



**Finance Administration**  
215 N. Mason  
2<sup>nd</sup> Floor  
PO Box 580  
Fort Collins, CO 80522  
**970.221.6788**  
970.221.6782 - fax  
[fcgov.com](http://fcgov.com)

**AGENDA**  
**Council Finance & Audit Committee**  
**October 20, 2022**  
**4:00 - 6:00 pm**  
Zoom Meeting <https://zoom.us/j/8140111859>

Approval of Minutes from the September 1, 2022, Council Finance Committee meeting.

- |   |          |             |
|---|----------|-------------|
| 1. East Mulberry Potential Annexation:<br>Opportunities & Tradeoffs | 30 mins. | R. Everette |
| 2. 2023 Utility Rate Increases                                      | 40 mins. | L. Smith    |
| 3. Supplemental Appropriation:<br>Meter Data Management             | 20 mins. | A. Bromley  |
| 4. Utilities Income-Qualified Assistance Program Structure          | 30 mins. | H. Young    |

**Council Finance Committee**  
**Agenda Planning Calendar 2022**  
**RVSD 10/11/22 ts**

<b>Oct. 20<sup>th</sup></b>	<b>2022</b>		
	East Mulberry Potential Annexation: Opportunities & Tradeoffs	30 min	R. Everette
	2023 Utility Rate Increases	40 min	L. Smith
	Supplemental Appropriation: Meter Data Management	20 min	A. Bromley
	Utilities Income-Qualified Assistance Program Structure	30 min	H. Young

<b>Nov. 3<sup>rd</sup></b>	<b>2022</b>		
	9/11 Memorial at Spring Park	30 min	N. Bodenhamer
	Sustainable Funding - Transit	30 min	D. Brooks
	Sustainable Funding - Climate	30 min	L. Ex H. Depew
	General Employee Retirement Plan (GERP) Annual Report	30 min	B. Dunn

<b>Dec. 1<sup>st</sup></b>	<b>2022</b>		
	Financial Policy Updates	30 min	B. Dunn





Finance Committee Meeting Minutes  
September 1, 2022, 4-6 pm  
Zoom

Council Attendees: Julie Pignataro, Kelly Ohlson, Emily Francis, Shirley Peel

Staff: Kelly DiMartino, Travis Storin, Tyler Marr, Rupa Venkatesh, Carrie Daggett, Caryn Champine, Monica Martinez, Teresa Roche, Drew Brooks, Blaine Dunn, Ginny Sawyer, Megan Valliere, Jen Poznanovic, Nina Bodenhamer, Randy Bailey, Trevor Nash, Renee Reeves, Jo Cech, Molly Reeves, Lindsay Ex, Honore Depew, Gerry Paul, Josh Birks, Seve Ghose, Mike Calhoon, Victoria Shaw, LeAnn Williams, Sylvia Tatman-Burruss, Erik Martin, Lawrence Pollack, Lance Smith, John Phelan, Javier Echeverria, Dave Lenz, Sheena Freve, Zack Mozer, Carolyn Koontz

Others: Kevin Jones, Chamber  
Molly Bohannon, Coloradoan  
Daniel Guimond, Emily Gallichotte, Rachel Selby  
Jason Miller, Fehr & Peers Transportation

---

Meeting called to order at 4:00 pm

Approval of minutes from the August 1, 2022, Council Finance Committee Meeting. Kelly Ohlson moved for approval of the minutes as presented. Emily Francis seconded the motion. Minutes were approved unanimously via roll call by; Julie Pignataro, Kelly Ohlson and Emily Francis

## **A. Sustainable Funding Update**

Ginny Sawyer, Sr. Project Manager  
Jennifer Poznanovic, Sr. Revenue Manager

### **EXECUTIVE SUMMARY**

---

The purpose of this item is to further refine possible new revenue models and to seek direction on best use of the upcoming December Work Session on revenue.

### **GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED**

---

1. Does CFC want to recommend or eliminate any of the models presented?
2. Does CFC agree with proposed Work Session direction and questions?
3. What additional information should be included at the Work Session in December?



## BACKGROUND/DISCUSSION

---

Over the past several years, masterplan developments and updates have identified clear funding needs in the areas of parks and recreation, transit, and housing. Along with these needs and the criticality of the City climate action goals, Council Finance Committee has asked for climate funding needs to be included in funding conversations. Annual shortfalls range from six to twelve million per area.

Funding needs identified and discussed previously include:

- Parks & Recreation - \$8 to \$12M annual shortfall (Parks & Recreation Master Plan)
- Transit - \$8M to \$10M annual shortfall (Transit Master Plan)
- Housing - \$8M to \$9.5M annual shortfall (Housing Strategic Plan)
- Climate - \$6M+ annual shortfall (Our Climate Future Plan)

Staff continues to work with CFC to further refine both the needs and the potential funding mechanisms to close the gaps. This work includes on-going Council Finance meetings, Work Sessions with the full Council, developing an engagement plan, and ultimate implementation.

Discussions and feedback to date have highlighted a desire to:

- Clearly define and articulate revenue needs and level of service considerations.
- Thoroughly research funding options including impacts and the context of existing and potential new tax measures (local and regionally.)
- Work to keep overall resident impact and tax burden as low as possible.
- Consider existing dedicated tax renewals and associated election timelines in a strategic manner.

### **Timeline:**

#### To date:

- *December 2021:*
  - Begin discussions on identified funding gaps.
- *January 2022:*
  - Deeper dive with CFC on the projected gaps in each area.
- *March 2022:*
  - Meet with CFC to review all possible revenue mechanisms.
- *April 2022:*
  - Full Council work session to review work to date.
- *June 2022:*
  - CFC to discuss most feasible funding mechanisms and targeted funding amounts.
- *September 2022:*
  - CFC to refine various funding models and considerations for addressing gaps and seek direction on the best use of the December Council Work Session.

#### Future:

- Refine acceptable funding mechanisms and how to direct funding.
- Determine election cycle for which, if any, any voter approved mechanisms.
- Engagement efforts.

### Potential Funding Mechanisms

Numerous potential funding mechanisms have been discussed with CFC. Of those discussed previously, sales tax, property tax and excise taxes have emerged as the most feasible. The table below demonstrates the potential revenue gain along with any annual impact to residents.

Category	Funding Mechanism	Annual Revenue Estimate	Resident Impact
Sales Tax	¼ Cent Sales Tax (dedicated, ongoing or repurpose)	\$9M+	<ul style="list-style-type: none"><li>• \$30.67 average per/year for a resident</li><li>• Sales tax on food would remain at 2.25%</li><li>• Visitors also impacted</li></ul>
Property Tax	1 Mill Property Tax	\$3.5M	<ul style="list-style-type: none"><li>• Residential annual increase of \$21.45</li><li>• Commercial annual increase of \$87.00</li></ul>
	2 Mill Property Tax	\$7M	<ul style="list-style-type: none"><li>• Residential annual increase of \$42.90</li><li>• Commercial annual increase of \$174.00</li></ul>
	3 Mill Property Tax	\$11M+	<ul style="list-style-type: none"><li>• Residential annual increase of \$64.35</li><li>• Commercial annual increase of \$261.00</li></ul>
Excise Tax	5% Tax on Specific Goods	\$5M	<ul style="list-style-type: none"><li>• \$5 per \$100 purchase in Fort Collins</li><li>• Visitors also impacted</li></ul>
User Fee	\$5 Monthly User Fee	\$4M	<ul style="list-style-type: none"><li>• \$60 annually/resident</li></ul>
	\$10 Monthly User Fee	\$8M	<ul style="list-style-type: none"><li>• \$120 annually/resident</li></ul>
	Commercial User Fee	TBD	<ul style="list-style-type: none"><li>• TBD for commercial properties in Fort Collins</li></ul>
Capital Expansion Fee	Reconfigure/ Broaden Application	\$2M	<ul style="list-style-type: none"><li>• Net neutral for residential and commercial permit fees</li></ul>

The mechanisms above include both taxes and fees. Taxes require voter approval and can be used for any public purpose authorized by City Council. Fees do not require voter approval and they can only be imposed on those likely to benefit from the service funded with the fee.

### Targeted Funding Option Considerations

In June, staff drafted five scenarios which targeted a diversity of funding sources totaling amounts between \$10M and \$40M. These scenarios were not intended to be final or recommended options. They were intended to demonstrate the flexibility and variable means and ways to add additional revenue to cover the identified gaps. CFC supported potential revenue ranges of \$25 to \$35M.

From those five models, three are included in these materials. Total revenue amounts vary from \$25M to \$34M with anticipated impacts to residents ranging from \$95 annually to \$215 annually. The models focus on property tax, sales tax, excise tax, and a possible user fee.

The potential of an emitter tax/fee has not been included but will be added as a policy question to a future CFC meeting.

Staff has also included information for consideration on which funding mechanisms may be best targeted to particular funding needs.

## PROPOSED NEXT STEPS

---

- Council Work Session December 13, 2022.
- February CFC meeting to review and discuss election cycles.
- Schedule additional conversation on carbon incentives/penalties?

## DISCUSSION / NEXT STEPS

---

Julie Pignataro; when will the carbon tax be discussed?

Travis Storin; I don't have it on a Council Finance Committee agenda; however, we have time in December. Staff would like to consider the large emitter fee as a separate project. We previously reviewed with the committee, the 4 large emitters that meet the EPA standard of 25,000 metric tons or more. We only have decent and measurable emissions data on those 4 entities. Our analysis to date seems to indicate that this is not a robust revenue opportunity.

Julie Pignataro; originally we estimated it could be \$2M which is the lowest threshold for this exercise. Do you think it is less?

Travis Storin; it is very difficult for us to estimate. I don't know how sharp the \$2M number is. Also, there is the legal requirement to consider that fees benefit the rate payer.

Honore Depew; I agree with Travis' assessment. I would add in that one of the four entities (the landfill) is located outside city limits so they would not be eligible for the fee. Some of the considerations that came forward in discussion were around diminishing rate of returns, as they reduce their emissions, the funding source goes away. Mitigation strategies, there is no clear way to impose the fee on anyone who is under that annual 25,000 metric ton threshold.

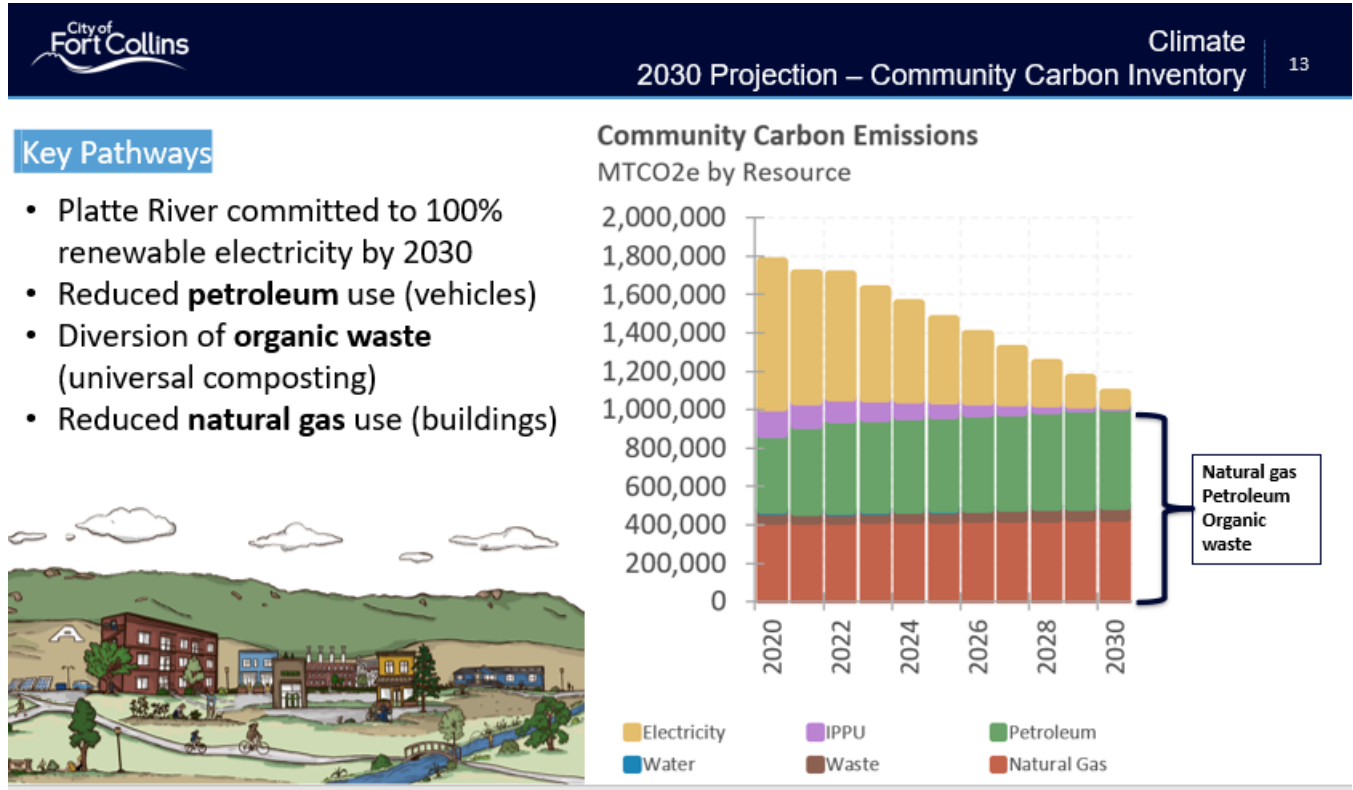
Emily Francis; I think this committee gave clear direction that we wanted this to be included. I don't agree with staff's decision to not include it in the discussion today. My preference would be that this comes back to Council Finance Committee before it goes to Council in December.

Travis Storin; I apologize if that is a miss - I see some flexibility in the agenda for the November meeting and could bring this back as a dedicated topic and bring it back into the overall portfolio-based discussion. I apologize for making it a separate work stream.

Julie Pignataro; I would say yes, I want to learn more about it, and I think Emily and Kelly want to learn more as well.

Kelly Ohlson; I am lacking enthusiasm for any new revenue sources beyond the renewal of the expiring taxes. We gave clear direction, but we don't have the large emitter fee or carbon tax included in these materials. (was showing in materials as \$11M not \$2M). We should look at an emitter fee instead of just a large emitter fee which would include only 2-3 entities. I am not buying the staff line that we have no way of doing that if they are less than 25,000 metric tons. We can measure what natural gas, electricity, etc. are being used. We can figure that out and staff or a consultant can come up with a formula for an emitter's fee or tax. I believe there are ways we can broaden it to an emitter fee that will have real impact on air quality and climate with the money generated going to programs, including some that could help some of those companies do better.

We want to see more information on this We can measure accurately enough to come up with people owe.



Community Carbon Inventory - slide #13 (see above)

Kelly Ohlson; I have a question on the PRPA – it says PRPA is committed to 100% renewable electricity by 2030. I thought they were going to have natural gas generators, etc. I just want to make sure that is accurate. I thought there were some asterisks on that statement that they are committed by 2030.  
**ACTION ITEM:** Could someone confirm and clarify the above?

It is surprising to me that the things we eliminated as options off the table were mostly dealing with business and the things we kept deal with residents. After I thought through it, I am not for switching a tax over to a fee for street maintenance freeing up another ¼ cent sales tax, but that fee would be the same no matter what the value of the house so that actually seems more regressive than a sales tax. I think the Council might want to try to zoom in closer to the \$20-30M range.

Mechanism	Revenue	Use	Variables
Sales Tax	\$9M+	Parks & Recreation	Broad support. Clear narrative.
		Affordable Housing	Support. More than triple historical funding. Advances climate action.
		Transit	Support. Initial years fund capital. Later years fund operations. Advances climate action.
Property Tax	\$11M to \$14M	Parks & Recreation	Broad support. Can tie housing valuation directly to proximity to parks.
		Affordable Housing	Support. More than triple historical funding. Advances climate action. Can tie housing need to existing housing supply.
		Transit	Support. Initial years fund capital. Later years fund operations. Advances climate action. Direct linkage to property tax not required and harder to connect to transit.
Excise Tax	\$5M	Parks & Recreation Affordable Housing Transit Climate	Can select a product directly related to one of the focus areas to advance goal (i.e. sporting equipment/P&R; Plastics/Climate; Auto related/Transit) or can select any product and state where funding will go (i.e. cannabis)
User Fee	\$9M	Street Maintenance	Fee must benefit fee payer. This would be used to off-set current dedicated street maintenance tax and allowing "re-purposing" of the dedicated tax.

Considerations - slide #9 (see above)

Kelly Ohlson; Property tax \$11-14M - the chart showed 3 mils as the highest and that was \$11M  
So, is the \$14M because that was including both residential and commercial?

Ginny Sawyer; I think the other charts state 3 mils. If we did more than 3 mils, I can't remember if it is 4 or 5 mils that would take it to \$14M.

Kelly Ohlson; did we codify that more people are going to be able to qualify for the sales tax rebate?  
There was agreement on this committee that income levels would be broadened, and we took steps to make it easier and to track.

Travis Storin; that code change is scheduled to come to Council on October 18<sup>th</sup>

## Accelerate Implementation of the Housing Strategic Plan

**Expand the City's competitive process** to better support projects seeking to: Acquire land, develop housing, preserve existing housing, support residents.

*Examples:*

- Housing acquisition (redevelopment/preservation)
- Land acquisition
- New construction costs
- Affordable homeownership renovation
- Renovation of affordable rental housing
- Homeownership assistance

**Expand or initiate City-led efforts** as identified in adopted policies including the Housing Strategic Plan, City Strategic Plan, and HUD Consolidated Plan.

*Examples:*

- Land Bank acquisition (expand)
- Extend affordability restrictions
- Fee credits for qualifying projects (expand)
- Develop incentive programs (energy efficiency, voluntary affordability restrictions, etc.)
- Explore redevelopment partnerships
- Other innovative approaches (middle income, mixed income, etc.)

What Could Dedicated Housing Revenue Fund? Affordable Housing - slide #12 (see above)

Kelly Ohlson; What does 'New construction costs' under examples above mean?

ACTION ITEM:

Travis Storin; we may need to follow up on that later in writing as far as specific interventions as we don't have staff on hand from Social Sustainability to address the specific techniques they proposed.

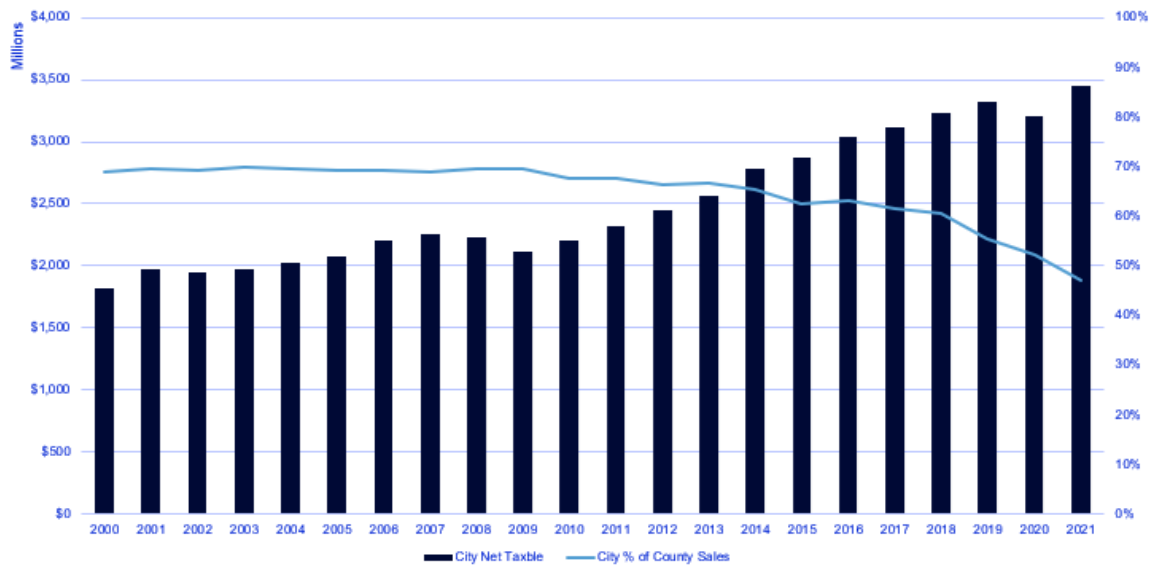
Kelly Ohlson; I am interested in and am open to renewing taxes that expire in 2025. I am not big on excise taxes but will remain open.

Funding Option	Mechanics	Considerations
<b>Property Tax</b>	<ul style="list-style-type: none"> <li>A mill is 1/10<sup>th</sup> of a penny</li> <li>\$1.00 revenue for each \$1,000 of assessed value</li> <li>Residential assessment rate = 7.15%</li> <li>Commercial assessment rate = 29.0%</li> </ul>	<ul style="list-style-type: none"> <li><b>Voter approval required</b></li> <li>Less Volatile than Sales Tax</li> <li>Current City mill levy of 9.797 not increased since 1992</li> <li>Property values have increased; not the City's mill levy</li> </ul>
<b>Sales Tax</b>	<ul style="list-style-type: none"> <li>Increase sales tax by ¼ cent</li> <li>Captures revenue from residents &amp; visitors</li> </ul>	<ul style="list-style-type: none"> <li><b>Voter approval required</b></li> <li>Funded by both residents &amp; visitors</li> <li>Volatile during a recession</li> </ul>
<b>Excise Tax</b>	<ul style="list-style-type: none"> <li>An excise tax is a legislated tax on specific goods or services at purchase such as fuel, tobacco, and alcohol</li> <li>City of Boulder implemented a sugar sweetened beverage tax of \$0.02 per fluid ounce in 2016; Fort Collins estimate of \$4M+</li> <li>Other potential products: Beverages in plastic containers, marijuana</li> </ul>	<ul style="list-style-type: none"> <li><b>Voter approval required</b></li> <li>Revenue impacted by sales/recession</li> </ul>
<b>User Fee</b>	<ul style="list-style-type: none"> <li>Monthly fee applied to residential &amp; commercial utility bill</li> <li>Fees must be reasonably related to the actual cost of the program or service funded by the fee</li> </ul>	<ul style="list-style-type: none"> <li><b>Voter approval NOT required</b></li> <li>Flat fee would have disparate impact on residents with lower income levels</li> </ul>
<b>Capital Expansion Fee</b>	<ul style="list-style-type: none"> <li>Fees are collected for the purpose of funding additional improvements required to address the impact of growth within the city as population increases</li> </ul>	<ul style="list-style-type: none"> <li><b>Voter approval NOT required</b></li> <li>Reconfigured fees do not fall within the current standard models for capital expansion fees</li> </ul>

Mechanics & Considerations - slide #22 (see above)

Kelly Ohlson; Capital Expansion Fees are very fair, proven and court defended at every level. On the right side above 'Reconfigured fees do not fall within the current standard models for capital expansion fees.'

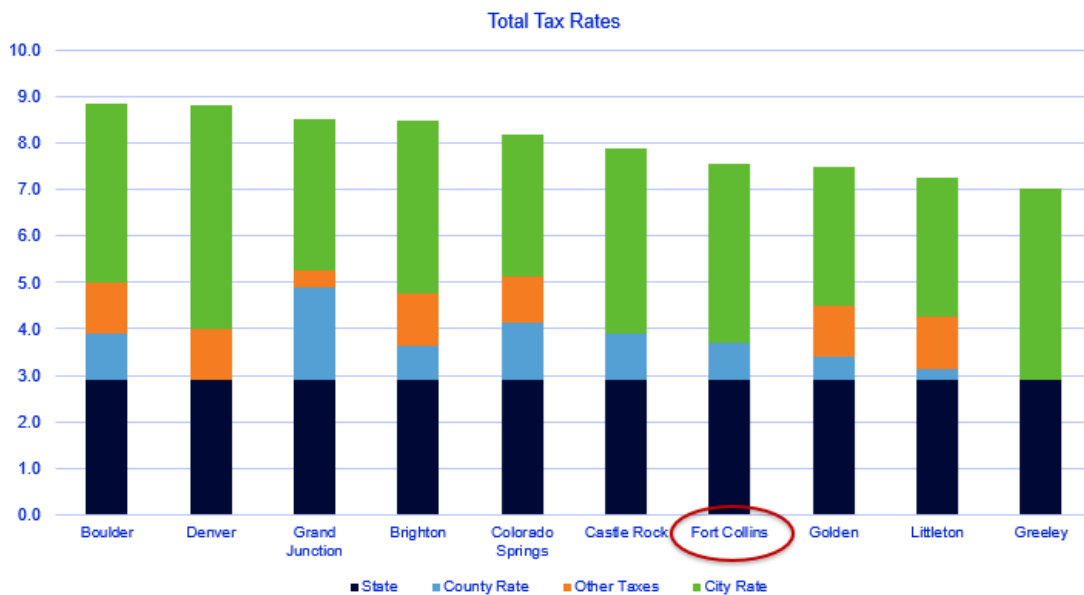
Travis Storin; in an overview, when we go to develop what the fees are, our fee schedules – it is all based on costs, and we have a fairly wide latitude on what we define for the cost recovery that we are seeking when we price out a fee. Council has quite a bit of flexibility and when we come back in the Spring of 2024 with a fee update, we would have the latitude to price in infrastructure replacement into a fee, essentially reconfiguring the Capital Expansion fee program which right now exists to build new assets and my understanding from Legal has been that if we are defining the costs to be recovered quantitatively within our pricing models, then we can set the fee to incorporate, for example, parks asset management.



Fort Collins Net Taxable Sales - (slide #26) see above

Kelly Ohlson; reiterates what we predicted years ago, in the year 2000 we had approximately 65% share. This shows why the over reliance on sales tax not a good idea





Colorado City Full Stack – Sales Tax Rates - (slide #25) see above

Kelly Ohlson; our rates would have to get really high – as other communities dropped from 65 to 48 which is a 17% decline from 2000-2021 because as shopping increased in Loveland and Windsor – we weren't the only show in town.

Travis Storin; that is consistent with our interpretation as a staff. As you see developments such as Centerra and Costco go up in other communities, which we refer to as leakage which has been a fairly consistent trend, particularly within the last 10 years. While it is probably true that Fort Collins is the employment center of northern Colorado, it is decreasingly the economic and commerce center. We watch this very closely for the very diversification reasons you mentioned.

Kelly Ohlson; by our next discussion, I would like to see data for Aurora and Loveland – two relevant date points.

ACTION ITEM

County	Population	Total County Mill Levy	State Rate	County Rate	Other Sales Taxes	City Rate	Seat	*Total Seat Rate
El Paso County	730,395	7.692	2.90	1.23	1.00	3.07	Colorado Springs	8.20
Denver County	715,522	--	2.90	0.00	1.10	4.81	Denver	8.81
Arapahoe County	655,070	13.013	2.90	0.25	1.10	3.00	Littleton	7.25
Jefferson County	582,910	24.578	2.90	0.50	1.10	3.00	Golden	7.50
Adams County	519,572	26.897	2.90	0.75	1.10	3.75	Brighton	8.50
Larimer County	359,066	22.458	2.90	0.80	0.00	3.85	Fort Collins	7.55
Douglas County	357,978	19.274	2.90	1.00	0.00	4.00	Castle Rock	7.90
Boulder County	330,758	24.771	2.90	0.99	1.10	3.86	Boulder	8.85
Weld County	328,981	15.038	2.90	0.00	0.00	4.11	Greeley	7.01
Mesa County	155,703	11.703	2.90	2.00	0.37	3.25	Grand Junction	8.52

\*All counties except Douglas and Larimer have other taxes that include transportation, culture and public safety

Colorado City & County Tax Rates by Population (slide 24) see above

Kelly Ohlson; why that order?

Ginny Sawyer; it is by population

Travis Storin; this is a way to benchmark against what other communities of similar size are doing and is there tolerance among the population for additional taxation.

Emily Francis; in the models that we did with excise tax. What is that based on?

Jen Poznanovic; based on Marijuana – Front Range 3-5% range for an additional excise tax  
Across the Front Range, it is typically more in the 5% range for an additional excise tax.

Emily Francis; have we seen any impact on the gray market?

Travis Storin; Jim Lenderts from Police Services, our Marijuana Enforcement Officer, it has been his assessment that it has not made a substantial impact on gray or black-market activities. I know that Jim would be more than happy to join any future Council or committee discussion to provide more insight into the judgements and criteria used in making that assessment. He has found that to be a common misconception.

Emily Francis; think it would be helpful for Council to have more information about that and the impacts it has had at the December Work Session  
ACTION ITEM:

Emily Francis; we talked about the redoing of Capital Improvement won't take place until later, but we also talked about housing size being related. There was supposed to be a follow up - when could we expect to hear more on that?

Travis Storin; I need to revisit the timeline and will do so during this meeting. Can be challenging with the two-year schedule that we have for fee updates, and we lost our way a bit in 2020 due to Covid. Currently, we do index our fees to square footage to an extent and that would be something that would be scoped into the Council Finance discussion – what is that spread across the different square footage in the residential space.

ACTION ITEM:

Emily Francis; I believe John Duval attended that meeting and we discussed our ability to increase that spread so we had a higher percentage going to larger homes – I think Legal was looking into that.

Carrie Daggett; we will work with Travis and follow up – and get information back to Council.

ACTION ITEM:

Emily Francis; How much work are we doing with impact for different income levels – one model is \$95 per resident - is that blanket or what is you fall within certain AMI ranges

Jen Poznanovic; that is the average, and it has not yet vetted for the different income level

Emily Francis; can we have that for the December Work Session?

Travis Storin; yes we can do that- strategize across income bands – what does it mean on an income basis – is it a flat dollar amount?

Emily Francis; my feedback on the models is that I don't like user fees.

It feels kind of like a bait and switch and has an unfair impact. Street maintenance – everyone uses streets in a different way. I don't agree with how we are doing that. If there is a way where if you use this more you pay a fee. I wouldn't support a user fee-unless there is some way we can tie it to actual use.

Julie Pignataro; Can we recommend or eliminate any of these models? Are the pieces interchangeable?

Travis Storin; they are highly interchangeable

Julie Pignataro; I feel like that first question is a bit limiting – what we land on - these are the three models that Finance Committee recommends knowing that the seven Councilmembers will all have very different opinions. This is going to be a huge educational item – explaining what the different fees and taxes are.

Ginny Sawyer; do we adjust these models before December especially because you plan to talk about carbon emission in November – we could explain what a user fee is, but we could also present options without user fees since we are not hearing a lot of support for that now. We could broaden the discussion ... more of if you have questions

Julie Pignataro; my suggestions is that we come to Council with three models and say this is what the Council Finance Committee recommends. The model that did not include user fees could be one potential option. Almost like we rate the models and give the rest of council the ability to discuss and pick and choose as they want.

Julie Pignataro; why did you end of bringing these three models? I didn't feel like it reflected our conversations.

Ginny Sawyer; at the last meeting, we had a total of five models, so we eliminated two and those were in the lower category of \$0-10M. My recollection is that you indicated you wanted to seek more revenue than that, so we brought models that were in the \$25-34M revenue range.

Julie Pignataro; I didn't associate the components of one model with that lower bracket. There may have been components in the lower models that I liked more but they were not carried over into the new models

The old models are included in the back up starting at slide 20

Julie Pignataro; what are we hoping to come out of the December work session with?  
An answer or a feeling?

Ginny Sawyer; an answer would be great, but a feeling is a good goal.

Travis Storin; staff is very grateful for the volume of agenda time this committee has dedicated to this topic. You are right, this is inherently gooey – the intersection of municipal finance and policy making is a difficult iterative thing. Even directional guidance in December is immensely helpful for us. I would anticipate us seeking a similar tone and tenor with the full council as we have had at these committee meetings with these topics.

Julie Pignataro; what is missing to give us more concrete decisions?

Ginny Sawyer: maybe what we try to get at is....

Does everyone agree user fees are off the table?

Do people think a property tax is a possibility some time in the next three -five years?

Do we think a dedicated tax may be a good mechanism and acceptable?

If we can find some things to really focus on as a mechanism because the amounts can change.

Maybe new revenue isn't something we are that interested in so we can adjust those numbers too.

We still have a lot of those different levers and decisions to make as we go through this.

Julie Pignataro; I like that a lot – it would be very worthwhile to be candid as we are talking about each option – for example - If we do this then we won't be able to get more than \$10M.

I agree with what Kelly said that a lot of the business stuff came off and it went heavy on the individual community member – that could just be perception. I am against user fees as well. Excise tax I do see similarly to the carbon and large emitter fee - kind of like a tax on cigarettes- you want someone to change their behaviors

Would an excise tax on marijuana exclude medical marijuana?

Travis Storin; would be at Council's discretion as to what goes on the ballot

Jen Poznanovic; right now, we do tax medical marijuana

Julie Pignataro; Might be good to know the percentage that goes to medical versus recreational

Jen Poznanovic; medical marijuana is a very small percentage – recreational is by far the vast majority of our revenue.

Kelly Ohlson; in our follow ups in Police Services

I would like to see legitimate sources regarding the impact on the gray and black markets in a summary. I also would like to see what our current taxes are on liquor, beer, and wine for comparison.

On the user fees I am ok if we get the porridge just right but not sure how we do that.

Street maintenance or parks is per household not resident.

Travis Storin; it is done by household and is billed via utility bills

Kelly Ohlson; point of clarification; Community Capital Improvement Plan (CCIP) expires in 2025

I am open to rethinking and redoing that- ¼ cent for these priorities. It served its purpose in one and two.

those aren't continuing things they are primarily capital – if that is a ¼ cent that can be repurposed for these things - count me in

2030 – ¼ cent – used to be .85 KFCG then 60% was rolled on to forever

Then there is another ¼ cent that is a floater and that is money that we can't dismiss even if it is currently funding some things we could redirect to these priorities

Repurposing BOB2 and rethinking in 2030 the .25 KFCG

What we take to the full Council – as much of the refined stuff

Emily Francis; if this is going to come back to us in November – I would request the follow-ups then.

Travis Storin;

### **Summary**

- Clarity that we do want the large emitter fee incorporated into this discussion. Challenge for creativity around - if we can't measure those under 25K emissions then we need to think about other units of measure
- Request for clarification around PRPA's 100% renewable energy goal
- Utility Rates adjustments are coming to Council Finance in November
- Concern over shift from business to residents
- Aversion to user fees due to their regressive nature
- Seeking clarity of the definition of household versus resident as it pertains to fees
- Incorporate Aurora and Loveland
- Additional source citation on grey and black-market activity in marijuana market as well as data on taxes from liquor, beer, and wine.
- Delineate more quantitative between medical and recreational marijuana
- From CAO - fees more dispersed by square footage
- Stratify the tax impact across different resident income levels
- As we move forward to Council in December – we will be clear that the presentation does not necessarily mean endorsement by the Council Finance Committee rather this is the current state of our iterations – not perfect – but ready for discussion.

- Rank ordering the models

Kelly Ohlson; re: Clarity that we do want the large emitter fee incorporated into this discussion – other units of measure

3 potential options;

1. Large emitters
2. Emitter fee in general – broadening the emitter fee - focusing on top 100-150 (who are the top 100?)
3. A wiser policy for Carbon Tax

Travis Storin; referring to Denver's ¼ cent with use restricted to climate initiatives.

## **B. Annual Adjustment Ordinance**

Lawrence Pollack, Budget Director

Travis Storin, Chief Financial Officer

First Reading of Ordinance No. , 2022,

Making Supplemental Appropriations and Authorizing Transfers of Appropriations in Various City Funds.

First Reading of Ordinance No. , 2022,

Appropriating Prior Year Reserves in Various City Funds.

### **EXECUTIVE SUMMARY**

The purpose of these Annual Adjustment Ordinances is to combine dedicated and unanticipated revenues or reserves that need to be appropriated before the end of the year to cover the related expenses that were not anticipated and therefore, not included in the 2022 annual budget appropriation. The unanticipated revenue is primarily from fees, charges, rents, contributions, and grants that have been paid to City departments to offset specific expenses.

### **GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED**

- What questions or feedback does the Council Finance Committee have on the 2022 Annual Adjustment Ordinance?
- Does the Council Finance Committee support moving forward with bringing the 2022 Annual Adjustment Ordinance to the full City Council?

### **BACKGROUND/DISCUSSION**

These Ordinances appropriate unanticipated revenue and prior year reserves in various City funds and authorizes the transfer of appropriated amounts between funds and/or projects. The City Charter permits the City Council to appropriate unanticipated revenue received as a result of rate or fee increases or new revenue sources, such as grants and reimbursements. The City Charter also permits the City Council to provide, by ordinance, for payment of any expense from prior year reserves. Additionally, it authorizes the City Council to transfer any unexpended appropriated amounts from one fund to another upon recommendation of the City Manager, provided that the purpose for which the transferred funds are to be expended remains unchanged; the purpose for which they were initially appropriated no longer exists; or the proposed transfer is from a fund or capital project account in which the amount appropriated exceeds the amount needed to accomplish the purpose specified in the appropriation ordinance.

If these appropriations are not approved, the City will have to reduce expenditures even though revenue and reimbursements have been received to cover those expenditures.

The table below is a summary of the expenses in each fund that make up the increase in requested appropriations. Also included are transfers between funds and/or projects which do not increase net appropriations, but per the City Charter, require City Council approval to make the transfer. A table with the specific use of prior year reserves appears at the end of the AIS.

Funding	Additional Revenue	Prior Year Reserves	Transfers	TOTAL
General Fund	\$648,888	\$692,164	\$0	\$1,341,052
Data & Communications Fund	0	12,500	0	12,500
Equipment Fund	625,793	48,064	0	673,857
Sales & Use Tax Fund	0	0	48,076	48,076
Natural Areas Fund	48,076	0	0	48,076
Golf Fund	0	368,348	0	368,348
CCIP Fund	0	0	25,000	25,000
Cultural Services Fund	25,000	0	0	25,000
Water Fund	80,000	0	0	80,000
Light & Power Fund	4,500,000	0	0	4,500,000
Transportation Services Fund	442,094	0	0	442,094
<b>GRAND TOTAL</b>	<b>\$6,369,851</b>	<b>\$1,121,076</b>	<b>\$73,076</b>	<b>\$7,564,003</b>

## A. GENERAL FUND

### 1. Security Classes provided by Emergency Preparedness and Security (EPS)

Revenue collected from security class participants is intended to help offset the cost of providing security training from FRCC for a 3-day Crime Prevention Through Environmental Design (CPTED) class in April and a 5-Day CPTED training in August 2022. This request includes revenue collected between December 2021 - July 2022 and helps offset all class incurred expenses for 2022. This model uses initial investment to prime the pump, using collected fees to supplement ongoing training.

FROM:	Prior Year Reserves (2021 class revenue)	\$13,621
FROM:	Unanticipated Revenue	\$14,290
FOR:	Security Classes	\$27,911

### 2. Land Bank Operational Expenses

This request is intended to cover expenses related to the land bank property maintenance needs for 2022. Since expenses vary from year to year, funding is requested annually mid-year to cover these costs. Expenses in 2022 include general maintenance of properties, raw water and sewer expenses, electricity, repairs, and other as applicable.

FROM:	Prior Year Reserves (Land Bank reserve)	\$2,750
FOR:	Land Bank Expenses	\$2,750

**3. Fort Collins Police Services (FCPS)** has received revenue from various sources. A listing of these items follows:



- a. \$36,516 – 2022/2023 BATTLE Grant (Beat Auto Theft Through Law Enforcement) Grant: Police Services was awarded a grant from the Colorado State Patrol to help prevent auto theft in Colorado.
- b. \$44,805 – 2022/2023 Black Market Marijuana Grant: Police Services was awarded the Marijuana grant to support the investigation and prosecution of black market or illegal marijuana cultivation and distribution in the city.
- c. \$75,152 – 2022 Body Worn Camera Grant: In December of 2021, Police Services was awarded a grant to help fund the upgrade of body worn cameras because of the passing of HB 21-1250. This item is to appropriate the money that was received in 2022.
- d. \$11,400 - 2022 Click it or Ticket Grant: In 2021 Police Services was awarded a Click it or Ticket Grant from the Colorado Department of Transportation to pay for officers to work overtime to conduct enforcement activities.
- e. \$7,868 - 'Contribution to Northern Colorado Drug Taskforce: As a part of the City of Fort Collins contribution to the Northern Colorado Drug Taskforce, any Drug Offender Surcharge, or Court Ordered Restitution that is remitted from Larimer County Court to Fort Collins Police, is then passed along to the NCDTF. Any additional restitution that is collected by FCPS is additionally passed along to the NCDTF.
- f. \$11,400 - 2021/2022 High Visibility Enforcement (HVE) Grant: Police Services was awarded a grant from the Law Enforcement Assistance Fund to pay for overtime for DUI enforcement.
- g. \$15,000 – 2022/2023 HVE Grant: Police Services was awarded a grant from the Law Enforcement Assistance Fund to pay for overtime for DUI enforcement
- h. \$7,682 – 2021 ICAC Grant (Internet Crimes Against Children): In June of 2021 Police Services was awarded the ICAC grant, but the corresponding appropriation was inadvertently excluded from last year's Annual Adjustment Ordinance.
- i. \$300,000 - Northern Colorado Regional Communication Network (NCRCN) Police Radios Upgrades and Repairs: Police Radios have been failing on an increasing level due to aging infrastructure for the Radio Towers in the surrounding area. Information Services is currently working with Motorola and Bearcom to assess the current need, which is still in process. This request is utilizing the dedicated reserves within the General Fund for NCRCN.
- j. \$208,465 - Police Reimbursable Overtime: Police Services help schedule security and traffic control for large events. Since these events are staffed by officers outside of their normal duties, officers are paid overtime. The organization who requested officer presence is then billed for the costs of the officers' overtime. Fort Collins Police Services (FCPS) partners with Larimer County to staff events at The Ranch. Police receives reimbursement from Larimer County for officers' hours worked at Ranch events.
- k. \$42,022 - School Resource Officers: Police Services have a contract with Poudre School District to provide officers on location at a majority of the schools for safety and support. The school district pays Police Services based on a predetermined contract amount and also partially reimbursing for overtime incurred. This request is for the previously billed overtime and anticipated overtime for the remaining year.

- l. \$8,962 - DUI Enforcement: Proceeds that have been received for DUI enforcement from Larimer County.
- m. \$96,243 - Police Miscellaneous Revenue: Police Services receives revenue from the sale of Police reports along with other miscellaneous revenue, like restitution payments, evidence revenue and SWAT training.

**TOTAL APPROPRIATION**

FROM: Unanticipated Revenue (2022/2023 BATTLE Grant)	\$36,516
FROM: Unanticipated Revenue (2022/2023 Black Market Marijuana Grant)	\$44,805
FROM: Unanticipated Revenue (2022 Body Worn Camera Grant)	\$75,152
FROM: Unanticipated Revenue (2022 Click it or Ticket Grant)	\$11,400
FROM: Unanticipated Revenue (Northern Colorado Drug Taskforce)	\$7,868
FROM: Unanticipated Revenue (2021/2022 HVE Grant)	\$11,400
FROM: Unanticipated Revenue (2022/2023 HVE Grant)	\$15,000
FROM: Unanticipated Revenue (2021 ICAC Grant)	\$7,682
FROM: Prior Year Reserves (NCRCN Police Radios Upgrades & Repairs)	\$300,000
FROM: Unanticipated Revenue (Police Reimbursable Overtime)	\$208,465
FROM: Unanticipated Revenue (School Resource Officers)	\$42,022
FROM: Unanticipated Revenue (DUI Enforcement)	\$8,962
FROM: Unanticipated Revenue (Police Miscellaneous Revenue)	<u>\$96,243</u>
	<b>\$865,515</b>

FOR: Help prevent auto theft	\$36,516
FOR: Support the investigation of illegal marijuana cultivation	\$44,805
FOR: Upgrade body worn cameras	\$75,152
FOR: Overtime for Seat Belt enforcement	\$11,400
FOR: Contribution to Northern Colorado Drug Task Force	\$7,868
FOR: Overtime for DUI enforcement	\$26,400
FOR: Help prevent Internet Crimes Against Children	\$7,682
FOR: Police Radios Upgrades & Repairs	\$300,000
FOR: Police Reimbursable Overtime for events	\$208,465
FOR: Overtime for School Resource Officers	\$42,022
FOR: DUI enforcement	\$8,962
FOR: Police Miscellaneous Revenue	<u>\$96,243</u>
	<b>\$865,515</b>

**4. Radon Kits**

Environmental Services sells radon test kits at cost as part of its program to reduce lung-cancer risk from in-home radon exposure. This appropriation would recover kit sales for the purpose of restocking radon test kits.

FROM: Unanticipated Revenue (radon kit sales)	\$1,471
FOR: Radon test kit purchase	\$1,471

**5. Manufacturing Equipment Use Tax Rebate**

Finance requests the appropriation of \$109,010 to cover the amount due for the 2020 Manufacturing Equipment Use Tax Rebate program as established in Chapter 25, Article II, Division 5, of the Municipal Code. The rebate program was established to encourage investment in new manufacturing equipment by local firms.

Vendors have until December 31st of the following year to file for the rebate. This item appropriates the use tax funds to cover the payment of the rebates.

FROM:	Prior Year Reserves (Manufacturing Use Tax Rebate Assignment)	\$109,010
FOR:	Manufacturing Use Tax Rebates	\$109,010

#### **6. Restorative Justice Grant**

A grant in the amount of \$67,612 has been awarded and received from the Colorado Division of Criminal Justice (DCJ) Juvenile Diversion fund for the continued operation of Restorative Justice Services, which includes the RESTORE program for shoplifting offenses, the Restorative Justice Conferencing Program (RJCP) and Reflect Program for all other offenses. No match is required for this grant. The grant period is July 1, 2022, to June 30, 2023. Restorative Justice Services and its three programs has been partially grant-funded since its inception in 2000. The Council yearly accepts grant funds from Colorado Division of Criminal Justice to support Restorative Justice Services. This grant helps fund youth referred to the program from the 8th Judicial District Attorney's Office or in lieu of a summons. Since it began, Restorative Justice Services has provided a restorative justice alternative to more than 3,300 young people who committed chargeable offenses in our community.

FROM:	Unanticipated Revenue (Restorative Justice Grant)	\$67,612
FOR:	Restorative Justice Services	\$67,612

#### **7. Administrative transfer of IRS alternative fuel vehicles refund from General Fund to Equipment Fund (refer to item C4)**

Operation Services applied for, and received, a refund from the IRS for alternative fuel vehicles. These funds were not identified correctly when received in 2021 and were deposited in the General Fund. This will move the money from the General Fund to the Operation Services Fund.

FROM:	Transfer from Prior Year General Fund reserves (IRS refund)	\$266,783
FOR:	Equipment Fund - Alternative fuel vehicles	\$266,783

### **B. DATA & COMMUNICATIONS FUND**

#### **1. Accela Permitting System Upgrade**

The Information Technology (IT) Department is requesting funds from the Development Tracking Systems (DTS) restricted reserves to fund this unanticipated expense request to upgrade the City's permitting platform system. The City's IT department recently received notice that the Accela permitting platform will no longer be supported based on the current version the City is utilizing. This is requiring the City to upgrade to the latest version to avoid losing software support and any potential security risks associated with being out-of-date. Upon initiating the upgrade process, staff identified the need for consultant support to assist the City in upgrading its Development, Test, and Production Accela Civic Platform environments. The City intends to contract with TruePoint Solutions, a vendor that has provided Accela support in the past, to provide services as needed, including software installation, pre-installation/upgrade preparation assistance and post-upgrade support. Once completed, the City's permitting platform will be up to date. It will include a new user interface that offers additional features and functionality not currently available, as well as improve the overall performance of the platform.

FROM:	Prior Year Reserves (DTS assignment)	\$12,500
FOR:	Accela Permitting System Upgrade	\$12,500

### **C. EQUIPMENT FUND**

### 1. Unanticipated Fuel Revenue from Price increase

The price of wholesale fuel has been higher than budgeted. This has in turn also increase the price at which the various city departments have Operation Services for the fuel. With the anticipated elevated fuel prices for the remainder of the year.

FROM:	Unanticipated Revenue	\$50,000
FOR:	Fuel price increase	\$50,000

### 2. Charge Ahead Grant 2022

This is a State of Colorado Charge Ahead grant to install multiple electric vehicle chargers at multiple locations. This grant requires a 20% local match which will come from the Operations Services 2022 operating budget.

FROM:	Unanticipated Revenue (Charge Ahead Grant)	\$54,000
FOR:	Electric vehicle chargers	\$54,000

### 3. Unanticipated Revenue and Expense associated with Purchase of Civic Center Condos

In January of 2022 the City of Fort Collins purchased the Civic Center Condos on Mason Street. These condos are leased out with rental payments coming into the City. The management of the condos have come with costs for operations and maintenance (O&M), and additional appropriation is being requested to cover the O&M costs.

FROM:	Unanticipated Revenue	\$255,010
FOR:	Operations and Maintenance costs	\$255,010

### 4. Administrative transfer IRS alternative fuel vehicles refund from General Fund to Equipment Fund (refer to item A7)

Operation Services applied for, and received, a refund from the IRS for alternative fuel vehicles. These funds were not identified correctly when received in 2021 and were deposited in the General Fund. This will move the money from the General Fund to the Operation Services Fund.

FROM:	Unanticipated Revenue (IRS refund)	\$266,783
FOR:	Alternative fuel vehicles	\$266,783

### 5. Equipment Fund Debt Service Payment

The original appropriation of this Certificate of Participants was done through Ordinance No. 73, 2022. This request is for the first interest payment on the loan, which is due in December 2022. This amount is a one-time payment and will come out of Equipment Fund reserves. This amount was not included in the original Ordinance because it was not anticipated that the first interest payment would be due in 2022.

FROM:	Prior Year Reserves	\$48,064
FOR:	2022 interest payment on loan	\$48,064

## D. SALES & USE TAX FUND

### 1. Sales Tax transfer to Natural Areas (refer to item E1)

Sales tax collections were higher than expected in 2021, this is to transfer remaining amount due to Natural Areas Fund.

FROM:	Unanticipated Revenue (Sales tax collections)	\$48,076
FOR:	Transfer to the Natural Areas Fund	\$48,076

## **E. NATURAL AREAS FUND**

### **1. Sales Tax transfer to Natural Areas (refer to item D1)**

Sales tax collections were higher than expected in 2021, this is to transfer remaining amount due to Natural Areas Fund.

FROM:	Unanticipated Revenue via transfer	\$48,076
FOR:	Natural Areas land purchase and operations	\$48,076

## **F. GOLF FUND**

### **1. Golf Fund Debt Service Payment**

The original appropriation of this Certificate of Participations was done through Ordinance No. 72, 2022. This request is for the first interest payment on the loan, which is due in December 2022. This amount is a one-time payment and will come out of Golf Fund reserves. This amount was not included in the original Ordinance because it was not anticipated that the first interest payment would be due in 2022.

FROM:	Prior Year Reserves	\$80,022
FOR:	2022 interest payment on loan	\$80,022

### **2. Golf Player Assistant Pay**

This is the cost associated with contractual labor payment increases to Golf Professionals for fees associated with the required payment of Player Assistants. The Golf Fund is an enterprise fund and receives no tax dollar support. In 2022, the Golf Division required the contracted golf professionals at all three of the City's golf courses to pay for Player Assistants on the golf course. In the past these positions were filled by volunteers that were reimbursed only with playing privileges. Recent changes in labor laws have required these individuals be paid for the work.

FROM:	Prior Year Reserves	\$288,326
FOR:	Contractual Labor payment increases	\$288,326

## **G. COMMUNITY CAPITAL IMPROVEMENT PROGRAM (CCIP) FUND**

### **1. Carnegie Library renovation operations & maintenance support (refer to item H1)**

This is the 2022 amount for the operations and maintenance support for the Carnegie Library renovation as part of the Community Capital Improvements Program.

FROM:	Unanticipated Revenue	\$25,000
FOR:	Transfer to Cultural Services (Carnegie Library)	\$25,000

## **H. CULTURAL SERVICES FUND**

### **1. Carnegie Library renovation operations & maintenance support (refer to item G1)**

This is the 2022 amount for the operations and maintenance support for the Carnegie Library renovation as part of the Community Capital Improvements Program.

FROM:	Unanticipated Revenue via transfer	\$25,000
FOR	Carnegie Library Operations & Maintenance	\$25,000

## **I. WATER FUND**

### **1. Bureau of Reclamation 2019 additional amount - Grant Xeriscape Incentive Program**

This is a Bureau of Reclamation grant R19A00169 was awarded to Water Conservation for the Xeriscape Incentive Program. Reclamation has increased that award by \$5,000. The Bureau of Reclamation released the additional funds after having retained the amount for administrative costs. This money goes toward Xeriscape Incentive Program reimbursements for customers.

FROM:	Unanticipated Revenue (Bureau of Reclamation grant)	\$5,000
FOR	Xeriscape Incentive Program	\$5,000

### **2. Bureau of Reclamation 2022 - Grant Xeriscape Incentive Program**

A Bureau of Reclamation grant was awarded to Water Conservation for the Xeriscape Incentive Program. The full grant award of \$75,000 will be used as customer reimbursements for the program. The match funding requirement will be met by the program participants' required match.

FROM:	Unanticipated Revenue (Bureau of Reclamation grant)	\$75,000
FOR	Xeriscape Incentive Program	\$75,000

## **J. LIGHT & POWER FUND**

### **1. Wholesale Purchased Power**

Through July 2022 the amount of wholesale purchased power needed for Residential, Commercial & Industrial sales has exceeded the budgeted amount of \$1,833,680. One of the factors for this increase in cost, besides increased demand, is the amount of intermittent energy sold to Fort Collins Utilities as opposed to dispatchable energy. Intermittent energy costs just over twice the amount of dispatchable energy costs. While our costs for wholesale purchased power have exceeded budget, so has our revenue generated by sales of that energy to the rate payers. Through July 2022 revenues are in excess of budget by \$4,469,729.

FROM:	Unanticipated Revenue (sales of purchased power)	\$2,000,000
FOR	Wholesale purchased power	\$2,000,000

### **2. Systems Additions & Replacement**

Through July 2022 the system additions & replacement budget, which is comprised of several business units, is over budget by \$1,297,000. The related revenues generated from development and upgrades to the electric system are over budget by \$3,894,735 through July 2022.

FROM:	Unanticipated Revenue (electric capacity charge)	\$2,500,000
FOR	Electric systems additions & replacements	\$2,500,000

## **K. TRANSPORTATION SERVICES FUND**

### **1. South Timberline Corridor - Fort Collins-Loveland Water District - Reimbursement for Water Line Improvements**

Fort Collins-Loveland Water District (FCLWD) agreed to reimburse the City for water line improvements within the footprint of the City's South Timberline Corridor project. FCLWD asked that the City perform the water line improvements as part of the transportation capital improvement project to minimize traffic disruptions. The

water line improvements were not required as part of the City's transportation project. The total amount of the reimbursement is \$132,094 and will be credited to the South Timberline Corridor project.

FROM:	Unanticipated Revenue (reimbursement)	\$132,094
FOR	South Timberline Corridor project	\$132,094

## 2. Shift Your Ride Transportation Demand Management (TDM) Program: Electric Micromobility Pass and Education Series Pilot

The contract with SPIN requires them to pay \$10,000 to the City annually for transportation programs deemed appropriate by City staff. These funds will be used to cover printing costs, payroll taxes on the employee SPIN passes, and other expenses associated with the program.

FROM:	Unanticipated Revenue (Vendor payment (SPIN))	\$10,000
FOR	Shift Your Ride TDM Program	\$10,000

## 3. Streets: Work for Others

The Planning, Development and Transportation Work for Others program is a self-supported program for all "Work for Others" activities within Streets. Expenses are tracked and billed out to other city departments, Poudre School District, CSU, CDOT, Larimer County, developers, and other public agencies. The original budget of \$3.0M was an estimate based on scheduled projects and anticipated rates. Due to increased cost of asphalt, fuel, parts, and other materials, an additional \$300,000 is requested to cover costs through the end of 2022. Revenue for performing the work will offset the expense (note: expense will not be incurred without offsetting revenue).

FROM:	Unanticipated Revenue (reimbursement for work done)	\$300,000
FOR	Work for Others program	\$300,000

## FINANCIAL / ECONOMIC IMPACTS

This Ordinance increases total City 2022 appropriations by \$7,564,003. Of that amount, this Ordinance increases General Fund 2022 appropriations by \$1,341,052, including use of \$692,164 in prior year reserves. Funding for the total increase to City appropriations is \$6,369,851 from unanticipated revenue, \$1,121,076 from prior year reserves, and \$73,076 from transfers between Funds.

The following is a summary of the items requesting prior year reserves:

Item #	Fund	Use	Amount
A1	General Fund	Emergency Preparedness and Security (EPS) Security Classes	\$13,621
A2	General Fund	Land Bank Operational Expenses	2,750
A3i	General Fund	NCRCN Police Radios Upgrades and Repairs	300,000
A5	General Fund	Manufacturing Equipment Use Tax Rebate	109,010
A7	General Fund	Administrative transfer IRS alternative fuel vehicles refund from General Fund to Equipment Fund	266,783
B1	Data & Comm. Fund	Accela Permitting System Upgrade	12,500
C5	Equipment Fund	Equipment Fund Debt Service Payment	48,064
F1	Golf Fund	Golf Fund Debt Service Payment	80,022
F2	Golf Fund	Golf Player Assistant Pay	288,326
Total Use of Prior Year Reserves:			\$1,121,076

## DISCUSSION / NEXT STEPS

---

### Guidance Requested

- What questions or feedback does the Council Finance Committee have on the 2022 Annual Adjustment Ordinance?
- Does the Council Finance Committee support moving forward with bringing the 2022 Annual Adjustment Ordinance to the full City Council?

Kelly Ohlson; Police Services - how did we not anticipate and plan for \$300K for new radios?

Travis Storin; NCRCN is the Northern Colorado Regional Communication Network and there are multiple agencies who participate in a consortium like fashion – this is actually for the equipment that is on the two towers in Fort Collins that we are responsible for and is not for handheld or car radios. The reason that it is not in the original budget is because these things were going forward in synch across the other agencies, sometimes it is a hospital system or a fire department. The ability to synch with other first responders. These tend not to have an economic impact, or they are from a highly restricted source. We have a General Fund restricted reserve on the books for \$300K which is set aside for this NCRCN expense which you see this in the next agenda item. These funds were set aside for when the NCRNC is ready to move forward with upgrades.

Zack Mozer; we have been anticipating this – fees that we charge PSD, PFA, UCHealth have been in excess of the actual NCRNC expenses. We are actually cashing in the excess of those fees to upgrade that infrastructure.

Kelly Ohlson; I was just responding to the lead summary which said this expense was unanticipated. Thank you

Kelly Ohlson; question regarding Police reimbursable overtime – when this work isn't on behalf of the City of Fort Collins. Why aren't the different organizations who hire police officers responsible to pick up the overtime?

Zack Mozer; the bulk of this request is forward looking and is primarily for overtime at football games.

Kelly Ohlson; maybe there should be a rate between regular time and overtime that the organization would pay. Also, why wouldn't we be getting reimbursed 100% for overtime work done serving PSD?

### ACTION ITEM:

Kelly DiMartino; I will take this as a follow up item and work with Zack.

Simple answer – we aren't as a city doing any subsidizing for those external organizations when they hire officers. The officers are doing their full-time base job and when they take these jobs, they really are overtime at that point. These jobs are not built into their ongoing schedules, so they are additional.

Kelly Ohlson; this is voluntary overtime on the officer's part not like overtime required by the City of Fort Collins. They are not required to go to the football games or to direct church traffic. Wouldn't have to be overtime.

Kelly DiMartino; we can discuss this offline – there may be a disconnect as we still have a legal obligation to pay them when they are working over 40 hours.

Kelly Ohlson; regarding police resource officers on PSD duty - why are we not fully reimbursed for that overtime? If PSD asks for overtime, the expense should be theirs.

Lawrence Pollack; the resource officers are a 50/50 split between PSD and the city. If we owe them overtime based on labor laws, then we split that cost with PSD.



Kelly Ohlson; the 50/50 split is not logical or rational to me.

**ACTION ITEM:**

Kelly Ohlson; I would like to see a breakdown for the purchase of the Civic Center condos. I know there is some income coming in.

Travis Storin; we will incorporate information about the purchase of the condos and the issues that arose into the Council materials when we bring this forward.

Emily Francis; I had the same questions about police overtime and cost sharing levels. I am curious about the IGA we have with CSU regarding football games. Please include me in the follow-up.

Lawrence Pollack;

**Summary**

- Police overtime cost sharing and whether that is a volunteer event such as CSU football games.
- School Resource Officers (SROs) for PSD – existing agreements and overtime sharing
- As part of the materials when we bring this forward to the full Council, we will provide additional information regarding the purchase of the Civic Center condos and the unexpected expenses that arose

Emily Francis; we don't charge organizations for police officers to for example, to direct traffic (church, football games)

Lawrence Pollack; ultimately that is what they are paying for, police time, they use a police vehicle and are wearing their uniforms as a sworn officer. So, they are representing the city – with materials and supplies that we have purchased. The entity is just paying for the incremental cost incurred by that activity that is not city sponsored. Some of this is arrears, but we know there is a lot coming up with CSU football games.

**C. 2021 Fund Balance Review**

Blaine Dunn, Accounting Director

**EXECUTIVE SUMMARY:**

The attached presentation gives a status of fund balances and working capital. Fund balances are primarily considered for funding one-time offers during the Budgeting for Outcomes process. To a lesser extent, available monies are also used to fund supplemental appropriations between BFO cycles.

**GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED**

General update to Council Finance Committee

**BACKGROUND/DISCUSSION**

To aid in answering the question of what funding is available to support emerging issues and initiatives in the next budget cycle. In each fund the balances are shown vertically by the accounting classifications. The amounts are then additionally categorized into Appropriated, Available with Constraints, and Available for Nearly Any Purpose.

*Appropriated, Minimum Policy or Scheduled* is comprised of minimum fund balances established by policy, funds from the 2021 balance that have been appropriated in 2022 and amounts for projects specifically identified by voters. An example of the latter is Community Capital Improvements Plan.

*Available with Constraints* are those balances available for appropriation but within defined constraints. An example are donations received through City Give. They are restricted for the purpose of the donation, but still available for appropriation.

*Available for Nearly Any Purpose* are balances that are available for appropriation at the discretion of the City Council.

## DISCUSSION / NEXT STEPS

Travis Storin; we would normally bring this forward in May or June but the Council Finance Committee agenda has been full. This timing might be even better.



Community Capital Improvement Plan - Year End 2021 - \$20.5M					
	2020	2021	Appropriated, Min. Policy, or Scheduled	Available but with some Constraints	Available for Nearly Any Purpose
<b>Restricted</b>					
Available for ballot projects	7.5	11.0	-	11.0	-
City Park Train	0.1	0.1	0.1	-	-
Gardens Visitor Center Expansion	-	0.1	0.1	-	-
Nature in the City	0.2	0.3	0.3	-	-
Affordable Housing Fund	0.4	0.6	0.6	-	-
Arterial Intersection Imprvmnt	1.2	1.2	1.2	-	-
Bicycle Infrastructure Imprvmnt	0.2	0.2	0.2	-	-
Bike/Ped Grade Separated Cross	1.9	2.0	2.0	-	-
Lincoln Avenue Bridge	0.3	0.3	0.3	-	-
Pedestrian Sidewalk - ADA	0.2	0.1	0.1	-	-
Willow Street Improvements	0.1	0.1	0.1	-	-
Linden Street Renovation	3.2	2.3	2.3	-	-
Carnegie Bldg Renovation	-	2.2	2.2	-	-
<b>Year End Total</b>	<b>\$ 15.3</b>	<b>\$ 20.5</b>	<b>\$ 9.5</b>	<b>\$ 11.0</b>	<b>\$ -</b>

Planned use of \$9.2M in reserves for SE Community Center in 2023



Community Capital Improvement Plan slide (see above)

Kelly Ohlson; at the bottom, is says \$9.2M in reserves for SE Community Center in 2023. I am assuming that is in addition to the money that was set aside.

Blaine Dunn; the reason we wanted to call that out specifically is that the \$9.2M will come from the \$11M showing on the first line of the slide above (\$11M Available for ballot projects). The way we built out the revenue model and the projections for CCIP is that we started to build a plan so that when we needed that money for the SE Community Center, we could pull from that fund balance.

Kelly Ohlson; thank you - confirming that is money set aside for this particular purpose, correct?

Blaine Dunn; yes, that is correct.

Kelly Ohlson; your explanation was helpful – confirming that is the money we planned on spending and we may spend more



## General Fund Balances

- \$2.5M Land-bank program inventory, held at lower of cost or market
- \$7.7M is an emergency reserve required by TABOR, equal to 3% of qualified governmental revenue; City also has policy setting an additional \$34.2M aside
- Traditionally fund balances are assigned for camera radar and photo red-light, public safety dispatch system, affordable housing and waste innovation
- \$13.2M is set aside for prior year purchase orders, reappropriation, and budgeted use of reserves

General Fund Balances (see above)

Kelly Ohlson; What does the word 'traditionally' mean on the 3<sup>rd</sup> bullet of the slide above? I never heard of this.

Blaine Dunn; in the past, we have received direction from Council Finance and from previous Councils to continue to set these items aside as assigned balances. If Council would like to give us different direction, we will certainly change that.

General Fund - Year End 2021 - \$86.5M						
	2020	2021	Appropriated, Min. Policy, or Scheduled	Available but with some Constraints	Available for Nearly Any Purpose	
<b>Assigned - Minimum 60 day Policy</b>	\$ 31.0	\$ 34.2	\$ 34.2	\$ -	\$ -	
<b>Non-spendable</b>						
Landbank inventory	2.8	2.5	2.5	-	-	
Udall Endowment	0.1	0.1	0.1			
<b>Restricted</b>						
TABOR Emergency	6.7	7.7	7.7	-	-	
Police Radio Network	0.2	0.3	0.1	0.2	-	
Donations & Misc	0.6	1.0	0.4	0.6	-	
<b>Committed</b>						
Traffic Calming	0.1	-	-	-	-	
Culture & Recreation	0.3	0.3	-	0.3	-	
Affordable Housing Land Bank	0.1	0.1	-	0.1	-	
Police Regional Training Facility	0.1	0.1	-	0.1	-	
<b>Assigned</b>						
Prior Year Purchase Orders	4.0	6.9	6.9	-	-	
Manufacturing Use Tax Rebate	0.4	0.2	0.2	-	-	
Digital Equity	-	0.1	-	-	0.1	
Golf Irrigation System	0.4	0.4	0.4	-	-	
Camera Radar	1.4	1.2	-	-	1.2	
Waste Innovation	0.2	0.2	-	-	0.2	
Cultural Services	0.4	0.5	-	-	0.5	
Reappropriation	0.9	0.8	0.8	-	-	
Budgeted use of reserves	7.9	5.5	5.5	-	-	
Child Care Needs	0.3	0.3	-	-	0.3	
Police Programming	0.6	0.6	0.6	-	-	
Hughes Land Purchase	-	2.0	-	-	2.0	
ERP Replacement	-	2.5	-	-	2.5	
Municipal Court Renovation	-	3.0	0.7	-	2.3	
Inflation Contingency	-	4.0	-	-	4.0	
<b>Unassigned</b>	4.3	12.0	6.3	-	5.7	
<b>Year End Total</b>	<b>\$ 62.8</b>	<b>\$ 86.5</b>	<b>\$ 66.4</b>	<b>\$ 1.3</b>	<b>\$ 18.8</b>	

Kelly Ohlson; not all fund balances go to the four categories listed above?

Blaine Dunn; correct, for example under assigned above, we have \$200K set aside for Waste Innovation. If Council wanted to bring something forward in the waste innovation space, we could pull from that amount.

Kelly Ohlson; so, with budgets coming up, seems like every city does it this way, the manager presents a recommended budget and we are supposed to make it the Councils and residents budget. So, when cuts are brought up and panic sets in, there always seems to be money that is automatically available for what Council wants to add into the budget instead versus cutting. I would like to know going into budget, how much money Council has available for the things they want to put above the line. Is it the \$5.7M or?

Travis Storin; everything you see here is money in the bank. Using last year as an example, where we actually generated those dollars through a more regressive revenue forecast. It was something of a calculated risk saying we could increase the revenue forecast which generated some additional funding. I don't have at my finger tips the amount of the \$188.M reserves that are put to use in the budget but I do know that it is spelled out in the budget document that is being published tomorrow. I do predict that BFO this year will be more of a tradeoff conversation because we went pretty deep on use of reserves. We will be clear in our work session materials on what amount is being used and what the untapped reserves are that Council can tap into.

Kelly Ohlson; it will be very helpful to know how much money we have before we just have to start moving things in the recommended budget. There are two ways we can go, we can move things below the line and then

move things above the line for priorities or it can be just new money or my preference would be a combination of those things but we do need to know how much money we have to work with.

Travis Storin; a friend just messaged with some information, the recommended budget uses \$11.5M of General Fund Reserves and the reason that we characterized the \$18.8M as available for any purpose versus the \$5.7M that is unassigned - you see the balances above the \$5.7M that make up the total of \$18.8M in the slide above – there is either a management assignment or informal Council guidance (ie: not an adopted ordinance) that we are going to need to set that money aside.

Kelly Ohlson; I see the \$5.7M in the slide above as ‘unassigned’ but you say you have intent there. What am I missing?

Travis Storin; we are in the rear-view mirror as this is year end 2021, we account for what is in the 2022 budget but we have not yet adjusted these balance for what is proposed in the City Managers’ Recommended 2023 - 2024 budget.

## **Other Business:**

Topic 1 of 2

### **Parklane Mobile Home Park / New Life Mobile Homes**

Requesting an Appropriation Ordinance authorizing a grant of \$125K to bring forward at the September 20<sup>th</sup> City Council Meeting.

Requesting \$125K from the General Fund reserves to be used for forestry, landscaping (tree trimming, underground infrastructure, curb and gutter and pavement) at what was known as Parklane Mobile Home Park but has a new name of New Life Mobile Home Park. The residents purchased the property and changed the name. The city has previously made some verbal commitments around this when the mobile home park residents first indicated they were going to buy the park for themselves.

Kelly Ohlson; is this in the city limits?

Caryn Champine; it is in the county but is part of our Growth Management Area (GMA) and is part of the Mulberry enclave as well.

Kelly Ohlson; that is a stretch for me because it is not in the city limits, but I will go along for the ride. If this were located inside the city limits this would be a no brainer. What did the county contribute?

Caryn Champine; Larimer County contributed \$1M toward the purchase. The City of Fort Collins didn’t contribute anything toward the purchase.

Emily Francis; do we fund other things outside the city limits but within the GMA? This would be good information to have for our future discussion. I know they have a range of needs so also how we decide what we are going to fund.

Travis Storin; we will take that back for discussion as I don’t think I can respond now regarding expenditures within the GMA but outside the city limits.

Caryn Champine; We don't necessarily have a formula to use in these types of circumstances. This is a unique dynamic and a new space for us. The approach we took was first to gain an understanding of what the Infrastructure assessment was and as Travis described it includes; tree trimming, underground infrastructure improvements that are needed as well as curb and gutter and pavement. All of that is upwards of \$900K in total costs which would be absorbed by the residents over time. The approach we took was to look at the total cost of what they are getting as an assessment. There are approximately 60 units in this community, so we thought through a methodology of \$1,500 - \$2K per unit to give us some measure of how to help those residents offset their costs. The way we write this contract which will be a grant to them that will either be treated as a reimbursement approach or money coming forward. We are working with the City Attorney's office to finalize the details on what that contract will look like if this is supported by Council. The contract would reference the infrastructure assessment.

Emily Francis; I think that makes sense – thank you

## **Other Business**

Topic 2 of 2

### **9/11 Memorial at Spring Park**

PFA has contributed \$80K – We have raised to date \$150K in charitable donations - Staff is proposing a \$200K appropriation from the Neighborhood Parkland Fund which has \$6.7M in reserves on hand that are available. We anticipate this will bring additional donor activity. This is a dedicated funding source for a dedicated purpose type of proposition.

Kelly Ohlson; we should be seeing the top ten priorities of staff and then together, we could work out what the priorities are and have some context of how we are spending money. As it stands now, we do not have any idea what the other options are (trade-offs, opportunity costs), We are planning to do something new when we are dealing with shortfalls for existing parks refresh.

Travis Storin; just to clarify the Neighborhood Parkland Fund - any reserve balance we have accumulated can only be used for new facilities so unfortunately we are not able to use these funds for refresh / asset management needs.

Nina Bodenhamer; I have been interfacing with this project since we started City Give. It had been in process for 3 years at that time. The partnership that was created between PFA and the city – this piece of the park is adjacent to Fire Station #3 and this work will create brighten and add new purpose and amenities – looking at how we increase bike access and visibility. We have raised almost \$200K in donations and have spent some of that on design and taking the design documents to construction documents. This is in a way creating a refreshed purpose in a dated neighborhood park, giving it a new sense of purpose, and leveraging the phenomenal community asset we have which is the steel beam from the Twin Towers.

Kelly Ohlson; what is the total cost? We don't want this coming back requesting additional funds to complete

Nina Bodenhamer:       \$200K appropriation from the Neighborhood Parkland fund  
                                  \$80K from PFA  
                                  \$100K in cash on hand

The total parks budget was \$650K - we have an outstanding construction total of \$500K We are hearing from donors, 'come see us when you are building the park'. This appropriation would allow us to move toward a groundbreaking. The direction I have received is that we will either scale the park based on the funds we have available, and we will continue fund raising to close that gap.

Kelly Ohlson; I will support this if other Council Finance Committee members and Council support

Julie Pignataro; you said depending on donations, it could be scaled but would that increase the scale of operations and maintenance – how would we cover that?

Nina Bodenhamer; maintenance will be absorbed into the current maintenance of Spring Park. There is one piece that warrants set aside money which is the water element, reflecting pool to be located under the beam. We recently had a donation from our local VFW toward the maintenance of the veterans' memorial in Edora Park which was put that money into a separate non-lapsing business unit to hold it until needed. A similar reserve for future maintenance here.

Julie Pignataro; this is so relevant to the discussions we have been having where we have completely overshot our current maintenance for parks. In the grand scheme of things, this seems little, but ten more of these and then what? Do you have a response to that statement?

Nina Bodenhamer; When it was conceptualized, it was going to be fully supported by fund raising. In the absence of City Give, there was no toggle to say what is the community feasibility? Everyone wants to believe that donors will come in and fund our dreams – there has been enormous donor support and a valuable partnership with PFA. It has also been sitting there for 5 years with these questions. I believe that we now have a process in place to ask these hard questions before we go out and do any community engagement, design, or fundraising. I believe we now have an improved process, so we don't go down this path again. A case in point would be our charitable project at Eastside Park – the process at that time was we do not move forward until we have alignment with strategic priorities and the money is fully raised. This is kind of us making the best of a situation we inherited. Donors have given, do we return gifts, or do we invest? PFA believes this is a worthwhile cause and they have invested \$80K.

Julie Pignataro; everyone on this committee thinks this is a worthwhile cause. I am interrupting what I am hearing as this is our lessons learned project and we learned new things about how the process should work going forward. How did we land on \$200K?

Nina Bodenhamer; this was Kurt Friesen, Victoria Shaw and I looking at what is available in that fund. What is an investment that can deliver the park to a reasonable standard without impacting future investments of that fund. This \$200K will take us to groundbreaking then we can scale but still deliver on our commitments, our promise, and our partnerships.

Julie Pignataro; is the water element definitely part of it?

Nina Bodenhamer; it is a reflecting pool to be located under the beam. It was a piece that was presented in the design document that \$180K of donation were given to this piece. A range of donors, residents, first responders. The reflecting pool requires minimal maintenance costs compared to splash pads, etc. as it's not flowing water.

Emly Francis; what are the other priorities we have with this funding and how does this fall within that? So, this gets us to groundbreaking, how much more will this cost?

Nina Bodenhamer; I have asked the parks planning team for construction costs including the general contractor. Based on that we have a gap of \$120K and we can chip away at that with donor gifts and / or scale the project. At groundbreaking, the money we have in hand will be the park that we deliver.

Kelly Ohlson; when this comes to us for a vote, could you please include in the AIS, what the next two neighborhood parks are as well as timing and anticipated costs. I am fine if Julie and Emily want to do this. I don't want to see this brought back requesting additional funding out of General Fund to finish this.

Julie Pignataro; is it worth making sure this doesn't end up on consent. We need to have a discussion and be transparent about the trade-offs and what we have learned in the process.

Emily Francis; if the questions we asked are addressed in the AIS, it could be on consent, and we could always pull it.

Meeting Adjourned at 6:20 pm





## **COUNCIL FINANCE COMMITTEE AGENDA ITEM SUMMARY**

### **Staff:**

Rebecca Everette, Planning Manager  
Megan Keith, Senior Planner  
Sylvia Tatman-Burruss, Sr. Policy and Project Manager

**Date:** October 20<sup>th</sup>, 2022

### **SUBJECT FOR DISCUSSION:**

E Mulberry Potential Annexation: Opportunities and Tradeoffs

### **EXECUTIVE SUMMARY**

In August 2022, City staff presented detailed financial modeling scenarios for the East Mulberry Enclave Area based on a set of assumptions, including potential annexation timing and levels of investment for Utilities and general City Services. The Council Finance Committee requested a follow-up presentation outlining the potential opportunities and tradeoffs of annexing the existing East Mulberry enclave in relation to Council priorities, community feedback and priorities outlined in existing adopted plans.

For the October Council Finance Committee meeting, staff has prepared a presentation and an attachment that outline opportunities and tradeoffs within the East Mulberry area related to potential future annexation. This summary is based on adopted Council priorities, community engagement conducted thus far, and priorities outlined in the Strategic Plan and City Plan. While the opportunities and tradeoffs highlighted in these materials are not meant to be an exhaustive list, they reflect the key takeaways for each “character area” within the broader East Mulberry Plan area. These opportunities and tradeoffs will be further explored and addressed within the upcoming East Mulberry Plan Update.

### **GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED**

1. Do the materials presented adequately address requests from the August 1 Council Finance session?
2. Are there any additions or modifications staff should make before sharing similar materials at the November 8 Council Work Session?

### **BACKGROUND/DISCUSSION**

Staff has been modeling financial scenarios related to potential future annexation of the East Mulberry enclave with an outside consultant, Economic Planning Systems, since late 2020. Staff has also been working on an update to the East Mulberry Plan, including extensive community engagement, since early 2021. Recent full Council discussions on this topic include:

- October 2021: Discussion of E Mulberry Plan Vision, possible annexation scenarios and a high-level presentation of financial modeling over a 20-year time horizon.
- April 2022: City Council and County Commissioner discussion of potential future annexation and the existing Intergovernmental Agreement for Growth Management.
- April 2022: Work session focused on overall community approach to annexation and growth management, including implications for the East Mulberry Enclave area

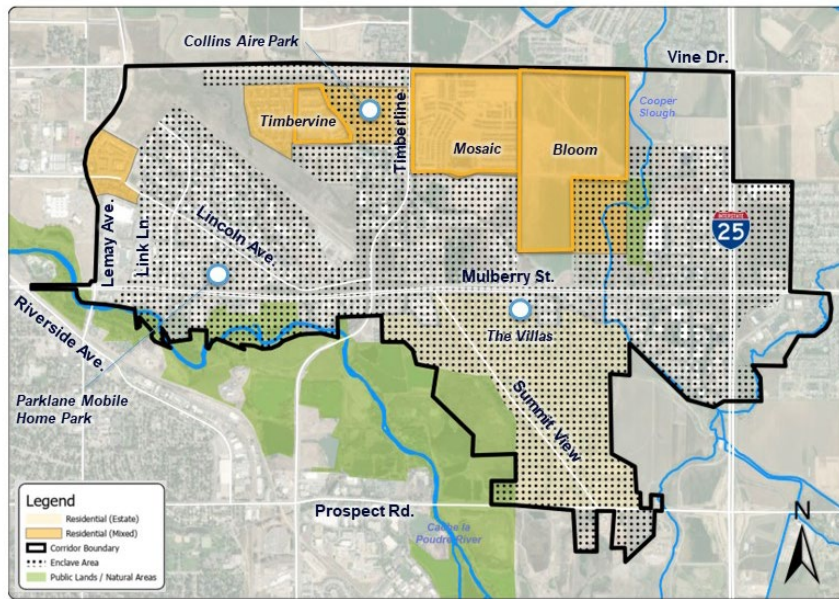
#### **Next Steps:**

- November 8, 2022: Council Work Session, which will include opportunities and tradeoffs for the East Mulberry Plan Area and a recap of the summary financial metrics and modeling for the East Mulberry Enclave.
- February 2023: Council Work Session focused on East Mulberry Plan Update (draft plan)
- February/March 2023: Consideration of adoption of the East Mulberry Plan Update
- *Note: There are currently no scheduled Council actions related to annexation timing or phasing.*

#### **ATTACHMENTS:**

1. East Mulberry Character Areas: Review of Opportunities and Tradeoffs
2. East Mulberry Council Finance Slide Deck

## East Mulberry Residential Character Area



*Contains most of the existing and planned housing in the plan area, including existing mobile home parks.*

### Key Opportunities:

- Mobile Home Park Preservation
- Application of other Affordable Housing Preservation Tools
- Apply City development code and land use priorities to future projects
- Address infrastructure deficiencies

### Key Tradeoffs:

- Limited sales tax generation
- Existing stormwater and street infrastructure to serve residential areas is sub-standard.

## Mobile Home Park Preservation

Within the East Mulberry area, there are multiple mobile home parks, one of which is currently for sale. These mobile home parks are not currently zoned for preservation. The City of Fort Collins recently created a zone district specifically for the purpose of mobile home park preservation.

Current number of residential units or mobile homes within each existing mobile home park:

- Collins Aire Park: 535 homes (currently for sale, as of 10/10/2022)
- The Villas: 48 homes
- Nueva Vida (formerly Parklane): 68 homes

## Application of other Affordable Housing Preservation Tools

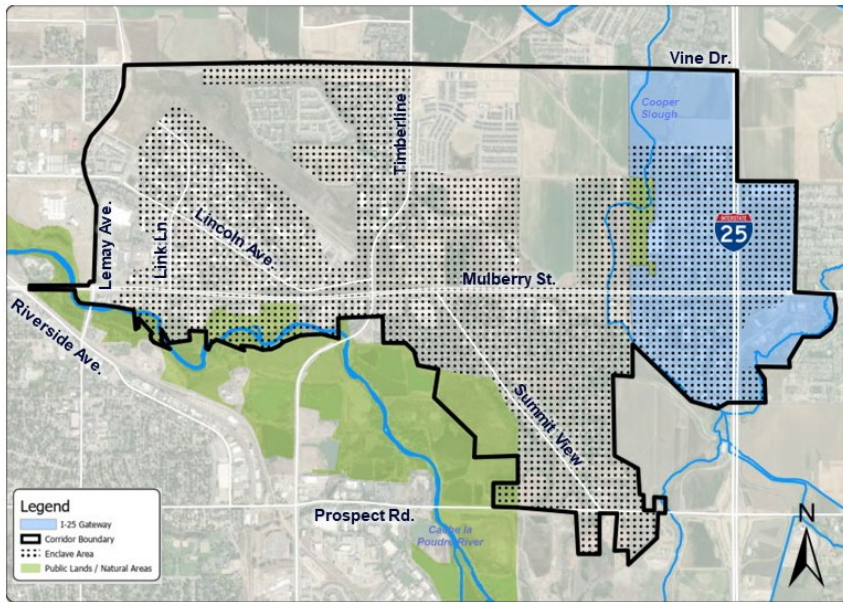
- Potential to utilize the City's Land Bank program and to partner with a community land trust to preserve affordable housing in the area
- Application of potential future resources for affordable housing as implementation of the Housing Strategic Plan

## Address Infrastructure Deficiencies

- Stormwater infrastructure, pedestrian access and transit availability are very limited or absent in many areas within the enclave.
- With over 2,500 units of housing planned or recently developed (Mosaic, Timberline, and Bloom), multi-modal connections and access will become increasingly necessary to accommodate existing and future residents.

Opportunity	Council Priority	Strategic Plan	City Plan
Mobile Home Park Zoning		1.8: Preserve and Enhance mobile home parks as a source of affordable housing	Increase availability of affordable housing
15-minute community concept	#30: Implementation of 15-minute community concept	6.5: Maintain existing and aging transportation infrastructure	Supporting a sustainable pattern of development

## East Mulberry I-25 Gateway Area



*The primary eastern gateway into Fort Collins houses a variety of existing uses including unique industrial uses.*

### Key Opportunities:

- Improve Mulberry as a regional connector
- Improve aesthetics and safety at eastern gateway
- Enhance and preserve natural features

### Key Tradeoffs:

- City assumes responsibility and cost associated with higher police call volume

## Improve Mulberry as a Regional Connector

The E Mulberry corridor and I-25 intersection is an important gateway into the northernmost portion of the Fort Collins community. While CDOT maintains the I-25 and E Mulberry intersection, several changes could be made to improve the interchange along with modifications to the entire corridor to better accommodate multi-modal transportation.

## Improve Aesthetics and Safety at Eastern Gateway

- Upon annexation, Land Use Code standards would apply to new developments and businesses would need to come into compliance with some City codes after an amortization period, including lighting and signage.
- While Land Use Code standards would apply upon annexation, City staff is focused on preservation of existing businesses. Therefore, flexibility in standards and additions of uses in the Industrial zone district will be explored in the update to the East Mulberry Plan.
- Upon annexation, the City of Fort Collins could begin to partner on the redesign of the E Mulberry interchange
- Upon annexation, Fort Collins Police Services would begin to service the area at a level more consistent with urban level needs.

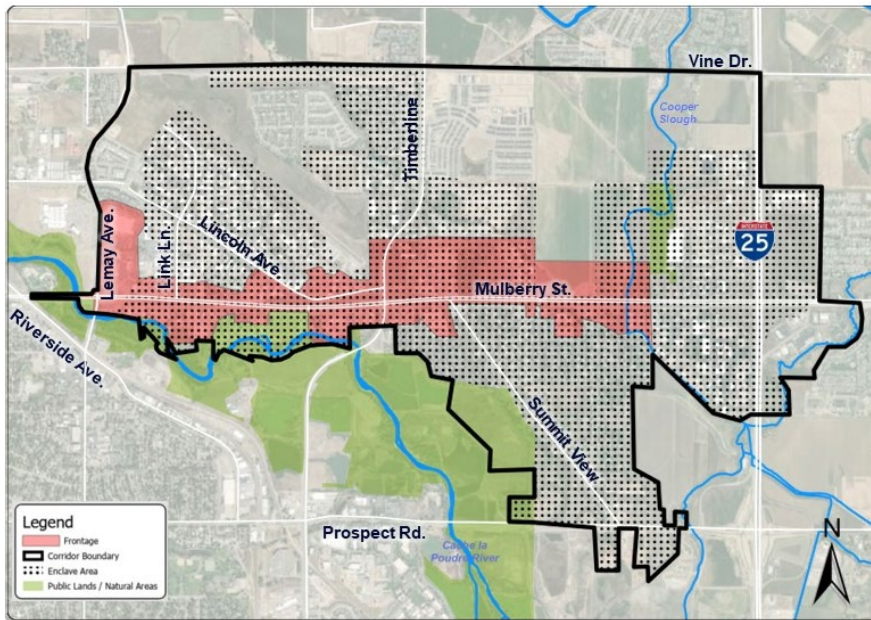
## Address Infrastructure Deficiencies

- The I-25 and E Mulberry interchange should be upgraded to safely accommodate increased traffic, stormwater run-off, and multi-modal transportation.
- The area lacks sufficient stormwater infrastructure, creating burdens on existing business owners. These burdens include increased risk of flooding in a large weather event and expensive stormwater containment requirements if a business owner wants to expand.

Opportunity	Council Priority	Strategic Plan	City Plan
Improve Mulberry as a regional connector	Advance regionalism by supporting and investing in regional transportation connections	3.2: Work with key partners to grow diverse employment opportunities in the community	Support local, unique and creative businesses
Enhance and preserve natural features like the Cooper Slough and Dry Creek	Protect and Enhance Instream River Flows	4.6 Sustain and improve the health of the Cache la Poudre River and all watersheds within Fort Collins	Supporting a sustainable pattern of development



## Frontage Character Area



*Mulberry Street and parallel frontage road is a key corridor for travel and business access.*

### Key Opportunities:

- Improve accessibility, safety, aesthetics, environmental health, and water quality along the Mulberry frontage. Improve aesthetics and safety at eastern gateway
- Address infrastructure deficiencies

### Key Tradeoffs:

- City assumes increased maintenance responsibilities.

The East Mulberry corridor is a prominent gateway into the northernmost portion of the Fort Collins community and is a major transportation spine for warehousing, manufacturing, fabrication, and maintenance businesses that serve the Northern Colorado region and the State of Colorado. While CDOT maintains the East Mulberry roadway, several changes could be made to improve truck access and better accommodate multi-modal transportation.

### Improve accessibility, aesthetics, and water quality

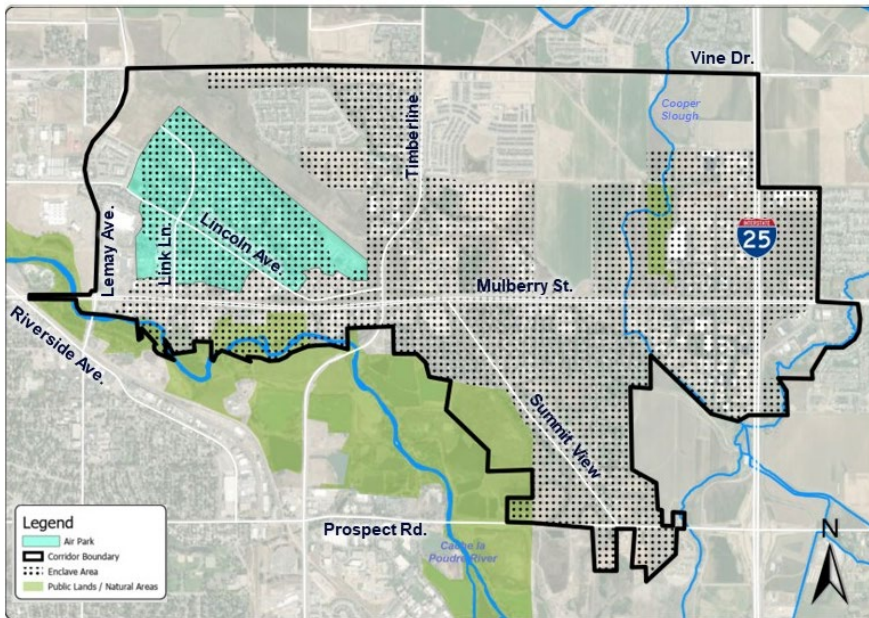
- Upon annexation, the City of Fort Collins could begin to partner on the redesign of the E Mulberry corridor
- Improvements would include upgrades to stormwater infrastructure to protect the Cache la Poudre waterway
- Upon annexation, Land Use Code standards would apply to new developments and businesses would need to come into compliance with some City codes after an amortization period, including lighting and signage.
- Improvements to access along the frontage roads could be achieved as future redevelopment occurs and the Fort Collins Master Street Plan is applied to prominent intersections and frontage access points.
- Upon annexation, Fort Collins Police Services would begin to service the area at a level more consistent with urban level needs.

### Address Infrastructure Deficiencies

- Stormwater infrastructure is especially problematic along the E Mulberry corridor, affecting businesses and residents to the north and existing residential neighborhoods to the south where flooding often occurs.
- Frontage road access is limited and dangerous along the E Mulberry corridor creating access issues for existing businesses and creating significant barriers to pedestrian and bicycle access.

Opportunity	Council Priority	Strategic Plan	City Plan
Improve accessibility, safety, aesthetics, environmental health, and water quality along the E Mulberry frontage	Improve safety for all modes and users of the transportation system	6.5: Maintain existing and aging transportation infrastructure	Supporting a sustainable pattern of development
Enhance and preserve natural features like the Poudre River and Cooper Slough	Protect and Enhance Instream River Flows	4.6 Sustain and improve the health of the Cache la Poudre River and all watersheds within Fort Collins	Supporting a sustainable pattern of development

## Airpark Character Area



*The Airpark includes a mix of industrial services, housing, restaurants, breweries, and serves as a new and small business incubator.*

### Key Opportunities:

- Ability to support establishment, retention and expansion of existing small businesses.
- Support new business incubation, start-ups, and creative industries.
- Coordinated approach to stormwater improvements.

### Key Tradeoffs:

- Risk of displacement and gentrification of existing businesses.
- City would inherit severely deficient or non-existent stormwater and roadway infrastructure, including frequent flooding issues.

The Airpark is home to a high concentration of industrial businesses that serve Northern Colorado and beyond. businesses are housed within warehouses and on large lots that provide easy truck access, outdoor storage, and access to I-25. The Airpark area also has several infrastructure deficiency issues related to stormwater, pedestrian access, deterioration of roadways, and aging overhead power lines.

### Support Existing and New Businesses

- While Land Use Code standards would apply upon annexation, City staff is focused on preservation of existing businesses. Therefore, flexibility in standards and additions of uses in the Industrial zone district will be explored in the update to the East Mulberry Plan.
- Due to site constraints and infrastructure deficiencies, staff is focused on creating requirements that address health and safety concerns in the case of business expansions, building upgrades and other minor improvements that would trigger site upgrades.
- City of Fort Collins staff could work closely with businesses to create Improvement Districts for improvements to local roads and help improve access to other City-led businesses support tools.
- Improvements could include upgrades to stormwater infrastructure to protect the Cache la Poudre waterway

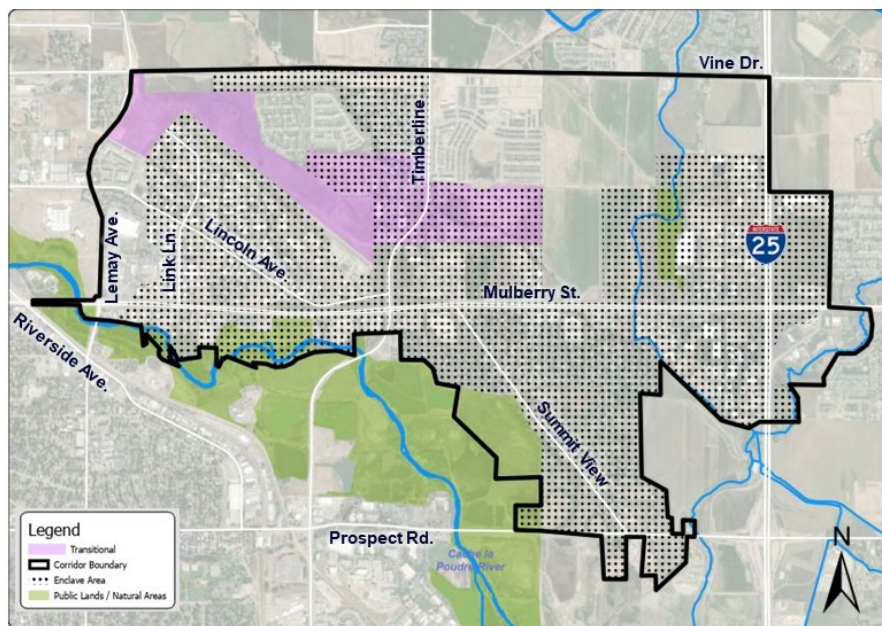
### Gentrification Risk

- City staff is sensitive to the risk of gentrification due to improvements within the area. While there are multiple factors involved in gentrification, the City would focus on limiting barriers to business expansion and working with business owners to identify and execute creative solutions that fit their needs while addressing citywide standards and priorities.

Opportunity	Council Priority	Strategic Plan	City Plan
Improve accessibility, safety, aesthetics, environmental health, and water quality along the E Mulberry frontage	Improve safety for all modes and users of the transportation system	6.5: Maintain existing and aging transportation infrastructure	Supporting a sustainable pattern of development
Enhance and preserve natural features like the Poudre River and Cooper Slough	Protect and Enhance Instream River Flows	4.6Sustain and improve the health of the Cache la Poudre River and all watersheds within Fort Collins	Supporting a sustainable pattern of development



## Transitional Character Area



*Transitional Areas are primarily undeveloped areas that could help unify and connect land uses in the Mulberry corridor.*

### Key Opportunities:

- Opportunity to address area-wide stormwater issues with key interventions in this area.
- Proactive zoning to meet current and future land use demand.
- Strategic roadway connections built to city standards.

### Key Tradeoffs:

- Funding for investments such as new roadways and other infrastructure may be dependent on new development.

The Transitional area is important to stormwater infrastructure, especially for businesses and residents within the Airpark area, and in relation to water quality and runoff to the Poudre River. International Boulevard is also planned for extension from the Bloom neighborhood and through the existing airport airstrip, creating an additional access point for residents of Timbervine and other surrounding neighborhoods to the rest of the community (including downtown area).

## Address Stormwater Infrastructure and Land Use

- Improvements are planned within this area and master planning for stormwater upgrades would begin upon annexation of the Airpark area and surrounding properties.
- Annexation of properties adjacent to the former airport area would provide an opportunity for rezoning
- Parcels that are still available for development could be rezoned to better match the industrial land uses within the Airpark area.

## Address Access Deficiencies

- As the area grows, requirements for access to new developments and existing neighborhoods will increase, putting pressure on existing roadways.
- While these access points will only be created as new development occurs, annexation and rezoning can encourage redevelopment and investment.

Opportunity	Council Priority	Strategic Plan	City Plan
Analyze the area for potential rezoning to better fit the needs in the area	Advance regionalism – collaboration regionally while maintaining the unique character of Fort Collins	3.2 Work with key partners to grow diverse employment opportunities in the community	Utilize tools and partnerships to leverage infill and redevelopment opportunities to achieve development consistent with City Plan and supporting the City's broader strategic objectives
Enhance and preserve natural features like the Poudre River and Cooper Slough	Protect and Enhance Instream River Flows	4.6 Sustain and improve the health of the Cache la Poudre River and all watersheds within Fort Collins	Supporting a sustainable pattern of development





## E. Mulberry Potential Annexation: Opportunities and Tradeoffs

Council Finance Committee

Rebecca Everette, Planning Manager

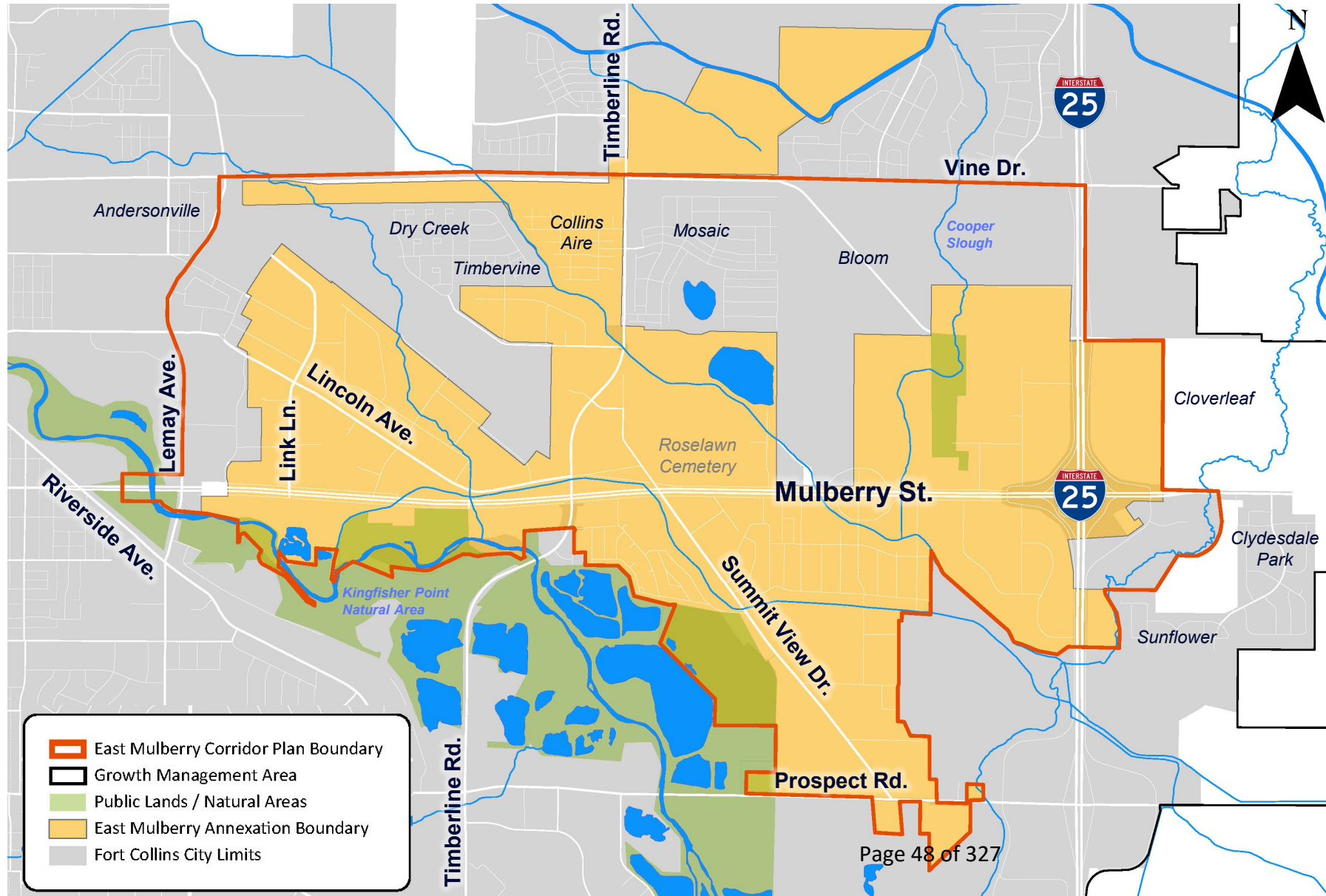
October 20, 2022

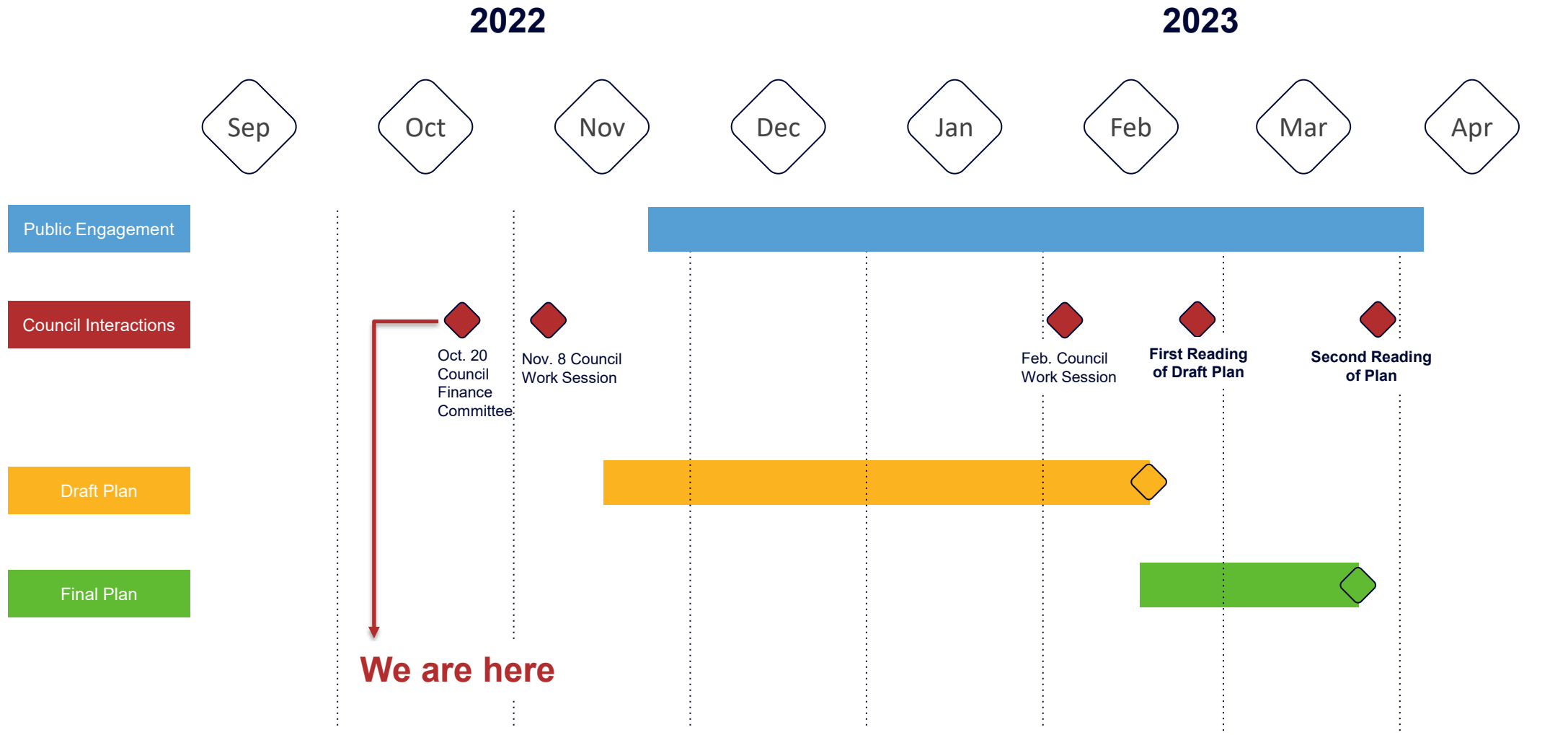
1. Reorientation to East Mulberry Plan Update
2. August 1 Council Finance Committee Requests:
  1. Tell a more complete story of benefits and trade-offs
  2. Show alignment with Council Priorities
3. Questions
  - Do the materials presented adequately address requests from the August 1 Council Finance session?
  - Are there any additions or modifications staff should make before sharing similar materials at the November 8 Council Work Session?





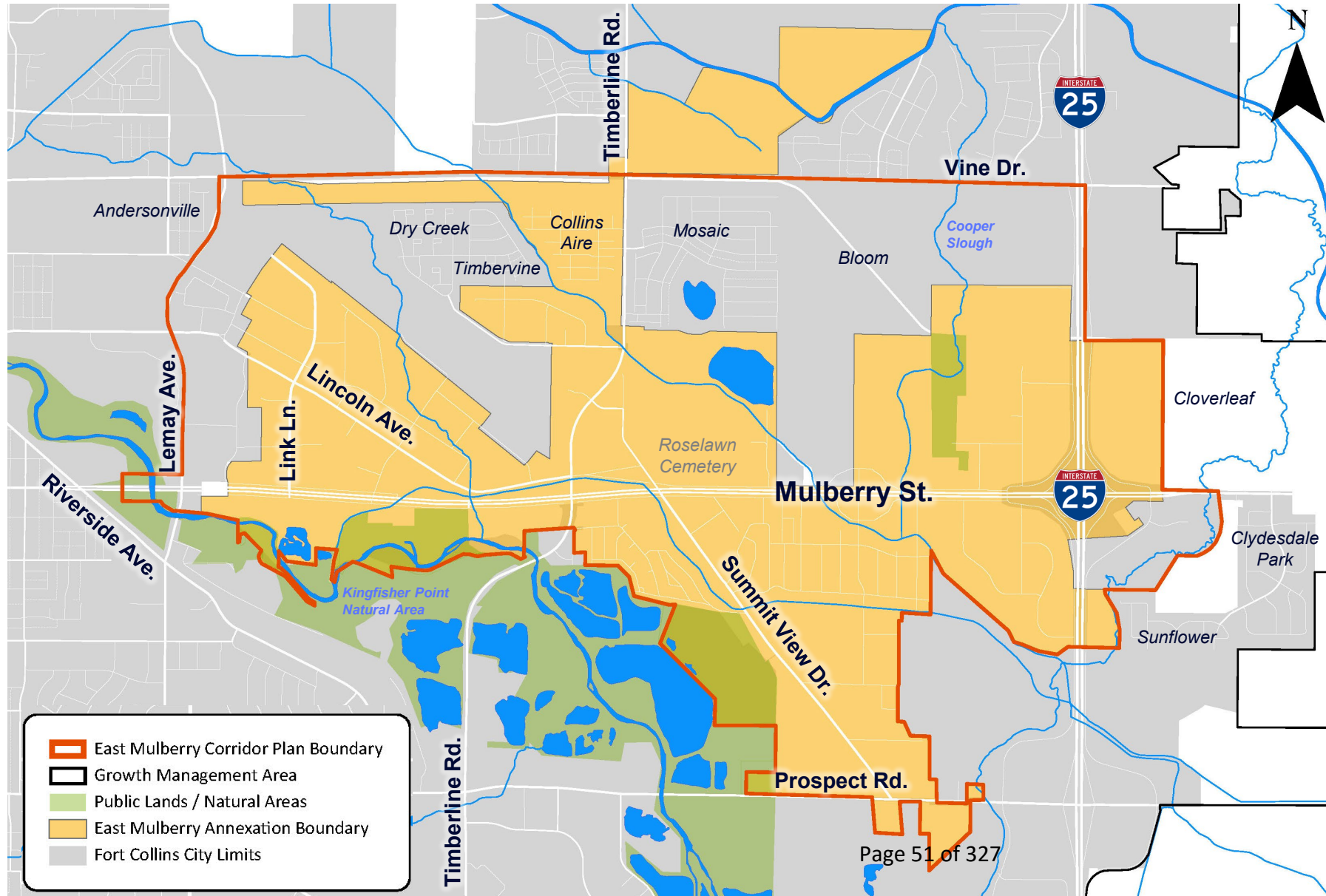
# East Mulberry Plan Update – Project Status







# Opportunities & Tradeoffs – Character Area Analysis



Opportunities and tradeoffs derived and synthesized from:

**Engagement Efforts:**

- Community Advisory Group – representation includes:
  - Plant Nursery Owner
  - Real Estate Agent
  - Restaurant Owner
  - Trailer Manufacturer and Retailer
  - Livestock/Ag Business
  - Microbrewery Owner
  - At Large Resident
- East Mulberry Business Focus Groups
- Community and Business Workshops
- Q&A Sessions for Residents and Businesses
- Internal engagement with City Departments

**Priorities Alignment:**

- 2021-2023 Council Priorities
- 2022 Strategic Plan
- City Plan



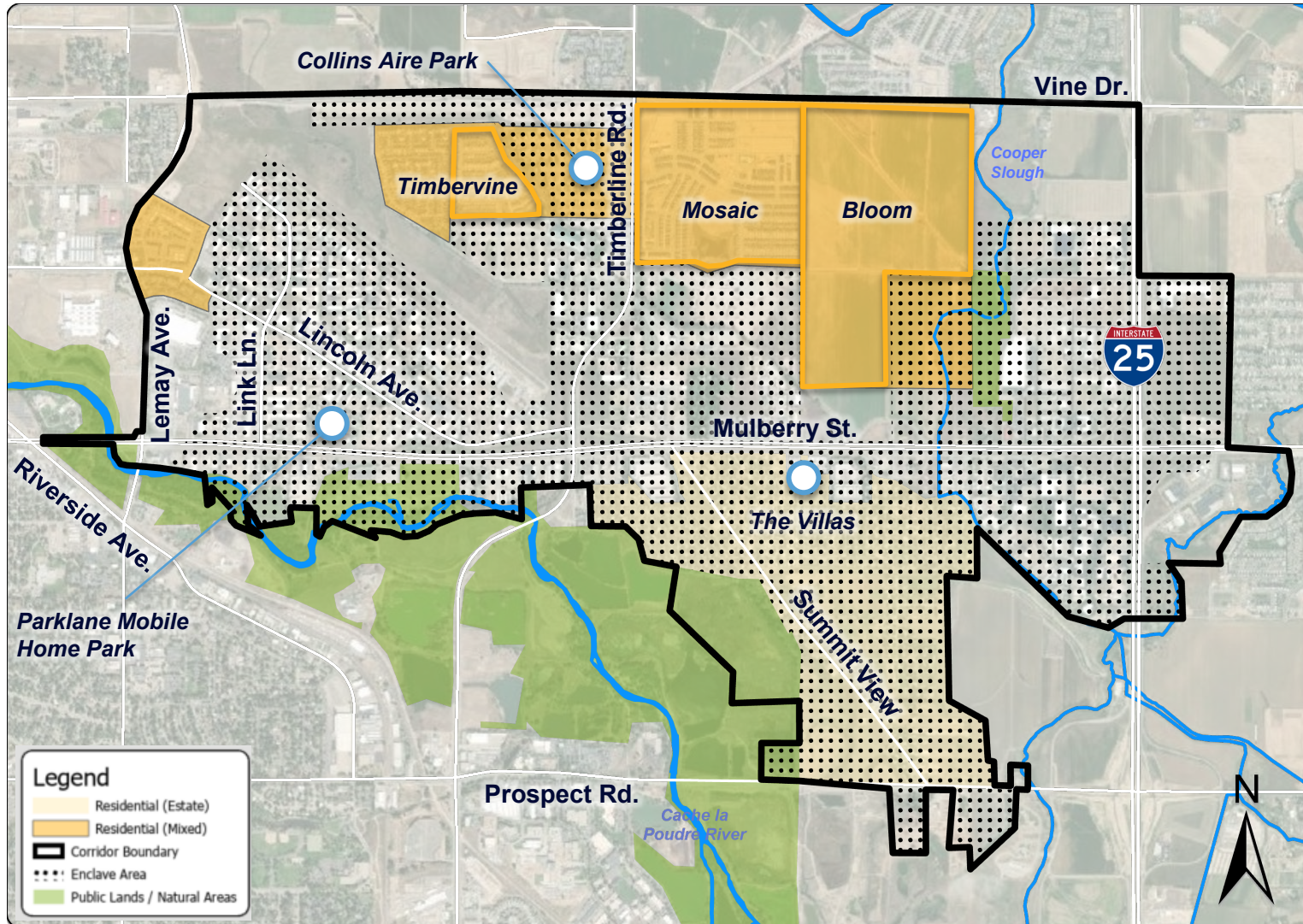
*Contains most of the existing and planned housing in the plan area, including existing mobile home parks.*

## Key Opportunities:

- Preserve mobile home parks and other affordable housing options.
  - **Alignment with Strategic Plan:**  
Mobile Home Park Preservation
- Apply City development code and land use priorities to future projects.
  - **Alignment with Council Priority:**  
Incorporate 15-minute City Concept to future neighborhoods

## Key Tradeoffs:

- Limited sales tax generation, except for online sales, within residential areas.
- Existing stormwater and street infrastructure to serve residential areas is sub-standard.





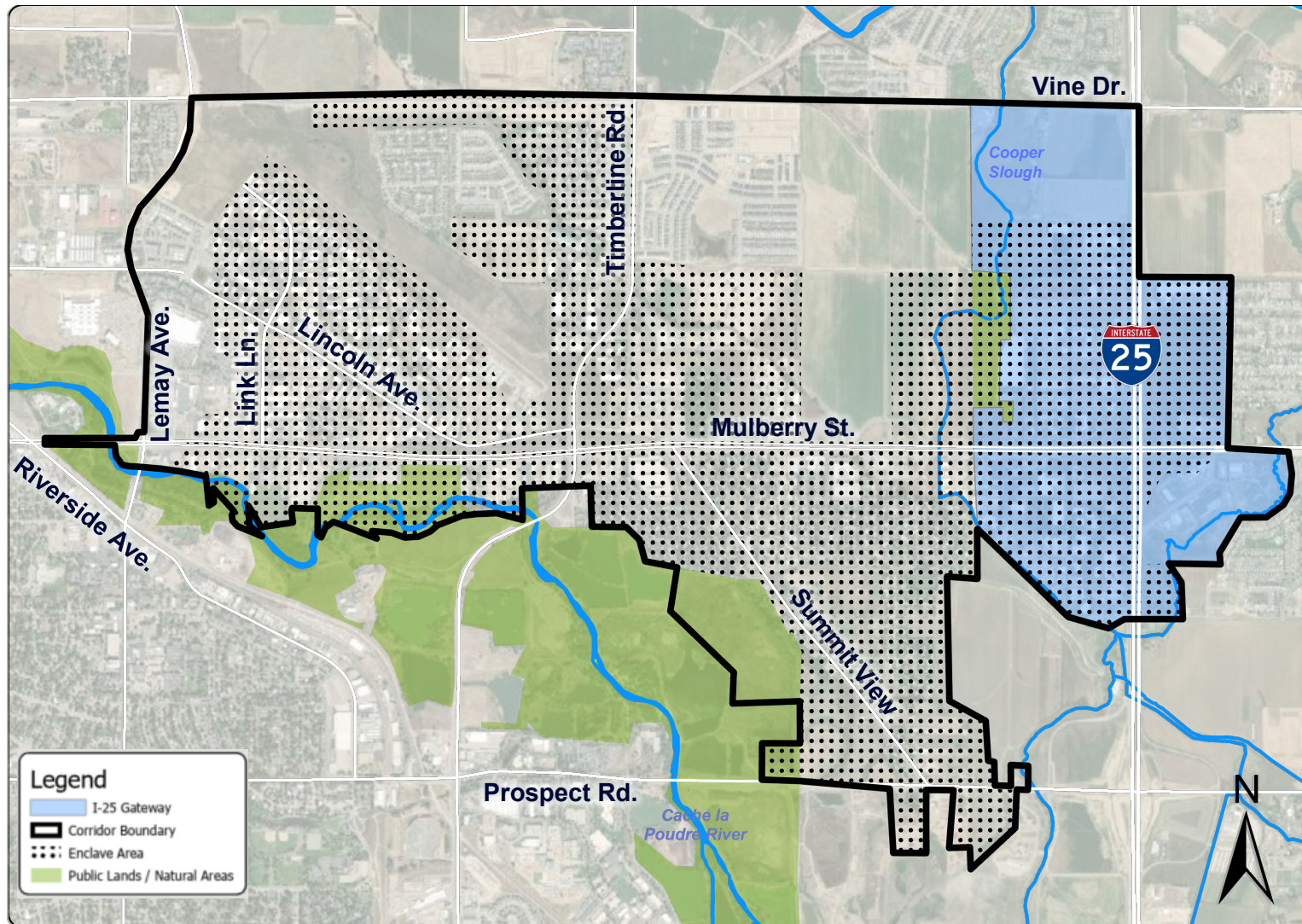
*The primary eastern gateway into Fort Collins houses a variety of existing uses including unique industrial uses.*

## Key Opportunities:

- Improve Mulberry Street as a regional connector.
  - **Alignment with Council Priority:**  
Advance regionalism by supporting and investing in regional transportation connections.
- Improve aesthetics and safety at Fort Collins' key eastern gateway from I-25.
- Enhance and preserve natural features like Cooper Slough and Dry Creek.
  - **Alignment with Strategic Plan:**  
Sustain and improve the health of the Cache la Poudre River and all watersheds within Fort Collins.

## Key Tradeoffs:

- City assumes responsibility and cost associated with higher police call volume near interchange.





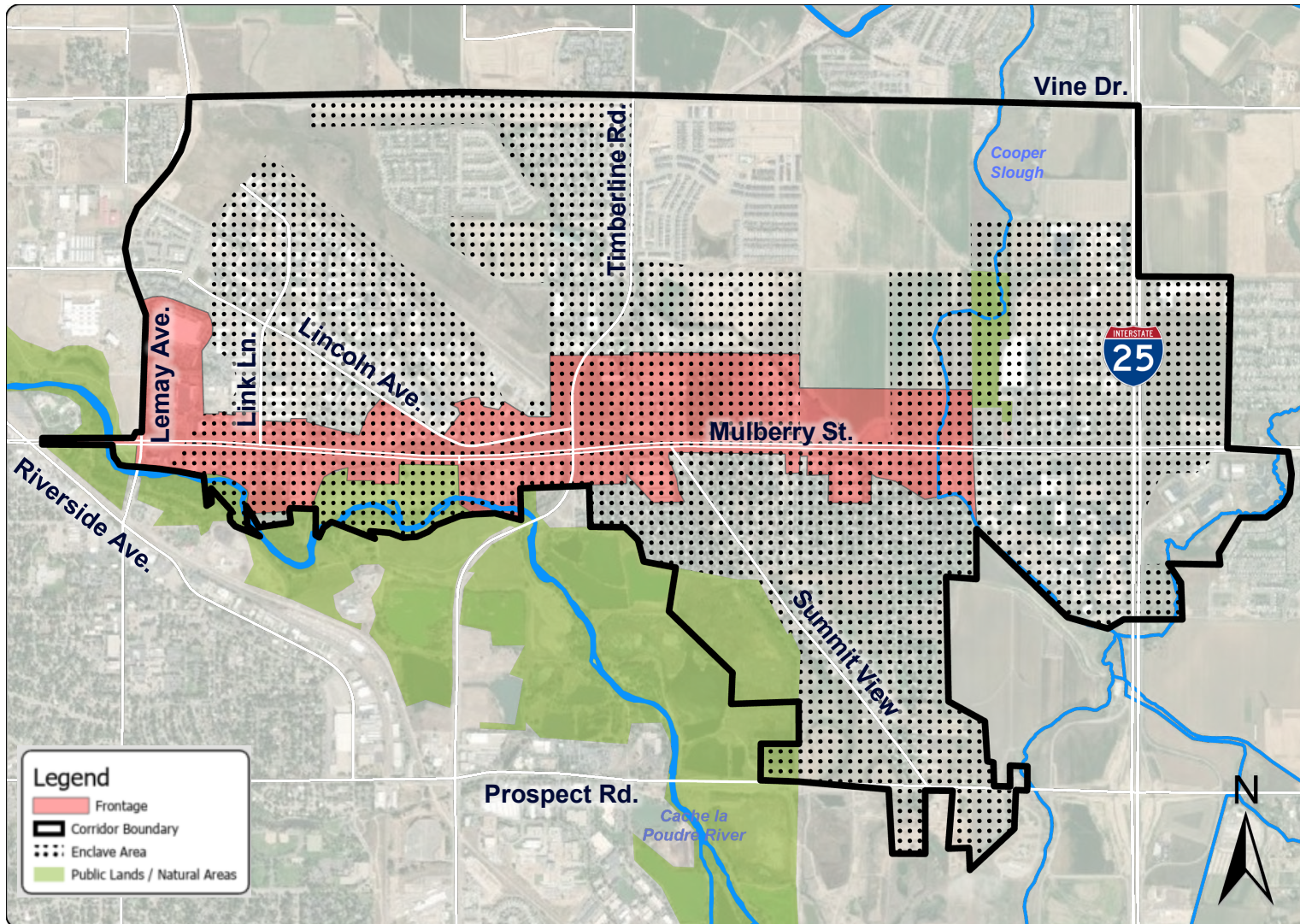
*Mulberry Street and parallel frontage road is a key corridor for travel and business access.*

## Key Opportunities:

- Improve accessibility, safety, aesthetics, environmental health, and water quality along the Mulberry street frontage.
  - **Alignment with Council Priority:** Improve safety for all modes and users of the transportation system
  - **Alignment with Strategic Plan:** Provide and maintain reliable infrastructure that directly improves community safety (including stormwater).
  - **Alignment with Council Priority:** Plan for, preserve, plant and maintain a safe, healthy and resilient urban forest and tree canopy.

## Key Tradeoffs:

- City assumes increased maintenance responsibilities.





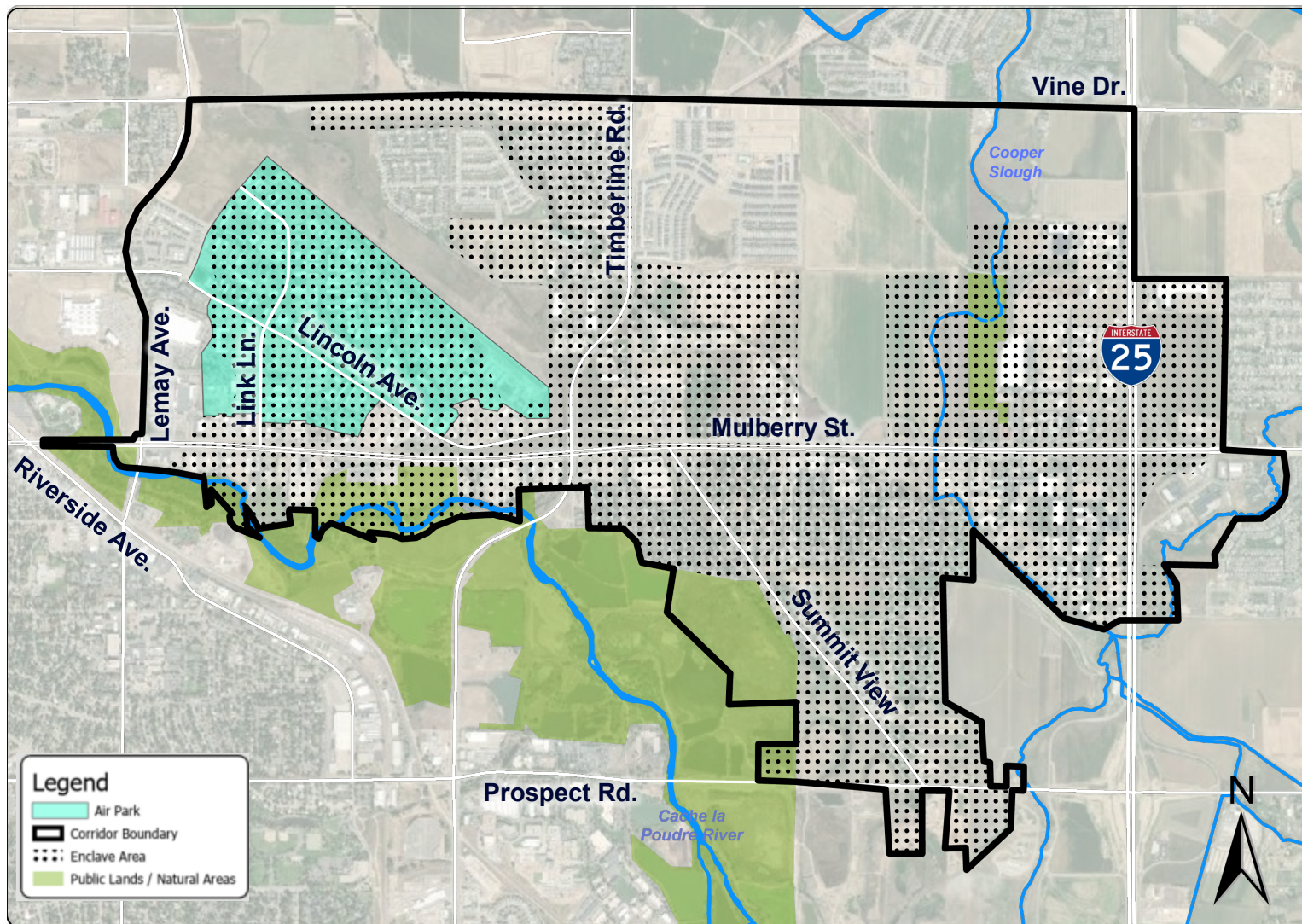
*The Airpark includes a mix of industrial services, housing, restaurants, breweries, and serves as a new and small business incubator.*

## Key Opportunities:

- Ability to support establishment, retention and expansion of existing small businesses. Support new business incubation, start-ups, and creative industries.
  - **Alignment with Strategic Plan:** Work with key partners to grow diverse employment opportunities in the community.
- Coordinated approach to stormwater improvements

## Key Tradeoffs:

- Risk of displacement and gentrification of existing businesses due to redevelopment pressure or cost of improvements.
- City would inherit severely deficient or non-existent stormwater and roadway infrastructure, including frequent flooding issues.









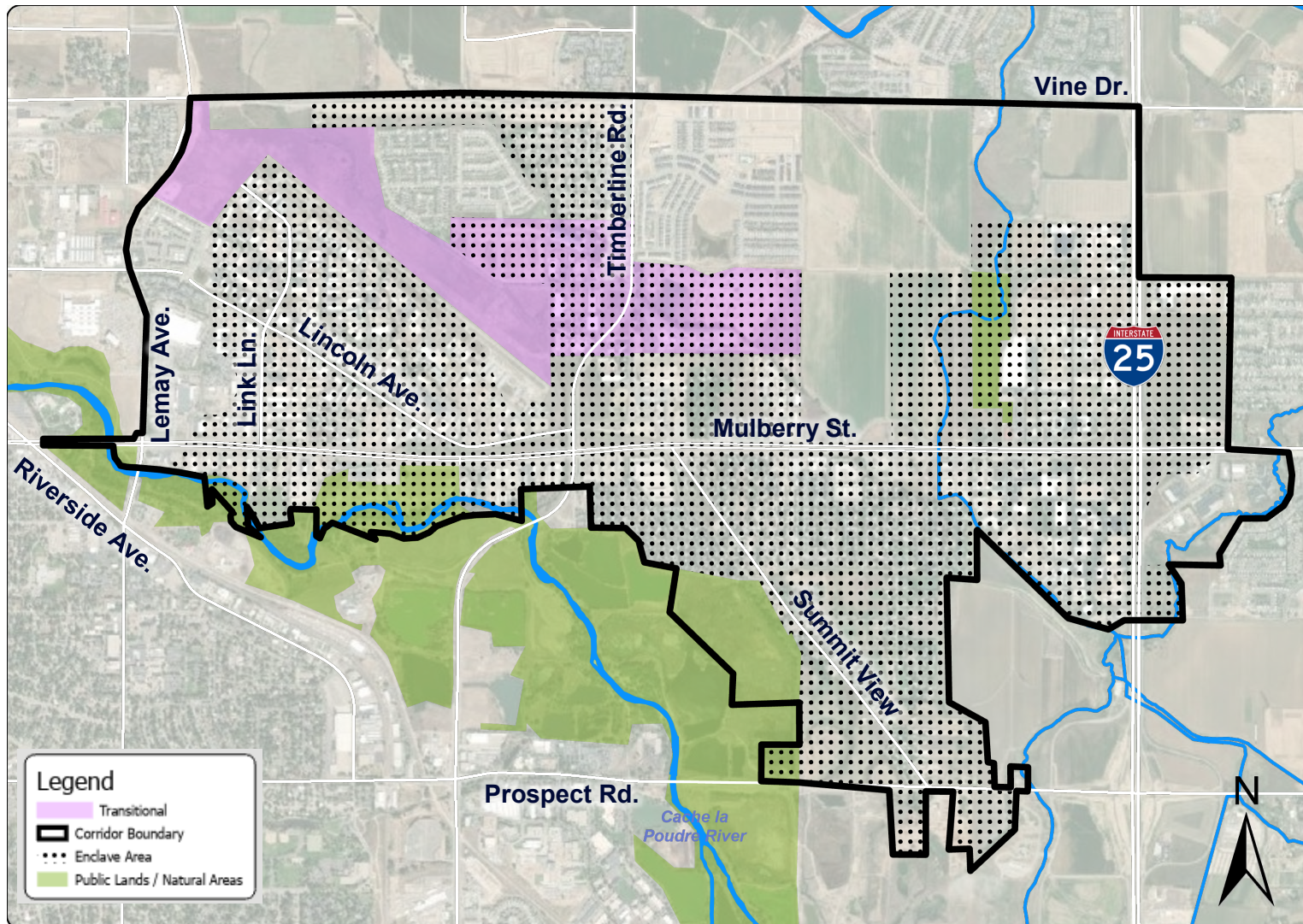
*Transitional Areas are primarily undeveloped areas that could help unify and connect land uses in the Mulberry corridor.*

## Key Opportunities:

- Opportunity to address area-wide stormwater issues with key interventions in this area.
- Proactive zoning to meet current and future land use demand.
- Strategic roadway connections built to city standards.
  - **Alignment with Strategic Plan:** Maintain existing and aging transportation infrastructure to keep the system in a state of good repair and continually address missing elements to meet community needs and expectations.

## Key Tradeoffs:

- Funding for investments such as new roadways and other infrastructure may be dependent on new development.



## Additional Input from City Departments

### **Challenges Related to a Voluntary Annexation Approach:**

- Voluntary annexation over time can pose challenges in implementing a long-term, large-scale vision
- Discontinuous annexed areas may result in longer law enforcement response times or barriers to providing the level of service other parts of the city receive
- Piecemeal annexation would make regional infrastructure improvements (e.g., flood mitigation) more challenging
- Insufficient street and stormwater infrastructure may create barriers for redevelopment and existing business expansion
- Opportunity cost - proactive roadway maintenance in annexed areas may prevent the need for wholesale replacement later

1. Do the materials presented adequately address requests from the August 1 Council Finance session?
2. Are there any additions or modifications staff should make before sharing similar materials at the November 8 Council Work Session?







## COUNCIL FINANCE COMMITTEE AGENDA ITEM SUMMARY

**Staff:** Lance Smith, Utilities Strategic Finance Director





**Date:** October 20, 2022

### SUBJECT FOR DISCUSSION

2023 Utility Rate Increases

### EXECUTIVE SUMMARY

In November, City Council will consider adopting the 2023 City Budget which includes operating revenues for each utility enterprise based on utility rates that include the following increases:

UTILITY		2023 PROPOSED INCREASE
	ELECTRIC	5%
	WATER	4%
	WASTEWATER	4%
	STORMWATER	3%

Last December staff presented the forecasted need for more modest rate increases than what is shown here. Those initially proposed rate increases for each of the utility enterprises were increased in June as inflation continued to increase throughout 2022 and the Federal Reserve responded by increasing the cost of borrowing, both of which adversely impacted the whole 10-year rate forecasts that were also presented last December. All budget discussions since June have included the proposed increases shown above.

These proposed changes will be presented to both the Energy Board and Water Commission for formal action in October. Minutes will be provided to the full City Council for First Reading.

### GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED

1. Does Council Finance Committee support bringing forward rate adjustments consistent with what has been discussed through the budget process for the full City Council's consideration?

## BACKGROUND/DISCUSSION

### Inflationary Pressures

The rate forecasts presented to the Council Finance Committee last December were developed assuming inflation over the next decade would be similar to the inflation experienced over the last decade. Inflation this year quickly exceeded those levels. The increased inflation realized in 2022 is likely to persist over the next few years before returning to more modest levels but for how long, and to what level, is not clear at this point.

Staff could not update the long-term financial models during the budget process in June but because of the recent increases in these inflationary pressures, increased rates 2% more in the Light & Power, Water and Wastewater monthly charges from what was previously shown last winter ahead of the budget process. There are similar pressures in the stormwater utility as well but there is more operating income available for infrastructure improvements in this fund than the other three enterprises, so staff increased that rate by an additional 1% in June, as well.

Staff has since been able to update the 10-year rate forecasts to reflect potential inflation by sampling from the past 60 years, instead of just the past decade. The updated long-term rate forecasts are included below as each utility's primary 2023 rate drivers are considered. There is a need to consider raising rates more than 5% in a given year, especially when inflation is more than 5% in consecutive years which may happen in the near-term.

Inflation is felt across the utilities but in different ways depending on which operating expenses are increasing more or less than other expenses. The table below shows how higher inflation in labor costs would impact the Customer Service & Administration (CS&A) internal services fund more than the enterprise funds. Similarly, higher inflation for material costs would impact the enterprise funds more than CS&A. The long-term financial model for each utility considers how inflation is impacting costs for each utility.

OpEx	Electric (no PP)	Water	Wastewater	Stormwater	Customer Service & Admin
Labor	30%	40%	35%	30%	65%
Materials	70%	60%	55%	55%	35%
Debt Service			10%	15%	

### Electric

Every two years, or once each budget cycle, staff reviews and updates the cost of service models for each of the four utility services. In 2022, the electric cost of service model has been updated. Staff is proposing a 5% retail rate increase for the electric fund in 2023. This increase is driven by a combination of increases in wholesale electric expenses as well as distribution operating & maintenance costs and investments in distribution infrastructure.

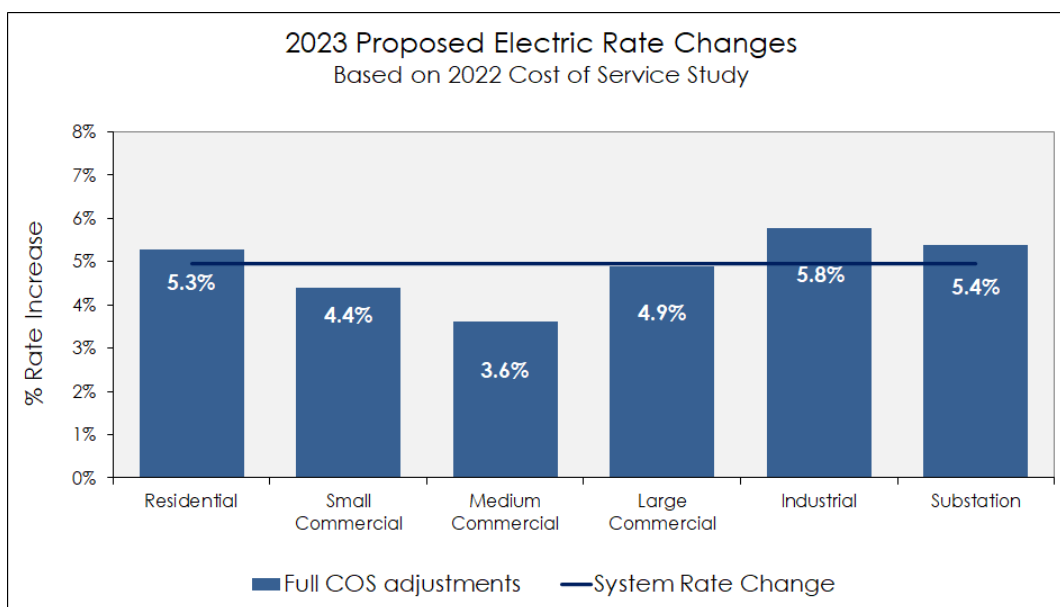
Platte River Power Authority (PRPA) is planning to increase their wholesale blended rate (\$/MWh) by 5% in 2023. Roughly two-thirds of costs incurred each year to provide electric

service to our community are attributable to wholesale purchased power expenses, while the other one-third is attributable to costs related to operating & maintaining the distribution system.

The impact to each of the four PRPA owner-communities will vary slightly from the 5% overall change in \$ / MWh, with Fort Collins Utilities projected to see a slightly lower \$ / MWh change than the other owner-communities. This result is driven largely by a more favorable load factor, as compared to Loveland, Longmont, and Estes Park. This more favorable load factor is due in part to demand-side management efforts that Fort Collins has collaborated on with commercial customers over the years, as well as the rollout of residential TOD rates in 2018. The lower relative impact for Fort Collins has been a financial benefit to utility customers in recent years, as wholesale rates are passed directly on to retail customers.

The electric cost of service model accounts for changes in consumption and costs to provide electricity to each rate class, or customer category. Given the frequency of these updates, there are generally relatively minor adjustments necessary. There are many factors that go into these updates, including how load factors change across rate classes, consumption increases or decreases, and average demand during coincident peak hours, which accounts for the wholesale demand cost allocations.

The updates proposed for each rate class for 2023 are shown in the graph below, which range from 3.6% to 5.8%, depending on the rate class. The dark horizontal line represents the average 5.0% increase for the electric fund.



The new 10-year rate forecast based on the larger dataset of real inflation data reflects the 5% wholesale increase forecasted through 2028. Note it will be necessary to exceed the 5% annual rate increase ceiling which has historically resulted in more gradual rate adjustments. This exceedance will be necessary for a few years due to inflationary pressures.

Electric	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Rate Increase	2.0%	5.0%	5.0%	4-5%	4-5%	4-6%	6-8%	6-8%	6-8%	4-7%	4-7%

## Net-metering Solar Credit

Solar credit rates for residential customers are proposed to stay flat from 2022 to 2023. Maintaining a level solar credit rate, as retail rates increase over time, is Utility's gradual approach to transition to a sustainable solar financial model. This approach does not reduce the current benefit for existing solar customers and does not change the full retail value for self-consumed solar.

Staff is also proposing to modify the solar credit for generation pushed back to the grid for small and medium commercial solar customers. Currently, the credit only accounts for the wholesale energy component and going forward would include both the wholesale energy and wholesale demand component. This will increase the credit these customers get from ~4.2 cents / kWh to ~6.2 cents per kWh. Making this change will further incentivize solar installations for these commercial customers and help increase solar installations across the city.

## Water

The cost-of-service model for the "wet utilities" (water, wastewater and stormwater services) will be updated in 2023. Rate class specific adjustments will be proposed for 2024 based on those updated models. For 2023, the same rate increase is applied to all of the rate classes.

Staff is proposing a 4% retail rate increase for the water fund in 2023. This is higher than the initially proposed 2% increase due to the higher costs of materials and impacts to the cost of borrowing which will increase the amount of interest being paid on any revenue bonds that will be needed in the coming decade for infrastructure investments.

The long-term financial models have been updated for the "wet utilities" as well as electric. The results to the ten-year rate forecast for water rates is shown below. Just as for electric services, it may be necessary to have rate increases in the 5-8% range for a few years, if inflation stays above 5%.

Water	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Rate Increase	0.0%	4.0%	4.0%	4-7%	5-8%	5-8%	5-8%	4-7%	4-7%	4-7%	4-7%

## Wastewater

Staff is proposing a 4% retail rate increase for the wastewater fund in 2023, as well. There has been a trend in recent years of declining operating revenues for this utility. As this utility is not immune to the impacts of inflation on its operating costs, it is necessary to increase operating revenues through rate adjustments to offset these higher costs of providing this service to our community. At this point the financial model is not indicating a need to exceed the previous 5% rate limit although it is still driving higher rates than the December forecast contained.

The updated ten-year forecast for wastewater rates is shown here:

Wastewater	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Rate Increase	0.0%	4.0%	4.0%	3-5%	3-5%	3-5%	3-5%	3-5%	3-5%	3-5%	3-5%

### **Stormwater**

Staff is proposing a 3% retail rate increase for the stormwater fund in 2023. This is 1% higher than the December 2021 forecast which is a smaller incremental increase than what is being proposed for the other utilities. The reasons for this smaller adjustment to the proposed rate increase for this utility are that a larger portion of operating revenues are available in this fund for infrastructure investments than the other utilities. There will be a need to issue revenue bonds for the Oak Street stormwater improvement project this budget cycle (Offer 4.2).

The updated ten-year rate forecast for stormwater services is shown here:

Stormwater	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Rate Increase	0.0%	3.0%	3.0%	3-5%	3-5%	3-5%	3-5%	3-5%	3-5%	3-5%	3-5%

### **Other Considerations**

Staff is also in the process of selecting a vendor to provide a new, modern billing system, which will occur over the next few years. This investment in a new billing system will be shared by all four utility services. While the proposed increases for 2023 recognize the cost of this investment, the primary driver of the rate increases are inflationary pressures on operating costs with the secondary driver being the total 10-year capital investments of which the billing system is a one.

### **Customer Bill Impacts**

The table below shows the impacts of the proposed rate change to the average residential monthly bill. Under the proposed rate changes, a residential customer's total utility bill, for a customer receiving all four municipal utility services, would increase by 4.3%, or \$7.98 per month.

Fort Collins Utilities Comparative Residential Monthly Bill					
Utility	2022	2023	\$ Change	% Change	
Electric	\$ 80.01	\$ 84.01	\$ 4.00	5.0%	
Water	\$ 49.03	\$ 50.99	\$ 1.96	4.0%	
Wastewater	\$ 34.25	\$ 35.62	\$ 1.37	4.0%	
Stormwater	\$ 21.74	\$ 22.40	\$ 0.65	3.0%	
Total Average Bill	\$ 185.04	\$ 193.02	\$ 7.98	4.3%	

The table below compares typical residential electric, water, wastewater, and stormwater monthly utility bills across neighboring utilities along the Front Range, based on 2022 charges. In total, Fort Collins Utilities comes in the lowest at \$185.04 for all four services. With the proposed increases, Fort Collins would move to second lowest, although there are known increases proposed amongst these other utilities for 2023, as well, with some of them being substantially higher than the percentage increases proposed for our community.

2022 Residential Average Monthly Utility Bill					
Utility	Electric	Water	Wastewater	Stormwater	Total
Ft Collins	\$ 80.01	\$ 49.03	\$ 34.25	\$ 21.74	\$ 185.04
Longmont	\$ 73.57	\$ 62.97	\$ 34.10	\$ 14.90	\$ 185.53
Loveland	\$ 82.42	\$ 54.95	\$ 39.61	\$ 18.86	\$ 195.84
Greeley	\$ 90.07	\$ 69.60	\$ 28.49	\$ 15.77	\$ 203.93
Boulder	\$ 90.07	\$ 58.31	\$ 42.70	\$ 22.00	\$ 213.08
Colorado Springs	\$ 109.39	\$ 93.26	\$ 29.85	N/A	\$ 232.51

### **Proposed Changes to Development Fees**

Development fees are the mechanism for Utilities to recover the impact of adding new demand to the services Utilities provides, including electric, water, wastewater, and stormwater. Plant Investment Fees (PIFs) and Electric Capacity Fees (ECFs) are one-time charges for new development or re-development. These fees recover costs for excess capacity of infrastructure already in place to serve new customers based on the “buy-in” approach, where customers pay according to new demands they will put on the system, and considers incremental costs of future infrastructure to serve them.

PIF revenues are a critical revenue stream to help fund new infrastructure but represent a small portion of the total revenues collected each year for each utility enterprise. The table below shows what percentage of total revenues is from development fees for each utility:

	PIF Revenue as % of Total Revenue
Electric	3%
Water	14%
Wastewater	9%
Stormwater	6%

Every other year, when models are not updated, an inflationary adjustment is applied to utility development fees. Staff uses the Engineering News Record (ENR) construction cost index to apply adjustments. With the current uncertainty in the economy driving higher than normal inflation across the board for most goods and services, staff is proposing a 9% increase to fees



for 2023. These fees include the Electric Capacity Fees, Water Plant Investment Fees, Wastewater Plant Investment Fees, and Stormwater Plant Investment Fees. There has some variability in the monthly ENR percentages, but the percentages have hovered close to 9% for most of 2022. Utilities has experienced even higher cost increases with various items, such as electric transformers, which have increased substantially due to supply chain issues and higher material costs.

Utility Fee	2023 Proposed Increase
Electric Capacity Fee (ECF)	9.0%
Water Plant Investment Fee (PIF)	
Wastewater Plant Investment Fee (PIF)	
Stormwater Plant Investment Fee (PIF)	

## ATTACHMENTS

Attachment 1 – Powerpoint presentation for Council Finance Committee



# Utilities: 2023 Rates & Fees







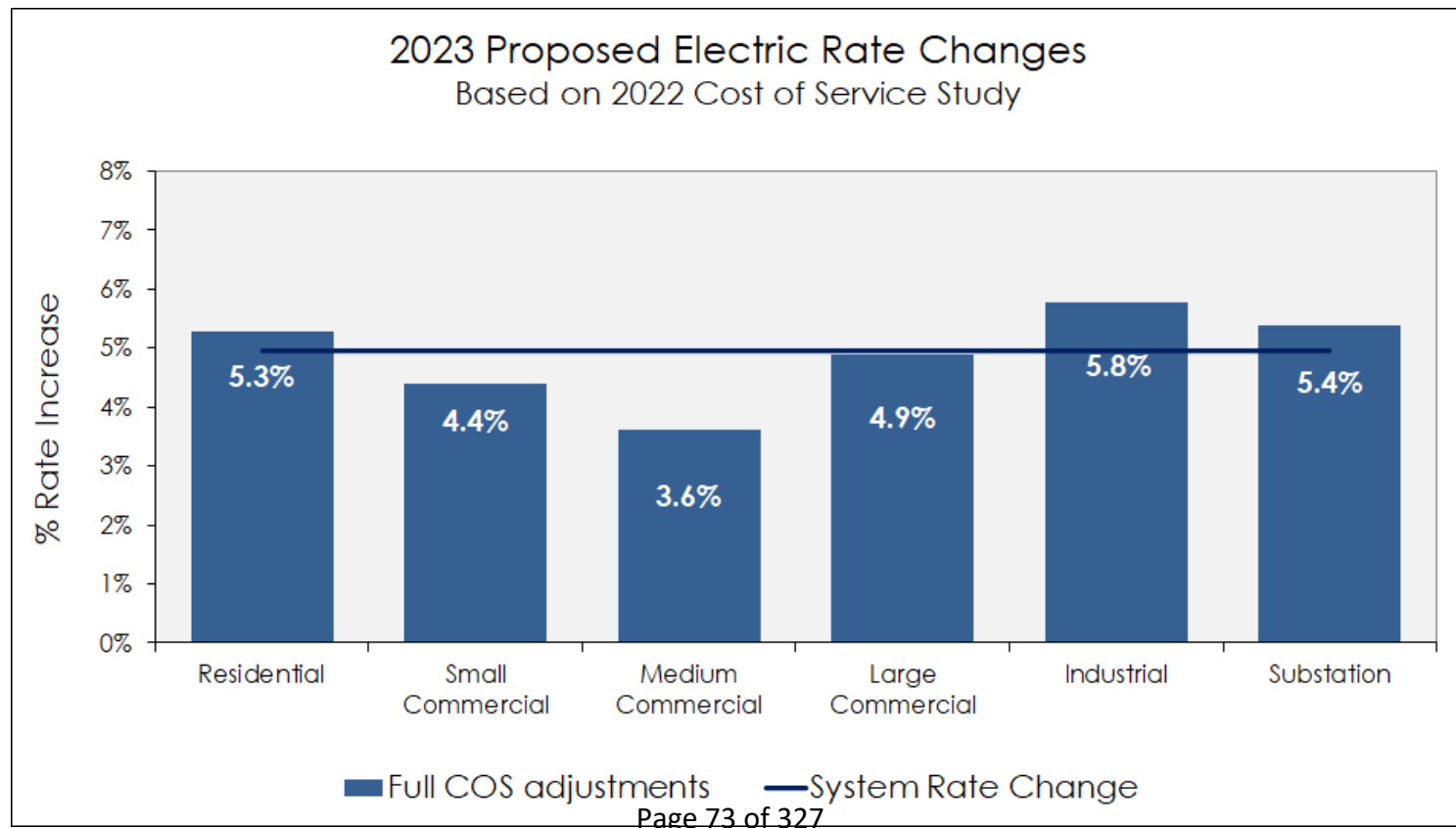
City Council

Lance Smith, Utilities Finance Director

10-20-2022

Does Council Finance Committee support bringing forward rate adjustments consistent with what has been discussed through the budget process for the full City Council's consideration?

UTILITY	2023 PROPOSED INCREASE
 ELECTRIC	5%
 WATER	4%
 WASTEWATER	4%
 STORMWATER	3%



Fort Collins Utilities Comparative Residential Monthly Bill					
Utility	2022	2023	\$ Change	% Change	
Electric	\$ 80.01	\$ 84.01	\$ 4.00	5.0%	
Water	\$ 49.03	\$ 50.99	\$ 1.96	4.0%	
Wastewater	\$ 34.25	\$ 35.62	\$ 1.37	4.0%	
Stormwater	\$ 21.74	\$ 22.40	\$ 0.65	3.0%	
Total Average Bill	\$ 185.04	\$ 193.02	\$ 7.98	4.3%	

2022 Residential Average Monthly Utility Bill					
Utility	Electric	Water	Wastewater	Stormwater	Total
Ft Collins	\$ 80.01	\$ 49.03	\$ 34.25	\$ 21.74	\$ 185.04
Longmont	\$ 73.57	\$ 62.97	\$ 34.10	\$ 14.90	\$ 185.53
Loveland	\$ 82.42	\$ 54.95	\$ 39.61	\$ 18.86	\$ 195.84
Greeley	\$ 90.07	\$ 69.60	\$ 28.49	\$ 15.77	\$ 203.93
Boulder	\$ 90.07	\$ 58.31	\$ 42.70	\$ 22.00	\$ 213.08
Colorado Springs	\$ 109.39	\$ 93.26	\$ 29.85	N/A	\$ 232.51

Utility Fee	2023 Proposed Increase
Electric Capacity Fee (ECF)	9%
Water Plant Investment Fee (PIF)	
Wastewater Plant Investment Fee (PIF)	
Stormwater Plant Investment Fee (PIF)	

- Engineering News Record – Construction Cost Index
- Water Supply Requirement (WSR) and Excess Water Use (EWU) will not be adjusted until Q1 or Q2 of 2023
- ECF categories modified to align with building code regarding electric heat



# Thank you



**COUNCIL FINANCE COMMITTEE  
AGENDA ITEM SUMMARY**

**Staff:** Adam Bromley, Director of Electrical Engineering  
Lance Smith, Utilities Strategic Finance Director

**Date:** October 20, 2022

**SUBJECT FOR DISCUSSION**

Meter Data Management System Upgrade Appropriation Request

**EXECUTIVE SUMMARY**

The Meter Data Management System (MDMS) owned and operated by Utilities has been in place since the inception of the Advanced Meter Fort Collins implementation. It receives water and electric meter reads for all advanced meters across Fort Collins service territory throughout the day, performs quality checks on that data, and then at the end of the billing cycle it calculates the billing determinants for each customer that are necessary to generate individual customer bills.

Fort Collins has been utilizing the same version of the software, EnergyIP, since it was installed. For a number of reasons that will be described below, this software must be upgraded to a more current version and the upgrade cannot wait for the new budget cycle to begin (i.e. January 2023). Fort Collins staff will need vendor support to complete this major software version upgrade.

As the MDMS system supports both the water and electric utilities, the cost of the upgrade will be shared between them. Utilities has historically allocated costs for shared software based on customer counts a determined by the number of deployed meters to establish the cost share for each utility. Applying this method here, the Water Enterprise's share of this expense would be 31.6% and the Light & Power Enterprise's share would be 68.4%. The total supplemental appropriation being proposed for your consideration is for \$629,588, with the individual appropriations from each utility's reserves as specified below:

Light & Power	\$430,638
Water	\$198,950
<b>Total Cost of MDMS Upgrade</b>	<b>\$629,588</b>

**GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED**

1. Does Council Finance Committee support an off-cycle appropriation of Water and L&P reserves that will fund vendor support of a major version upgrade of the Utilities Meter Data Management System (MDMS)?

## BACKGROUND/DISCUSSION

Fort Collins staff knew that a version upgrade to the MDMS was needed back in 2018 and had planned to complete the upgrade at that time with the use of internal resources only. Staff attended vendor training specific to this upgrade in order to support it. The staff that were identified to complete this upgrade in 2018 subsequently were taken from this project to devote their expertise on the Utilities Customer Information System (CIS) upgrade project that was a higher priority due to the immediate customer/billing needs for the new Connexion utility. This meant that the MDMS upgrade was put on hold, which may have benefited Utilities in the long run. This is because as other utilities utilizing the same MDMS implemented their own migrations to the newer versions, which included significant architectural changes, the vendor realized that these migrations were much too complicated without third-party assistance.

Now that the organization has stepped back from the engagement with the previous CIS vendor and is planning a new CIS upgrade projected to be initiated in 2023, staff and management identified the window of time prior to the CIS project to complete the previously delayed upgrade to MDMS. There are several reasons that completing this upgrade now is imperative which include:

- Functionality included in the new version will reduce manual work and customizations:
  - More robust data Validation, Editing, and Estimation (VEE) algorithm/process that greatly reduces manual action and intervention
  - Enables use and storage of more electric meter channels which provides billing determinant calculations for our largest Commercial & Industrial (C&I) customers; this is currently calculated in a third-party software which entails a high volume of manual work
  - Reports that were previously custom developed through an external program will now be included inherently to the software
- Existing version is extremely outdated; extended support for the current 7.2 version is not sustainable
- New version is much more stable and will eliminate many of the billing issues encountered on a monthly basis
- Current version of software relies on older versions of browsers (now unsupported) and other no longer supported software technologies which is a cyber security vulnerability
- Application servers (non-database) for this version are located on a very old version of Linux RedHat because it will not operate on more recent, supported versions
- The current version of Oracle being utilized will deprecate support at the end of 2022

Staff has engaged with vendor support companies and other users of the software to conclude that the most effective way to complete a successful upgrade is to utilize external support that has previously completed upgrades from our current version to the newest version of software. To complete this upgrade prior to the CIS upgrade project, staff has solicited for external support through an RFP process.

After completing an RFP process, staff has a better understanding of the full costs involved in obtaining external support. The provided quote for those services was approximately \$630K. As mentioned above in the summary, L&P and Water share the costs of this system depending on their respective meter counts. The total supplemental appropriation being proposed for your consideration is for \$629,588, with the individual appropriations from each utility's reserves as specified below:

Light & Power	\$430,638
Water	\$198,950
<b>Total Cost of MDMS Upgrade</b>	<b>\$629,588</b>

The following table shows where L&P reserves are and where they will be after this supplemental appropriation:

	Light & Power	Water
Year End 2021 Reserve Balance	\$64.6	\$84.3
Minimum Required	(\$8.1)	(\$5.8)
Appropriated Prior to 2022	(\$18.8)	(\$37.2)
2022 Connexion Appropriation	(\$20.0)	
2022 Transformer Appropriation	(\$3.6)	
2023-24 CMO Recommended Budget	(\$0.8)	(\$29.2)
Available Reserves Before This Request	\$13.3	\$12.1
MDMS Upgrade	(\$0.4)	(\$0.2)
Remaining Available Reserves	\$12.9M	\$11.9M

## ATTACHMENTS

Attachment 1 – Energy Board minutes on discussion of appropriation

Attachment 2 – Water Commission minutes on discussion of appropriation

## Attachment 1

**ENERGY BOARD** April 14, 2022 – 5:30 pm 222 Laporte Ave – Colorado Room

### ROLL CALL

**Board Members Present:** Bill Becker, Alan Braslau, Steve Tenbrink, Jeremy Giovando, Dan Gould, Sidra Aghabibian, John Fassler, Councilmember Canonico

**Board Members Absent:** Marge Moore, Emilio Ramirez

### METER DATA MANAGEMENT UPGRADE: OFF-CYCLE APPROPRIATION REQUEST

*Adam Bromley, Interim Deputy Director, Utilities Light & Power*  
(Attachments available upon request)

Meter Data Management provides a number of vital functions for the Utility in the realm of metering data, metering operations, and billing customers. The software product the Utility uses is from Siemens, called EnergyIP, and the biggest component of this software is a database that stores historical energy usage and water consumption data for every Utilities customer. It validates the incoming data, as well as estimates and edits that data when data is missing or incorrect; known as “VEE” process (Validation Estimation Editing). EnergyIP uses 15-minute interval energy usage data and water consumption data to create billing determinants for the CIS (Customer Information System), and these billing determinants are ultimately what’s used to create an accurate bill for each customer, including the residential Time-of-Day electric rate. It also provides data exports to the three web portals (Franklin, WaterSmart, MV-Web for Commercial & Industrial) for customer consumption presentment and provides access to meter data and report creation (for example: the alerts to customers when there is a potential water leak in their home or business).

Beginning in 2011, the Advanced Metering Infrastructure (AMI) project was implemented concurrently with the implementation of MDMS. In 2018, the Utility planned to upgrade from EnergyIP version 7.2 to 8.7 (staff attended the upgrade training); however, the inception of Connexion diverted personnel resources toward a new CIS to meet the needs of the new service and the EnergyIP upgrade was postponed. In late 2021 the CIS project was also delayed, and now Staff hopes to implement early next year (2023). This year, Staff plans to upgrade from EnergyIP version 7.2 to 9.0, as Utilities IT personnel have available bandwidth (with plans to attend the upgrade training again).

The newest release of EnergyIP includes: a more robust and automated VEE algorithm/process that greatly reduces manual action and intervention, as well as the ability to use and store more electric meter data channels (i.e., kVAR or power factor) that enables billing determinant calculations for largest C&I customers. This work is currently done through a third-party software called MV-90 and the process entails a lot of manual work, and some reports that were previously written externally are now included in base functionality.

The upgrade is necessary now for many reasons. Older versions of software no longer supported or sustainable, and there are cyber security risks; the servers on EnergyIP version 7.2 are on a very old version of Linux RedHat because it will not operate on more recent, supported versions.

The upgrade creates some urgency due to the dependencies within other utilities projects. The MDMS upgrade must be complete and stable before the CIS upgrade can begin. The CIS RFP (request for proposal) creation begins in 2022 with implementation starting in 2023, and this work will require Utilities IT staff. Additionally, the AMI Headend upgrade completion is scheduled for June 2022, which is necessary to support AMI data collection hardware in field.

For a normal version upgrade, internal staff has the bandwidth and expertise to perform a large portion of the version upgrade tasks; however, there is a fundamental change in system architecture that necessitates a high level of support from Advanta (Siemens consulting branch) to ensure the upgrade is successful. If Advanta performs all tasks (including Data Migration) associated with upgrade the original cost would be roughly \$994,000. Staff made the decision to not do any data migration, which would mean the data is accessible as needed but the 7.2 version will be standalone. There are two secondary options:

Option 1 will have Advanta performing a turn-key solution, with no Data Migration (roughly \$750,000), or Option 2 with Utilities Staff leading all tasks with Advanta support (roughly \$662,000).

Board member Braslau wondered if there is cybersecurity risk in maintaining version 7.2 as a standalone? Mr. Burkes said the risk can be minimized because staff won't be processing the same interval data in parallel after a certain point, so the 7.2 version will be archival only.

Due to the savings (about \$250,000) to not migrate data, Staff recommends Option 2, where staff is heavily involved in upgrade tasks. A highly knowledgeable staff can operate system more effectively, and the firm cost quote eliminates possibility of needing additional vendor support. The total off cycle appropriation request is %550,000; \$376,200 from Light & Power and \$173,800 from Water (there is no storm or wastewater data in MDMS, so they do not need to contribute funding).

Chairperson Tenbrink wondered what is the critical path is. Mr. Bromley said the critical path would be implementation before the new CIS. Vice Chairperson Becker wondered if the first release got the lifespan staff thought it would, and where does the new release stand (are we on the early side of release), will the new release have a similar lifespan? Mr. Bromley said yes, the Utility got at least four extra years out of the first release, and we are early in the newest release so there will be a lot of life ahead of it.

**Board member Fassler moved to support an off-cycle appropriation of L&P reserves that will fund vendor support of a major version upgrade of the Utilities Meter Data Management System (MDMS).**

**Board member Aghababian seconded the motion.**

Discussion:

None.

**Vote on the motion: It passed unanimously, 6-0**

**WATER COMMISSION REGULAR MEETING** April 21, 2022, 5:30-7:30 p.m. Hybrid in person at 222 LaPorte Ave and online via Zoom

**ROLL CALL**

- *Commissioners Present:* Jason Tarry (Chairperson), John Primsky, Kent Bruxvoort, Paul Herman, Jordan Radin, Rick Kahn, Randy Kenyon
- *Commissioners Absent - Excused:* Greg Steed (Vice Chairperson), Tyler Eldridge
- *Staff Members Present:* Jason Graham, Adam Bromley, Lori Clements, Mary Evans, Michael Neale, Lance Smith, Mariel Miller, Donnie Dustin, John Song, Kendall Minor, Marcus Coldiron, Eric Potyondy

**METER DATA MANAGEMENT UPGRADE: OFF-CYCLE APPROPRIATION REQUEST**

Adam Bromley, Interim Utilities Deputy Director of Light and Power, presented on the Meter Data Management System, which is a database that stores historical energy usage and water consumption data for every Utilities customer and provides validation of that incoming data, as well as estimating and editing that data when data is missing or incorrect, a process called VEE (Validation Estimating Editing). Discussion Highlights A Commissioner requested clarification as to the reason why the appropriation needs to be made. Mr. Bromley responded that the new version of the software has a fundamental change in the architecture, and so the vendor had found that migration efforts and transitions were more difficult than anticipated without vendor support. Another Commissioner asked and Mr. Bromley confirmed that there are foreseeable security risks if the upgrade isn't made. Another Commissioner inquired if the vendor has made the upgrade from version 7.2 straight to 9.0. Mary Evans responded that the vendor has successfully made the upgrade before. She went on to add that the appropriation includes a project management professional from the vendor. **Commissioner Kahn moved** that the Water Commission recommend City Council support an off-cycle appropriation of Water reserves that will fund vendor support of a major version upgrade of the Utilities Meter Data Management System (MDMS)? **Commissioner Bruxvoort seconded the motion.**

**Vote on the Motion: it passed unanimously, 7-0**



## **COUNCIL FINANCE COMMITTEE AGENDA ITEM SUMMARY**

**Staff:** Heather Young, Utilities Community Engagement  
Shannon Ash, Utilities Community Engagement

**Date:** October 20, 2022

### **SUBJECT FOR DISCUSSION**

Income-Qualified Assistance Program (IQAP) Update, Proposed Changes, and Program Adoption

### **EXECUTIVE SUMMARY**

The Income-Qualified Assistance Program (IQAP) that provides income-qualified Fort Collins Utilities (Utilities) customers reduced rates on select Utilities services was introduced in October 2018 as a pilot program. The IQAP program bill adjustment effectively applies a 23% rate discount on electric, water, and wastewater services, and is due to expire December 31, 2022. In July 2021, City Council approved moving the program from an application-based, opt-in program to an auto-enroll, opt-out program, subject to participants' participation in the complementary state Low-income Energy Assistance Program (LEAP). At that time, City Council also requested an evaluation of the discounted rate percentage to ensure it was still sufficient to meet program objectives. Since July 2021, participation in IQAP has increased 128%. Staff are planning to provide City Council an update on the program on November 1, 2022 and will be seeking a motion from City Council to adopt the program.

### **GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED**

Staff are seeking adoption of IQAP by City Council to transition the program from a pilot program to an ongoing program and are requesting an increase of the bill adjustment from 23% to 25% to ensure that low-income customers spend a similar percentage of household income on utilities as someone who makes 100% of Area Median Income (AMI).

- Does the Council Finance Committee support the continuation and adoption of IQAP as a regular initiative?
- Does the Council Finance Committee support increasing the bill adjustment discount from 23% to 25%?

### **STAFF RECOMMENDATION**

Staff recommends adopting IQAP as an ongoing program to support Utilities customers and increasing the program discount from 23% to 25% for participating customer bills. Adopting this program on a permanent basis aligns with existing community, City, and Utilities priorities and is an investment in our community.

### **BACKGROUND/DISCUSSION**

The Income-Qualified Assistance Program was approved as a pilot by City Council and launched in October 2018. The program was designed to reduce utility burdens for qualifying low-income

participants that opt-in to the program by giving them a 23% discount on specific rate components of electric, water, and wastewater service bills. Utilities partnered with LEAP for income-eligibility verification for IQAP. LEAP eligibility is based on household size and an income threshold of 60% of State Median Income.

When IQAP launched, Utilities customers enrolled in the current or past LEAP season were eligible to complete an application to “opt-in” to participate in IQAP. Utilities sent bulk invites via mail or email to LEAP-enrolled customers annually to encourage them to apply for participation in IQAP. Customers could fill out an application at any time during the year to be enrolled in the program, provided their LEAP enrollment could be verified. Applications were completed online or via a paper form. Once an application was received by Utilities staff, the customer’s LEAP enrollment was verified, and their service bills were adjusted for the applicable services.

In July 2021, City Council approved an extension of the pilot program and changed the enrollment structure from application-based, opt-in to auto-enroll, opt-out based on customers’ qualification and participation in LEAP. The intent of the opt-out approach was to increase overall participation while reducing administrative requirements for processing applications. The current pilot and associated discount are set to expire December 31, 2022, pursuant to City Code §26-724.

### ***Utility Burden***

One of the main reasons IQAP was implemented was to help offset the utility burden some customers experience. Utility burden is defined as the percentage of a household’s income that is spent on utility services such as electric, water, wastewater, and gas. Low-income households have been found to have disproportionately high utility burdens when compared to non-low-income households. Contributing factors include race, ethnicity, and low-quality housing.

Utility costs also continue to increase faster than income, both locally and nationally. Some customers are on a fixed income, especially seniors. Inflation means people have to spend more of their income on basic needs like utilities, and without access to heating, cooling, and water, unpaid utility bills can lead to dire health impacts. As temperatures increase due to climate change, customers use more energy. The cost of that energy also increases as the City and Platte River Power Authority work towards securing carbon-neutral energy sources.

### ***Current Program Design***

The IQAP pilot bill adjustment was designed as a multi-pronged approach to helping low-income households (at or below 60% AMI) achieve utility burdens that are more similar to those of households with 100% AMI. The IQAP 23% bill discount was designed to be combined with LEAP benefits and in-home conservation efforts to reduce participants’ utility burdens to more average levels (approximately 3.1% of income).

Utilities continues to partner with LEAP for income-eligibility verification to allow for auto-enrollment into IQAP. Utilities staff receives monthly lists of approved customers during the LEAP season. These lists are then verified by staff to confirm the customer is a Utilities account holder and if so, staff submits a billing rate adjustment request to the Billing office. The customer is mailed a confirmation letter informing them that they have been enrolled in IQAP for the year, along with conservation education materials and additional program information.

IQAP participants are encouraged to participate in no-cost conservation programs such as Larimer County Conservation Corps (LCCC) retrofits and/or Colorado Affordable Residential Energy Program (CARE) to make their dwellings more efficient and to help reduce utility costs further. They also receive the monthly Utilities Insights newsletter ([fcgov.com/utilities/utilities-insights](https://fcgov.com/utilities/utilities-insights)) that provides low- or no-cost tips and tricks for reducing utility use and costs. These ancillary program communications extend the reach of Utilities conservation and efficiency outreach efforts, delivering this key information to and improving user habits in households that historically are unlikely to participate in these efforts. Educating and creating incentives for conservation and efficiency shifts in these households allows the City and Utilities to more aggressively achieve our environmental goals in a progressive manner.

### ***Program Update***

Since the launch of IQAP, participation has continued to increase and additional intentional outreach into the community is expected to gradually increase enrollment.

2021 Participation	2022 Participation	2023 Estimated Participation
759	1,727	1,900*

*\*Anticipating a 10% increase from the previous year*

Estimated total reach is 10,000 households using a city-wide poverty rate of ~16%, based on 2021 Census Bureau data combined with controlling for the student population in Fort Collins (City Rebates Eval Report, 2019).

Utilities staff members have begun reaching out to partner agencies to discuss outreach opportunities. The goal is to increase awareness of LEAP and Utilities affordability programs. Utilities staff have identified underserved locations in the community using data from the Equity Office and will focus outreach opportunities in those areas.

According to current survey results, the majority of IQAP customers continue to be satisfied or very satisfied in the auto-enrollment process. The change from an application-based structure to auto-enrollment has increased program participation by approximately 128%.

### ***Energy Use Analysis***

At the launch of IQAP, an assumption was made that program participants would use less energy compared to those not in the program because participants were connected with CARE, LCCC, and other efficiency programs. Data analysis has shown that IQAP participants initially use slightly more energy (2.9% on average), but by year three of enrollment, energy use between IQAP and non-IQAP customers was similar. This can be attributed to customers being able to afford to heat and cool their homes at comfortable temperatures because it is more affordable. According to survey results, customers identify increased quality of life as a benefit of IQAP.

### ***Rate Reduction Evaluation***

In July 2021, Council requested an evaluation to determine if the 23% rate reduction was still sufficient. Utilities staff conducted an analysis to determine the percentage that it would take for a low-income customer to spend a similar amount on utilities as someone who makes 100% AMI. For this evaluation, Utilities staff used the same methodology to estimate the necessary

rate reduction amount using updated utility and income data. The analysis took the LEAP benefit and non-City gas bills into consideration and calculated the necessary discount rate to be 25%. Utilities staff expects the increased rate reduction will help offset the high energy burden and energy insecurity that continues to increase in our community and throughout the nation. This difference amounts to ~\$20/year/customer.

## **BOARD/COMMISSION FEEDBACK**

As part of outreach for this program, Utilities staff visited or will visit Energy Board, Affordable Housing Board, Senior Advisory Board and Water Commission. To date, Energy Board and the Affordable Housing Board are supportive of this program adoption, based on feedback provided at their September/October regular meetings. This section will be updated as we receive additional feedback.

## **CITY FINANCIAL IMPACTS**

Based on current enrollment numbers (1,727 participants), customers receive an average IQAP discount of \$220.50/year with a 23% rate reduction. The total annual cost to Utilities is ~\$392,000. With a 25% rate reduction, customers would receive an average discount of \$240/year. The total annual cost to Utilities would be ~\$415,000, or an annual increase of ~\$23,000. The total cost of this program is nominal relative to the annual operating budget of Utilities and would minimally impact other Utilities customers. Increasing the IQAP bill discount, as proposed, is not anticipated to significantly affect the Utilities costs nor contribute to the need for additional rate increases.

## **PUBLIC OUTREACH**

Every year, participants in IQAP are offered an opportunity to complete a program survey. Participants are asked questions such as, “What has been the biggest benefit of receiving the IQAP utility bill discount?” and “Is there anything you would like to change about the Income-Qualified Assistance Program?” The overwhelming majority of participants report they are satisfied or very satisfied with the ease of enrollment and the discount they receive. They list increased quality of life, being able to save money for other expenses, decreased stress with paying bills, being educated on ways to conserve energy, and budgeting on a fixed income as some of the benefits because of IQAP. When asked about changes they would like to see to the program, a larger discount was listed repeatedly.

Utilities staff have scheduled outreach opportunities in the community for this upcoming LEAP season to increase awareness of the program and assist with applications. Several partner agencies throughout Fort Collins have agreed to host tabling events, which will allow Utilities staff to reach community members in locations they trust. These locations were selected to ensure accessibility to the community, from the north side to the south side of the city.

## **ATTACHMENTS**

Attachment 1: American Council for an Energy-Efficient Economy (ACEEE) Energy Burden Report, September 2020 (PDF)

Attachment 2: Apex Analytics Updated IQAP Findings (PDF)

Attachment 3: A ‘Tsunami of Shutoffs’: 20 Million US Homes Are Behind on Energy Bills (PDF)

Attachment 4: <https://www.npr.org/2022/09/13/1122371879/electricity-utilities-gasoline-gas-prices-inflation-august-cpi-consumer-prices>

Attachment 5: U.S. Department of Energy: “Low-Income Household Energy Burden Varies Among States — Efficiency Can Help In All of Them” (PDF)  
Attachment 6: City of Fort Collins City Rebates Eval Report, 2019 (PDF)

# How High Are Household Energy Burdens?

**An Assessment of National and Metropolitan Energy  
Burden across the United States**

Ariel Dreihobl, Lauren Ross, and Roxana Ayala





---

## ABOUT THE AUTHORS

**Ariel Drehabl** conducts research, analysis, and outreach on local-level energy efficiency policies and initiatives, with a focus on energy affordability, energy equity, and limited-income communities. Ariel earned a master of science in environmental science, policy, and management from a joint-degree program that awarded degrees from Central European University in Hungary, Lund University in Sweden, and the University of Manchester in the United Kingdom. She earned a bachelor of arts in history and international studies from Northwestern University.

**Lauren Ross** oversees ACEEE's work related to the local implementation of energy efficiency. Her research concentrates on the nexus of affordable housing, energy efficiency, and cities. She leads ACEEE's efforts to improve policies and expand utility programs to promote energy efficiency in low-income and multifamily households. Lauren earned a PhD in urban sociology from Temple University, a master of arts in urban sociology from the George Washington University, and a bachelor of arts in political science from the University of Delaware.

**Roxana Ayala** assists with research, writing, and technical support on local-level energy efficiency policies and initiatives, with a focus on energy equity. Roxana earned a bachelor of arts in environmental studies and urban studies from the University of California, Irvine.

---

## ACKNOWLEDGMENTS

This report was made possible through the generous support of the Kresge Foundation. The authors gratefully acknowledge external reviewers, internal reviewers, colleagues, and sponsors who supported this report.

The authors are grateful for the external reviews provided by the following experts. Note that external review and support do not imply affiliation or endorsement.

Ansha Zaman, Center for Earth, Energy, and Democracy; Chandra Farley, Partnership for Southern Equity; David Reinbolt, Ohio Partners for Affordable Energy; Denise Abdul-Rahman, NAACP; Deron Lovaas, NRDC; Diana Hernandez, Columbia University; Elizabeth Chant, Optimal Energy; Jackie Berger, APPRISE; Jacquie Moss, Texas Energy Poverty Research Institute; Lauren Wentz, VEIC; Matt Cox, Greenlink Group; Michael DiRamio, NYSERDA; Pam Mendelson, U.S. Department of Energy; Todd Nedwick, National Housing Trust; Tony Reames, University of Michigan; Valerie Strauss, Association for Energy Affordability; and Zelalem Adefris, Catalyst Miami.

The authors are also grateful to internal reviewers at ACEEE, including Jennifer Amann, Buildings Program Director; Maggie Molina, Senior Director for Policy; Martin Kushler, Senior Fellow; Reuven Sussman, Behavior Change Program Director; Stefen Samarripas, Senior Researcher; and Steve Nadel, Executive Director.

Last, the authors would like to thank Mary Robert Carter for managing the editorial process, Mariel Wolfson for developmental editing, Keri Schreiner for copyediting, Roxanna Usher and Sean O'Brien for proofreading, Kate Doughty for graphics support, Tanja Bos for graphic design, and Ben Somberg and Maxine Chikumbo for their help in launching this report.

# Contents

Executive Summary .....	ii
Introduction .....	1
Background .....	2
Systemic Patterns and Causes of Inequities .....	2
Limited Access to Energy Programs.....	3
Definition and Drivers of High Energy Burdens .....	3
Adverse Effects of High Energy Burdens.....	5
Impact of COVID-19 on Energy Insecurity .....	6
Methods.....	7
Limitations .....	8
Energy Burden Findings .....	9
National Energy Burdens.....	9
Regional Energy Burdens.....	13
Metro Area Energy Burdens.....	14
Low-Income Weatherization Can Reduce High Energy Burdens.....	19
Strategies to Ramp-Up, Improve, and Better Target Low-Income Housing Retrofits, Energy Efficiency, and Weatherization .....	20
Design to Meet the Needs of Highly Burdened Communities.....	21
Ramp-Up Investment in Low-Income Housing Retrofits, Energy Efficiency, and Weatherization.....	24
Improve Program Design, Delivery, and Evaluation through Best Practices and Community Engagement.....	27
Conclusions and Further Research .....	30
References .....	32
Appendix A. Energy Burden Data .....	38
Appendix B. High and Severe Energy Burdens.....	51
Appendix C. City- and State-Led Actions to Address High Energy Burdens .....	63
Appendix D. Low-Income Energy Efficiency Program Best Practices.....	66



# Executive Summary



## KEY TAKEAWAYS

- New research based on data from 2017 finds that high energy burdens remain a persistent national challenge. Of all U.S. households, 25% (30.6 million) face a high energy burden (i.e., pay more than 6% of income on energy bills) and 13% (15.9 million) of U.S. households face a severe energy burden (i.e., pay more than 10% of income on energy).<sup>1</sup>
- Nationally, 67% (25.8 million) of low-income households ( $\leq 200\%$  of the federal poverty level [FPL]) face a high energy burden and 60% (15.4 million) of low-income households with a high energy burden face a severe energy burden.
- The East South Central Region (i.e., Alabama, Kentucky, Mississippi, and Tennessee) has the highest percentage of households with high energy burdens (38%) as compared to other regions.
- Black, Hispanic, Native American, and older adult households, as well as families residing in low-income multifamily housing, manufactured housing, and older buildings experience disproportionately high energy burdens nationally, regionally, and in metro areas.
- Weatherization can reduce low-income household energy burdens by about 25%, making it an effective strategy to reduce high energy burdens for households with high energy use while also benefiting the environment.
- Leading cities and states have begun to incorporate energy burden goals into strategies and plans and to create local policies and programs to achieve more equitable energy outcomes in their communities. They are pursuing these goals through increased investment in energy efficiency, weatherization, and renewable energy.

<sup>1</sup> Researchers estimate that housing costs should be no more than 30% of household income, and household energy costs should be no more than 20% of housing costs. This means that affordable household energy costs should be no more than 6% of total household income. For decades, researchers have used the thresholds of 6% as a high burden and 10% as a severe burden (APPRISE 2005). Note that high and severe energy burdens are not mutually exclusive. All severe energy burdens ( $> 10\%$ ) also fall into the high burden category ( $> 6\%$ ).

This report provides an updated snapshot of U.S. energy burdens (i.e., the percentage of household income spent on home energy bills) nationally, regionally, and in 25 select metro areas in the United States.<sup>1,2</sup> Both high and severe energy burdens are caused by physical, economic, social, and behavioral factors, and they impact physical and mental health, education, nutrition, job performance, and community development. Energy efficiency and weatherization can help address energy insecurity (i.e., the inability to adequately meet basic household heating, cooling, and energy needs over time) by improving building energy efficiency, reducing energy bills, and improving indoor air quality and comfort (Hernández 2016).

We recognize that the economic recession brought on by the global COVID-19 pandemic has greatly increased U.S. energy insecurity and also interrupted weatherization and energy efficiency programs nationally. While this report measures energy burdens using 2017 data from the American Housing Survey (AHS), we anticipate the recession will lead to a further increase in energy insecurity and higher energy burdens in 2020 and beyond.

## Methods

This study calculates energy burdens using the AHS, which includes a national and regional dataset as well as a dataset of 25 metropolitan statistical areas.<sup>4</sup> We calculate energy burdens across all households and in a variety of subgroups to identify those that spend disproportionately more of their income on energy bills than otherwise similar groups, analyzing across income, housing type, tenure status, race, ethnicity, and age of occupant and structure. We also calculate the percentage of households nationally, regionally, and in each select metro area that have high energy burdens (i.e., spend more than 6% of income on home energy bills) and severe energy burdens (i.e., spend more than 10% of income on home energy bills). We do not include households who do not directly pay for their energy bills.

## Energy Burden Findings

### NATIONAL ENERGY BURDENS

U.S. households spend an average of 3.1% of income on home energy bills. Figure ES1 presents our national energy burden findings by subgroup. We acknowledge

that many highly burdened groups are intersectional, meaning that they face compounding, intersecting causes of inequality and injustice, with energy burden representing one facet of inequity. The following are key national findings:

- Low-income households spend three times more of their income on energy costs compared to the median spending of non-low-income households (8.1% versus 2.3%).
- Low-income multifamily households spend 2.3 times more of their income on energy costs compared to the median spending of multifamily households (5.6% versus 2.4%).
- The median energy burden for Black households is 43% higher than for non-Hispanic white households (4.2% versus 2.9%), and the median energy burden for Hispanic households is 20% higher than that for non-Hispanic white households (3.5% versus 2.9%).
- The median renter energy burden is 13% higher than that of the median owner (3.4% versus 3.0%).
- More than 25% (30.6 million) of U.S. households experience a high energy burden, and about 50% (15.9 million) of households with a high energy burden face a severe energy burden.<sup>5</sup>
- Of low-income households ( $\leq 200\%$  FPL), 67% (25.8 million) experience a high energy burden, and 60% (15.4 million) of those households with a high energy burden face a severe energy burden.
- Low-income households, Black, Hispanic, Native American, renters, and older adult households all have disproportionately higher energy burdens than the national median household.

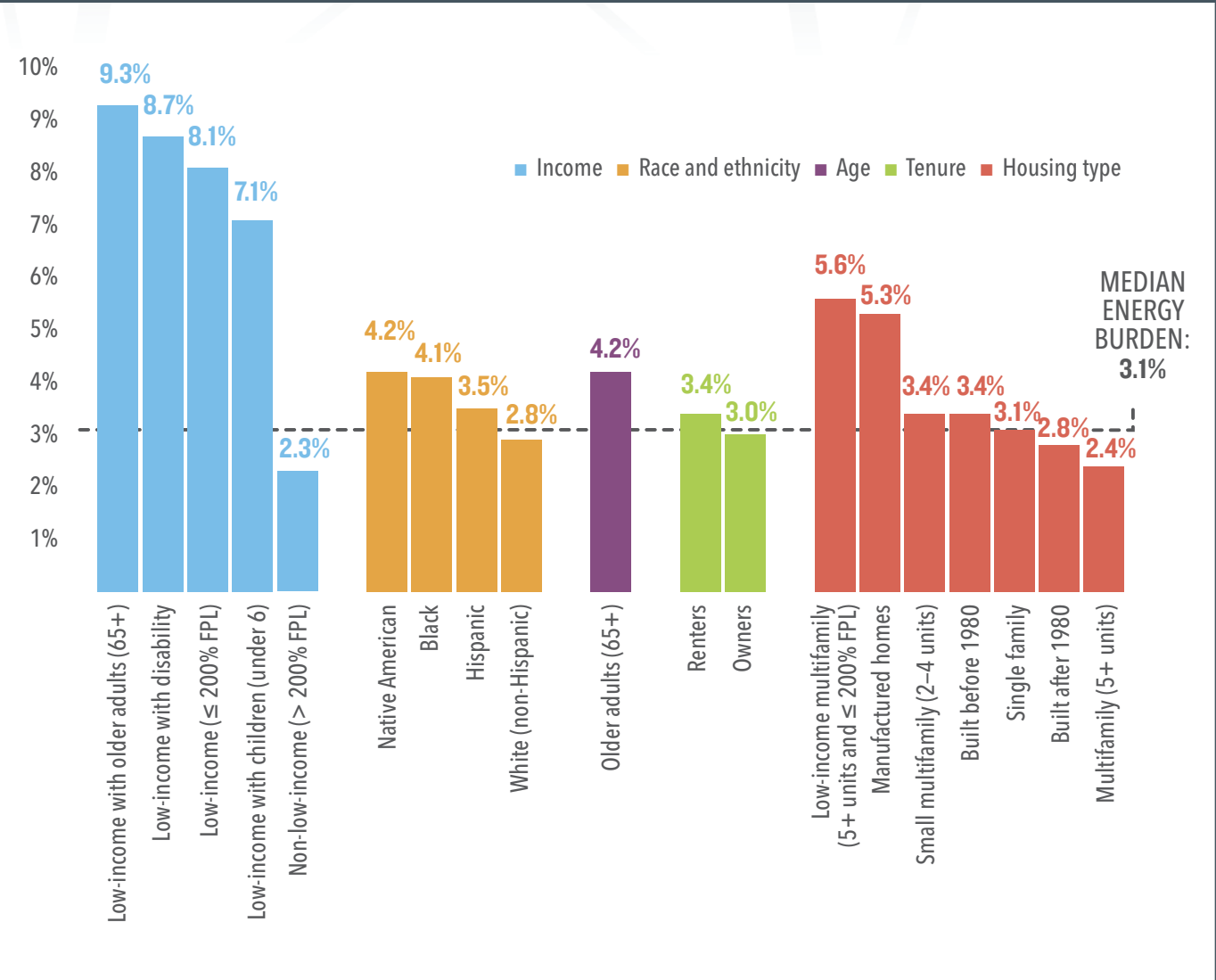
<sup>2</sup> This study focuses on home energy burden and includes electricity and heating fuels. Note that the study does not include transportation, water, or telecommunication cost burdens in its energy burden calculations.

<sup>3</sup> This report provides an update to ACEEE's previous energy burden research. Dreihobl and Ross (2016) analyzed 2011 and 2013 American Housing Survey (AHS) data, and Ross, Dreihobl, and Stickles (2018) analyzed 2015 AHS data. This report analyzes 2017 AHS data, the most recent data available as of publication.

<sup>4</sup> We include the 25 metropolitan statistical areas (MSAs) sampled for the 2017 AHS: Atlanta, Baltimore, Birmingham, Boston, Chicago, Dallas, Detroit, Houston, Las Vegas, Los Angeles, Miami, Minneapolis, New York City, Oklahoma City, Philadelphia, Phoenix, Richmond, Riverside, Rochester, San Antonio, San Francisco, San Jose, Seattle, Tampa, and Washington, DC.

<sup>5</sup> Note that high and severe energy burdens are not mutually exclusive. All severe energy burdens ( $> 10\%$ ) also fall into the high burden category ( $> 6\%$ ).

**FIGURE ES1. National energy burdens across subgroups (i.e., income, race and ethnicity, age, tenure, and housing type) compared to the national median energy burden**



## REGIONAL ENERGY BURDENS

We find that the national trends hold true across the nine census regions. The following are our key regional findings:

- Across all nine regions, low-income household energy burdens are 2.1-3 times higher than the median energy burden.
- The East South Central region (i.e., *Alabama, Kentucky, Mississippi, Tennessee*) has the greatest percentage of households (38%) with high energy burdens, followed by East North Central (i.e., *Illinois, Indiana, Michigan, Ohio, Wisconsin*), New England (*Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont*), and Middle Atlantic regions (i.e., *New Jersey, New York, Pennsylvania*) (all 29%).
- The gap between low-income and median energy burdens is largest in the New England, Pacific (i.e., *Alaska, California, Hawaii, Oregon, Washington*), and Middle Atlantic regions.
- The South Atlantic region (i.e., *Delaware, DC, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia*) had the greatest number of households (6.3 million) with high burdens, followed by the East North Central (5.4 million) and Middle Atlantic (4.6 million) regions.

## METRO AREA ENERGY BURDENS

National and regional patterns are mirrored in cities. The following are our key metropolitan area findings:

- Low-income households experience energy burdens at least two times higher than that of the average household in each metropolitan area included in the study.<sup>6</sup>
- Black and Hispanic households experience higher energy burdens than non-Hispanic white households; renters experience higher energy burdens than owners; and people living in buildings built before 1980 experience higher energy burdens than people living in buildings built after 1980 across all metro areas in the study.
- Six metro areas have a greater percentage of households with a high energy burden than the national average (25%), including Birmingham (34%), Detroit (30%), Riverside (29%), Rochester (29%), Atlanta (28%), and Philadelphia (26%).

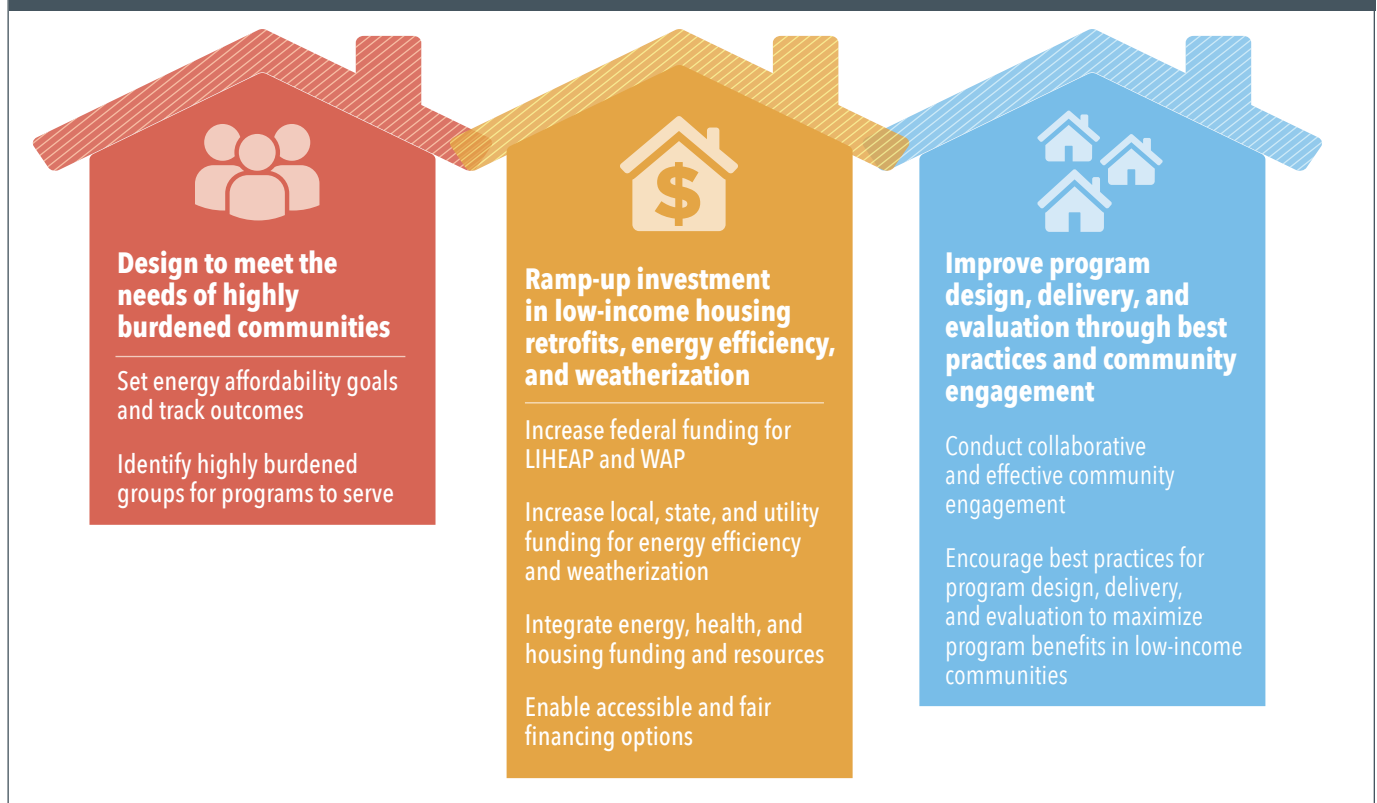
- In five metro areas—Baltimore, Philadelphia, Detroit, Boston, and Birmingham—at least one-quarter of low-income households have energy burdens above 18%, which is three times the high energy burden threshold of 6%.

See the body of the report for additional images, maps, charts, and data on energy burden calculations nationally, regionally, and in metro areas.

## Strategies to Accelerate, Improve, and Better Target Low-Income Housing Retrofits and Weatherization

Clean energy investments—such as energy efficiency, weatherization, and renewable energy—can provide a long-term, high-impact solution to lowering high energy burdens. By investing in energy efficiency and weatherization first or alongside renewable energy technologies, these measures can reduce whole-home energy use to maximize the costs and benefits of

**FIGURE ES2. Strategies to improve and expand low-income energy efficiency and weatherization programs**



<sup>6</sup> We define the “average household” energy burden as the median across all households in the sample (i.e., in each MSA).

**Based on prior evidence of how weatherization reduces average customer bills, we estimate that it can reduce low-income household energy burden by 25%.**

additional renewable energy generation. This report focuses on weatherization and energy efficiency as long-term solutions to reducing high energy burdens; these solutions can be combined with renewable energy investments and/or electrification strategies that reduce energy bills for additional impact. Based on prior evidence of how weatherization reduces average customer bills, we estimate that it can reduce low-income household energy burden by 25%.<sup>7</sup>

To ensure that more low-income and highly energy burdened households receive much-needed energy efficiency and weatherization investments, we recommend that policymakers and program implementers design policies and programs to meet the needs of highly burdened communities and set up processes for evaluation and accountability processes. This involves engaging with community members from the start, increasing funding for low-income weatherization and energy efficiency, and integrating best practices into program design and implementation. Figure ES2 depicts this actionable framework. For more information about these strategies, see the full report.

## Conclusions and Next Steps

Energy affordability remains a national crisis, with low-income households, communities of color, renters, and older adults experiencing disproportionately higher energy burdens than the average household nationally, regionally, and in metro areas. This study finds that each MSA has both similar and unique energy affordability inequities. Further research can help better understand the intersectional drivers of high energy burdens and the policies best suited to improve local energy affordability. Climate change and the global pandemic also underscore the urgency in addressing high household energy burdens. As temperatures continue to rise and heat waves become more common, access to clean, affordable energy is needed more than ever to prevent indoor heat-related illnesses and deaths.

Cities, states, and utilities are well positioned to build on this research and conduct more targeted and detailed energy burden analyses, such as the Pennsylvania Public Utility Commission's study on home energy affordability for low-income customers. Studying energy burden and more broadly analyzing energy insecurity factors are first steps toward setting more targeted energy burden reduction goals and creating policies and programs that lead to more vibrant and prosperous communities.

<sup>7</sup> We assume 25% savings from energy efficiency upgrades based on the U.S. Department of Energy's estimate (DOE 2014) and use the median low-income household values to calculate a 25% reduction. We reduced the median low-income energy bill by 25% from \$1,464 to \$1,098. Using the median low-income household income of \$18,000, this equates to a reduced energy burden of 6.1%. Reducing the median low-income energy burden from 8.1% to 6.1% is a 25% reduction.



# Introduction



**E**nergy insecurity—that is, the inability to adequately meet basic household heating, cooling, and energy needs over time (Hernández 2016)—is increasingly viewed as a major equity issue by policymakers, energy utilities, and clean energy and environmental justice advocates. This multidimensional problem reflects the confluence of three factors: inefficient housing and appliances, lack of access to economic resources, and coping strategies that may lead some residents to dangerously under-heat or under-cool their homes (Hernández, Aratani, and Jiang 2014).

Household energy burden—the percentage of annual household income spent on annual energy bills—is one key element contributing to a household’s energy insecurity. Energy burden as a metric helps us visualize energy affordability (i.e., the ability to afford one’s energy bills); identify which groups shoulder disproportionately higher burdens than others; and recognize which groups most need targeted energy-affordability- and energy-justice-related policies and investments to reduce high energy burdens. Three strategies can reduce both energy insecurity and high energy burdens: increasing household income, increasing bill payment assistance through government or utility resources, and reducing household energy use. This study discusses policy considerations that focus on the third solution of reducing excess energy use to lower high household energy burdens.

This report provides a snapshot of energy burdens nationally and in 25 of the largest U.S. metro areas. We examine median household energy burdens among

groups—varying by income, housing type and age, and tenure status—as well as the percentage of households experiencing high (> 6%) and severe (> 10%) energy burdens nationally, in metro areas, and across groups (APPRISE 2005). Building on ACEEE’s 2016 urban energy burden study and 2018 rural energy burden study (Drehobl and Ross 2016; Ross, Drehobl, and Stickles 2018), this report analyzes national-, regional-, and metro-level data from the U.S. Census Bureau’s most recent American Housing Survey (AHS) conducted in 2017.

Local policymakers, utilities, and advocates can use this report’s data and policy recommendations to better understand both which groups tend to have disproportionately higher energy burdens and how they can measure these burdens in their communities. The subsequent policy recommendations focus on low-income energy efficiency and weatherization as high-impact strategies to alleviate high energy burdens and improve overall energy affordability.

# Background



## Systemic Patterns and Causes of Inequities

Household access to energy is central to maintaining health and well-being, yet one in three U.S. households reported difficulty paying their energy bills in 2015 (EIA 2018). Black, Indigenous, and People of Color (BIPOC) communities often experience the highest energy burdens when compared to more affluent or white households (Kontokosta, Reina, and Bonczak 2019; Dreobl and Ross 2016; Hernández et al. 2016).<sup>8</sup> These communities often experience racial segregation, high unemployment, high poverty rates, poor housing conditions, high rates of certain health conditions, lower educational opportunity, and barriers to accessing financing and investment (Jargowsky 2015; Cashin 2005). Many of these characteristics are due in part to systemic racial discrimination, which has led to long-standing patterns of disenfranchisement from income and wealth-building opportunities for BIPOC communities as compared to white communities (Rothstein 2017).

<sup>8</sup> We use the term BIPOC in this report to describe communities that experience especially acute systemic inequities, barriers, and limited access to energy programs. By specifically naming Black and Indigenous (Native American) communities, the term BIPOC recognizes that Black and Indigenous people have historically experienced targeted policies of systemic economic exclusion, classism, and racism in the United States. It is important to recognize this history and how it has led to disproportionately high energy burdens and unique barriers to accessing clean energy technologies and investments.

Policies and practices that have led to economic and/or social exclusion in BIPOC communities include neighborhood segregation and redlining, lack of access to mortgages and other loans, mass incarceration, employment discrimination, and the legacy of segregated and underfunded schools (Jargowsky 2015; McCarty, Perl, and Jones 2019).<sup>9</sup> These types of systemic exclusions, underinvestments, discriminative lending practices, and limited housing choices have also limited BIPOC communities' access to efficient and healthy housing (Lewis, Hernández, and Geronimus 2019). In addition, Black communities are 68% more likely to live within 30 miles of a coal-fired power plant, and properties in close proximity to toxic facilities average 15% lower property values than those in other areas (National Research Council 2010). Black children are three times as likely to be admitted to the hospital for asthma attacks than white children (Patterson et al. 2014). According to a study by the American Association of Blacks in Energy, while Black households spent \$41 billion on energy in 2009, they held only 1.1% of energy jobs and gained only 0.01% of the revenue from energy-sector profits (Patterson et al. 2014).

## Limited Access to Energy Programs

A growing body of research shows that BIPOC and low-income communities experience disparate access to residential energy-saving appliances and other energy efficiency upgrades. While low-income and communities of color on average consume less energy than wealthier households, they are more likely to live in less-efficient housing (Bednar, Reames, and Keoleian 2017). Researchers found that, when holding income constant, BIPOC households experience higher energy burdens than non-Hispanic white households (Kontokosta, Reina, and Bonczak 2019). BIPOC and low-income communities also may experience higher costs when investing in energy-efficient upgrades. For example, a study based in Detroit found that energy-efficient lightbulbs were less available in high-poverty areas and smaller stores, and when they were available, they were more expensive than in other areas (Reames, Reiner, and Stacey 2018).

Others have found that untargeted utility-administered energy efficiency programs do not effectively reach BIPOC and low-income communities—particularly those living in multifamily buildings (Frank and Nowak 2016; Samarripas and York 2019). Low-income communities face economic, social, health and safety, and information barriers that impact their ability to access programs, and many programs fail to address these barriers through specific targeting practices. Limited access to energy

**Systemic exclusions, under-investments, discriminative lending practices, and limited housing choices have limited Black, Indigenous, and People of Color communities' access to efficient and healthy housing.**

efficiency resources and investments coupled with lower incomes increase the proportion of income that low-income and BIPOC households spend on energy bills (Jessel, Sawyer, and Hernández 2019; Berry, Hronis, and Woodward 2018).

Where utilities do administer programs targeted at low-income customers, participant needs far exceed available resources. Reames, Stacy, and Zimmerman (2019) found that 11 large investor-owned utilities across six states have distributional disparities in low-income investments; that is, they do not spend energy efficiency dollars proportionally on programs designed to reach low-income populations. A 2018 report found that only 6% of all U.S. energy efficiency spending in 2015 was dedicated to low-income programs (EDF APPRISE 2018). Most states require that utility energy efficiency program portfolios be cost effective, often using tests that focus mostly on direct economic costs to the utility (Woolf et al. 2017; Hayes, Kubes, and Gerbode 2020). This requirement places an additional burden on utilities, states, and local governments that invest in programs that serve low-income communities because it does not account for nonenergy and additional health, economic, and community benefits in program planning and evaluations.

## Definition and Drivers of High Energy Burdens

*High energy burdens* are often defined as greater than 6% of income, while *severe energy burdens* are those greater than 10% of income (APPRISE 2005).<sup>10</sup> Past research found that low-income, Black, and Hispanic communities, as well as older adults, renters, and those residing in low-income multifamily buildings experienced disproportionately higher energy burdens than other households (Drehobl and Ross 2016; Ross, Drehobl, and Stickles 2018).

<sup>9</sup> *Redlining* is the discriminatory practice of fencing off areas in which banks would avoid investments based on community demographics. Redlining was included in local, state, and federal housing policies for much of the 20th century. For more information on historical forms of economic and social exclusion, see *The Color of Law: A Forgotten History of How Our Government Segregated America* by Richard Rothstein.

<sup>10</sup> Researchers estimate that housing costs should be no more than 30% of household income, and household energy costs should be no more than 20% of housing costs. This means that affordable household energy costs should be no more than 6% of total household income.



**TABLE 1. Key drivers of high household energy burdens**

<b>Drivers</b>	<b>Examples of factors that affect energy burden</b>
<b>Physical</b>	Housing age (i.e., older homes are often less energy efficient)
	Housing type (e.g., manufactured homes, single family, and multifamily)
	Heating and cooling system (e.g., system type, fuel type, and fuel cost)
	Building envelope (e.g., poor insulation, leaky roofs, inefficient and/or poorly maintained poorly maintained heating and cooling systems (HVAC), and/or inadequate air sealing)
	Appliances and lighting efficiency (e.g., large-scale appliances such as refrigerators, washing machines, and dishwashers)
	Topography and location (e.g., climate, urban heat islands)
	Climate change and weather extremes that raise the need for heating and cooling
<b>Socioeconomic</b>	Chronic economic hardship due to persistent low income
	Sudden economic hardship (e.g., severe illness, unemployment, or disaster event)
	Inability to afford (or difficulty affording) up-front costs of energy efficiency investments
	Difficulty qualifying for credit or financing options to make efficiency investments due to financial and other systemic barriers
	Systemic inequalities relating to race and/or ethnicity, income, disability, and other factors
<b>Behavioral</b>	Information barriers relating to available bill assistance and energy efficiency programs and relating to knowledge of energy conservation measures
	Lack of trust and/or uncertainty about investments and/or savings
	Lack of cultural competence in outreach and education programs
	Increased energy use due to occupant age, number of people in the household, health-related needs, or disability
<b>Policy-related</b>	Insufficient or inaccessible policies and programs for bill assistance, energy efficiency, and weatherization for low-income households
	Utility rate design practices, such as high customer fixed charges, that limit customers' ability to respond to high bills through energy efficiency or conservation

Source: Updated from Ross, Dreihobl, and Stickles 2018

Drivers of high household energy burdens are often the result of the systemic factors, barriers, and challenges that these households face. Previous research identified drivers that can raise energy burdens, including the dwelling's physical structure, the resident's socioeconomic status and behavioral patterns, and the availability of policy-related resources (Dreihobl and Ross 2016; Ross, Dreihobl, and Stickles 2018). Table 1 shows an updated list of key drivers of high energy burdens.

## ENERGY INEFFICIENCY AS A DRIVER OF HIGH ENERGY BURDENS

While low incomes are a substantial factor driving higher energy burdens, inefficient housing is also a

contributor. According to the 2017 AHS data, 9% of total U.S. households completed an energy-efficient improvement in the past two years, but only 17% were low-income households (Census Bureau 2019). Low-income households ( $\leq 200\%$  of the federal poverty level [FPL]) make up about 30% of the population, which means that they are underrepresented in households completing energy efficiency upgrades and thus are not proportionally accessing and benefiting from these investments.

Additional research examining energy benchmarking data in a few major cities has found that households from both the lowest- and highest-income brackets had the highest *energy use intensity* (EUI)—that is, they had

the highest energy consumption per square foot. While consumption behaviors are regarded as the driver for high EUI among higher-income households, the researchers point to inefficient heating and lighting infrastructure to help explain the high EUI among low-income households (Kontokosta, Reina, and Bonczak 2019). High-income households use large amounts of energy to power larger homes—as well as more electronics and devices that use large amounts of energy—while low-income households tend to use fewer, less-efficient devices that require relatively large amounts of energy due to the inefficiency of the dwelling or the appliance itself. Therefore, household inefficiencies rather than inefficient behaviors tend to lead to higher energy use and expenditures for low-income households. Generally, energy efficiency investments can allow households to engage in the same activity while using less energy, thus reducing high energy burdens and improving comfort, health, and safety.

## **Adverse Effects of High Energy Burdens**

Our comprehensive evaluation of energy burden research reveals both that low-income households spend, on average, a higher portion of their income on energy bills than other groups, and that energy burdens are also higher for communities of color, rural communities, families with children, and older adults (Brown et al. 2020; Lewis, Hernández, and Geronimus 2019; Reames 2016; Hernández et al. 2016; Drehobl and Ross 2016; Ross, Drehobl, and Stickles 2018). Energy burden is one indicator to measure energy insecurity, and high energy burdens are associated with inadequate housing conditions and have been found to affect physical and mental health, nutrition, and local economic development.

### **EXCESSIVE ENERGY COST CAN IMPACT RESIDENTS' HEALTH AND COMFORT.**

Researchers have found that many households with high energy burdens also live in older, inefficient, and unhealthy housing. Inefficient housing is associated with other health impacts, such as carbon monoxide poisoning, lead exposure, thermal discomfort, and respiratory problems such as asthma and chronic obstructive pulmonary disease (COPD); it is also associated with the potential for hypothermia and/or heat stress resulting from leaky and/or unrepaired heating and cooling equipment (Brown et al. 2020; Norton, Brown, and Malomo-Paris 2017).

Households experiencing energy insecurity may forego needed energy use to reduce energy bills, forcing them to live in uncomfortable and unsafe homes. Hernández, Phillips, and Siegel (2016) found that half of the study's participants who experienced high monthly utility bills engaged in coping strategies such as using secondary heating equipment (i.e., stoves, ovens, or space heaters) to compensate for inefficient or inadequate heating systems. Employing this coping measure can compromise resident safety and comfort, and it may increase exposure to toxic gases. Teller-Elsberg et al. (2015) found that excess winter deaths potentially caused by fuel poverty kill more Vermonters each year than car crashes. In addition, according to the Residential Energy Consumption Survey, one in five U.S. households reported reducing or forgoing necessities such as food or medicine to pay an energy bill (EIA 2018). These tradeoffs can impact long-term health and well-being.

Climate change, rising temperatures, and subsequent cooling demands will continue to exacerbate household energy burdens—and prove deadly for some. In Maricopa County, Arizona—one of the hottest regions in the southwest—more than 90% of residents have access to a cooling system, yet up to 40% of heat-related deaths occur indoors (Maricopa County Department of Public Health 2020). A recent survey of homebound individuals found that one-third faced limitations on home cooling system use, with the overwhelming majority (81%) citing the “cost of bills” as a contributing factor (Maricopa County Department of Public Health 2016). As residents are increasingly forced to weigh the cost of properly cooling their homes, high energy burdens will likely become an even greater public health priority in the years to come.

### **HIGH ENERGY BURDENS IMPACT MENTAL HEALTH OF RESIDENTS.**

High energy burdens can have mental health impacts—such as chronic stress, anxiety, and depression—associated with fear and uncertainty around access to energy, the complexities of navigating energy assistance programs, and the inability to control energy costs (Hernández, Phillip, and Siegel 2016). In addition, Hernández (2016) found that low-income residents who were experiencing energy insecurity worried about losing their parental rights as they struggled to maintain essential energy services, such as lighting, in their homes.

## HIGH ENERGY BURDENS CAN LIMIT INDIVIDUALS' ABILITY TO BENEFIT FROM ECONOMIC DEVELOPMENT IN THEIR COMMUNITIES.

Households with high energy burdens are more likely to stay caught in cycles of poverty. After controlling for common predictors of poverty status such as income loss, illness, health, marital status, education, health insurance, and head of households—Bohr and McCreery (2019) found that, on average, energy-burdened households have a 175–200% chance of remaining in poverty for a longer period of time compared to nonenergy-burdened households.<sup>11</sup> BIPOC communities, older adults, and low-income households often experience this pernicious cycle, which includes persistent income inequality along with limited funding to invest in education or job training, and high energy burdens can perpetuate this cycle (Bohr and McCreery 2019; Lewis, Hernández, and Geronimus 2019).

### Impact of COVID-19 on Energy Insecurity

As the world enters a global recession in the wake of the coronavirus pandemic, more households—especially in BIPOC communities—may have difficulty paying their energy bills due to massive job losses; reduced income; a warming climate; and higher energy bills resulting from more time at home due to stay-at-home orders and to students and adults learning and working from home, respectively. For example, in March and April 2020, the California Public Utility Commission stated that residential electricity usage increased by 15–20% compared to the previous year (CPUC 2020). Because such factors lead to higher home energy bills, energy burdens will increase for households across the United States.

**Households with high energy burdens are more likely to stay caught in cycles of poverty.**

COVID-19 disproportionately impacts BIPOC communities due to many of the policies that have led to systemic economic and social exclusion. These policies have led to BIPOC communities experiencing higher rates of underlying health conditions, a lack of health insurance or access to testing, and a higher likelihood of working in the service industry or in other essential worker roles that do not allow for teleworking (SAMHSA 2020; CDC 2020). COVID-19 has also impacted the ability of energy efficiency and weatherization programs to operate, and limited the mix of measures that can be installed; many energy efficiency and weatherization programs have slowed down or are on hold (Ferris 2020). Policies and programs that address energy insecurity are even more important now in the face of rising energy bills and burdens.

Given these factors, energy burdens in 2020 are likely to be much higher than the burdens we calculate in this report, which uses 2017 data. The economic situation has clearly shifted drastically since 2017. While we expect post-2020 burden trends to be similar, yet more acute, we cannot visualize the full extent of current and future energy burdens until the release of post-2020 data in the 2023 AHS, which will include data from 2021.

<sup>11</sup> This study does not examine the relationship between energy burden and rent burden (i.e., the percentage of income spent on housing costs). Studies have found that rent burdens are also increasing, especially for communities of color, older adults, and families (Currier et al. 2018).

# Methods



This analysis builds on the methods used in ACEEE's previous two energy burden studies, *Lifting the High Energy Burden in American's Largest Cities* (Drehobl and Ross 2016) and *The High Cost of Energy in Rural America* (Ross, Drehobl, and Stickles 2018). This new study analyzes 2017 data from AHS, which is issued by the U.S. Department of Housing and Urban Development (HUD). The AHS is a biennial household-level survey by the Census Bureau that collects wide-range housing and demographic data from a nationally and regionally representative cross section of households across the United States and in a subset of metropolitan statistical areas (MSAs). The AHS includes household-level income data and energy cost data that we use as the basis of our energy burden calculations. The AHS models its energy cost data based on household characteristics ascertained through its survey and also uses data collected through the Residential Energy Consumption Survey (RECS) for a different national set of households.<sup>12</sup>

As we noted earlier, we define households with high energy burdens as those spending more than 6% of their income on electricity and heating fuel costs, and households with severe energy burdens as those

spending more than 10% of their income on energy costs.<sup>13</sup> These two categories are not mutually exclusive; *severe burden* is a worse-off subset of high burden households.

<sup>12</sup> Beginning with the 2015 edition, the AHS stopped including questions on energy costs. Previously, the majority of these data was self-reported. As part of the 2015 AHS redesign, researchers began estimating energy costs through regression-model-based imputation. They created the utility estimation system (UES) to estimate annual energy costs using regression models developed from the RECS, which collects administrative data from suppliers on actual billing amounts. This estimate was divided by 12 to calculate average monthly energy costs. The RECS also collects some housing characteristics similar to those the AHS collects, which allows the construction of models that can then be applied to the AHS. For more on the energy cost estimation model development and decisions for the 2015 AHS, see [www.huduser.gov/portal/sites/default/files/pdf/American-Housing-Survey.pdf](http://www.huduser.gov/portal/sites/default/files/pdf/American-Housing-Survey.pdf).

<sup>13</sup> HUD determines affordable housing costs to be 30% of total household income. Researchers have determined that, typically, 20% of total housing expenses are energy costs. This equates to 6% of total income spent on energy bills as an affordable level (Fisher Sheehan & Colton 2020). We consider energy burdens above 6% to be high burdens, with burdens above 10% to be severe. This method is in line with other research (APPRISE 2005).



The following are our study's inclusion and exclusion criteria:

- *Electricity and heating fuels.* The study does not include water, transportation, telecommunications, or Internet costs. Although such costs can create additional monetary burdens for households, we include only electricity and heating fuel costs in our energy burden calculations.
- *Households must report household income and the amount they pay for their electricity and their main heating fuel.*<sup>14</sup> If households did not include all three factors, we did not include them in our analysis.

We examine energy burdens for a variety of household subsets at the national, regional, and metropolitan levels, including the following:

- *Income level.* All households that fall into low-income ( $\leq 200\%$  FPL) and non-low-income ( $> 200\%$  FPL) categories.<sup>15</sup>
- *Low-income households with vulnerable persons at home.* Low-income households with a household member over the age of 65, under the age of 6, or who has a disability.
- *Housing type and age.* Single-family, small multifamily (two to four units), large multifamily (five or more units), low-income multifamily (five or more units and  $\leq 200\%$  FPL), manufactured housing, buildings built before 1980, and buildings built after 1980.<sup>16</sup>
- *Tenure:* Renters and owners.
- *Race and ethnicity.* Black, Hispanic, and non-Hispanic white households. We also include Native American households in the national analysis.
- *Age.* Households with one or more adults over the age of 65.

## Limitations

We included 48 MSAs in our last urban energy burden report, which used both 2011 and 2013 AHS data. This report uses only 2017 data, which limits our sample to 25 MSAs (AHS 2019). AHS includes modeled energy costs, which are determined by matching characteristics of households in the AHS to characteristics of households in the RECS. We also exclude households that do not report income, do not have a heating source, or do not pay for their heating costs. Thus, our report findings do not include data on renters who pay for their heating and/or electricity in their rent, or households with no annual income reported.

Our study does not explore causality, so we cannot determine *why* energy burdens differ across metro areas and demographic and other groups. Additional research is needed to determine the causes of disproportionate energy burdens, which can include building efficiency, income and poverty rates, and other timely economic factors. We are unable to compare trends across our energy burden reports, as this study does not explore *why* and *how* energy burdens may have changed over time.

Finally, our study includes only the 25 metro areas sampled by the AHS, which are not necessarily the best or worst performing metro areas regarding energy burdens. Ranking metro areas is thus limited since this is only a partial sample of cities. ACEEE plans to update this research with additional metro areas as more AHS data are available in the fall of 2020.

The following are the 25 MSAs with representative samples in the 2017 AHS dataset:

1. Atlanta	6. Dallas	11. Miami	16. Phoenix	21. San Francisco
2. Baltimore	7. Detroit	12. Minneapolis	17. Richmond	22. San Jose
3. Birmingham	8. Houston	13. New York City	18. Riverside	23. Seattle
4. Boston	9. Las Vegas	14. Oklahoma City	19. Rochester	24. Tampa
5. Chicago	10. Los Angeles	15. Philadelphia	20. San Antonio	25. Washington, DC

<sup>14</sup> AHS calculates household income as total money before taxes and other payments, including Social Security income, cash public assistance, or welfare payments from the state or local welfare office, retirement, survivor or disability benefits, and other sources of income such as veterans' payments, unemployment and/or worker's compensation, child support, and alimony. For more information, see: [www2.census.gov/programs-surveys/ahs/2017/2017%20AHS%20Definitions.pdf](http://www2.census.gov/programs-surveys/ahs/2017/2017%20AHS%20Definitions.pdf).

<sup>15</sup> In ACEEE's 2016 urban energy burden report, we defined low-income as 80% of the area median income (AMI), while this report defines low-income as 200% FPL. We made this change due to data availability. The 200% FPL definition also lines up with the Weatherization Assistance Program and is the most common qualification criterion for utility-led low-income programs. Because of this, low-income data in the 2016 and 2020 reports do not use the same definitions and are therefore not directly comparable.

<sup>16</sup> We chose 1980 as our cutoff point as states and cities began adopting the first building energy codes in the late 1970s and early 1980s. At this time, builders around the country began to consider energy and minimal energy efficiency measures due to increasing awareness of efficiency measures and concerns about energy as a result of the energy-related economic shocks of the 1970s.

# Energy Burden Findings



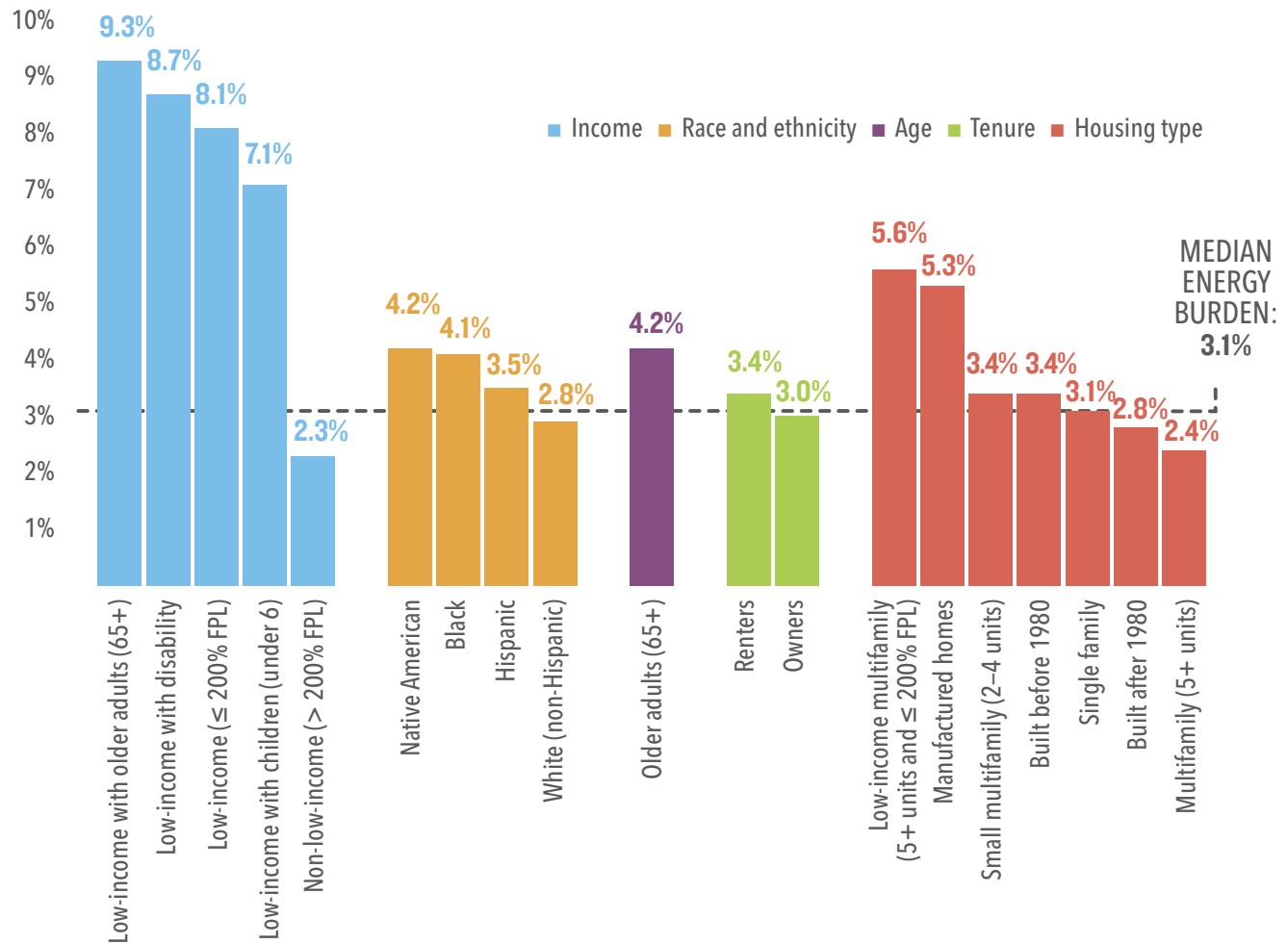
The results of this energy burden analysis reflect previous ACEEE studies in finding that nationally, regionally, and across all 25 metro areas, particular groups experience disproportionately high energy burdens. See **Appendices A** and **B** for tables including national, regional, and metro energy burden data.

## National Energy Burdens

Across the nationally representative sample, we find that low-income, Black, Hispanic, renter, and older adult households have disproportionately higher energy burdens than the average household. Figure 1 shows the median energy burden for different groups nationally,

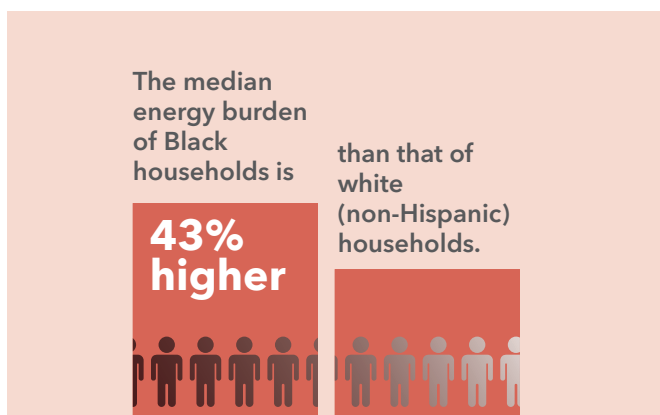
across categories of income, race and ethnicity, age, tenure status, and housing type. We find that the median national energy burden is 3.1%, and that the median low-income ( $\leq 200\%$  FPL) household energy burden is 3.5 times higher than the non-low-income household energy burden (8.1% versus 2.3%).

**FIGURE 1. National energy burdens across subgroups (i.e., income, race and ethnicity, age, tenure, and housing type) compared to the national median energy burden**

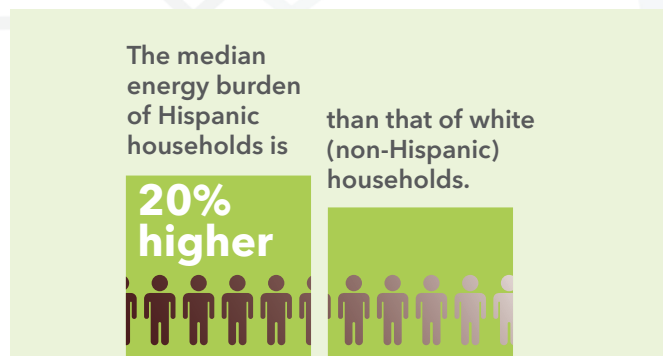




Many groups experience disproportionately high energy burdens, with low-income households having the highest energy burdens. These households have limited discretionary income and often have older, less-efficient housing stock and appliances that lead to higher energy bills. Even for cases in which monthly energy costs are similar between low-income and non-low-income households, the former devote a greater proportion of their income to these costs. Given this, reducing excess energy use in low-income households is critical for addressing energy insecurity.



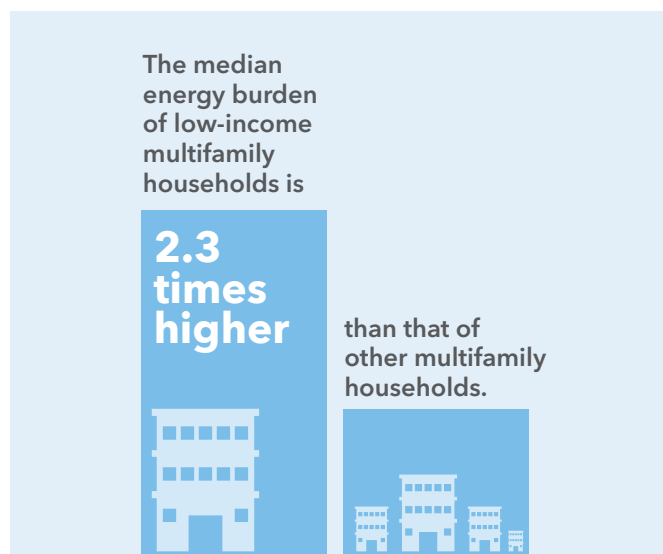
We also recognize that many highly burdened groups are intersectional—that is, they face compounding, intersecting causes of inequality and injustice. For example, nearly half of the older adult population in general is economically vulnerable, as are the majority of older Black and Hispanic households (Cooper and Gould 2013). Policies and programs that focus on addressing low-income household energy burdens will likely intersect with other highly burdened groups. Further research can help identify how high energy burdens are impacted by differences in race, ethnicity, income, education, housing type, occupant age, and other factors.



## NATIONAL DATA: HIGH AND SEVERE ENERGY BURDENS

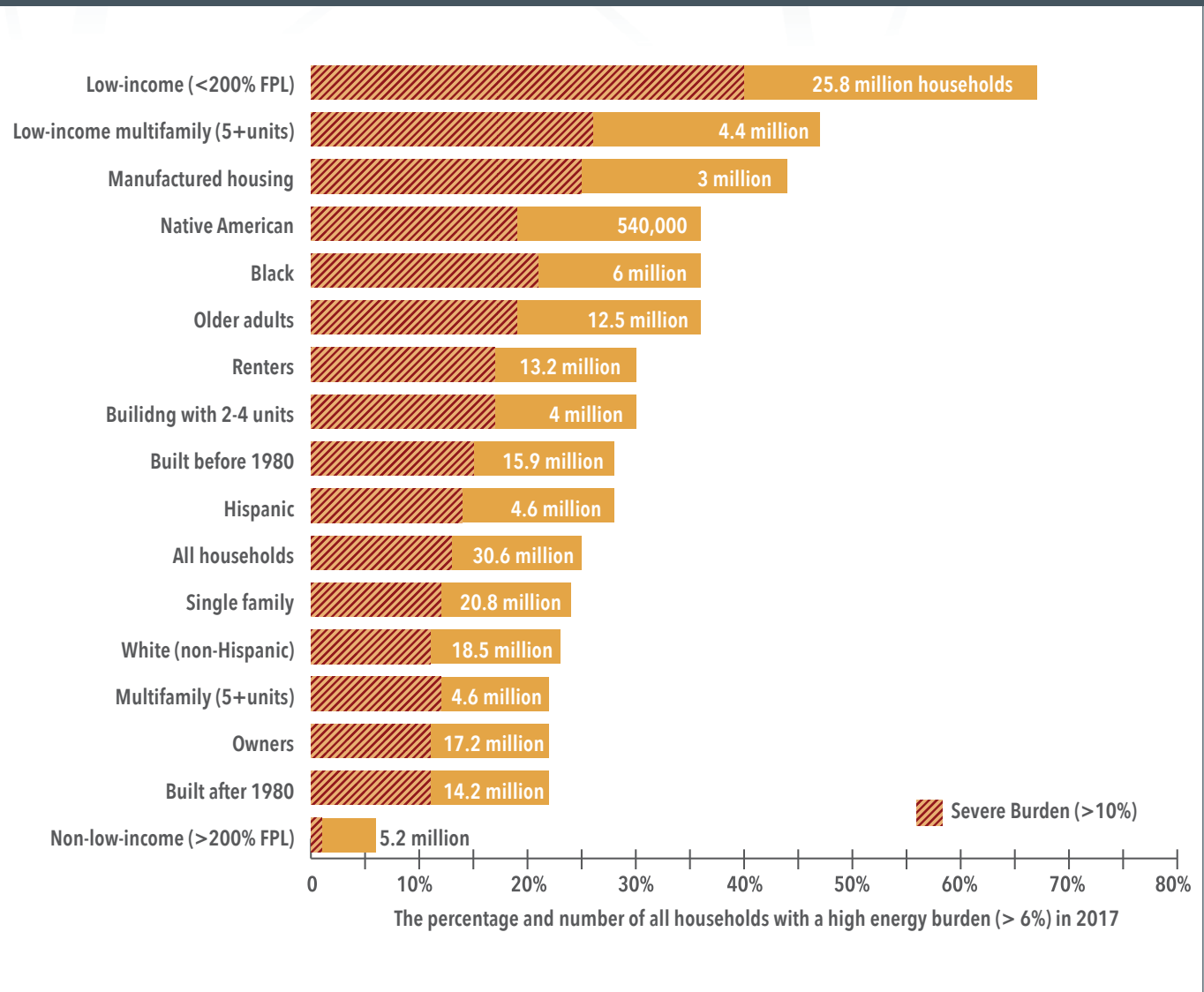
Median energy burdens allow us to compare burdens between groups, yet they do not illustrate how many people experience the impacts of energy insecurity, or the degrees to which they experience it. We therefore also calculate the percentage of households that experience high and severe energy burdens for different demographic groups. Figure 2 shows the percentage of households across subgroups that experience a high energy burden (above 6%), along with the total number of households experiencing a high energy burden. Figure 2 also indicates the percentage of those households that experience a severe energy burden (above 10%).

Nationally, more than 25% (30.6 million) of all households experience a high energy burden, and about 50% (15.9 million) of all households that experience a high energy burden have a severe energy burden. These burdens are even more acute for low-income households, of which 67% (25.8 million) experience a high energy burden and 60% (15.4 million) of those experience a severe energy burden. **Appendix B** includes high and severe energy burden percentages and total households that experience a high and severe





**FIGURE 2. The percentage and number of households nationally with a high energy burden (> 6%) across different subgroups in 2017**



Note: High and severe energy burdens are not mutually exclusive, meaning that the number of households experiencing a severe burden are also counted in the percentage that experience high burdens. All severe energy burdens (> 10%) also fall into the high burden category (> 6%). The red and orange bars in figure 2 sum to the total high energy burdened households, and the number of households is the total that experience a high energy burden.

burden nationally, regionally, and in each MSA across all households and across low-income, Black, Hispanic, older adult, and renting households.

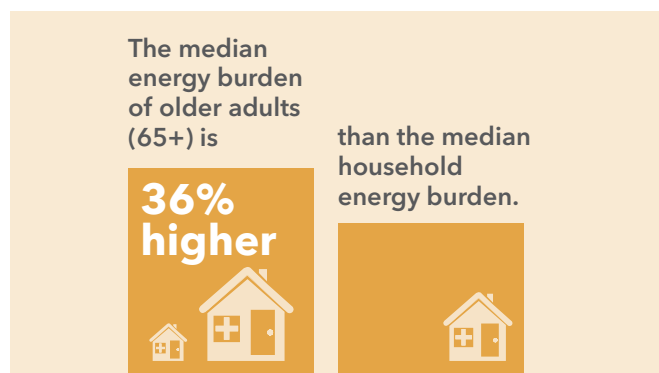
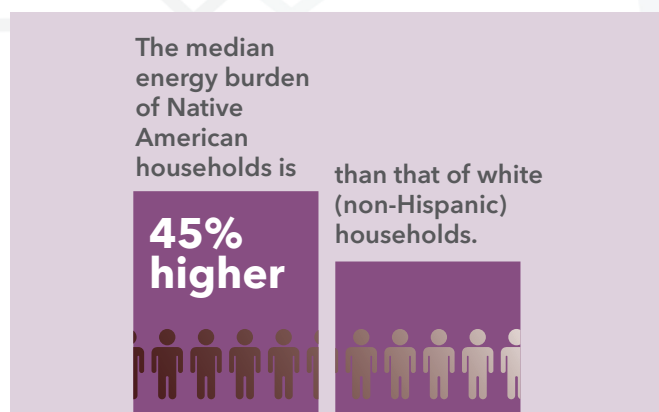
As figure 2 illustrates, U.S. residents experience high and severe energy burdens at different rates depending on factors such as income, occupant age, race, and tenure. Almost 50% of low-income multifamily residents; 36% of Black, Native American, and older adult households; 30% of renters; and 28% of Hispanic households experience a high energy burden.

Many households also have severe energy burdens, spending more than 10% of their income on energy. For example, 21% of Black households experience severe energy burdens as compared to 1% of non-low-income and 9% of non-Hispanic white households. For context, households with severe energy burdens spend at least three times more of their income on home energy bills than the median household.

## Regional Energy Burdens

National patterns play out across all regions, where low-income, Black, and Hispanic households; renters; manufactured housing residents; and older adults all have disproportionately higher energy burdens than each region's average household. Table 2 shows the states in each census region in the study.

Across all nine regions, low-income household energy burdens are 2.1–3 times higher than the median energy burden. The gap between low-income and median energy burdens is largest in the New England, Pacific,

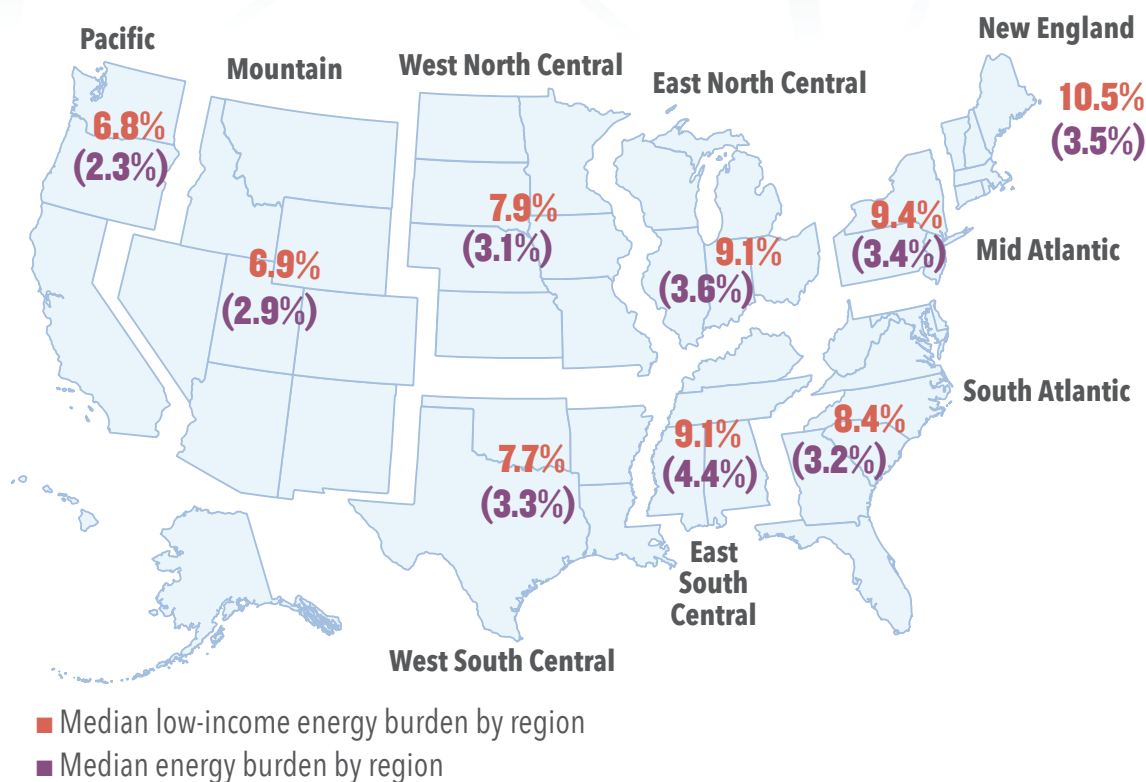


and Mid-Atlantic regions (3.0, 2.9, and 2.8 times higher, respectively). Figure 3 illustrates low-income energy burdens and the median energy burden across the nine census regions.

**TABLE 2. States within each census region**

Region	States
<b>New England</b>	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
<b>Middle Atlantic</b>	New Jersey, New York, Pennsylvania
<b>East North Central</b>	Illinois, Indiana, Michigan, Ohio, Wisconsin
<b>West North Central</b>	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
<b>South Atlantic</b>	Delaware, DC, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
<b>East South Central</b>	Alabama, Kentucky, Mississippi, Tennessee
<b>West South Central</b>	Arkansas, Louisiana, Oklahoma, Texas
<b>Mountain</b>	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
<b>Pacific</b>	Alaska, California, Hawaii, Oregon, Washington

**FIGURE 3. Median low-income (< 200% FPL) energy burdens by region (red) compared to median energy burdens by region (purple)**



## REGIONAL DATA: HIGH AND SEVERE ENERGY BURDENS

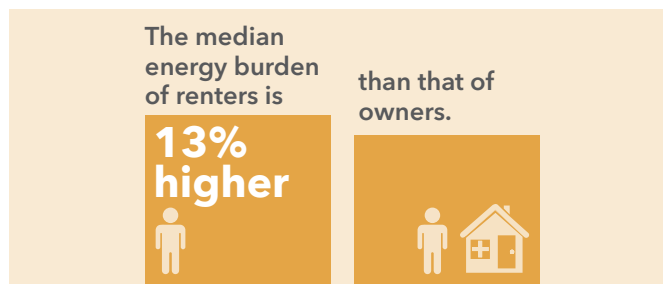
Figure 4 shows the percentage and total number of households that experience high and severe energy burdens in each region.

The percentage and total number of households that experience a high energy burden vary across regions. The East South Central region has the greatest percentage of households with high energy burdens (38%), followed

by East North Central, New England, and Middle Atlantic regions, all with 29%. The South Atlantic region had the greatest number of households (6.27 million) with high burdens, followed by the East North Central (5.40 million) and Middle Atlantic (4.57 million) regions. See **Appendix B** for the total number of highly burdened households across different groups in each region.

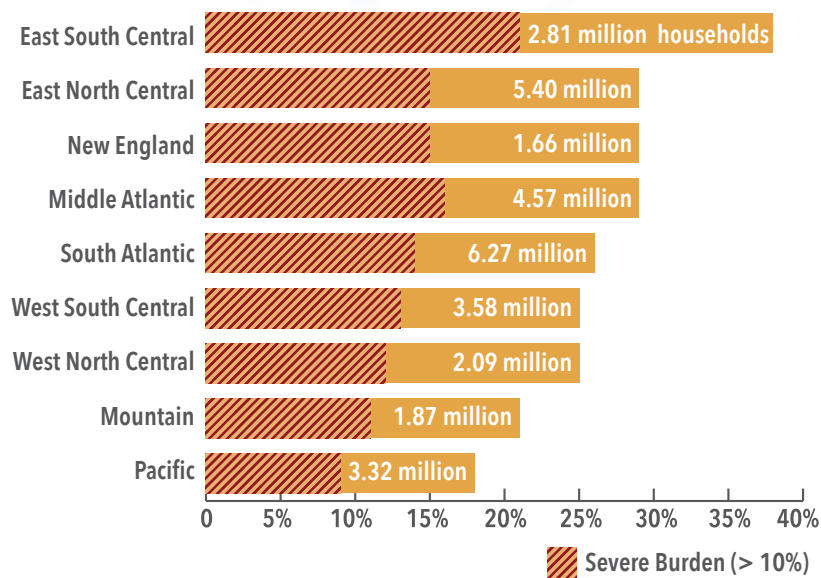
## Metro Area Energy Burdens

Across the select MSAs—which represent 38% of all households nationally—low-income households, low-income multifamily households, and older adult households are the most energy burdened groups. Groups with the lowest energy burdens are non-low-income, those living in buildings built after 1980, and those living in market-rate multifamily housing. Table 3 includes the median energy burdens for the most highly burdened groups in each metro area; **Appendices A** and **B** offer more details.<sup>17</sup>



<sup>17</sup> **Appendix A** includes national, regional, and metro area sample sizes, median energy burdens, median incomes, median monthly bills, upper-quartile energy burdens, percentage with a high burden, and percentage with a severe burden. **Appendix A** also includes median and upper-quartile energy burdens for subgroups nationally, regionally, and in metro areas, including low-income, low-income with older adults, low-income with a child under 6, low-income with disability, low-income multifamily, non-low-income, Black, Hispanic, non-Hispanic white, older adult, renters, owners, multifamily, built before 1980, and built after 1980. **Appendix B** includes the number of households nationally, regionally, and in metro areas that experience a high or severe energy burden.

**FIGURE 4. The percentage and number of all households with a high energy burden (> 6%) in each region in 2017**



The median energy burden of manufactured housing residents is

**39% higher**



than that of single family households.



Figure 5 includes the energy burdens at the median and upper quartile, showing that 50% of households in each city experience a burden above the median and 25% experience a burden above the upper quartile. For example, in Baltimore, 25% of low-income households experience an energy burden above 21.7%, which is seven times the national median burden. In five cities—Baltimore, Philadelphia, Detroit, Boston, and Birmingham—a quarter of low-income households have energy burdens above 18%, which is three times the 6% high energy burden threshold.

Across the 25 MSAs, low-income households experience energy burdens at least two times higher than the average household in all cities. In all metro areas, Black and Hispanic households experience higher energy burdens than non-Hispanic white households. Renters and people living in buildings built before 1980 experience higher energy burdens than owners in almost all metro areas in the study.

Median energy burdens do not tell the whole energy affordability story, as half of households in each group experience a higher energy burden than the median.

The median energy burden of residents in pre-1980s buildings is

**21% higher**



than that of residents in post-1980 buildings

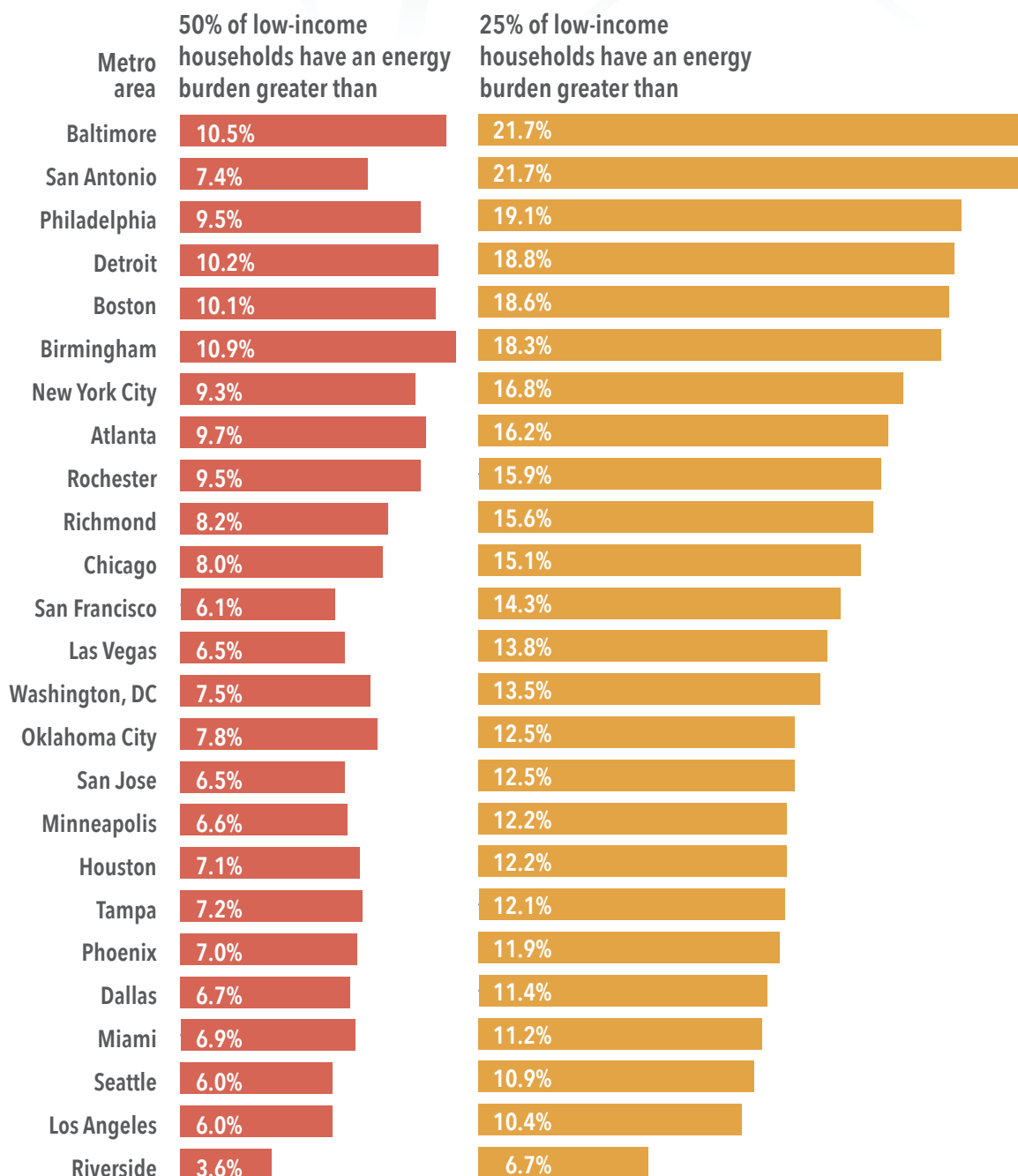


**TABLE 3. Median energy burdens in metro areas for all households and highly impacted groups, including low-income, Black, Hispanic, older adult (65+), renters, low-income multifamily residents, and those residing in buildings built before 1980**

<b>Metro area</b>	<b>All households</b>	<b>Low-income (≤ 200% FPL)</b>	<b>Black</b>	<b>Hispanic</b>	<b>Older adults (65+)</b>	<b>Renters</b>	<b>Low-income multifamily*</b>	<b>Built before 1980</b>
<b>National data</b>	3.1%	8.1%	4.2%	3.5%	4.2%	3.4%	3.1%	3.4%
<b>Atlanta</b>	3.5%	9.7%	4.1%	4.7%	5.1%	3.7%	6.6%	4.5%
<b>Baltimore</b>	3.0%	10.5%	3.8%	3.3%	4.1%	3.2%	2.5%	3.6%
<b>Birmingham</b>	4.2%	10.9%	5.6%	4.8%	5.8%	5.2%	6.8%	5.1%
<b>Boston</b>	3.1%	10.1%	3.7%	3.6%	4.4%	3.2%	6.6%	3.2%
<b>Chicago</b>	2.7%	8.0%	4.1%	3.0%	3.7%	3.1%	6.4%	2.9%
<b>Dallas</b>	2.9%	6.7%	3.3%	3.8%	3.8%	2.9%	5.0%	3.5%
<b>Detroit</b>	3.8%	10.2%	5.3%	4.5%	5.2%	4.6%	6.0%	4.3%
<b>Houston</b>	3.0%	7.1%	3.5%	3.4%	4.1%	3.3%	5.8%	3.4%
<b>Las Vegas</b>	2.8%	6.5%	3.2%	3.0%	3.4%	3.0%	5.3%	3.6%
<b>Los Angeles</b>	2.2%	6.0%	3.6%	2.6%	3.2%	2.4%	4.8%	2.3%
<b>Miami</b>	3.0%	6.9%	3.4%	3.1%	4.2%	3.1%	5.5%	3.3%
<b>Minneapolis</b>	2.2%	6.6%	2.6%	2.7%	3.0%	2.3%	4.3%	2.5%
<b>New York City</b>	2.9%	9.3%	3.6%	3.8%	4.2%	3.3%	8.0%	3.0%
<b>Oklahoma City</b>	3.3%	7.8%	3.9%	4.2%	4.0%	3.9%	6.5%	3.8%
<b>Philadelphia</b>	3.2%	9.5%	4.4%	5.2%	4.4%	3.9%	6.5%	3.6%
<b>Phoenix</b>	3.0%	7.0%	3.2%	3.6%	4.0%	2.8%	4.6%	3.6%
<b>Richmond</b>	2.6%	8.2%	3.4%	2.9%	3.5%	2.9%	5.0%	3.1%
<b>Riverside</b>	3.6%	8.7%	3.9%	3.7%	5.1%	4.0%	6.1%	4.3%
<b>Rochester</b>	3.8%	9.5%	5.1%	5.4%	4.8%	4.3%	6.0%	4.0%
<b>San Antonio</b>	3.0%	7.4%	3.1%	3.4%	4.1%	3.1%	4.8%	3.9%
<b>San Francisco</b>	1.4%	6.1%	2.4%	1.2%	2.4%	1.4%	4.9%	1.4%
<b>San Jose</b>	1.5%	6.5%	1.8%	1.9%	2.4%	1.5%	4.7%	1.6%
<b>Seattle</b>	1.8%	6.0%	2.3%	2.0%	2.4%	1.8%	4.1%	2.0%
<b>Tampa</b>	2.8%	7.2%	3.6%	3.5%	3.8%	2.8%	4.9%	3.3%
<b>Washington, DC</b>	2.0%	7.5%	2.9%	2.7%	2.9%	2.0%	5.2%	2.3%

\* Low-income multifamily households are below 200% FPL and in a building with five or more units.

**FIGURE 5. Energy burden experienced by 50% and 25% of low-income households in 25 metro areas**



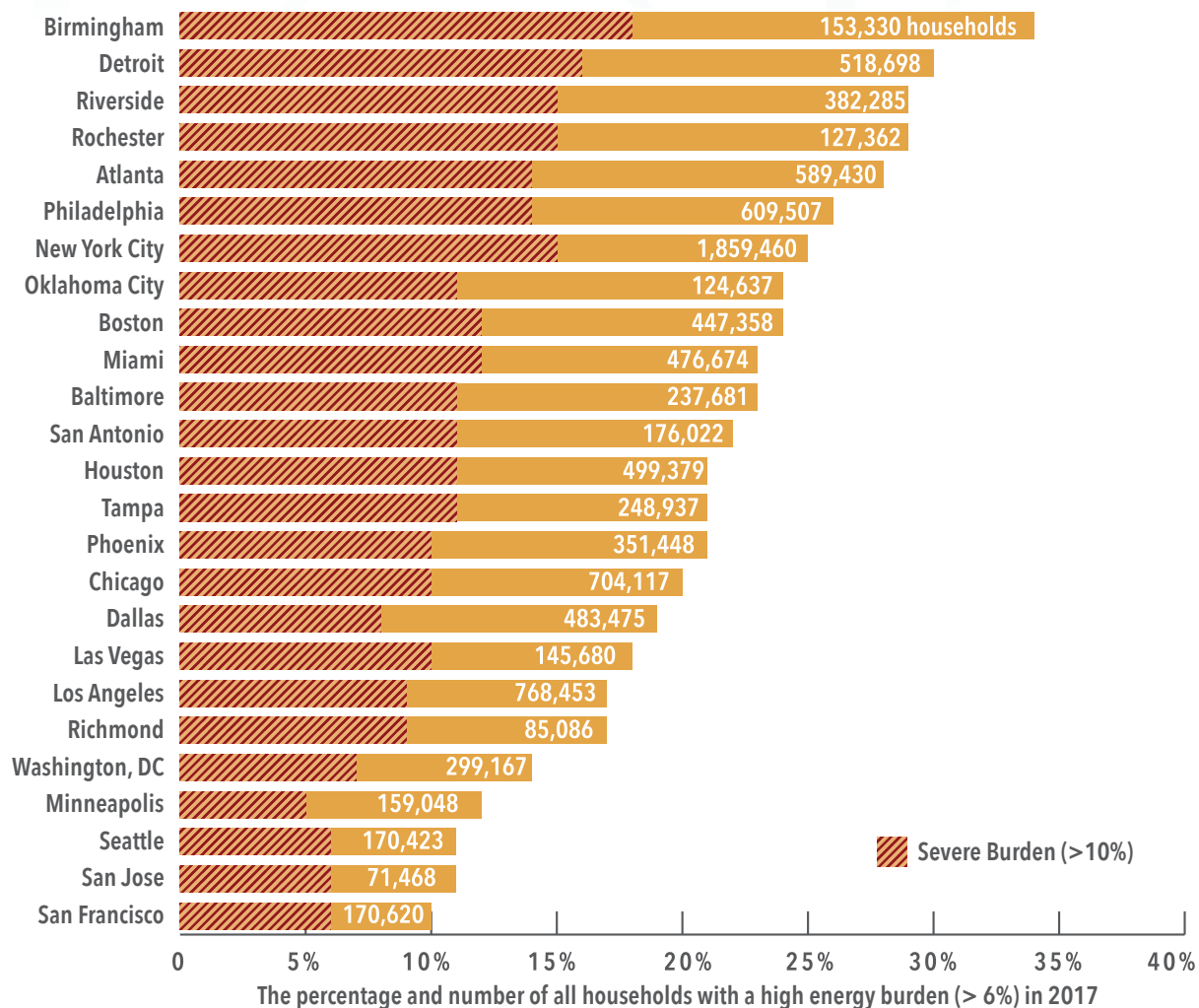
### METRO DATA: HIGH AND SEVERE ENERGY BURDENS

The percentage of households experiencing a high energy burden varied across the select metro areas, with up to one-third of residents in some cities facing a high energy burden. Figure 6 shows the percentage and total

number of households in each metro area that experience high and severe energy burdens. Six metro areas have a greater percentage of households with a high energy burden than the national average (25%), including Birmingham (34%), Detroit (30%), Riverside (29%), Rochester (29%), Atlanta (28%), and Philadelphia (26%).



**FIGURE 6. The percentage and number of all households with a high energy burden (> 6%) in each of the 2017 AHS MSAs**



**Appendix B** includes data on high and severe energy burdens in each metro area in our sample. In nine metro areas, 12% or more of households experienced a severe energy burden, spending more than 10% of their income on energy bills; among these are 1.1 million households in New York City, 333,000 in Philadelphia, and 288,000 in Atlanta.

As these findings illustrate, high and severe energy burdens are both a national and a local challenge. Even though some metro areas have lower percentages of households with high energy burdens than the national average, each city has tens to hundreds of thousands of households with high energy burdens. In addition, both the national energy burden trends and the metro-level trends show similar patterns of energy burden vulnerability for specific groups and are therefore likely reflected in other metro areas nationally as well. This indicates that both the metro areas studied and

other cities have energy burden disparities in their communities. They also have opportunities to create policy and programs to lower these energy burdens for their residents.

By focusing on the needs of those who are disproportionately burdened—particularly at the intersection of criteria such as of low-income, communities of color, older adults, and renters—policymakers can set policies and create programs that have the greatest impact on energy insecurity. As they do so, they should recognize that many households—especially those with high energy use due to building inefficiencies—experience much higher than average energy burdens. These households are therefore likely to need targeted and long-lasting interventions, such as energy efficiency and weatherization, to achieve long-term affordability.

# Low-Income Weatherization Can Reduce High Energy Burdens



Energy efficiency and weatherization provide a long-term solution to reducing high energy burdens, while also complementing bill payment assistance and programs aimed at energy-saving education and behavior change. *Weatherization* refers to programs that address the efficiency of the building envelope and building systems (such as unit heating, cooling, lighting, windows, and water heating) through energy audits; these audits identify cost-effective energy efficiency upgrades provided through energy efficiency programs. Other low-income energy efficiency programs may include additional measures such as appliance replacements, efficient lighting, and health and safety measures. While these recommendations focus on weatherization and energy efficiency as a long-term solution to reducing high energy burdens, these investments can be combined with renewable energy technologies and/or electrification strategies to further reduce energy bills.

Energy efficiency programs and investments that provide comprehensive building upgrades—such as insulation, air sealing, heating and cooling systems, appliances, lighting, and other baseload measures—can strongly impact long-term energy affordability, as low-income households tend to live in older buildings and have older, less-efficient appliances than higher income households (Cluett, Amann, and Ou 2016). Research suggests that weatherization measures can reduce energy use by 25–35% (DOE 2014, 2017; DOE 2011). Assuming a 25% reduction in energy use and using the 2017 AHS data, we estimate that energy efficiency and

weatherization can reduce the energy burden of the average low-income household by 25%.<sup>18</sup>

Low-income energy efficiency and weatherization programs are especially important in the wake of the economic recession and pandemic. These programs can both reduce high energy burdens and help stimulate the economy through local job creation and workforce development. Policies that accelerate investment in, improve the design of, and better target low-income energy efficiency, weatherization, and housing retrofit programs can have a high impact on long-term energy affordability.

<sup>18</sup> We assume a 25% savings from energy efficiency upgrades based on the U.S. Department of Energy's estimate (DOE 2014) and use the median low-income household values to calculate a 25% reduction. We reduced the median low-income energy bill by 25% from \$1,464 to \$1,098. Using the median low-income household income of \$18,000, this equates to a reduced energy burden of 6.1%. Reducing the median low-income energy burden from 8.1% to 6.1% is a 25% reduction. Following this same methodology, our 2016 metro energy burden report estimates a 30% reduction based on the 2011 and 2013 AHS data.

# Strategies to Accelerate, Improve, and Better Target Low-Income Housing Retrofits, Energy Efficiency, and Weatherization



Many local and state governments, utilities, and community-based organizations have already begun to identify energy efficiency as a key strategy for lowering high energy burdens. To date, we have identified nine cities (Atlanta, Cincinnati, Houston, Minneapolis, New Orleans, Oakland, Philadelphia, Pittsburgh, Saint Paul) and six states (Colorado, New Jersey, New York, Oregon, Pennsylvania, Washington) that have set energy-burden-focused policies, goals, or programs with energy efficiency as a key component (see **Appendix C**). For example, the State of Oregon's *Ten-Year Plan to Reduce the Energy Burden in Oregon Affordable Housing* states that its goal is to "reduce the energy burden on the low-income population in Oregon, while prioritizing energy efficiency to achieve that reduction" (OR DOE, OR PUC, and OHCS 2019). At the city level, Philadelphia's Clean Energy Vision Plan set a goal to eliminate the energy burden for 33% of Philadelphians. To accomplish this, the city has designed and funded multiple pilot programs to reduce high energy use in multifamily and single-family buildings. See **Appendix C** for more information on energy-burden-focused city- and state-led actions.

**FIGURE 7. Key strategies to lower high energy burdens by better targeting low-income energy efficiency programs, ramping up investment, and improving program design and best practices**

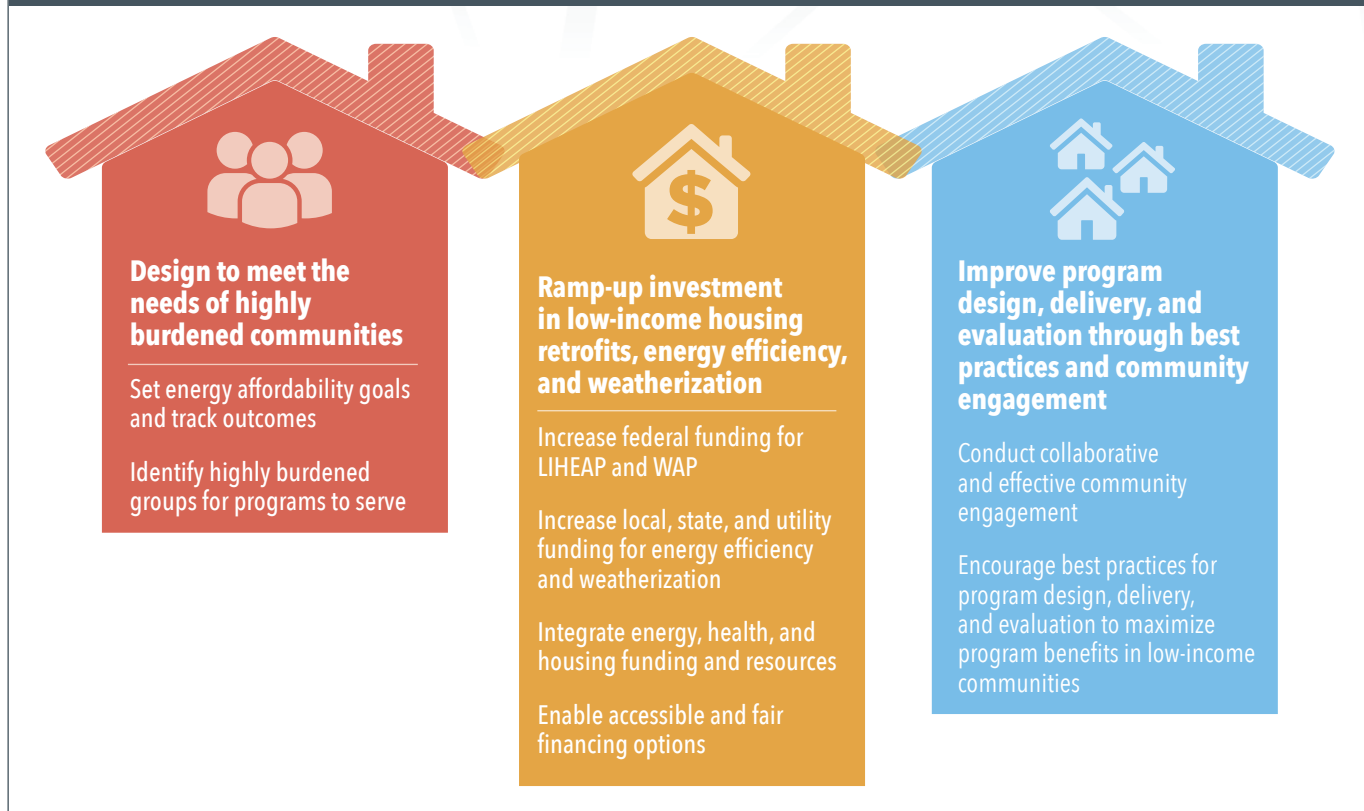


Figure 7 illustrates the key strategies to design programs to meet the needs of highly burdened communities, increase funding, and improve program design to have the greatest impact.

## Design to Meet the Needs of Highly Burdened Communities

Focusing low-income energy efficiency and weatherization investment on residents with the highest burdens can greatly alleviate energy insecurity. Local and state governments and utilities can conduct more granular and detailed energy insecurity studies or analyses to help identify which local communities have the highest burdens. They can also use other energy equity and justice-related metrics and indicators to target resources to and investment in these communities. One tool for doing this analysis is the U.S. Department of Energy (DOE) Low Income Energy Affordability Data (LEAD) tool (see text box 1). Policymakers and program implementers can use a community-based approach to develop programs to invest in communities with high burdens. Cities and states can also set energy affordability goals and policies, and then track outcomes to ensure that the communities most impacted by energy insecurity receive the benefits of energy efficiency investments.

### TEXT BOX 1. ENERGY BURDEN ASSESSMENTS: LOW INCOME ENERGY AFFORDABILITY DATA (LEAD) TOOL

The Department of Energy's Low Income Energy Affordability Data Tool (LEAD), developed with the National Renewable Energy Laboratory, aims to help states, communities, and other stakeholders create better energy strategies and programs by improving their understanding of low-income housing and community energy characteristics. LEAD is a web-accessible interactive platform that allows users to build their own state, county, and census tract and city profiles with specific household energy characteristics associated with various income levels and housing type, vintage, and tenure. The tool provides three principal metrics—energy burden, annual average housing energy costs, and housing counts—along with map and chart-based visualizations (Ma et al. 2019). States and local governments have begun using the LEAD tool in planning. For example, New Jersey cited its use of LEAD in the development of its new Office of Clean Energy Equity (New Jersey Legislature 2020).

LEAD is available for free at [energy.gov/eere/slsc/maps/lead-tool](https://energy.gov/eere/slsc/maps/lead-tool).



## SET ENERGY AFFORDABILITY GOALS AND TRACK OUTCOMES

State and local policymakers can set energy affordability and energy burden goals as a first step to addressing energy insecurity in their communities. Examples of such goals include reducing energy burdens by certain percentages, lowering energy burdens for all households to a certain threshold, or targeting resources toward individuals with high energy burdens. By focusing on the needs of those who are disproportionately burdened—particularly at the intersection of criteria such as income, race and ethnicity, and age—policymakers can set policies and create programs that have the greatest impact on addressing energy insecurity. Table 4 lists cities that have established energy burden and affordability goals.

**Appendix C** includes additional city and state energy burden policies.

To establish energy burden goals, cities, states, and utilities can conduct baseline studies to understand the state of energy burdens, poverty, housing, and access to energy efficiency investments in their communities. They can then establish an appropriate goal and strategies to accomplish that goal.

Coordinating goal setting with other state and local priorities can help cities to streamline their efforts. Some cities—such as Minneapolis and New Orleans—include energy burden goals in their climate action plans as a strategy to reduce greenhouse gas emissions and achieve more equitable outcomes. States such as New

York have also used energy burdens in statewide energy affordability policy plans.

Energy burden maps and visualizations are a useful tool for cities and states to achieve more equitable and affordable energy in their communities, move resources toward overburdened communities, and address other climate and equity goals. The DOE's LEAD tool provides one way to create energy burden visualizations. Plans should include specific strategies for lowering high energy burdens, as well as methods and strategies to track iterative progress.

In addition to goals, some cities have begun using energy burden as an equity indicator metric. For example, the city of Oakland includes energy cost burden as a metric in its *2018 Equity Indicators* report (City of Oakland 2018) to measure equity within essential housing services. The city found that energy burdens were higher for Black, Hispanic, and Asian households in the city as compared to white households. Similarly, the Minneapolis Climate Action Plan indicates that reporting on plan progress should also include equity indicators to measure whether energy burden reductions are equitable (City of Minneapolis 2013). Text box 2 offers examples of how governors and policymakers in four states—Pennsylvania, New York, Oregon, and Washington—created goals and policies around energy burdens to address energy insecurity in their states. To date, energy burden goals are largely set and acted upon by climate and energy officials at the city and state level. Such metrics and goals are rarely part of larger

**TABLE 4. Cities with energy burden goals and strategies**

City	Description	Data source
<b>Atlanta</b>	The Resilience Strategy includes action to lift energy burden on 10% of Atlanta households.	City of Atlanta 2017
<b>Cincinnati</b>	The Green Cincinnati Plan set a goal to reduce household energy burdened by 10% compared to current levels.	City of Cincinnati 2018
<b>Houston</b>	The Climate Action Plan includes a goal to promote weatherization programs to reduce residential energy consumption and focus on reducing energy burdens of low-income populations.	City of Houston 2020
<b>Minneapolis</b>	The Climate Action Plan states that the city will prioritize neighborhoods with high energy burdens for strategy implementation.	City of Minneapolis 2013
<b>New Orleans</b>	The Climate Action Plan includes two strategies to reduce the high energy burdens of the city's residents.	City of New Orleans 2017
<b>Philadelphia</b>	The Clean Energy Vision Plan set a goal to eliminate the energy burden for 33% of Philadelphians.	City of Philadelphia 2018
<b>Saint Paul</b>	The city set a 10-year goal to reduce resident energy burden so that no household will spend more than 4% of its income on energy bills.	City of Saint Paul 2017

## TEXT BOX 2. CASE STUDIES: STATE-LED ENERGY AFFORDABILITY EFFORTS

**New York Energy Affordability Goal.** In 2016, Governor Andrew M. Cuomo became one of the first U.S. government officials to issue a policy aimed at addressing high energy burdens. Through the state's first ever Energy Affordability policy, he aims to ensure that no New Yorker spends more than 6% of their household income on energy (New York 2016). New York continues to explore pathways to reducing energy burden to 6% for all New Yorkers through a combination of enhanced bill assistance, energy efficiency, and increased coordination among state agencies responsible for energy, bill assistance, and affordable housing.

Oregon's Strategies to Achieve Affordability. Issued by Governor Kate Brown in 2017, Executive Order 17-20 targets state agencies to improve energy efficiency. Section 5(b) emphasizes a prioritization of energy efficiency in affordable housing to reduce utility bills (Oregon 2017). In response to this directive, the Oregon Housing and Community Service Department partnered with the DOE and the Public Utility Commission to develop an assessment to identify the energy burden of Oregon's low-income population and also prioritize energy efficiency. The interagency assessment concluded that energy costs for low-income Oregonians are nearly \$350 million per year, and it identified more than \$113 million annual potential energy cost savings that can be achieved through low-income energy efficiency programs across the state (OR DOE, OR PUC, and OHCS 2019). The order identifies a number of strategies to achieve these cost savings, such as adopting energy codes for new buildings and including retrofit measures, such as smart thermostats and replacing electric resistance heating.

Pennsylvania Energy Affordability Study. In 2019, the Pennsylvania Public Utility Commission (PA PUC) released a report that examined home energy affordability for the state's low-income customers (Pennsylvania PUC 2019a). The report's goal was to determine what constitutes an affordable energy burden for low-income households in the state, which would advise changes to the bill payment assistance programs to achieve these affordable energy burden levels. In 2020, the PA PUC set a new policy to direct the state's regulated utilities to ensure that low-income customers spend no more than 10% of their income on energy bills and that the lowest-income customers spend no more than 6% of their income on energy bills (Pennsylvania PUC 2019b).

Washington Clean Energy Transformation Act. In 2019, Governor Jay Inslee passed the Clean Energy Transformation Act (CETA), which sets specific goals to achieve 100% clean electricity across Washington by 2045. Under CETA, the Washington Department of Commerce will assess the energy burdens of low-income households and the energy assistance offered by electric utilities. The department will consult with local advocates of vulnerable populations and low-income households to improve energy assistance programs. The department will publish a statewide summary to include the estimated level of energy burden and energy assistance among electric customers, identify drivers of energy burden and energy efficiency potential, and assess the effectiveness of current utility programs and mechanisms to reduce energy burdens (Washington State Department of Commerce 2020).

public health strategies and priorities despite their wide-reaching health implications.

### IDENTIFY HIGHLY BURDENED GROUPS FOR PROGRAMS TO SERVE

Overburdened households, especially Black, Native American, Hispanic, and other communities of color, often are either marginalized and overlooked by utilities' energy efficiency program marketing or face additional barriers to program participation, such as high cost or financing barriers (Leventis, Kramer, and Schwartz 2017). Creating targeted energy efficiency marketing beyond direct billing mailers can drive positive outcomes for the whole system.

Policymakers can also look beyond energy burden as an indicator to identify highly burdened groups, taking into account factors such as income, unemployment

rates, race and ethnicity, geography, education, and multiple other stressors—including air pollution and health indicators. By using metrics beyond energy burden, policymakers and program implementers can better invest resources in communities that experience the highest levels of marginalization underinvestment, and negative social and health impacts (Lin et al. 2019). Policymakers can design and implement programs that meet the needs of highly burdened groups through robust community engagement. For example, local governments can design programs to improve access to affordable, energy-efficient housing by mandating or incentivizing stringent energy efficiency standards, streamlining permit and inspection processes, and amending zoning codes for construction of more housing units, while also using neighborhood approaches to involve and empower community members in these processes (Samarripas and de Campos Lopes 2020).



### TEXT BOX 3. MEETING THE NEEDS OF HIGHLY BURDENED GROUPS: CASE STUDIES

**Minneapolis Green Zones:** The Minneapolis Climate Action Plan's Environmental Justice Working Group developed the idea of *Green Zones*, a place-based policy initiative aimed at improving health and supporting economic development. The city used data to identify two such zones—a Northern Green Zone and a Southern Green Zone—where residents face disproportionate burdens across areas such as equity, displacement, air quality, brownfields and soil contamination, housing, green jobs, food access, and greening (City of Minneapolis 2020). Once created, the city designed programs to direct investment into these communities. The Green Zones provide an example of how policymakers can work to identify highly burdened communities and create programs that meet the needs of residents in these areas.

**Energy Burden as a Program Qualification: Efficiency Vermont.** Efficiency Vermont (EVT), the energy efficiency program implementer for the state's utility-funded energy efficiency programs, conducted a 2018 study of equity measurements to better understand how the clean energy industry defines, collects, analyzes, and reports data on equity. This study informed changes to the design of EVT's Targeted High Use Program, which launched in 2011 and originally qualified customers based on two factors: income (< 80% of Area Median Income [AMI]) and a minimum energy use of 10,000 kWh/year. The program historically served approximately 350 households per year, working with the DOE's Weatherization Assistance Program (WAP) to conduct energy assessments and then install LEDs and water-saving measures, identify appliances for replacement, and replace high-efficiency heat pumps and heat pump water heaters where appropriate. Through its equity analysis, EVT determined that the energy use threshold was too high and excluded many customers with high energy burdens—but lower energy use—from accessing the program. In 2019, EVT changed the program qualification to two factors: income (< 80% AMI) and electric energy burden ( $\geq 3\%$ ). This change allowed it to recenter the program around energy burden reduction by qualifying not only more customers but also those who have high energy burdens yet may have previously been disqualified based on their energy use.

Efforts to alleviate high energy burdens should aim not only to identify those with high burdens and energy use but also to understand who has been overlooked by past efforts and develop strategies to address the needs of these households. Text box 3 contains additional case studies of city- and utility-led strategies to meet the needs of their overburdened communities.

### Accelerate Investment in Low-Income Housing Retrofits, Energy Efficiency, and Weatherization

The current need for low-income energy efficiency and weatherization far exceeds allocated resources. In 2017, utility-led energy efficiency administrators allocated only 5% of electric and 22% of natural gas energy efficiency expenditures to low-income programs (CEE 2019). This funding allocation shows that energy efficiency funds are not currently distributed to ensure that low-income households have equitable access to these investments and their benefits.

Policymakers and advocates can work toward leveraging and allocating additional funding for low-income energy efficiency and weatherization programs. They can also help ensure that these programs follow best practices to increase their impact. Following are several useful strategies for ramping up additional funding for low-income energy efficiency and weatherization.

### INCREASE FEDERAL FUNDING FOR LIHEAP AND WAP

Although an estimated 36 million U.S. households are currently eligible for weatherization, the DOE's Weatherization Assistance Program (WAP) has served only 7 million households over the past 40 years (Bullen 2018; DOE 2016). WAP serves about 100,000 homes per year through DOE and leveraged funds, which is far fewer than both the eligible households nationally and the 15.7 million severely energy burdened households estimated in this study (NASCS 2020b). At the current rate, it would take 360 years to weatherize all eligible households through WAP—assuming no more households become WAP-eligible over time.

Congress funds WAP and allows funds to be transferred to the program from the Department of Health and Human Services' Low-Income Home Energy Assistance Program (LIHEAP). WAP can also utilize additional leveraged funds. States can transfer 15% (or up to 25% with a waiver) of LIHEAP bill assistance funds to WAP to supplement DOE weatherization funding. Over the past 10 years, annual expenditures directed toward weatherization have ranged from \$1 billion to \$3 billion per year, with the American Recovery and Reinvestment Act greatly increasing low-income funding for WAP (Brown et al. 2019). The National Association for State Community Services Programs' 2018 funding report estimates that WAP grantees had access to \$1.1 billion in total available funding in 2018, with \$247 million direct base funding from the DOE, \$453

million from LIHEAP-transferred funding, and \$408 million from utilities, state-sourced revenue, and other sources (NASCS 2020b). Non-DOE WAP funds in 2018 added an additional \$861 million, or \$3.48 for every DOE-invested dollar (NASCS 2020b).

The federal government has the ability to increase both WAP and LIHEAP budgets to better meet households' needs. From 2008 to 2018, DOE base funding for WAP has fluctuated from a high of \$450 million in 2009 to a low of \$68 million in 2012 (DOE 2009, 2012). In 2020, Congress allocated \$305 million to WAP—a 23% increase (\$58 million) compared to the funds allocated in 2018 (DOE 2020). Even so, leveraging additional state, local, and other funding helps supplement and increase available weatherization funds. In addition, states can decide to increase the LIHEAP percentage they transfer to WAP to better support the program. Further, it is essential that the increased demand for adequate cooling systems be assessed in the allocation of WAP and LIHEAP funds. For households across the South, rising temperatures and the increasing frequency and duration of heat waves are likely to increase cooling needs—and thus energy expenses (Berardelli 2019).

The COVID-19 pandemic has added to the urgency of increasing support for low-income bill payment assistance. On May 8, 2020, the federal government authorized \$900 million in supplemental LIHEAP funding to help “prevent, prepare for, or respond to” home energy needs surrounding the national emergency created by COVID-19 (HHS 2020). On May 15, 2020, the U.S. House of Representatives passed the Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act, which would add an additional \$1.5 billion for LIHEAP to address energy access and security issues resulting from the COVID-19 pandemic (116<sup>th</sup> Congress 2020). As of publication, the Senate has not passed this legislation.

## **INCREASE STATE, LOCAL, AND UTILITY FUNDING FOR ENERGY EFFICIENCY AND WEATHERIZATION**

Funding from states, local governments, and utilities can also support low-income energy efficiency and weatherization efforts. In many states, PUCs can set low-income energy efficiency spending and/or savings requirements—as well as energy burden reduction targets—for their regulated utilities. As of 2017, of the 27 states with electric and/or natural gas Energy Efficiency Resource Standards (EERS), 18 had low-income energy efficiency spending requirements in place (Berg and Drehobl 2018; Gilleo 2019). States and local governments can also fund and implement their own energy efficiency and weatherization programs separately from WAP or as

**Policy approaches can be aligned to leverage funding resources and maximize benefits for residents, including reduced energy burdens and safer and healthier housing.**

a WAP add-on. They can, for example, allocate funds—such as from Community Development Block Grants (CDBG)—to joint or independent energy efficiency and weatherization programs.

**Appendix C** and text box 4 include examples of cities and states that created independent energy efficiency and weatherization programs to address high energy burdens.

## **INTEGRATE ENERGY, HEALTH, AND HOUSING FUNDING AND RESOURCES.**

High energy burdens, housing, and health are inextricably linked. In our study, many of the groups who experience high energy burdens also live in inadequate housing and disproportionately suffer from a variety of other harms, including higher than average exposures to environmental pollution (Tessum et al. 2019) and higher than average rates of certain preventable illnesses and diseases (CDC 2013). Although the recent COVID-19 pandemic has sharply illustrated this disparity, the same story plays out across a variety of preventable harms.<sup>19</sup> Policy approaches can be aligned to leverage funding resources and maximize benefits for residents, including reduced energy burdens and safer and healthier housing.

The benefits of these programs can be much greater when the goals of saving energy and protecting health are sought in tandem. Typical energy efficiency and weatherization services can provide a range of health benefits. Poorly sealed building envelopes allow pests, moisture, and air pollution to infiltrate (Institute of Medicine 2011), which can harm respiratory health through pest allergies, mold growth, and lung disease. Leaky windows, faulty HVAC systems, and poor insulation can lead to cold drafts and extreme home temperatures during summer and winter months. This can trigger heat-related illnesses and asthma attacks, as well as exacerbate other respiratory illnesses (AAFA 2017; American Lung Association 2020; CDC 2016). Addressing these issues through energy efficiency and weatherization will result in improved health outcomes; it will also reduce household energy burdens.

<sup>19</sup> For more on the disparities among COVID-19 fatalities, see Malcolm and Sawani (2020); Hooper, Nápoles, and Pérez-Stable (2020); and CDC (2020).

#### TEXT BOX 4. CITY- AND STATE-FUNDED ENERGY AFFORDABILITY PILOT PROGRAMS

**Philadelphia:** To meet its energy burden goals, Philadelphia has partnered on multiple pilot programs to reduce high energy burdens for low-income single and multifamily households. In 2017, the Philadelphia Energy Authority (PEA) launched its Multifamily Affordable Housing Pilot program in partnership with public and private-sector groups, including the local electric and natural gas utilities, property owners, energy service companies, program implementers, contractors, and technology providers (PEA 2020a). The program's goal was to deliver deep energy savings of more than 30% to low-income multifamily building residents in the city. In 2018, PEA and partners completed the program's first phase, which included low-cost measures and measures to collect energy data. These data were then used in the second phase to design deeper savings measures, such as HVAC and building envelope measures.

In response to COVID-19, PEA is developing a platform with its partners and advocates to coordinate and streamline low-income homeowner services aimed at improving home safety, health, affordability, and comfort (PEA 2020b). Set to launch in 2021, PEA's Built to Last pilot program aims to deliver comprehensive home improvements that will reduce energy burden while improving health and safety. The program will serve 80–100 homes and will streamline benefit screening, property assessment, and construction management. To cover program costs, Built to Last aims to combine available funding with grants and microfinancing options. PEA plans to deploy the Built to Last program at a larger scale in 2022 (PEA 2020b).

**Pittsburgh.** The city recognized that while Pittsburgh residents have some of the lowest utility rates in the country, they still pay almost twice the national average for their energy bills, leading to high energy burdens. Over the course of a few years, Pittsburgh developed a Climate Action Plan and launched both its resilience strategy (OnePGH) and its equality indicator project. These three projects helped the city identify residential energy burden as one of the primary challenges that local communities face (City of Pittsburgh 2019). As part of the Bloomberg Mayor's Challenge, Pittsburgh created Switch PGH to address high energy burdens through a civic engagement tool that gamifies home improvement (Mayors Challenge 2018). Switch PGH helps residents make lasting energy efficiency behavior changes and incentivizes home upgrades to reduce energy burdens.

**Colorado.** The Colorado State Energy Office awarded GRID Alternatives, a solar installer that focuses on the low-income market, a \$1.2 million grant to launch a demonstration project with the goal of reducing the energy burden for more than 300 low-income households. The program also aimed to improve understanding of how to make community solar programs with low-income participants mutually beneficial for both utilities and participants (Cook and Shah 2018). Through this program, households saved from 15% to more than 50% on their utility bills, with an average annual savings of \$382.

Myriad programs exist to address health and safety issues within homes, as well as to preserve and grow the affordable housing stock. Opportunities exist to integrate these programs and resources to more comprehensively address the energy, health, and housing needs of the households most in need of assistance.<sup>20</sup> For example, many homes must defer energy efficiency investments due to a home's physical issues, such as those related to structural deficiencies, moisture, and/or mold. According to Rose et al. (2015), WAP agencies estimated that such issues led to a 1–5% deferral rate for WAP income-eligible homes. In some areas, however, the problem is worse. In western Wisconsin, for example, a Community Action Agency and WAP provider serving four counties reported a deferral rate approaching 60% (NASCSP 2020a). Addressing nonenergy-related housing issues would allow more homes to be weatherization-ready.

Integrating programs creates opportunities to streamline

administration and reduce operating redundancies that can leave more funding for energy efficiency and weatherization measures that enable households to save on energy costs. Pooling resources and establishing cross-sector referral networks not only stretches program budgets, but it also can make programs more accessible for residents by streamlining eligibility and enrollment processes. For instance, offering a single contact point or a streamlined process can give participants a variety of services simultaneously to meet their energy, health, and housing needs (Levin, Curry, and Capps 2019). This can help mitigate barriers that arise when people have to navigate multiple separate services with varying eligibility requirements and enrollment processes. Efficiency Vermont's Healthy Homes Initiative (HHI) is one such example. A partnership between the state's WAP partners and community-based organizations that offer health interventions, HHI is coordinated through Vermont's Office of Economic Opportunity. Using

<sup>20</sup> ACEEE recently published several reports exploring the intersection of health and energy, including *Protecting the Health of Vulnerable Populations with In-Home Energy Efficiency: A Survey of Methods for Demonstrating Health Outcomes* ([www.aceee.org/research-report/h1901](http://www.aceee.org/research-report/h1901)); *Making Health Count: Monetizing the Health Benefits of In-Home Services Delivered by Energy Efficiency Programs* ([www.aceee.org/research-report/h2001](http://www.aceee.org/research-report/h2001)); and *Braiding Energy and Health Funding for In-Home Programs: Federal Funding Opportunities* ([www.aceee.org/research-report/h2002](http://www.aceee.org/research-report/h2002)).

One Touch, an electronic platform for healthy home resources, HHI has established a robust referral network and successfully integrated healthy home principles into its residential energy efficiency program design.

The health sector is also beginning to realize the efficiencies of combining health and energy assessments and interventions (Hayes and Gerbode 2020). For example, a single contractor could be trained to both identify and address a family's asthma triggers, energy efficiency needs, and fall risks, thereby reducing the associated logistical burden on residents who might otherwise have to coordinate each service individually. Efforts such as this are beginning to appear across the country. In 2015, the state of Washington directed more than \$4 million in competitive grants to fund collaborations among clinical practitioners, home retrofitters, and community service organizations as a means of empowering clinicians and others to refer participants for a range of coordinated services (e.g., comprehensive in-home repairs and community health worker visits) (Levin, Curry, and Capps 2019). In New York, the State Energy Research and Development Authority (NYSERDA) recently kicked off a value-based payment pilot program that seeks to implement a healthy homes approach; through this program, Medicaid managed care organizations will partly cover residential upgrades when healthcare cost savings and benefits to residents are verified (NYSERDA 2018). Such cross-sectoral approaches to energy efficiency and weatherization seek to address some of the major root causes of health and energy inequities while making enrollment and participation feasible and accessible for residents. The benefits of energy efficiency cut across the health and energy sectors; by working to integrate resources, policymakers can maximize these benefits.

Housing policy can also help ensure that energy efficiency is integrated into efforts to upgrade and expand the affordable housing stock. State and local governments can play a key role in these integrating approaches. For example, a growing number of state housing finance agencies (HFAs)—state-chartered entities responsible for ensuring affordable housing across states—have included energy efficiency requirements in their allocation criteria for low-cost financing programs such as federal Low-Income Housing Tax Credits and grant programs administered to local governments. The same is true for local housing authorities, which increasingly incorporate energy efficiency into the maintenance and repair of their subsidized housing stock (EPA 2018). Text box 5 offers a brief case study of how one local government systematically required energy efficiency in its rental certification process, ensuring that all types of rental housing meet a specific level of energy performance.

## **ENABLE ACCESSIBLE AND FAIR FINANCING OPTIONS**

Many low-income households face barriers—such as credit eligibility—to investing in energy efficiency; these barriers can prevent them from participating in energy efficiency programs or installing energy efficiency upgrades that require financing for up-front costs. With the right consumer protections in place, financing can enable households to undertake cost-effective energy efficiency investments to lower their energy usage and bills. Local and state governments, utilities, private lenders, and nonprofit or community-based organizations can act to create and/or enable low- or no-cost financing options (i.e., payments are offset by energy cost savings) for energy efficiency investments.

Several types of financing instruments, such as on-bill payment (i.e., loan repayments included on the utility bill) and energy service agreements are becoming more common (Leventis, Kramer, and Schwartz 2017). Similarly, opportunities such as Commercial Property Assessed Clean Energy (C-PACE) can increase energy efficiency financing in the affordable multifamily sector. SEE Action's 2017 report, *Energy Efficiency Financing for Low- and Moderate-Income Households*, provides a comprehensive overview of the pros and cons of various financing options for both single and multifamily low-income households (Leventis, Kramer, and Schwartz 2017).

## **Improve program design, delivery, and evaluation through best practices and community engagement**

Program designers and implementers can collaborate and effectively engage with a community to create programs that fit its specific needs rather trying to fit the community into an existing program design. They can also incorporate best practices into their program design, delivery, and evaluation, and can emulate successful peer program models to increase program effectiveness and impact.

## **CONDUCT COLLABORATIVE AND EFFECTIVE COMMUNITY ENGAGEMENT**

To create programs that effectively reduce high energy burdens, energy efficiency and renewable energy program designers and implementers can work to engage and include local stakeholders throughout the program planning and implementation processes.

By connecting with, listening to, and partnering with community-serving organizations and community members in highly impacted communities, program



## TEXT BOX 5. THE CITY OF BOULDER'S SMARTREGS PROGRAM

In 2010, the city council in Boulder, Colorado, adopted SmartRegs, a program that requires all rental housing units in the city to demonstrate that their efficiency approximates or exceeds the standards set by the 1999 Energy Code. The program was integrated into the city's existing rental license program, which requires a rental property to obtain and renew its rental license every four years. This renewal entails an inspection for health and safety measures, and SmartRegs added energy efficiency requirements that must be met to certify that the property is approved for rental. All single- and multifamily units that offer long-term licensed rental housing are subject to the requirement. For larger multifamily buildings, a sample of representative apartments can be inspected.

Boulder also offers a companion EnergySmart program that provides technical assistance, help with selecting contractors for energy efficiency improvements, and financial incentives beyond those offered by the local utility. EnergySmart is funded primarily by Boulder County and provides services to all municipalities in the county.

SmartRegs has been recognized not only for saving energy and related costs but also for leading to widescale upgrades in the city's rental housing stock. Over the course of the eight-year compliance timeline, nearly all of the approximately 23,000 licensed rental units have become compliant (City of Boulder 2020a). The most common upgrades were attic, crawlspace, and wall insulation. The average upgrade cost has been about \$3,000 per unit, of which an average of \$579 was paid by city- and utility-sponsored rebates. As of 2018, the city estimates that the program has saved about 1.9 million kWh of electricity, 460,000 therms of natural gas, \$520,000 in energy costs, and 3,900 million metric tons of carbon dioxide. The city estimates the total investment in the program at just over \$8 million, including nearly \$1 million in rebates (City of Boulder 2020b).

administrators can identify the best measures, financing options, delivery methods, and marketing strategies to help residents reduce high energy burdens and meet their needs. Achieving this connection requires partnering with the community on program design and identifying and addressing barriers to participation for key stakeholders. This often requires engagement and trust-building over a long time period.

Robust community engagement incorporates the voices of and/or delegates power to community members. Such engagement can help develop neighborhood-centered programs that are most successful when combined with consistent funding, quality delivery infrastructure, and targeted outreach and engagement (USDN 2019). For more information on best practices in stakeholder engagement, see the DOE's Clean Energy for Low-Income Communities (CELICA) Online Toolkit at [betterbuildingssolutioncenter.energy.gov/CELICA-Toolkit/stakeholder-engagement](https://betterbuildingssolutioncenter.energy.gov/CELICA-Toolkit/stakeholder-engagement).

To include residents with high energy burdens in policy and program design, cities, states, and utilities can establish working groups, task forces, committees, and other structures that give residents a formal decision-making role. Creating this engagement when energy insecurity strategies, goals, and/or programs are first being developed allows for more input and direction from community members. Local energy planning efforts can also start with a community needs assessment led by a formal body of community residents. Local government and community leaders can then use this assessment's

findings to drive local energy affordability policies and program developments based on the findings' prioritized needs and strategies.

Policymakers and program implementers can minimize stakeholder and community participation barriers by funding or compensating participants for their time and participation in stakeholder engagement processes. For example, offering stipends to compensate participants for their time and expertise, setting realistic time expectations, creating accessible logistics, and offering additional incentives can increase participation and access (Curti, Andersen, and Write 2018). Other incentives to reduce engagement barriers include childcare, meals, and transit passes.

Policymakers can also move to a model of *energy democracy* in which community residents are innovators, planners, and decision makers on how to use and create energy in a way that is local, renewable, affordable, and just (Fairchild and Weinrub 2017). Communities that have transitioned to an energy democracy have shifted away from "an extractive economy, energy, and governance system to one that is regenerative, provides reparations, transforms power structures, and creates new governance and ownership practices (ECC 2019)." The Emerald Cities Collaborative led the creation of an *Energy Democracy Scorecard*, which provides a framework for communities to move toward an energy democracy. Policymakers can work to create energy democracy frameworks in their communities by working with community members to recognize power

imbalances and create dialogues about systemic barriers that must be addressed in order to correct long-standing injustices and inequalities in the energy and related sectors. This can help move the energy planning model to one of community self-determination and shared ownership. For more information, see [emeraldcities.org/about/energy-democracy-scorecard](https://emeraldcities.org/about/energy-democracy-scorecard).

## ENCOURAGE BEST PRACTICES FOR PROGRAM DESIGN, DELIVERY, AND EVALUATION TO MAXIMIZE BENEFITS IN LOW-INCOME COMMUNITIES

Researchers from ACEEE and other organizations have established numerous best practice strategies and case

studies of ways to improve and expand low-income energy efficiency programs and investments (Aznar et al. 2019; Nowak, Kushler, and Witte 2019; EDF 2018; Gilleo, Nowak, and Dreihobl 2017; Samarripas and York 2019; Cluett, Amann, and Ou 2016; Ross, Jarrett, and York 2016; Reames 2016).

Table 5 includes low-income program best practices across five categories: coordination, collaboration, and segmentation; funding and financing; measures, messaging, and targeting; evaluation and quality control; and renewables and workforce development. **Appendix D** offers more detailed descriptions and examples of each of these best practices.

**TABLE 5. Low-income program best practices by category**

<b>Coordination, collaboration, and segmentation</b>	<b>Funding and financing</b>	<b>Measures, messaging, and targeting</b>	<b>Evaluation and quality control</b>	<b>Renewables and workforce development</b>
Community engagement and participatory planning	Leverage diverse funding sources	Include health and safety measures and healthier building materials	Collect and share metrics	Integrate energy efficiency and solar
Statewide coordination models	Inclusive financing models	Prioritize deep energy-saving measures	Conduct robust research and evaluation	Support the development of a diverse and strong energy efficiency workforce
One-stop-shop program models	Align utility and housing finance programs	Integrate direct-installation and rebate programs	Include quality control	
Market segmentation		Target high energy users and vulnerable households	Incorporate nonenergy benefits	
Fuel neutral programs		Incorporate new and emerging technologies in low-income programs		
		Effectively message programs in ways that provide clear value and actionable guidance		



# Conclusions and Further Research



High energy burdens and energy insecurity are well-documented and pervasive national issues. Even in 2017, a time of economic prosperity, well over one-quarter of all U.S. households experienced a high energy burden. As this indicates, we need a renewed focus on equitable clean energy development and just energy transitions to ensure that investments in energy efficiency and renewable energy address energy insecurity. Climate change also underscores the urgency in addressing high household energy burdens. As temperatures continue to rise and heat waves become more common, access to clean, affordable energy is needed more than ever. We need cross-sectoral approaches that address the intersection of energy, health, and housing in the face of climate change.

Both nationally and in metro areas, this study finds that certain groups pay disproportionately more of their income on energy costs, including low-income households, communities of color, older adults, renters, and those residing in older buildings. Even though each metro area has a unique energy burden landscape, all cities have energy security inequities and can work to address them through collaborative policy and program decisions. Policymakers at the local, state, and utility levels can direct energy efficiency and renewable energy investments to disadvantaged and historically underinvested communities. They can then measure and ensure that these investments provide equitable benefits to local jobs, community health, and residential energy affordability.

Energy burdens are not the sole indicator of energy insecure households but rather provide one metric for determining energy insecurity. Further research is needed to identify the main physical drivers of high energy burdens, as well as the policies best suited to address the needs of the most highly energy burdened households. To better understand their communities' energy insecurity landscape, cities and states—and their energy, health, and housing agencies—as well as utilities are well-positioned to conduct detailed energy burden analyses, including qualitative data collection and interviews. Such studies would enable a first step toward setting more targeted energy affordability and energy burden goals and creating equitable, cross-sectoral policies and programs for achieving greater access to affordable energy for all.

# References

# References

- 116th Congress. 2020. *A Bill Making Emergency Supplemental Appropriations for the Fiscal Year Ending September 30, 2020, and for Other Purposes; Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act*. H.R. 6800, May 12. Washington, DC: 116th Congress. [docs.house.gov/billsthisweek/20200511/BILLS-116hr6800ih.pdf](https://docs.house.gov/billsthisweek/20200511/BILLS-116hr6800ih.pdf).
- AAFA (Asthma and Allergy Foundation of America). 2017. "Weather Can Trigger Asthma." [www.aaafa.org/weather-triggers-asthma/](http://www.aaafa.org/weather-triggers-asthma/).
- American Lung Association. 2020. "Winter Weather." [www.lung.org/clean-air/emergencies-and-natural-disasters/winter-weather](http://www.lung.org/clean-air/emergencies-and-natural-disasters/winter-weather).
- APPRISE (Applied Public Policy Research Institute for Study and Evaluation). 2005. *LIHEAP Energy Burden Evaluation Study*. Washington, DC: HHS (Department of Health and Human Services). [www.acf.hhs.gov/sites/default/files/ocs/comm\\_liheap\\_energyburdenstudy\\_apprise.pdf](http://www.acf.hhs.gov/sites/default/files/ocs/comm_liheap_energyburdenstudy_apprise.pdf).
- Aznar, A., J. Logan, D. Gagne, and E. Chen. 2019. *Advancing Energy Efficiency in Developing Countries: Lessons Learned from Low-Income Residential Experiences in Industrialized Countries*. Prepared by USAID (U.S. Agency for International Development) and NREL. Washington, DC: DOE. [www.nrel.gov/docs/fy19osti/71915.pdf](http://www.nrel.gov/docs/fy19osti/71915.pdf).
- Beaulieu, S., A. Buylova, M. Hannoosh, and P. Schaffer. 2018. *Ten-Year Plan: Reducing the Energy Burden in Oregon's Affordable Housing*. Salem: Oregon DOE (Department of Energy), Oregon PUC (Public Utility Commission), and OHCS (Oregon Housing and Community Services Department). [www.oregon.gov/energy/Get-Involved/Documents/2018-BEEWG-Ten-Year-Plan-Energy-Burden.pdf](http://www.oregon.gov/energy/Get-Involved/Documents/2018-BEEWG-Ten-Year-Plan-Energy-Burden.pdf).
- Bednar, D., T. Reames, and G. Keoleian. 2017. "The Intersection of Energy Justice: Modeling the Spatial, Racial/Ethnic and Socioeconomic Patterns of Urban Residential Heating Consumption and Efficiency in Detroit, Michigan." *Energy and Buildings* 143: 25–34. [doi.org/10.1016/j.enbuild.2017.03.028](https://doi.org/10.1016/j.enbuild.2017.03.028).
- Berardelli, J. 2019. "Heat Waves and Climate Change: Is There a Connection?" *Yale Climate Connections*, June 25. [www.yaleclimateconnections.org/2019/06/heat-waves-and-climate-change-is-there-a-connection/](http://www.yaleclimateconnections.org/2019/06/heat-waves-and-climate-change-is-there-a-connection/).
- Berg, W., and A. Drehobl. 2018. "State-Level Strategies for Tackling the Energy Burden: A Review of Policies Extending State- and Ratepayer-Funded Energy Efficiency to Low-Income Households." In *Proceedings of the 2018 ACEEE Summer Study on Energy Efficiency in Buildings*. Washington, DC: ACEEE. [aceee.org/files/proceedings/2018/index.html#/paper/event-data/p390](http://aceee.org/files/proceedings/2018/index.html#/paper/event-data/p390).
- Berry, C., C. Hronis, and M. Woodward. 2018. "Who's Energy Insecure? You Might Be Surprised." In *Proceedings of the 2018 ACEEE Summer Study on Energy Efficiency in Buildings* 13: 1–14. Washington, DC: ACEEE. [www.aceee.org/files/proceedings/2018/#/paper/event-data/p393](http://www.aceee.org/files/proceedings/2018/#/paper/event-data/p393).
- Bohr, J., and A. McCreery. 2019. "Do Energy Burdens Contribute to Economic Poverty in the United States? A Panel Analysis." *Social Forces* November 16. [doi.org/10.1093/sf/soz131](https://doi.org/10.1093/sf/soz131).
- Brown, M., A. Soni, M. Lapsa, K. Southworth, and M. Cox. 2019. "Low-Income Energy Affordability in an Era of U.S. Energy Abundance." *Progress in Energy* 1: 1. [iopscience.iop.org/article/10.1088/2516-1083/ab250b](https://iopscience.iop.org/article/10.1088/2516-1083/ab250b).
- Brown, M., A. Soni, M. Lapsa, and K. Southworth. 2020. *Low-Income Energy Affordability: Conclusions from a Literature Review*. Prepared by Oak Ridge National Laboratory. Washington, DC: DOE. [info.ornl.gov/sites/publications/Files/Pub124723.pdf](https://info.ornl.gov/sites/publications/Files/Pub124723.pdf).
- Bullen, L. 2018. Estimated Number of Households Income-Eligible for the Department of Energy Weatherization Assistance Program as of 2015. Washington, DC: Community Action Partnership. [communityactionpartnership.com/wp-content/uploads/2018/07/Estimated-Number-of-Households-Income-Eligible-for-WAP.pdf](http://communityactionpartnership.com/wp-content/uploads/2018/07/Estimated-Number-of-Households-Income-Eligible-for-WAP.pdf).
- Cashin, S. 2004. *The Failures of Integration: How Race and Class Are Undermining the American Dream*. New York: PublicAffairs.
- CDC (Centers for Disease Control and Prevention). 2013. "CDC Health Disparities and Inequalities Report—United States, 2013." *Morbidity and Mortality Weekly Report, Supplement 2* (3): 1–187. [www.cdc.gov/mmwr/pdf/other/su6203.pdf](http://www.cdc.gov/mmwr/pdf/other/su6203.pdf).
- .2016. *Heat-Related Illness*. Atlanta: CDC. [www.cdc.gov/pictureofamerica/pdfs/picture\\_of\\_america\\_heat-related\\_illness.pdf](http://www.cdc.gov/pictureofamerica/pdfs/picture_of_america_heat-related_illness.pdf).
- .2020. "Coronavirus Disease 2019—Racial & Ethnic Minority Groups." [www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html](http://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html).
- CEE (Consortium for Energy Efficiency). 2019. *2018 State of the Efficiency Program Industry: Budgets, Expenditures, and Impacts*. Middleton, MA: CEE. [library.cee1.org/system/files/library/13981/CEE\\_2018\\_AnnualIndustryReport.pdf](http://library.cee1.org/system/files/library/13981/CEE_2018_AnnualIndustryReport.pdf).
- Census Bureau. 2019. *Metropolitan Area Oversample Histories: 2015 and Beyond*. Washington, DC: HUD (Department of Housing and Urban Development) and Census Bureau. [www.census.gov/programs-surveys/ahs/tech-documentation/help-guides/metro\\_oversamp\\_hist\\_2015.html](http://www.census.gov/programs-surveys/ahs/tech-documentation/help-guides/metro_oversamp_hist_2015.html).
- City of Atlanta. 2017. *Resilient Atlanta: Actions to Build an Equitable Future*. Atlanta: City of Atlanta Mayor's Office of Resilience. [100resilientcities.org/wp-content/uploads/2017/11/Resilience-Strategy-Atlanta-English.pdf](http://100resilientcities.org/wp-content/uploads/2017/11/Resilience-Strategy-Atlanta-English.pdf)

- 2019. *Clean Energy Atlanta: A Vision for a 100% Clean Energy Future*. Atlanta: City of Atlanta Mayor's Office of Resilience. [www.100atl.com/](http://www.100atl.com/).
- City of Boulder. 2020a. *2019 Rental Housing License Long-Term Licenses and SmartRegs Compliance*. Boulder: City of Boulder. [www-static.bouldercolorado.gov/docs/2019\\_RHL\\_Smart\\_Regs\\_Stats\\_for\\_web-1-202001230915.pdf](http://www-static.bouldercolorado.gov/docs/2019_RHL_Smart_Regs_Stats_for_web-1-202001230915.pdf).
- 2020b. "SmartRegs Program Progress." [bouldercolorado.gov/plan-develop/smartregs-progress](http://bouldercolorado.gov/plan-develop/smartregs-progress).
- City of Cincinnati. 2018. *2018 Green Cincinnati Plan*. Cincinnati: City of Cincinnati. [cincinnati-oh.gov/oes/assets/File/2018%20Green%20Cincinnati%20Plan\(1\).pdf](http://cincinnati-oh.gov/oes/assets/File/2018%20Green%20Cincinnati%20Plan(1).pdf).
- 2020. "City, Duke Energy Ohio Pilot Energy Efficiency Program for Income-Eligible Renters." *Office of Environment & Sustainability News*, February 5. [www.cincinnati-oh.gov/oes/news/city-duke-energy-ohio-pilot-energy-efficiency-program-for-income-eligible-renters/](http://www.cincinnati-oh.gov/oes/news/city-duke-energy-ohio-pilot-energy-efficiency-program-for-income-eligible-renters/).
- City of Houston. 2020. *Houston Climate Action Plan*. Houston: City of Houston. [greenhoustontx.gov/climateactionplan/CAP-April2020.pdf](http://greenhoustontx.gov/climateactionplan/CAP-April2020.pdf).
- City of Minneapolis. 2013. *Climate Action Plan: A Roadmap to Reducing Citywide Greenhouse Gas Emissions*. Minneapolis: City of Minneapolis Sustainability Office. [vote.minneapolismn.gov/www/groups/public/@citycoordinator/documents/webcontent/wcms1p-113598.pdf](http://vote.minneapolismn.gov/www/groups/public/@citycoordinator/documents/webcontent/wcms1p-113598.pdf).
- 2020. "Green Zone Initiative." [www.ci.minneapolis.mn.us/sustainability/policies/green-zones](http://www.ci.minneapolis.mn.us/sustainability/policies/green-zones).
- City of New Orleans. 2017. *Climate Action for a Resilient New Orleans*. New Orleans: City of New Orleans. [www.nola.gov/nola/media/Climate-Action/Climate-Action-for-a-Resilient-New-Orleans.pdf](http://www.nola.gov/nola/media/Climate-Action/Climate-Action-for-a-Resilient-New-Orleans.pdf).
- City of Oakland. 2018. *Oakland Equity Indicators: Measuring Change toward Greater Equity in Oakland*. Oakland: City of Oakland. [cao-94612.s3.amazonaws.com/documents/2018-Equity-Indicators-Full-Report.pdf](http://cao-94612.s3.amazonaws.com/documents/2018-Equity-Indicators-Full-Report.pdf).
- City of Philadelphia. 2018. *Powering Our Future: A Clean Energy Vision for Philadelphia*. Philadelphia: City of Philadelphia Office of Sustainability. [www.phila.gov/media/20180821150658/Powering-Our-Future-Full-Report.pdf](http://www.phila.gov/media/20180821150658/Powering-Our-Future-Full-Report.pdf).
- City of Pittsburgh. 2019. "The Mayor's Challenge." [pittsburghpa.gov/dcp/mayors-challenge](http://pittsburghpa.gov/dcp/mayors-challenge).
- City of Saint Paul. 2017. *Saint Paul's Path to Carbon Neutrality: Buildings Sector*. Prepared by Xcel Energy. St. Paul, MN: City of Saint Paul. [www.stpaul.gov/sites/default/files/Media%20Root/Mayor%27s%20Office/Saint%20Paul%27s%20Path%20to%20Carbon%20Neutrality\\_Buildings%20Sector%20Draft%20Plan.pdf](http://www.stpaul.gov/sites/default/files/Media%20Root/Mayor%27s%20Office/Saint%20Paul%27s%20Path%20to%20Carbon%20Neutrality_Buildings%20Sector%20Draft%20Plan.pdf).
- Cluett, R., J. Amann, and S. Ou. 2016. *Building Better Energy Efficiency Programs for Low-Income Households*. Washington, DC: ACEEE. [aceee.org/research-report/a1601](http://aceee.org/research-report/a1601).
- Cook, J., and M. Shah. 2018. *Reducing Energy Burden with Solar: Colorado's Strategy and Roadmap for States*. Prepared by NREL. Washington, DC: DOE. [www.nrel.gov/docs/fy18osti/70965.pdf](http://www.nrel.gov/docs/fy18osti/70965.pdf).
- Cooper, D., and E. Gould. 2013. *Financial Security of Elderly Americans at Risk*. Washington, DC: EPI (Economic Policy Institute). [www.epi.org/publication/economic-security-elderly-americans-risk/](http://www.epi.org/publication/economic-security-elderly-americans-risk/).
- CPUC (California Public Utilities Commission). 2020. *CPUC Works to Help Mitigate Higher Energy Bills Utility Customers May Receive Due to Shelter at Home*. Press release, April 2. [docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K358/331358410.PDF](http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K358/331358410.PDF).
- Currier, E., C. Key, J. Biernacka-Lievstro, W. Lake, S. Elmi, S. Kypa, and A. Lantz. 2018. *American Families Face a Growing Rent Burden*. Philadelphia: The Pew Charitable Trusts. [www.pewtrusts.org/-/media/assets/2018/04/rent-burden\\_report\\_v2.pdf](http://www.pewtrusts.org/-/media/assets/2018/04/rent-burden_report_v2.pdf).
- Curti, J., F. Andersen, and K. Wright. 2018. *A Guidebook on Equitable Clean Energy Program Design for Local Governments and Partners*. Waltham, MA: The Cadmus Group and USDN (Urban Sustainability Directors Network). [cadmusgroup.com/wp-content/uploads/2018/09/Cadmus-USDN-Equitable-Clean-Energy-Guidebook.pdf](http://cadmusgroup.com/wp-content/uploads/2018/09/Cadmus-USDN-Equitable-Clean-Energy-Guidebook.pdf).
- DOE (Department of Energy). 2009. *Weatherization Program Notice 09-2: Program Year 2009 Grantee Allocations*. March 25. Washington, DC: DOE. [www.energy.gov/sites/prod/files/2016/01/f28/WAP-WPN-09-2.pdf](http://www.energy.gov/sites/prod/files/2016/01/f28/WAP-WPN-09-2.pdf).
- 2011. *Weatherization Assistance Program*. Washington, DC: DOE. [www.nrel.gov/docs/fy11osti/51242.pdf](http://www.nrel.gov/docs/fy11osti/51242.pdf).
- 2012. *Weatherization Program Notice 12-2: Program Year 2012 Grantee Allocations*. February 8. Washington, DC: DOE. [www.energy.gov/sites/prod/files/2015/12/f27/WAP-WPN-12-2.pdf](http://www.energy.gov/sites/prod/files/2015/12/f27/WAP-WPN-12-2.pdf).
- 2014. *Better Buildings Neighborhood Program Summary of Reported Data from July 1, 2010-September 30, 2013*. Washington, DC: DOE. [energy.gov/sites/prod/files/2014/09/f18/bbnp\\_summary\\_reported\\_data\\_9-15-2014.pdf](http://energy.gov/sites/prod/files/2014/09/f18/bbnp_summary_reported_data_9-15-2014.pdf).
- 2016. "Celebrating 40 Years of America's Weatherization Assistance Program." [www.energy.gov/eere/articles/celebrating-40-years-america-s-weatherization-assistance-program](http://www.energy.gov/eere/articles/celebrating-40-years-america-s-weatherization-assistance-program).
- 2017. *Weatherization Works!* Washington, DC: DOE. [www.energy.gov/sites/prod/files/2017/05/f34/wap\\_factsheet\\_08.2017.pdf](http://www.energy.gov/sites/prod/files/2017/05/f34/wap_factsheet_08.2017.pdf).



- 2020. *Weatherization Program Notice 20-2: Program Year 2020 Grantee Allocations*. February 10. Washington, DC: DOE. [www.energy.gov/sites/prod/files/2020/05/f74/wpn-20-2\\_v2\\_0.pdf](http://www.energy.gov/sites/prod/files/2020/05/f74/wpn-20-2_v2_0.pdf).
- Drehobl, A., and L. Ross. 2016. *Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low-Income and Underserved Communities*. Washington, DC: ACEEE. [aceee.org/research-report/u1602](http://aceee.org/research-report/u1602).
- ECC (Emerald Cities Collaborative). 2019. *Energy Democracy: Reparation—Regeneration—Reinvestment*. Washington, DC: ECC. [files.emeraldcities.org/Energy%20Democracy%20FINAL\\_Flipbook.pdf](http://files.emeraldcities.org/Energy%20Democracy%20FINAL_Flipbook.pdf).
- EDF (Environmental Defense Fund). 2018. *Low-Income Energy Efficiency: A Pathway to Clean, Affordable Energy for All*. Prepared by APPRISE. New York: EDF. [www.edf.org/sites/default/files/documents/liee\\_national\\_summary.pdf](http://www.edf.org/sites/default/files/documents/liee_national_summary.pdf).
- EIA (Energy Information Administration). 2018. "One in Three U.S. Households Faces a Challenge in Meeting Energy Needs." *Today in Energy*, September 19. [www.eia.gov/todayinenergy/detail.php?id=37072](http://www.eia.gov/todayinenergy/detail.php?id=37072).
- EPA (Environmental Protection Agency). 2018. *Energy Efficiency in Affordable Housing: A Guide to Developing and Implementing Greenhouse Gas Reduction Programs*. Washington, DC: EPA. [www.epa.gov/sites/production/files/2018-07/documents/final\\_affordablehousingguide\\_06262018\\_508.pdf](http://www.epa.gov/sites/production/files/2018-07/documents/final_affordablehousingguide_06262018_508.pdf).
- Fairchild, D., and A. Weinrub. 2017. *Energy Democracy: Advancing Equity in Clean Energy Solutions*. Washington, DC: Island Press.
- Ferris, D. 2020. "Inside Clean Energy's Coronavirus Job Crash." *Energy Wire*, April 8. [www.eenews.net/energywire/2020/04/08/stories/1062815823](http://www.eenews.net/energywire/2020/04/08/stories/1062815823).
- Fisher Sheehan & Colton. 2020. "What Is the Home Energy Affordability Gap?" [www.homeenergyaffordabilitygap.com/01\\_whatIsHEAG2.html](http://www.homeenergyaffordabilitygap.com/01_whatIsHEAG2.html).
- Frank, M., and S. Nowak. 2016. "Who's Participating and Who's Not? The Unintended Consequences of Untargeted Programs." In *Proceedings of the 2016 ACEEE Summer Study on Energy Efficiency in Buildings 2*: 1–13. Washington, DC: ACEEE. [aceee.org/files/proceedings/2016/data/papers/2\\_542.pdf](http://aceee.org/files/proceedings/2016/data/papers/2_542.pdf).
- Gilleo, A. 2019. *State Energy Efficiency Resource Standards (EERS)*. Washington, DC: ACEEE. [www.aceee.org/sites/default/files/state-eers-0519.pdf](http://www.aceee.org/sites/default/files/state-eers-0519.pdf).
- Gilleo, A., S. Nowak, and A. Drehobl. 2017. *Making a Difference: Strategies for Successful Low-Income Energy Efficiency Programs*. Washington, DC: ACEEE. [aceee.org/research-report/u1713](http://aceee.org/research-report/u1713).
- Hayes, S., and C. Gerbode. 2020. *Braiding Energy and Health Funding for In-Home Programs: Federal Funding Opportunities*. Washington, DC: ACEEE. [aceee.org/research-report/h2002](http://aceee.org/research-report/h2002).
- Hayes, S., C. Kubes, and C. Gerbode. 2020. *Making Health Count: Monetizing the Health Benefits of In-Home Services Delivered by Energy Efficiency Programs*. Washington, DC: ACEEE. [aceee.org/research-report/h2001](http://aceee.org/research-report/h2001).
- Hernández, D. 2016. "Understanding 'Energy Security' and Why It Matters to Health." *Social Science & Medicine* 167: 1–10. [www.ncbi.nlm.nih.gov/pmc/articles/PMC5114037/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5114037/).
- Hernández, D., Y. Aratani, and Y. Jiang. 2014. *Energy Insecurity among Families with Children*. New York: National Center for Children in Poverty, Columbia University Mailman School of Public Health. [www.nccp.org/publications/pdf/text\\_1086.pdf](http://www.nccp.org/publications/pdf/text_1086.pdf).
- Hernández, D., D. Phillips, and E. Siegel. 2016. "Exploring the Housing and Household Energy Pathways to Stress: A Mixed Methods Study." *International Journal of Environment Research and Public Health* 13 (9): 916–28. [www.ncbi.nlm.nih.gov/pubmed/27649222](http://www.ncbi.nlm.nih.gov/pubmed/27649222).
- Hernández, D., Y. Jiang, D. Carrión, D. Phillips, and Y. Aratani. 2016. "Housing Hardship and Energy Insecurity among Native-Born and Immigrant Low-Income Families with Children in the United States." *Journal of Children and Poverty* 22 (2): 77–92. [doi.org/10.1080/10796126.2016.1148672](https://doi.org/10.1080/10796126.2016.1148672).
- HHS (Department of Health and Human Services). 2020. "LIHEAP DCL 2020-10 CARES Act Supplemental Funding Release FFY20." May 8. [www.acf.hhs.gov/ocs/resource/liheap-dcl-2020-10-cares-act-supplemental-funding-release-ffy20](http://www.acf.hhs.gov/ocs/resource/liheap-dcl-2020-10-cares-act-supplemental-funding-release-ffy20).
- Hooper, M., A. Nápoles, and E. Pérez-Stable. 2020. "COVID-19 and Racial/Ethnic Disparities." *JAMA* 323 (24): 2466–7. [jamanetwork.com/journals/jama/fullarticle/2766098](http://jamanetwork.com/journals/jama/fullarticle/2766098).
- Institute of Medicine. 2011. *Climate Change, the Indoor Environment, and Health*. Washington DC: The National Academies Press. [healthyindoors.com/wp-content/uploads/2016/11/IOM-CLIMATE-CHANGE-AND-HEALTH-pdf-1.pdf](http://healthyindoors.com/wp-content/uploads/2016/11/IOM-CLIMATE-CHANGE-AND-HEALTH-pdf-1.pdf).
- Jargowsky, P. 2015. *Architecture of Segregation: Civil Unrest, the Concentration of Poverty, and Public Policy*. New York: The Century Foundation. [production-tcf.imgix.net/app/uploads/2015/08/07182514/Jargowsky\\_ArchitectureofSegregation-11.pdf](http://production-tcf.imgix.net/app/uploads/2015/08/07182514/Jargowsky_ArchitectureofSegregation-11.pdf).
- Jessel, S., S. Sawyer, and D. Hernández. 2019. "Energy, Poverty, and Health in Climate Change: A Comprehensive Review of an Emerging Literature." *Frontiers in Public Health* 7: 357. [www.ncbi.nlm.nih.gov/pmc/articles/PMC6920209/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC6920209/).
- Kontokosta, C., V. Reina, and B. Bonczak. 2019. "Energy Cost Burdens for Low-Income and Minority Households." *Journal of the American Planning Association* 86 (1): 89–105. [doi.org/10.1080/01944363.2019.1647446](https://doi.org/10.1080/01944363.2019.1647446).

- Leventis, G., C. Kramer, and L. Schwartz. 2017. *Energy Efficiency Financing for Low- and Moderate-Income Households: Current State of the Market, Issues, and Opportunities*. Washington, DC: SEE Action (State and Local Energy Efficiency Action Network), DOE. [emp.lbl.gov/sites/default/files/news/lmi-final0811.pdf](http://emp.lbl.gov/sites/default/files/news/lmi-final0811.pdf).
- Levin, E., L. Curry, and L. Capps. 2019. *Energy-Plus-Health Playbook*. Winooski, VT: VEIC. [www.veic.org/clients-results/reports/energy-plus-health-playbook](http://www.veic.org/clients-results/reports/energy-plus-health-playbook).
- Lewis, J., D. Hernández, and A. Geronimus. 2019. "Energy Efficiency as Energy Justice: Address Racial Inequalities through Investments in People and Places." *Energy Efficiency* 13: 419-32 [doi.org/10.1007/s12053-019-09820-z](https://doi.org/10.1007/s12053-019-09820-z).
- Lin, J., K. Marshall, S. Kabaca, M. Frades, and D. Ware. 2019. "Energy Affordability in Practice: Oracle Utilities Opower's Business Intelligence to Meet Low and Moderate Income Need at Eversource." *The Electricity Journal* 33 (2): 106687. [doi.org/10.1016/j.tej.2019.106687](https://doi.org/10.1016/j.tej.2019.106687).
- Ma, O., K. Laymon, M. Day, R. Oliveira, J. Weers, and A. Vimont. 2019. *Low-Income Energy Affordability Data (LEAD) Tool Methodology*. Prepared by NREL. Washington, DC: DOE. [www.nrel.gov/docs/fy19osti/74249.pdf](http://www.nrel.gov/docs/fy19osti/74249.pdf).
- Malcolm, K., and J. Sawani. 2020. "Racial Disparities in the Time of COVID-19." *University of Michigan Health Lab Rounds*, May 4. [labblog.uofmhealth.org/rounds/racial-disparities-time-of-covid-19](http://labblog.uofmhealth.org/rounds/racial-disparities-time-of-covid-19).
- Maricopa County Department of Public Health Office of Epidemiology. 2016. *Assessing the Cooling Needs of Homebound Individuals in Maricopa County, 2016*. Phoenix: Maricopa County Department of Public Health. [www.maricopa.gov/DocumentCenter/View/53679/Cooling-Needs-of-Homebound-Individuals-Report-PDF](http://www.maricopa.gov/DocumentCenter/View/53679/Cooling-Needs-of-Homebound-Individuals-Report-PDF).
- . 2020. *Heat-Associated Deaths in Maricopa County, AZ: Final Report for 2019*. Phoenix: Maricopa County Department of Public Health. [www.maricopa.gov/ArchiveCenter/ViewFile/Item/4959](http://www.maricopa.gov/ArchiveCenter/ViewFile/Item/4959).
- Mayors Challenge. 2018. "2018 Champion City—Bringing Housing Stock Up to Scratch with Collaborative Energy Retrofits: Pittsburgh." [mayorchallenge.bloomberg.org/ideas/pittsburgh-pa/](http://mayorchallenge.bloomberg.org/ideas/pittsburgh-pa/).
- McCarty, M., L. Perl, and K. Jones. 2019. *Overview of Federal Housing Assistance Programs and Policy*. Washington, DC: CRS (Congressional Research Service). [crsreports.congress.gov/product/pdf/RL/RL34591](https://crsreports.congress.gov/product/pdf/RL/RL34591).
- National Research Council. 2010. *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use*. Washington, DC: National Academies Press. [www.ourenergypolicy.org/wp-content/uploads/2012/06/hidden.pdf](http://www.ourenergypolicy.org/wp-content/uploads/2012/06/hidden.pdf).
- NASCSP (National Association for State Community Service Programs). 2020a. "Couleecap's Weatherization Deferral Program Makes Homes Safer and More Energy Efficient." Accessed July. [nascsp.org/success-story/couleecaps-weatherization-deferral-program-makes-homes-safer-and-more-energy-efficient/](http://nascsp.org/success-story/couleecaps-weatherization-deferral-program-makes-homes-safer-and-more-energy-efficient/).
- . 2020b. *Weatherization Assistance Program: Funding Report PY 2018*. Washington, DC: NASCSP. [nascsp.org/wp-content/uploads/2020/05/NASCSP-2018-WAP-Funding-Survey\\_Final\\_May12.pdf](http://nascsp.org/wp-content/uploads/2020/05/NASCSP-2018-WAP-Funding-Survey_Final_May12.pdf).
- New Jersey Legislature. 2020. *An Act Concerning Clean Energy and Energy Efficiency Programs for Overburdened Communities*. S. 2484, May 14. [www.njleg.state.nj.us/2020/Bills/S2500/2484\\_11.HTM](http://www.njleg.state.nj.us/2020/Bills/S2500/2484_11.HTM).
- New York. 2016. "Governor Cuomo Announces New Energy Affordability Policy to Deliver Relief to Nearly 2 Million Low-Income New Yorkers." May 19. [www.governor.ny.gov/news/governor-cuomo-announces-new-energy-affordability-policy-deliver-relief-nearly-2-million-low](http://www.governor.ny.gov/news/governor-cuomo-announces-new-energy-affordability-policy-deliver-relief-nearly-2-million-low).
- Norton, R., B. Brown, and K. Malomo-Paris. 2017. *Weatherization and Its Impact on Occupant Health Outcomes*. Washington, DC: GHHI (Green & Health Homes Initiative). [www.greenandhealthyhomes.org/publication/weatherization-impact-occupant-health-outcomes/](http://www.greenandhealthyhomes.org/publication/weatherization-impact-occupant-health-outcomes/).
- Nowak, S., M. Kushler, and P. Witte. 2019. *The New Leaders of the Pack: ACEEE's Fourth National Review of Exemplary Energy Efficiency Programs*. Washington, DC: ACEEE. [aceee.org/research-report/u1901](http://aceee.org/research-report/u1901).
- NYSERDA (New York State Energy Research & Development Authority). 2018. *Annual Investment Plan and Performance Report through December 31, 2018*. Albany: NYSERDA. [nyserdera.ny.gov/About/Publications/NYSERDA-Annual-Reports-and-Financial-Statements](http://nyserdera.ny.gov/About/Publications/NYSERDA-Annual-Reports-and-Financial-Statements).
- Oregon. 2017. *Executive Order No. 17-20: Accelerating Efficiency in Oregon's Build Environment to Reduce Greenhouse Gas Emissions and Address Climate Change*. Salem: Office of Governor Kate Brown. [www.oregon.gov/gov/Documents/executive\\_orders/eo\\_17-20.pdf](http://www.oregon.gov/gov/Documents/executive_orders/eo_17-20.pdf).
- Patterson, J., K. Fink, C. Grant, S. Terry, R. Rosenberg, and C. Walker. 2014. *Just Energy Policies: Reducing Pollution and Creating Jobs: A State by State Guide to Energy Efficiency and Renewable Energy Policies*. Baltimore: NAACP (National Association for the Advancement of Colored People). [www.naacp.org/wp-content/uploads/2014/03/Just-Energy-Policies-Compendium-EXECUTIVE-SUMMARY\\_NAACP.pdf](http://www.naacp.org/wp-content/uploads/2014/03/Just-Energy-Policies-Compendium-EXECUTIVE-SUMMARY_NAACP.pdf).
- PEA (Philadelphia Energy Authority). 2020a "Affordable Residential." Accessed July. [philaenergy.org/programs-initiatives/residential/](http://philaenergy.org/programs-initiatives/residential/).
- . 2020b. *Built to Last: An Initiative to Restore Safe, Healthy, and Affordable Homes*. Philadelphia: PEA. [philaenergy.org/wp-content/uploads/2020/07/Built-to-Last-Overview.pdf](http://philaenergy.org/wp-content/uploads/2020/07/Built-to-Last-Overview.pdf).



- Pennsylvania PUC (Public Utility Commission). 2019a. *Home Energy Affordability for Low-Income Customers in Pennsylvania*. Docket No. M-2017-2587711. Harrisburg: Pennsylvania PUC. [www.puc.pa.gov/pcdocs/1602386.pdf](http://www.puc.pa.gov/pcdocs/1602386.pdf).
- . 2019b. "PUC Takes Major Steps to Address Energy Affordability for Low-Income Households; Revises Policy on Customer Assistance Programs and Initiates Rulemaking for Universal Service Programs." Press release, September 19. [www.puc.state.pa.us/about\\_puc/press\\_releases.aspx?ShowPR=4262](http://www.puc.state.pa.us/about_puc/press_releases.aspx?ShowPR=4262).
- Reames, T. 2016. "A Community-Based Approach to Low-Income Residential Energy Efficiency Participation Barriers." *Local Environment* 21 (12): 1449-66. [dx.doi.org/10.1080/13549839.2015.1136995](https://doi.org/10.1080/13549839.2015.1136995).
- Reames, T., M. Reiner, and M. Stacey. 2018. "An Incandescent Truth: Disparities in Energy-Efficient Lighting Availability and Prices in an Urban U.S. County." *Applied Energy* 218: 95-103. [doi.org/10.1016/j.apenergy.2018.02.143](https://doi.org/10.1016/j.apenergy.2018.02.143).
- Reames, T., B. Stacey, and M. Zimmerman. 2019. *A Multi-State Analysis of Equity in Utility-Sponsored Energy Efficiency Investments for Residential Electric Customers*. Ann Arbor: University of Michigan. [poverty.umich.edu/files/2019/05/Energy\\_efficiency.pdf](http://poverty.umich.edu/files/2019/05/Energy_efficiency.pdf).
- Rose, E., B. Hawkins, L. Ashcraft, and C. Miller. 2015. *Exploratory Review of Grantee, Subgrantee and Client Experiences with Deferred Services under the Weatherization Assistance Program*. Prepared by Oak Ridge National Laboratory. Washington, DC: DOE. [weatherization.ornl.gov/wp-content/uploads/pdf/WAPRecoveryActEvalFinalReports/ORNLTM-2014\\_364.pdf](http://weatherization.ornl.gov/wp-content/uploads/pdf/WAPRecoveryActEvalFinalReports/ORNLTM-2014_364.pdf).
- Ross, L., A. Dreihobl, and B. Stickles. 2018. *The High Cost of Energy in Rural America: Household Energy Burdens and Opportunities for Energy Efficiency*. Washington, DC: ACEEE. [aceee.org/research-report/u1806](http://aceee.org/research-report/u1806).
- Ross, L., M. Jarrett, and D. York. 2016. *Reaching More Residents: Opportunities for Increasing Participation in Multifamily Energy Efficiency Programs*. Washington, DC: ACEEE. [aceee.org/sites/default/files/publications/researchreports/u1603.pdf](http://aceee.org/sites/default/files/publications/researchreports/u1603.pdf).
- Rothstein, R. 2017. *The Color of Law: A Forgotten History of How Our Government Segregated America*. New York: Liveright Publishing.
- Samarripas, S., and C. de Campos Lopes. 2020. *Taking Stock: Links between Local Policy and Building Energy Use across the United States*. Washington, DC: ACEEE. [aceee.org/research-report/2020/04/taking-stock-links-between-local-policy-and-building-energy-use-across](http://aceee.org/research-report/2020/04/taking-stock-links-between-local-policy-and-building-energy-use-across).
- Samarripas, S., and D. York. 2019. *Closing the Gap in Energy Efficiency Programs for Affordable Multifamily Housing*. Washington, DC: ACEEE. [aceee.org/research-report/u1903](http://aceee.org/research-report/u1903).
- SAMHSA (Substance Abuse and Mental Health Services Administration). 2020. *Double Jeopardy: COVID-19 and Behavior Health Disparities for Black and Latino Communities in the U.S.* Rockville, MD: SAMHSA. [www.samhsa.gov/sites/default/files/covid19-behavioral-health-disparities-black-latino-communities.pdf](http://www.samhsa.gov/sites/default/files/covid19-behavioral-health-disparities-black-latino-communities.pdf).
- Teller-Elsberg, J., B. Sovacool, T. Smith, and E. Laine. 2015. "Fuel Poverty, Excess Winter Deaths, and Energy Cost in Vermont: Burdensome for Whom?" *Energy Policy* 90 (March): 81-91. [doi.org/10.1016/j.enpol.2015.12.009](https://doi.org/10.1016/j.enpol.2015.12.009).
- Tessum, C., J. Apte, A. Goodkind, N. Muller, K. Mullins, D. Paoletta, S. Polasky, N. Springer, S. Thakrar, J. Marshall, and J. Hill. 2019. "Inequality in Consumption of Goods and Services Adds to Racial-Ethnic Disparities in Air Pollution Exposure." *Proceedings of the National Academy of Sciences of the United States of America* 116 (13): 6001-6. [doi.org/10.1073/pnas.1818859116](https://doi.org/10.1073/pnas.1818859116).
- USDN. 2019. *From Community Engagement to Ownership: Tools for the Field with Case Studies of Four Municipal Community-Driven Environmental & Racial Equity Committees*. Prepared by Facilitating Power, Movement Strategy Center, and the National Association of Climate Resilience Planners. Port Washington, WI: USDN (Urban Sustainability Directors Network). [www.usdn.org/uploads/cms/documents/community\\_engagement\\_to\\_ownership\\_-\\_tools\\_and\\_case\\_studies\\_final.pdf](http://www.usdn.org/uploads/cms/documents/community_engagement_to_ownership_-_tools_and_case_studies_final.pdf).
- Washington State Department of Commerce. 2020. *CETA: A Brief Overview*. Olympia: Washington State Department of Commerce. [www.commerce.wa.gov/wp-content/uploads/2020/02/CETA-Overview.pdf](http://www.commerce.wa.gov/wp-content/uploads/2020/02/CETA-Overview.pdf).
- Woolf T., C. Neme, M. Kushler, S. Schiller, and T. Eckman. 2017. *National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources*. Framingham, MA: NESP (National Efficiency Screening Project). [nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM\\_May-2017\\_final.pdf](http://nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM_May-2017_final.pdf).

# APPENDIX A.

## **Energy Burden Data**

## Appendix A.1–National Energy Burden Data

**A1.** National energy burden data including sample sizes, median energy burdens, median income, median monthly energy bills, and the percentage of households in each group with a high and severe burden

Subgroups	Sample size	Median energy burden	Median annual income	Median annual energy expenditures	High burden percentage (>6%)	Severe burden percentage (>10%)
All households	53,539	3.1%	\$58,000	\$1,800	25%	13%
Low-income ( $\leq 200\%$ FPL)	16,685	8.1%	\$18,000	\$1,464	67%	40%
Low-income with adult over 65	6,018	9.3%	\$15,000	\$1,440	74%	47%
Low-income with child under six	2,665	7.1%	\$26,400	\$1,800	59%	33%
Low-income with disability	5,759	8.7%	\$14,660	\$1,344	69%	43%
Non-low-income ( $> 200\%$ FPL)	36,854	2.3%	\$84,005	\$2,040	6%	1%
White (non-Hispanic)	33,219	2.9%	\$65,000	\$1,920	23%	11%
Black	7,747	4.2%	\$36,000	\$1,560	36%	21%
Hispanic	8,435	3.5%	\$47,400	\$1,680	28%	14%
Native American	1,003	4.2%	\$40,000	\$1,680	36%	19%
Older adults (65+ years)	15,750	4.2%	\$40,015	\$1,800	36%	19%
Renters	20,455	3.4%	\$36,000	\$1,320	30%	17%
Owners	33,082	3.0%	\$75,000	\$2,160	22%	11%
Single family	37,423	3.1%	\$70,020	\$2,160	24%	12%
Multifamily (5+ units)	9,936	2.4%	\$35,450	\$960	22%	12%
Low-income multifamily (5 + units, $\leq 200\%$ FPL)	4,563	5.6%	\$14,300	\$960	47%	26%
Small multifamily (2–4 units)	3,708	3.4%	\$34,700	\$1,200	29%	17%
Manufactured homes	2,440	5.3%	\$34,800	\$1,800	45%	25%
Buildings built before 1980	28,013	3.4%	\$50,040	\$1,800	29%	15%
Buildings built after 1980	25,525	2.8%	\$66,000	\$1,920	21%	11%

## Appendix A.2—Regional Energy Burden Data

**A2.1.** Regional energy burdens, including sample sizes for each region, median energy burdens, median monthly energy bill, and the percentage with high and severe burdens

Region	Sample size	Median energy burden	Median annual income	Median annual energy expenditures	Upper-quartile energy burden	High burden percentage (>6%)	Severe burden percentage (>10%)
East North Central	7,422	3.6%	\$52,500	\$1,920	6.8%	29%	15%
East South Central	2,177	4.4%	\$39,400	\$1,800	8.5%	38%	21%
Middle Atlantic	4,851	3.4%	\$60,000	\$2,040	6.8%	29%	16%
Mountain	3,932	2.9%	\$57,625	\$1,680	5.2%	21%	11%
New England	2,778	3.5%	\$71,985	\$2,640	6.7%	29%	15%
Pacific	11,177	2.3%	\$69,800	\$1,680	4.5%	18%	9%
South Atlantic	11,363	3.2%	\$56,120	\$1,920	6.2%	26%	14%
West North Central	2,412	3.1%	\$55,100	\$1,800	5.8%	25%	12%
West South Central	7,427	3.3%	\$52,000	\$1,800	6.0%	25%	13%
National	53,539	3.1%	\$58,000	\$1,800	6.0%	25%	13%

**A2.2.** Regional median energy burdens for income-based groups

Region	Low-income (≤200% FPL)	Low-income with older adults (65+)	Low-income with child under 6	Low-income with disability	Low-income multifamily (5+ units, ≤200% FPL)	Non-low-income (>200% FPL)
East North Central	9.1%	9.8%	8.2%	9.2%	6.0%	2.6%
East South Central	9.1%	10.0%	8.6%	9.9%	6.6%	2.9%
Middle Atlantic	9.4%	10.7%	7.9%	10.2%	6.9%	2.6%
Mountain	6.9%	8.4%	5.7%	7.7%	4.5%	2.2%
New England	10.5%	11.6%	9.6%	10.8%	5.6%	2.9%
Pacific	6.8%	7.5%	5.4%	6.9%	5.3%	1.7%
South Atlantic	8.4%	9.5%	7.7%	8.8%	5.8%	2.3%
West North Central	7.9%	9.1%	7.1%	7.9%	4.7%	2.5%
West South Central	7.7%	9.6%	6.6%	9.0%	5.8%	2.4%
National	8.1%	9.3%	7.1%	8.7%	5.6%	2.3%

### A2.3. Regional median energy burdens based on race/ethnicity, age, and tenure status

Region	White (non-Hispanic)	Black	Hispanic	Older adults (65+ years)	Renter	Owner
East North Central	3.4%	5.1%	3.4%	4.7%	4.2%	3.3%
East South Central	4.0%	6.2%	5.0%	5.7%	5.3%	4.0%
Middle Atlantic	3.2%	4.4%	4.5%	4.8%	3.8%	3.2%
Mountain	2.6%	3.3%	3.7%	3.8%	3.0%	2.8%
New England	3.4%	4.0%	4.6%	4.8%	3.6%	3.5%
Pacific	2.1%	3.2%	3.0%	3.3%	2.5%	2.2%
South Atlantic	2.9%	4.0%	3.4%	4.4%	3.5%	3.0%
West North Central	3.0%	4.6%	3.3%	3.9%	3.9%	2.9%
West South Central	2.9%	4.0%	4.0%	4.4%	3.6%	3.1%
National	2.9%	4.2%	3.5%	4.2%	3.4%	3.0%

### A2.4. Regional median energy burdens based on building type

Region	Single family	Multifamily (5+ units)	Low-income multifamily (5+ units, ≤200% FPL)	Built before 1980	Built after 1980
East North Central	3.6%	3.0%	6.0%	4.0%	2.9%
East South Central	4.3%	3.9%	6.6%	4.9%	3.9%
Middle Atlantic	3.5%	2.5%	6.9%	3.6%	2.9%
Mountain	2.9%	2.3%	4.5%	3.3%	2.7%
New England	3.6%	2.4%	5.6%	3.7%	3.1%
Pacific	2.4%	1.9%	5.3%	2.3%	2.3%
South Atlantic	3.2%	2.5%	5.8%	3.6%	2.9%
West North Central	3.1%	2.6%	4.7%	3.4%	2.7%
West South Central	3.3%	2.6%	5.8%	3.9%	3.0%
National	3.1%	2.4%	5.6%	3.4%	2.8%

**A2.5.** Regional upper-quartile energy burdens for income-based groups (25% of households in each group have a burden above the upper-quartile threshold)

Region	Low-income (≤200% FPL)	Low-income with older adults (65+)	Low-income with child under 6	Low-income with disability	Low-income multifamily	Non-low-income (>200% FPL)
East North Central	16.4%	17.6%	14.2%	15.9%	10.6%	3.9%
East South Central	15.7%	15.7%	18.7%	17.2%	12.0%	4.2%
Middle Atlantic	17.6%	20.1%	15.6%	18.5%	12.9%	4.0%
Mountain	12.0%	15.3%	9.6%	13.6%	8.4%	3.3%
New England	19.3%	21.7%	15.4%	19.2%	10.8%	4.5%
Pacific	12.0%	13.7%	10.2%	12.0%	9.2%	2.8%
South Atlantic	14.7%	15.9%	12.4%	15.7%	10.0%	3.6%
West North Central	14.1%	14.5%	13.7%	14.6%	8.7%	3.6%
West South Central	12.9%	17.5%	10.1%	16.5%	10.2%	3.5%
National	14.4%	16.3%	12.0%	15.6%	10.1%	3.6%

**A2.6.** Regional upper-quartile energy burdens based on race/ethnicity, age, and tenure status (25% of households in each group have a burden above the upper-quartile threshold)

Region	White (non-Hispanic)	Black	Hispanic	Older adults (65+ years)	Renter	Owner
East North Central	6.4%	10.0%	6.1%	8.4%	8.4%	6.1%
East South Central	7.4%	12.3%	9.2%	10.3%	10.9%	7.2%
Middle Atlantic	6.2%	9.8%	8.6%	9.3%	8.0%	6.1%
Mountain	4.8%	6.3%	6.2%	7.0%	5.7%	4.9%
New England	6.3%	8.1%	9.3%	9.5%	7.8%	6.0%
Pacific	4.1%	6.5%	5.6%	6.4%	5.1%	4.1%
South Atlantic	5.5%	8.0%	6.2%	8.4%	7.4%	5.5%
West North Central	5.5%	9.3%	6.1%	7.3%	7.8%	5.2%
West South Central	5.1%	7.6%	7.1%	8.6%	7.3%	5.4%
National	5.5%	8.4%	6.5%	8.1%	7.1%	5.4%



**A2.7.** Regional upper-quartile energy burdens based on building type (25% of households in each group have a burden above the upper-quartile threshold)

Region	Single family	Multifamily (5+ units)	Low-income multifamily ( $\leq 200\%$ FPL, 5+ units)	Built before 1980	Built after 1980
East North Central	6.6%	6.5%	10.6%	7.4%	5.7%
East South Central	7.8%	8.2%	12.0%	9.6%	7.5%
Middle Atlantic	6.7%	6.5%	12.9%	7.0%	5.9%
Mountain	5.0%	4.7%	8.4%	5.9%	4.8%
New England	6.4%	6.1%	10.8%	7.2%	5.6%
Pacific	4.4%	4.3%	9.2%	4.7%	4.3%
South Atlantic	6.0%	5.3%	10.0%	7.2%	5.5%
West North Central	5.7%	5.5%	8.7%	6.4%	5.1%
West South Central	5.9%	5.4%	10.2%	7.4%	5.2%
National	5.8%	5.3%	10.1%	6.7%	5.3%

## Appendix A.3–Metro-Level Energy Burden Data

**A3.1.** Metro-level energy burdens, including sample sizes for each city, median energy burdens, median monthly energy bill, and percentage with high burden and severe burden

Metro area	Sample size	Median energy burden	Median annual income	Median annual energy expenditures	Upper-quartile energy burden	High burden percentage (>6%)	Severe burden percentage (>10%)
Atlanta	1,957	3.5%	\$60,000	\$2,280	6.5%	28%	14%
Baltimore	1,741	3.0%	\$75,100	\$2,280	5.5%	23%	11%
Birmingham	1,755	4.2%	\$53,300	\$2,280	7.4%	34%	18%
Boston	1,728	3.1%	\$81,925	\$2,640	5.8%	24%	12%
Chicago	1,788	2.7%	\$65,350	\$1,800	4.8%	20%	10%
Dallas	2,472	2.9%	\$60,000	\$1,920	4.9%	19%	8%
Detroit	1,917	3.8%	\$57,000	\$2,160	6.9%	30%	16%
Houston	2,164	3.0%	\$60,000	\$1,800	5.3%	21%	11%
Las Vegas	1,968	2.8%	\$54,700	\$1,560	4.8%	18%	10%
Los Angeles	2,351	2.2%	\$61,900	\$1,440	4.4%	17%	9%
Miami	1,978	3.0%	\$48,050	\$1,440	5.5%	23%	12%
Minneapolis	1,943	2.2%	\$81,000	\$1,920	3.6%	12%	5%
New York City	1,510	2.9%	\$67,500	\$1,920	6.0%	25%	15%
Oklahoma City	2,111	3.3%	\$52,000	\$1,800	5.8%	24%	11%
Philadelphia	1,852	3.2%	\$66,500	\$2,160	6.3%	26%	14%
Phoenix	2,000	3.0%	\$60,000	\$1,800	5.2%	21%	10%
Richmond	1,933	2.6%	\$69,000	\$1,920	4.7%	17%	9%
Riverside	2,070	3.6%	\$58,750	\$2,160	6.7%	29%	15%
Rochester	1,807	3.8%	\$56,000	\$2,160	6.7%	29%	15%
San Antonio	2,014	3.0%	\$55,000	\$1,800	5.4%	22%	11%
San Francisco	1,950	1.4%	\$100,000	\$1,440	2.9%	10%	6%
San Jose	2,043	1.5%	\$109,000	\$1,560	2.9%	11%	6%
Seattle	2,162	1.8%	\$79,800	\$1,440	3.3%	11%	6%
Tampa	1,701	2.8%	\$52,000	\$1,560	5.3%	21%	11%
Washington, DC	2,214	2.0%	\$100,000	\$2,160	3.9%	14%	7%
National	53,539	3.1%	\$58,000	\$1,800	6.0%	25%	13%

### A3.2. Metro-level median energy burdens for income-based groups

Metro area	Low-income (≤200% FPL)	Low-income with older adults (65+)	Low-income with child under 6	Low-income with disability	Low-income multifamily (5+ units, ≤200% FPL)	Non-low-income (>200% FPL)
Atlanta	9.7%	12.6%	8.1%	10.4%	6.6%	2.7%
Baltimore	10.5%	11.4%	7.8%	10.0%	7.5%	2.6%
Birmingham	10.9%	12.9%	9.3%	10.7%	6.8%	3.0%
Boston	10.1%	11.8%	9.5%	10.4%	6.6%	2.6%
Chicago	8.0%	9.5%	5.9%	8.0%	6.4%	2.1%
Dallas	6.7%	10.0%	6.0%	8.1%	5.0%	2.4%
Detroit	10.2%	12.0%	8.6%	10.7%	6.0%	2.8%
Houston	7.1%	9.9%	5.8%	9.6%	5.8%	2.2%
Las Vegas	6.5%	8.3%	5.0%	6.5%	5.3%	2.2%
Los Angeles	6.0%	6.4%	4.9%	6.1%	4.8%	1.6%
Miami	6.9%	8.0%	5.0%	7.6%	5.5%	2.1%
Minneapolis	6.6%	8.7%	4.7%	7.0%	4.3%	2.0%
New York City	9.3%	11.4%	7.5%	11.0%	8.0%	2.1%
Oklahoma City	7.8%	9.5%	6.1%	8.7%	6.5%	2.6%
Philadelphia	9.5%	10.4%	8.1%	10.1%	6.5%	2.4%
Phoenix	7.0%	8.3%	5.6%	7.3%	4.6%	2.4%
Richmond	8.2%	10.3%	6.9%	8.4%	5.0%	2.3%
Riverside	8.7%	10.6%	6.7%	9.6%	6.1%	2.7%
Rochester	9.5%	10.1%	7.9%	9.4%	6.0%	2.9%
San Antonio	7.4%	9.5%	6.0%	8.6%	4.8%	2.4%
San Francisco	6.1%	7.0%	4.7%	6.6%	4.9%	1.2%
San Jose	6.5%	8.1%	4.4%	7.6%	4.7%	1.2%
Seattle	6.0%	6.8%	4.4%	6.0%	4.1%	1.6%
Tampa	7.2%	8.0%	5.6%	8.0%	4.9%	2.1%
Washington, DC	7.5%	9.3%	5.9%	8.3%	5.2%	1.8%
National	8.1%	9.3%	7.1%	8.7%	5.6%	2.3%

### A3.3. Metro-level median energy burdens based on race/ethnicity, age, and tenure status

Metro area	White (non-Hispanic)	Black	Hispanic	Older adults (65+)	Renter	Owner
Atlanta	3.1%	4.1%	4.7%	5.1%	3.7%	3.4%
Baltimore	2.8%	3.8%	3.3%	4.1%	3.2%	2.9%
Birmingham	3.8%	5.6%	4.8%	5.8%	5.2%	3.9%
Boston	3.0%	3.7%	3.6%	4.4%	3.2%	3.0%
Chicago	2.4%	4.1%	3.0%	3.7%	3.1%	2.5%
Dallas	2.6%	3.3%	3.8%	3.8%	2.9%	3.0%
Detroit	3.5%	5.3%	4.5%	5.2%	4.6%	3.6%
Houston	2.5%	3.5%	3.4%	4.1%	3.3%	2.7%
Las Vegas	2.7%	3.2%	3.0%	3.4%	3.0%	2.7%
Los Angeles	1.8%	3.6%	2.6%	3.2%	2.4%	2.1%
Miami	2.5%	3.4%	3.1%	4.2%	3.1%	2.8%
Minneapolis	2.2%	2.6%	2.7%	3.0%	2.3%	2.2%
New York City	2.6%	3.6%	3.8%	4.2%	3.3%	2.7%
Oklahoma City	3.1%	3.9%	4.2%	4.0%	3.9%	3.1%
Philadelphia	2.9%	4.4%	5.2%	4.4%	3.9%	3.0%
Phoenix	2.8%	3.2%	3.6%	4.0%	2.8%	3.1%
Richmond	2.4%	3.4%	2.9%	3.5%	2.9%	2.6%
Riverside	3.4%	3.9%	3.7%	5.1%	4.0%	3.4%
Rochester	3.6%	5.1%	5.4%	4.8%	4.3%	3.6%
San Antonio	2.7%	3.1%	3.4%	4.1%	3.1%	3.0%
San Francisco	1.2%	2.4%	1.2%	2.4%	1.4%	1.4%
San Jose	1.4%	1.8%	1.9%	2.4%	1.5%	1.5%
Seattle	1.8%	2.3%	2.0%	2.4%	1.8%	1.8%
Tampa	2.6%	3.6%	3.5%	3.8%	2.8%	2.9%
Washington, DC	1.7%	2.9%	2.7%	2.9%	2.0%	2.0%
National	2.9%	4.2%	3.5%	4.2%	3.4%	3.0%

### A3.4. Metro-level median energy burdens based on building type

Metro area	Single family	Multifamily (5+ units)	Low-income multifamily (5+ units, ≤200% FPL)	Built before 1980	Built after 1980
Atlanta	3.7%	2.5%	6.6%	4.5%	3.3%
Baltimore	3.2%	2.5%	7.5%	3.6%	2.4%
Birmingham	4.1%	3.5%	6.8%	5.1%	3.6%
Boston	3.1%	2.2%	6.6%	3.2%	2.6%
Chicago	2.6%	2.7%	6.4%	2.9%	2.2%
Dallas	3.1%	2.2%	5.0%	3.5%	2.7%
Detroit	3.8%	2.5%	6.0%	4.3%	3.0%
Houston	3.0%	2.5%	5.8%	3.4%	2.7%
Las Vegas	2.8%	2.4%	5.3%	3.6%	2.7%
Los Angeles	2.3%	2.1%	4.8%	2.3%	2.1%
Miami	2.9%	2.9%	5.5%	3.3%	2.6%
Minneapolis	2.3%	1.8%	4.3%	2.5%	2.0%
New York City	3.0%	2.4%	8.0%	3.0%	2.4%
Oklahoma City	3.2%	3.3%	6.5%	3.8%	2.9%
Philadelphia	3.3%	2.7%	6.5%	3.6%	2.5%
Phoenix	3.1%	2.1%	4.6%	3.6%	2.8%
Richmond	2.6%	2.1%	5.0%	3.1%	2.3%
Riverside	3.5%	3.9%	6.1%	4.3%	3.3%
Rochester	3.7%	3.2%	6.0%	4.0%	3.4%
San Antonio	3.0%	2.6%	4.8%	3.9%	2.7%
San Francisco	1.5%	1.3%	4.9%	1.4%	1.4%
San Jose	1.6%	1.2%	4.7%	1.6%	1.3%
Seattle	1.9%	1.5%	4.1%	2.0%	1.7%
Tampa	2.8%	2.2%	4.9%	3.3%	2.5%
Washington, DC	2.2%	1.4%	5.2%	2.3%	1.9%
National	3.1%	2.4%	5.6%	3.4%	2.8%

**A3.5.** Metro-level upper-quartile energy burdens for income-based groups (25% of households in each group have a burden above the upper-quartile threshold)

<b>Metro area</b>	<b>Low-income (≤200% FPL)</b>	<b>Low-income with older adults (65+)</b>	<b>Low-income with child under 6</b>	<b>Low-income with disability</b>	<b>Low-income multifamily</b>	<b>Non-low-income (&gt;200% FPL)</b>
Atlanta	16.2%	19.1%	12.8%	17.9%	11.7%	4.1%
Baltimore	21.7%	34.0%	10.9%	27.1%	5.5%	3.8%
Birmingham	18.3%	20.0%	17.1%	17.7%	13.9%	4.6%
Boston	18.6%	21.8%	16.0%	21.4%	11.7%	4.2%
Chicago	15.1%	17.5%	11.2%	13.2%	12.7%	3.1%
Dallas	11.4%	17.1%	8.5%	15.4%	7.9%	3.6%
Detroit	18.8%	21.2%	13.6%	19.8%	9.6%	4.3%
Houston	12.2%	20.2%	9.0%	22.0%	9.8%	3.2%
Las Vegas	13.8%	21.8%	8.0%	13.7%	10.9%	3.2%
Los Angeles	10.4%	11.4%	8.4%	11.2%	8.7%	2.6%
Miami	11.2%	13.3%	10.0%	13.0%	10.0%	3.0%
Minneapolis	12.2%	14.8%	6.9%	12.6%	7.7%	2.9%
New York City	16.8%	21.8%	14.1%	18.6%	15.0%	3.4%
Oklahoma City	12.5%	14.0%	9.9%	12.4%	10.2%	3.7%
Philadelphia	19.1%	24.9%	14.7%	20.0%	12.1%	3.8%
Phoenix	11.9%	15.3%	9.2%	12.7%	7.3%	3.5%
Richmond	15.6%	22.0%	10.4%	19.2%	8.8%	3.3%
Riverside	15.0%	16.6%	10.7%	16.5%	9.9%	3.9%
Rochester	15.9%	20.0%	14.0%	14.7%	9.9%	4.3%
San Antonio	13.3%	16.6%	9.2%	16.2%	9.2%	3.5%
San Francisco	14.3%	14.3%	8.5%	14.4%	11.0%	2.0%
San Jose	12.5%	14.9%	7.6%	14.9%	8.9%	2.0%
Seattle	10.9%	12.0%	9.2%	9.9%	6.8%	2.4%
Tampa	12.1%	12.1%	10.7%	12.7%	9.2%	3.2%
Washington, DC	13.5%	17.6%	8.9%	15.0%	9.1%	2.9%
National	14.4%	16.3%	12.0%	15.6%	10.1%	3.6%



**A3.6.** Metro-level upper-quartile energy burdens based on race/ethnicity, age, and tenure status (25% of households in each group have a burden above the upper-quartile threshold)

Metro area	White (non-Hispanic)	Black	Hispanic	Older adults (65+)	Renter	Owner
Atlanta	5.4%	8.1%	7.4%	9.8%	7.2%	6.2%
Baltimore	5.0%	8.3%	4.9%	8.0%	6.7%	5.1%
Birmingham	6.7%	11.8%	8.7%	10.7%	10.4%	6.8%
Boston	5.6%	8.1%	7.7%	9.0%	6.8%	5.6%
Chicago	4.2%	8.5%	4.9%	7.5%	6.0%	4.4%
Dallas	4.3%	5.8%	6.0%	7.0%	5.1%	4.8%
Detroit	6.3%	9.4%	7.2%	9.0%	8.9%	6.3%
Houston	4.4%	6.6%	6.1%	8.0%	6.2%	4.8%
Las Vegas	4.6%	6.1%	5.0%	6.1%	5.3%	4.3%
Los Angeles	3.6%	6.5%	5.0%	6.1%	5.1%	3.8%
Miami	4.4%	6.9%	5.8%	8.3%	6.4%	5.0%
Minneapolis	3.5%	4.4%	4.5%	5.4%	4.2%	3.5%
New York City	5.4%	8.2%	7.9%	10.1%	7.2%	5.3%
Oklahoma City	5.4%	7.4%	6.6%	7.7%	6.8%	5.2%
Philadelphia	5.2%	10.2%	9.2%	8.4%	7.9%	5.5%
Phoenix	4.8%	6.2%	6.0%	7.0%	5.2%	5.2%
Richmond	4.1%	7.0%	5.8%	6.8%	5.5%	4.4%
Riverside	6.7%	7.3%	6.9%	9.2%	7.2%	6.4%
Rochester	6.2%	11.6%	11.4%	9.0%	8.1%	6.1%
San Antonio	4.6%	5.2%	6.4%	7.9%	5.5%	5.3%
San Francisco	2.5%	5.3%	3.6%	4.7%	3.0%	2.8%
San Jose	2.8%	3.7%	3.4%	5.0%	3.1%	2.8%
Seattle	3.2%	4.5%	4.1%	5.1%	3.6%	3.2%
Tampa	5.0%	7.1%	6.3%	6.5%	5.6%	5.2%
Washington, DC	3.0%	5.1%	5.1%	6.0%	4.4%	3.6%
National	5.5%	8.4%	6.5%	8.1%	7.1%	5.4%

**A3.7.** Metro-level upper-quartile energy burdens based on building type (25% of households in each group have a burden above the upper-quartile threshold)

Metro area	Single family	Multifamily (5+ units)	Low-income multifamily ( $\leq 200\%$ FPL, 5+ units)	Built before 1980	Built after 1980
Atlanta	6.6%	5.3%	11.7%	8.1%	5.8%
Baltimore	5.5%	5.5%	5.5%	6.9%	4.0%
Birmingham	7.3%	6.5%	13.9%	9.7%	6.3%
Boston	5.6%	5.6%	11.7%	6.2%	4.9%
Chicago	4.5%	5.3%	12.7%	5.5%	4.0%
Dallas	5.1%	4.2%	7.9%	6.0%	4.6%
Detroit	6.8%	6.0%	9.6%	7.5%	5.7%
Houston	5.1%	5.1%	9.8%	6.1%	4.8%
Las Vegas	4.7%	4.7%	10.9%	6.7%	4.4%
Los Angeles	4.4%	4.4%	8.7%	4.5%	4.1%
Miami	5.2%	5.5%	10.0%	6.2%	4.8%
Minneapolis	3.6%	3.3%	7.7%	3.9%	3.3%
New York City	6.3%	6.6%	15.0%	5.9%	6.4%
Oklahoma City	5.5%	6.8%	10.2%	6.9%	4.7%
Philadelphia	6.2%	5.8%	12.1%	7.0%	4.9%
Phoenix	5.1%	4.2%	7.3%	6.0%	4.6%
Richmond	4.7%	4.0%	8.8%	6.0%	3.9%
Riverside	6.5%	6.9%	9.9%	7.8%	5.8%
Rochester	6.5%	6.3%	9.9%	7.1%	5.9%
San Antonio	5.5%	4.3%	9.2%	7.5%	4.5%
San Francisco	3.0%	2.6%	11.0%	2.9%	2.8%
San Jose	3.0%	2.6%	8.9%	3.1%	2.5%
Seattle	3.2%	3.2%	6.8%	3.6%	3.1%
Tampa	5.2%	4.4%	9.2%	6.5%	4.5%
Washington, DC	4.0%	3.2%	9.1%	4.5%	3.2%
National	5.8%	5.3%	10.1%	6.7%	5.3%

# APPENDIX B.

## **High and Severe Energy Burdens**

This section includes 2017 population data from the American Housing Survey (AHS) Table Creator for both national and metropolitan statistical area samples. [www.census.gov/programs-surveys/ahs/data/interactive/ahstablecreator.html](http://www.census.gov/programs-surveys/ahs/data/interactive/ahstablecreator.html).

## Appendix B.1–National High and Severe Energy Burdens

**B1.1.** Total national households in each subgroup, and each subgroup’s total households with a high energy burden (≥6%) and total households with severe energy burden (≥10%)

Category	Subgroup	Total households	Percentage highly burdened (≥6%)	Total highly burdened households (≥6%)	Percentage severely burdened (≥10%)	Total severely burdened households (≥10%)
Income	All households	121,560,000	25%	30,585,830	13%	15,861,674
	Low-income (≤200% FPL)	38,551,000	67%	25,776,144	40%	15,383,432
	Non-low-income (>200% FPL)	83,009,000	6%	5,214,246	1%	738,779
Race/ ethnicity	Black	16,552,000	36%	5,995,213	21%	3,469,788
	Native American	1,483,000	36%	541,155	19%	283,884
	Hispanic	16,496,000	28%	4,572,335	14%	2,250,966
	White (non-Hispanic)	80,550,000	23%	21,924,520	11%	10,485,640
Age	Older adults (65+)	34,929,000	36%	12,487,949	19%	6,701,933
Tenure	Renters	43,993,000	30%	13,218,332	17%	7,290,945
	Owners	77,567,000	22%	17,174,847	11%	8,431,501
Housing type	Low-income multifamily (5+ units) and low-income (≤200% FPL)	9,345,000	47%	4,413,429	26%	2,408,442
	Small multifamily (2–4 units)	8,363,000	47%	3,949,653	26%	2,155,356
	Manufactured homes	6,727,000	45%	2,999,580	25%	1,709,320
	Built before 1980	55,723,000	29%	15,911,480	15%	8,392,366
	Single family	85,791,000	24%	20,831,649	12%	10,476,575
	Multifamily (5+ units)	20,605,000	22%	4,572,668	12%	2,449,125
	Built after 1980	65,838,000	21%	14,114,223	11%	7,137,071

## Appendix B.2—Regional High and Severe Energy Burdens

**B2.1.** Total households in each region, and each region's total households with a high energy burden ( $\geq 6\%$ ) and total households with severe energy burden ( $\geq 10\%$ )

Region	Total households in region	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened households ( $\geq 10\%$ )
East North Central	18,522,000	29%	5,371,380	15%	2,778,300
East South Central	7,417,000	38%	2,818,460	21%	1,557,570
Middle Atlantic	16,019,000	29%	4,645,510	16%	2,563,040
Mountain	8,916,000	21%	1,872,360	11%	980,760
New England	5,809,000	29%	1,684,610	15%	871,350
Pacific	18,305,000	18%	3,294,900	9%	1,647,450
South Atlantic	23,974,000	26%	6,233,240	14%	3,356,360
West North Central	8,527,000	25%	2,131,750	12%	1,023,240
West South Central	14,070,000	25%	3,517,500	13%	1,829,100
National	121,560,000	25%	30,585,830	13%	15,861,674

**B2.2.** Total low-income households in each region, and each region's total low-income households with a high energy burden ( $\geq 6\%$ ) and total low-income households with severe energy burden ( $\geq 10\%$ )

Region	Total low-income households in region	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened low-income households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened low-income households ( $\geq 10\%$ )
East North Central	5,979,000	74%	4,424,460	45%	2,690,550
East South Central	2,976,000	74%	2,202,240	46%	1,368,960
Middle Atlantic	4,827,000	72%	3,475,440	48%	2,316,960
Mountain	2,719,000	58%	1,577,020	33%	897,270
New England	1,621,000	75%	1,215,750	52%	842,920
Pacific	5,064,000	57%	2,886,480	33%	1,671,120
South Atlantic	8,042,000	69%	5,548,980	41%	3,297,220
West North Central	2,297,000	66%	1,516,020	39%	895,830
West South Central	5,026,000	66%	3,317,160	36%	1,809,360
National	38,551,000	67%	25,776,144	40%	15,383,432

**B2.3.** Total Black households in each region, and each region's total Black households with a high energy burden ( $\geq 6\%$ ) and total Black households with severe energy burden ( $\geq 10\%$ )

Region	Total Black households in region	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened Black households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened Black households ( $\geq 10\%$ )
East North Central	2,336,000	43%	1,004,480	25%	584,000
East South Central	1,595,000	51%	813,450	31%	494,450
Middle Atlantic	2,437,000	38%	926,060	25%	609,250
Mountain	359,000	27%	96,930	13%	46,670
New England	401,000	33%	132,330	17%	68,170
Pacific	1,077,000	26%	280,020	15%	161,550
South Atlantic	5,485,000	35%	1,919,750	20%	1,097,000
West North Central	585,000	40%	234,000	24%	140,400
West South Central	2,277,000	34%	774,180	19%	432,630
National	16,552,000	36%	5,995,213	21%	3,469,788

**B2.4.** Total Hispanic households in each region, and each region's total Hispanic households with a high energy burden ( $\geq 6\%$ ) and total Hispanic households with severe energy burden ( $\geq 10\%$ )

Region	Total Hispanic households in region	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened Hispanic households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened Hispanic households ( $\geq 10\%$ )
East North Central	1,083,000	26%	281,580	12%	129,960
East South Central	197,000	38%	74,860	23%	45,310
Middle Atlantic	2,052,000	38%	779,760	22%	451,440
Mountain	1,721,000	27%	464,670	13%	223,730
New England	563,000	40%	225,200	23%	129,490
Pacific	4,466,000	23%	1,027,180	11%	491,260
South Atlantic	2,695,000	26%	700,700	12%	323,400
West North Central	360,000	26%	93,600	15%	54,000
West South Central	3,359,000	31%	1,041,290	15%	503,850
National	16,496,000	28%	4,572,335	14%	2,250,966



**B2.5.** Total older adult (65+) households in each region, and each region's total older adult (65+) households with a high energy burden ( $\geq 6\%$ ) and total older adult (65+) households with severe energy burden ( $\geq 10\%$ )

Region	Total older adult (65+) households in MSA	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened older adult households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened older adult households ( $\geq 10\%$ )
East North Central	4,711,000	39%	1,837,290	20%	942,200
East South Central	1,902,000	49%	931,980	26%	494,520
Middle Atlantic	4,228,000	41%	1,733,480	23%	972,440
Mountain	2,258,000	30%	677,400	15%	338,700
New England	1,578,000	41%	646,980	24%	378,720
Pacific	4,328,000	27%	1,168,560	14%	605,920
South Atlantic	6,402,000	37%	2,368,740	21%	1,344,420
West North Central	2,202,000	32%	704,640	17%	374,340
West South Central	3,058,000	37%	1,131,460	21%	642,180
National	34,929,000	36%	12,487,949	19%	6,701,933

**B2.6.** Total renting households in each region, and each region's total renting households with a high energy burden ( $\geq 6\%$ ) and total renting households with severe energy burden ( $\geq 10\%$ )

Region	Total renting households in region	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened renting households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened renting households ( $\geq 10\%$ )
East North Central	5,945,000	37%	2,199,650	21%	1,248,450
East South Central	2,458,000	46%	1,130,680	28%	688,240
Middle Atlantic	6,279,000	34%	2,134,860	21%	1,318,590
Mountain	3,091,000	24%	741,840	12%	370,920
New England	2,092,000	34%	711,280	19%	397,480
Pacific	7,910,000	21%	1,661,100	11%	870,100
South Atlantic	8,395,000	31%	2,602,450	17%	1,427,150
West North Central	2,616,000	34%	889,440	19%	497,040
West South Central	5,207,000	31%	1,614,170	17%	885,190
National	43,993,000	30%	13,218,332	17%	7,290,945

## Appendix B.3—Metro Area High and Severe Energy Burdens

**B3.1.** Total households in each MSA, and each MSA's total households with a high energy burden ( $\geq 6\%$ ) and total households with severe energy burden ( $\geq 10\%$ )

Metro area	Total households in MSA	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened households ( $\geq 10\%$ )
Atlanta	2,108,800	28%	589,430	14%	287,711
Baltimore	1,047,600	23%	237,681	11%	120,345
Birmingham	447,000	34%	153,330	18%	80,995
Boston	1,853,800	24%	447,358	12%	230,652
Chicago	3,526,500	20%	704,117	10%	362,906
Dallas	2,564,700	19%	483,475	8%	216,838
Detroit	1,723,300	30%	518,698	16%	269,687
Houston	2,329,000	21%	499,379	11%	249,689
Las Vegas	798,600	18%	145,680	10%	80,347
Los Angeles	4,395,700	17%	768,453	9%	390,770
Miami	2,090,600	23%	476,674	12%	249,435
Minneapolis	1,379,600	12%	159,048	5%	71,714
New York City	7,428,000	25%	1,859,460	15%	1,111,740
Oklahoma City	515,900	24%	124,637	11%	57,920
Philadelphia	2,308,400	26%	609,507	14%	332,798
Phoenix	1,685,600	21%	351,448	10%	165,189
Richmond	489,500	17%	85,086	9%	46,342
Riverside	1,314,500	29%	382,285	15%	197,493
Rochester	439,700	29%	127,262	15%	64,726
San Antonio	805,700	22%	176,022	11%	88,011
San Francisco	1,706,200	10%	170,620	6%	100,622
San Jose	657,700	11%	71,468	6%	38,953
Seattle	1,485,700	11%	170,423	6%	83,837
Tampa	1,182,800	21%	248,937	11%	127,945
Washington, DC	2,178,800	14%	299,167	7%	149,583
National	120,062,818	25%	30,585,830	13%	15,861,674

**B3.2.** Total low-income households in each MSA, and each MSA's total low-income households with a high energy burden ( $\geq 6\%$ ) and total low-income households with severe energy burden ( $\geq 10\%$ )

Metro area	Total low-income households in MSA	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened low-income households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened low-income households ( $\geq 10\%$ )
Atlanta	589,900	79%	466,021	48%	283,152
Baltimore	241,200	77%	185,724	52%	125,424
Birmingham	156,000	82%	127,920	54%	84,240
Boston	412,700	74%	305,398	51%	210,477
Chicago	1,025,400	68%	697,272	39%	399,906
Dallas	692,500	49%	339,325	31%	214,675
Detroit	551,700	80%	441,360	51%	281,367
Houston	731,100	61%	445,971	34%	248,574
Las Vegas	253,700	55%	139,535	33%	83,721
Los Angeles	1,371,300	50%	685,650	27%	370,251
Miami	820,900	57%	467,913	31%	254,479
Minneapolis	256,900	57%	146,433	32%	82,208
New York City	2,248,400	70%	1,573,880	48%	1,079,232
Oklahoma City	155,400	68%	105,672	37%	57,498
Philadelphia	652,300	74%	482,702	48%	313,104
Phoenix	507,800	59%	299,602	32%	162,496
Richmond	122,100	64%	78,144	40%	48,840
Riverside	453,700	71%	322,127	44%	199,628
Rochester	137,400	73%	100,302	46%	63,204
San Antonio	260,800	62%	161,696	35%	91,280
San Francisco	326,600	51%	166,566	32%	104,512
San Jose	121,500	54%	65,610	32%	38,880
Seattle	290,000	50%	145,000	28%	81,200
Tampa	377,900	61%	230,519	36%	136,044
Washington, DC	399,200	60%	239,520	36%	143,712
National	38,551,000	67%	25,776,144	40%	15,383,432

**B3.3.** Total Black households in each MSA, and each MSA's total Black households with a high energy burden ( $\geq 6\%$ ) and total Black households with severe energy burden ( $\geq 10\%$ )

Metro area	Total Black households in MSA	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened Black households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened Black households ( $\geq 10\%$ )
Atlanta	789,500	36%	284,220	21%	165,795
Baltimore	324,100	34%	110,194	20%	64,820
Birmingham	137,000	47%	64,390	30%	41,100
Boston	157,900	32%	50,528	16%	25,264
Chicago	682,800	37%	252,636	21%	143,388
Dallas	466,000	25%	116,500	14%	65,240
Detroit	427,900	43%	183,997	23%	98,417
Houston	482,400	29%	139,896	15%	72,360
Las Vegas	112,600	26%	29,276	18%	20,268
Los Angeles	372,200	27%	100,494	15%	55,830
Miami	459,500	29%	133,255	18%	82,710
Minneapolis	113,000	15%	16,950	7%	7,910
New York City	1,459,600	32%	467,072	21%	306,516
Oklahoma City	61,000	32%	19,520	17%	10,370
Philadelphia	542,900	39%	211,731	25%	135,725
Phoenix	107,200	26%	27,872	15%	16,080
Richmond	153,500	28%	42,980	15%	23,025
Riverside	129,300	30%	38,790	17%	21,981
Rochester	48,000	44%	21,120	29%	13,920
San Antonio	61,500	20%	12,300	11%	6,765
San Francisco	157,900	24%	37,896	15%	23,685
San Jose	20,600	14%	2,884	11%	2,266
Seattle	94,100	14%	13,174	6%	5,646
Tampa	144,500	28%	40,460	18%	26,010
Washington, DC	631,200	21%	132,552	10%	63,120
National	16,552,000	36%	5,995,213	21%	3,469,788

**B3.4.** Total Hispanic households in each MSA, and each MSA's total Hispanic households with a high energy burden ( $\geq 6\%$ ) and total Hispanic households with severe energy burden ( $\geq 10\%$ )

Metro area	Total Hispanic households in MSA	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened Hispanic households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened Hispanic households ( $\geq 10\%$ )
Atlanta	168,100	35%	58,835	14%	23,534
Baltimore	42,800	21%	8,988	8%	3,424
Birmingham	14,400	40%	5,760	18%	2,592
Boston	184,900	30%	55,470	17%	31,433
Chicago	561,600	19%	106,704	9%	50,544
Dallas	592,600	25%	148,150	10%	59,260
Detroit	55,200	38%	20,976	15%	8,280
Houston	706,000	25%	176,500	11%	77,660
Las Vegas	186,600	18%	33,588	10%	18,660
Los Angeles	1,589,200	20%	317,840	10%	158,920
Miami	884,800	24%	212,352	12%	106,176
Minneapolis	60,500	16%	9,680	10%	6,050
New York City	1,544,500	33%	509,685	19%	293,455
Oklahoma City	52,300	29%	15,167	16%	8,368
Philadelphia	154,100	45%	69,345	24%	36,984
Phoenix	378,300	25%	94,575	11%	41,613
Richmond	25,100	24%	6,024	11%	2,761
Riverside	579,000	31%	179,490	15%	86,850
Rochester	25,500	44%	11,220	26%	6,630
San Antonio	400,900	27%	108,243	14%	56,126
San Francisco	284,300	12%	34,116	8%	22,744
San Jose	139,200	13%	18,096	7%	9,744
Seattle	109,600	15%	16,440	7%	7,672
Tampa	188,300	27%	50,841	16%	30,128
Washington, DC	252,700	19%	48,013	6%	15,162
National	16,496,000	28%	4,572,335	14%	2,250,966



**B3.5.** Total older adult (65+) households in each MSA, and each MSA's total older adult (65+) households with a high energy burden ( $\geq 6\%$ ) and total older adult (65+) households with severe energy burden ( $\geq 10\%$ )

Metro area	Total older adult (65+) households in MSA	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened older adult households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened older adult households ( $\geq 10\%$ )
Atlanta	490,700	44%	215,908	24%	117,768
Baltimore	107,700	34%	36,618	18%	19,386
Birmingham	127,800	48%	61,344	27%	34,506
Boston	516,400	38%	196,232	22%	113,608
Chicago	976,800	31%	302,808	16%	156,288
Dallas	540,500	29%	156,745	17%	91,885
Detroit	493,400	41%	202,294	22%	108,548
Houston	503,200	34%	171,088	20%	100,640
Las Vegas	204,400	26%	53,144	15%	30,660
Los Angeles	1,184,600	26%	307,996	14%	165,844
Miami	712,800	35%	249,480	20%	142,560
Minneapolis	339,300	22%	74,646	10%	33,930
New York City	2,162,800	39%	843,492	26%	562,328
Oklahoma City	123,800	35%	43,330	17%	21,046
Philadelphia	674,400	37%	249,528	21%	141,624
Phoenix	502,700	30%	150,810	14%	70,378
Richmond	131,100	29%	38,019	15%	19,665
Riverside	368,300	42%	154,686	24%	88,392
Rochester	133,600	39%	52,104	20%	26,720
San Antonio	188,100	35%	65,835	18%	33,858
San Francisco	498,900	18%	89,802	10%	49,890
San Jose	171,000	20%	34,200	11%	18,810
Seattle	361,100	19%	68,609	9%	32,499
Tampa	402,500	30%	120,750	14%	56,350
Washington, DC	546,800	25%	136,700	14%	76,552
National	34,929,000	36%	12,487,949	19%	6,701,933

**B3.6.** Total renting households in each MSA, and each MSA's total renting households with a high energy burden ( $\geq 6\%$ ) and total renting households with severe energy burden ( $\geq 10\%$ )

Metro area	Total renting households in MSA	Percentage highly burdened ( $\geq 6\%$ )	Total highly burdened renting households ( $\geq 6\%$ )	Percentage severely burdened ( $\geq 10\%$ )	Total severely burdened renting households ( $\geq 10\%$ )
Atlanta	794,400	31%	246,264	16%	127,104
Baltimore	369,100	30%	110,730	16%	59,056
Birmingham	141,700	47%	66,599	28%	39,676
Boston	715,000	28%	200,200	15%	107,250
Chicago	1,238,200	26%	321,932	14%	173,348
Dallas	1,060,200	20%	212,040	10%	106,020
Detroit	527,300	40%	210,920	21%	110,733
Houston	896,000	27%	241,920	14%	125,440
Las Vegas	400,900	21%	84,189	12%	48,108
Los Angeles	2,280,900	21%	478,989	11%	250,899
Miami	853,900	27%	230,553	15%	128,085
Minneapolis	407,700	14%	57,078	7%	28,539
New York City	3,643,800	29%	1,056,702	19%	692,322
Oklahoma City	169,200	30%	50,760	15%	25,380
Philadelphia	614,800	35%	215,180	19%	116,812
Phoenix	593,300	21%	124,593	10%	59,330
Richmond	174,500	23%	40,135	13%	22,685
Riverside	479,300	33%	158,169	16%	76,688
Rochester	144,300	36%	51,948	20%	28,860
San Antonio	305,300	22%	67,166	11%	33,583
San Francisco	375,100	13%	48,763	8%	30,008
San Jose	272,200	12%	32,664	7%	19,054
Seattle	613,600	13%	79,768	7%	42,952
Tampa	418,000	23%	96,140	13%	54,340
Washington, DC	801,800	17%	136,306	8%	64,144
National	43,993,000	30%	13,218,332	17%	7,290,945

## APPENDIX C.

# **City- and State-Led Actions to Address High Energy Burdens**

## C1. City-led actions to reduce high energy burdens

Metro area	Strategy/action	Year enacted	Description	Data source
Atlanta	Plan with energy burden strategy	2017	The Clean Energy plan includes energy burden as a key strategy for achieving the city's clean energy future.	City of Atlanta 2019
	Plan with energy burden goal	2017	The Resilience Strategy includes action to lift energy burden on 10% of Atlanta households.	City of Atlanta 2017
Cincinnati	Plan with energy burden goal	2018	The Green Cincinnati Plan set a goal to reduce household energy burdened by 10% compared to current levels.	City of Cincinnati 2018
	City-led program to reduce energy burdens	2020	The city partnered with Duke Energy Ohio to address the high energy burdens by launching a low-income multifamily energy efficiency pilot program called Warm Up Cincy.	City of Cincinnati 2020
Houston	Plan with energy burden strategy	2018	The Climate Action Plan includes a goal to promote weatherization programs to reduce residential energy consumption and focus on reducing energy burdens of low-income populations.	City of Houston 2020
Minneapolis	Plan with energy burden goal	2013	The Climate Action Plan states that the city will prioritize neighborhoods with high energy burdens for strategy implementation.	City of Minneapolis 2013
	Equity indicator	2013	Climate Action Plan reporting should also include equity indicators to measure whether energy burden reductions are equitable.	
New Orleans	Plan with energy burden goal	2017	The Climate Action Plan includes two strategies to reduce the high energy burdens of the city's residents.	City of New Orleans 2017
Oakland	Equity indicator	2018	Oakland includes energy cost burden as a metric in its 2018 Equity Indicators report.	City of Oakland 2018
Philadelphia	Plan with energy burden goal	2018	The Clean Energy Vision Plan set a goal to eliminate the energy burden for 33% of Philadelphians.	City of Philadelphia 2018
Pittsburgh	City-led program to reduce energy burdens	2019	As part of the Bloomberg Mayor's Challenge, the city created Switch PGH to address high burdens through a civic engagement tool.	City of Pittsburgh 2019
Saint Paul	Plan with energy burden goal	2017	The city set a goal to reduce resident energy burden within 10 years so that no household spends more than 4% of its income on energy bills.	City of Saint Paul 2017

See Appendix for data sources

## C2. State-led actions to reduce high energy burden

State	Strategy/action	Year enacted	Description	Data source
Colorado	Demonstration project/pilot program	2018	The Energy Office awarded GRID Alternatives a \$1.2 million grant to launch a project to reduce the energy burden of 300 low-income households through renewable energy and energy efficiency investments.	Cook and Shah 2018
New Jersey	State legislation	2020	The NJ Clean Energy Equity Act (S. 2484) aims to use solar, storage, and energy efficiency to bring low-income households and environmental justice communities within or below the state's average energy burden.	New Jersey Legislature 2020
New York	Governor-led executive order	2016	Governor Andrew M. Cuomo issued the Energy Affordability policy to work toward a goal of no New Yorker spending more than 6% of their household income on energy.	New York 2016
Oregon	Governor-led executive order	2018	In response to Governor Kate Brown's Executive Order 17-20, the Oregon Department of Energy, the Oregon Public Utility Commission, and the Oregon Housing and Community Services Department conducted an assessment and created a 10-year plan to reduce energy burdens in Oregon affordable housing.	OR DOE, OR PUC, and OHCS 2018
Pennsylvania	Public Utility Commission study	2019	The Pennsylvania PUC released a report that assessed home energy affordability for low-income customers in the state.	Pennsylvania Public Utility Commission 2019
	Public Utility Commission policy	2020	The Pennsylvania PUC set a new policy to direct utilities to ensure that low-income customers spend no more than 10% (6% for lowest-income customers) of their income on energy bills.	Pennsylvania Public Utility Commission 2019
Washington	Governor-led executive order	2019	As part of Governor Jay Inslee's Clean Energy Transformation Act, the Washington Department of Commerce assessed the energy burdens for low-income households and the energy assistance offered by electric utilities.	Washington State Department of Commerce 2020

# APPENDIX D.

## **Low-Income Energy Efficiency Program Best Practices**



This section contains short descriptions of some best practices for low-income energy efficiency programs: coordination, collaboration, and segmentation; funding and financing; effective measures and targeting; evaluation and quality control; and coordination of energy efficiency and renewable energy investments.

## Coordination, collaboration, and segmentation

### Community engagement and participatory planning

can ensure that programs are designed to meet community needs and build trust. By involving the community in the planning process, energy efficiency programs create outcomes that best meet community needs, leverage community networks to achieve higher program participation, and improve visibility and support within the community for program implementers (e.g., a utility or local government). Participatory planning requires effort from program planners, who can follow a set of best practices for optimal success.<sup>21</sup> For example, Professor Tony Reames conducted a community engagement study of Kansas City, Missouri, to understand barriers that low-income households face in participating in weatherization. This stakeholder engagement led to the development of innovative strategies to overcome barriers, such as hiring an all-African American staff to help build trust within the local community.<sup>22</sup>

**Statewide coordination models** enable consistent low-income program delivery across utilities, WAP implementers, and local jurisdictions. Some states have one implementer for the state's low-income programs who ensures that similar program offerings are available to all customers in the state. States such as California, New Jersey, New York, Colorado, and Massachusetts offer statewide low-income program models that aim to coordinate resources from multiple sources through a single program. For example, California's Energy Saving Assistance Program is offered by all regulated investor-owned utilities across the state. Massachusetts is served by the Low-Income Energy Affordability Network (LEAN), which includes community action agencies, public and private housing owners, government organizations, and public utilities that all work together to provide low-income efficiency solutions in the state.

**One-stop-shop program models** minimize barriers and allow low-income households to access all available resources in one place. The models provide a single point of contact, universal intake applications, comprehensive technical assistance, and streamlined access to program resources.<sup>23</sup> One-stop-shop models should be replicated in various locations and combine each location's available offerings. Through its Energize Delaware program model, for example, the nonprofit Delaware Sustainable Energy Utility (DESEU) offers a one-stop-shop resource that focuses on a whole-building approach and consolidates available resources directed at both low-income customers and owners of affordable multifamily buildings.

**Market segmentation** designs programs to meet the specific needs of subsets of highly burdened households, such as people living in affordable multifamily buildings or manufactured housing. Low-income customers are a diverse segment with diverse energy needs. By segmenting customers by key demographic categories, program designers can then work to identify a specific customer segment's energy usage characteristics and program needs. This can lead to more impactful outreach, relationship building, program design, and results. For instance, Eversource partnered with Oracle Utilities-Opower to develop a first-of-kind approach to digitally characterizing and targeting customers that require assistance. This analytical approach can guide utilities in creating programs that are specific to a resident subset or area.<sup>24</sup>

**Fuel-neutral programs** allow energy efficiency measures to be completed simultaneously in a home regardless of the electric and/or natural gas utilities that service it. This is critical for addressing the high costs associated with delivered fuels (oil, propane) and for coordinating across electric and natural gas utilities. For example, New York's Clean Energy Fund, designed to deliver on the state's Reforming the Energy Vision (REV) commitments, implements energy efficiency initiatives on a fuel-neutral basis. By taking a fuel-neutral approach, New York State can increase energy efficiency at the lowest cost, enable greater greenhouse gas reductions, and stimulate local economic development.<sup>25</sup>

<sup>21</sup> Calvert, K., I. McVey, and A. Kantamneni. 2017. "Placing the 'Community' in Community Energy Planning. Prepared for Guelph's Community Energy Initiative Task Force by the Community Energy Knowledge-Action Partnership. DOI: 10.13140/RG.2.2.22817.30562. [www.researchgate.net/publication/319141113\\_Placing\\_the\\_'Community'\\_in\\_Community\\_Energy\\_Planning](http://www.researchgate.net/publication/319141113_Placing_the_'Community'_in_Community_Energy_Planning).

<sup>22</sup> Reames, T. 2016. "A Community-Based Approach to Low-Income Residential Energy Efficiency Participation Barriers." *The International Journal of Justice and Sustainability* Vol 21. [www.tandfonline.com/doi/abs/10.1080/13549839.2015.1136995](http://www.tandfonline.com/doi/abs/10.1080/13549839.2015.1136995).

<sup>23</sup> Energy Efficiency for All, *One-Stop Shops for the Multifamily Sector*. [assets.ctfassets.net/ntcn17ss1ow9/30B8LUDt8GTegjPE8claf/8c5e68405c9692afb9f11fe898b8653e/EEFA\\_OneStopShop\\_FactSheet\\_2.pdf](https://assets.ctfassets.net/ntcn17ss1ow9/30B8LUDt8GTegjPE8claf/8c5e68405c9692afb9f11fe898b8653e/EEFA_OneStopShop_FactSheet_2.pdf).

<sup>24</sup> Lin, J., K.M. Rodgers, S. Kabaca, M. Frades, and D. Ware. 2020. "Energy Affordability in Practice: Oracle Utilities Opower's Business Intelligence to Meet Low and Moderate Income Need at Eversource." *The Electricity Journal*. 33 (9): 1-11. [doi.org/10.1016/j.tej.2019.106687](https://doi.org/10.1016/j.tej.2019.106687).

<sup>25</sup> NYSERDA. Reforming the Energy Vision: Clean Energy Fund, Frequently Asked Questions. [www.nyserda.ny.gov/-/media/Files/About/Clean-Energy-Fund/clean-energy-fund-qa.pdf](http://www.nyserda.ny.gov/-/media/Files/About/Clean-Energy-Fund/clean-energy-fund-qa.pdf).

## Funding and financing

**Leveraging diverse funding sources** allows programs to address health and safety issues and include greater investment and available measures. Funding for low-income energy efficiency programs often comes from electric and natural gas utility ratepayer dollars, federal WAP and LIHEAP funds, state and local funds, nonprofit resources, and other private funding sources. Leveraging funding from various sources can give program implementers greater flexibility, as some federal and utility funding sources limit the types of measures they fund. Leveraging diverse funding sources can lead to a more comprehensive program outcome that has the flexibility to address health and safety issues and incorporate more complex sets of energy efficiency investments.

**Inclusive financing models**, such as no-interest loans, loan guarantees, and the elimination of credit requirements, are designed to help low-income households overcome up-front cost barriers to accessing traditional private financing options. Inclusive financing options include Pay As You Save (PAYS) programs and on-bill tariff models, which allow low-income households to install energy efficiency investments that are paid off over time on the customer's bill.<sup>26</sup> In the low-income multifamily sector, limiting or eliminating up-front costs to building owners can help them undertake more substantial energy efficiency projects and overcome barriers related to the competition for scarce funding for capital projects. Low-interest financing and on-bill repayment can help owners spread out their energy efficiency project costs over time.

**Align utility and housing finance programs** to encourage energy efficiency upgrades in low-income multifamily buildings. Incorporating utility-customer funding in the current climate of affordable housing refinance and redevelopment can yield deeper, more comprehensive energy efficiency improvements. These extensive renovations may involve replacing outdated building systems, and utility-customer funds can be used to help cover the incremental cost of installing more-efficient equipment than would otherwise be required. For example, the Connecticut Green Bank coordinates closely with the state's energy efficiency initiatives led by the state agencies and local utilities to align incentives for affordable financing for both energy efficiency upgrades and rooftop solar installations. The Connecticut Green Bank's financing opportunities complement the available funding for energy efficiency upgrades from

the Connecticut Housing Finance Authority and the Connecticut Department of Housing.<sup>27</sup>

## Effective measures, messaging, and targeting

**Include health and safety measures and healthier building materials** to reduce deferral rates and improve indoor air quality, comfort, and long-term health outcomes for program participants. Programs often address health and safety concerns through leveraged funds. However, rather than disqualifying households due to building health and safety issues such as structural problems, mold, or asbestos, utilities and program implementers can combine funding streams to provide health and safety services. For example, the Bronx Healthy Buildings Program aims to reduce asthma-related hospital visits and address the social determinants of health through education, organizing, workforce development, and building upgrades. Energy audits, building inspections, and tenant organizing aim to identify needed repairs and opportunities for energy efficiency improvements.<sup>28</sup>

**Prioritize deep energy-saving measures** through a single program and/or engagement to achieve high levels of energy savings. Using trusted contractor networks to deliver programs that include savings-based incentives lets contractors focus on deep savings rather than limiting projects to simple direct-install measures. For example, Oncor's Targeted Weatherization Low-Income program first prioritizes deep energy-saving measures such as building-shell weatherization and air sealing, and then focuses on additional measures such as air-conditioning, refrigeration, and lighting.<sup>29</sup>

**Integrate direct-installation and rebate programs** to encourage more extensive improvements. For low-income single and multifamily projects, direct-installation programs that offer no-cost energy efficiency measures can provide an opportunity to connect with building owners, complete an on-site energy assessment, and encourage owners to take advantage of rebates for more extensive improvements such as HVAC upgrades, weatherization, common-area lighting retrofits, and other building-shell improvements.

**Targeting high energy users and vulnerable households** to generate the greatest energy savings and impact. By using utility data to identify households with the highest energy use, energy efficiency providers can achieve the greatest energy savings. Even so, energy use should be looked at in combination with other factors

<sup>26</sup> For more information on inclusive financing options, see SEE Action, 2017. *Energy Efficiency Financing for Low- and Moderate Income Households: Current State of the Market, Issues, and Opportunities*. [emp.lbl.gov/sites/default/files/news/lmi-final0811.pdf](http://emp.lbl.gov/sites/default/files/news/lmi-final0811.pdf).

<sup>27</sup> See ACEEE's 2018 report, *Our Powers Combined: Energy Efficiency and Solar in Affordable Multifamily Buildings*. [aceee.org/research-report/u1804-buildhealthchallenge.org/communities/awardee-bronx-nyc/](https://aceee.org/research-report/u1804-buildhealthchallenge.org/communities/awardee-bronx-nyc/).

<sup>29</sup> Gillo, A., S. Nowak, and A. Dreihobl. 2017. *Making a Difference: Strategies for Successful Low-Income Energy Efficiency Programs*. Washington, DC: ACEEE. [aceee.org/sites/default/files/publications/researchreports/u1713.pdf](https://aceee.org/sites/default/files/publications/researchreports/u1713.pdf).

that lead to household energy vulnerability. Although high energy use can lead to high savings, households with lower energy use can still experience high energy burdens. Efficiency Vermont, for example, changed its program qualification to focus on low-income households with high energy burden rather than low-income households with high energy use. This let the program qualify more customers and target needs to the most vulnerable households.<sup>30</sup>

**Incorporate new and emerging technologies in low-income programs.** Expanding the technology scope of low-income energy efficiency programs to technologies they do not traditionally incorporate—such as solar PV, smart meters, energy storage, and electric vehicles—can significantly improve energy affordability and equitable access to these technologies for low-income households.<sup>31</sup> Unless we ensure that new technologies are available to low-income and underinvested communities, inequities in access to these technologies will continue to grow. Programs that incorporate these emerging technologies can address access barriers for low-income communities and ensure more equitable distribution of their benefits.

**Effectively message programs in ways that provide clear value and actionable guidance.** Effective messaging helps achieve high program participation and builds trust and understanding of program benefits. Investing in energy efficiency often takes time and resources for both single and multifamily building owners. Although programs typically focus on energy savings and energy cost reductions benefits, programs must also market the many nonenergy benefits that result from energy efficiency improvements. Further, they should include actionable guidance—that is, clear steps that residents and building owners can take to learn more about program services and enroll in the program.

## Evaluation and quality control

**Collect and share metrics** on program outcomes, equity impacts, and other tracked data to hold implementers accountable to program requirements and goals. These metrics can include factors such as race and/or ethnicity, income status, property ownership, energy burden, and energy vulnerability. Often, program implementers publish demand-side management reports that include metrics on low-income program savings, spending, and customers served. Implementers can report additional equity factors such as energy burden data, demographic

data, and participation distribution. For example, VEIC published the *State of Equity Measurement: A Review of Practices in the Clean Energy Industry*, a guide that offers an overview of energy industry metrics for measuring program equity.<sup>32</sup> These include metrics to define target populations, determine disparate impacts, and include representative voices in program design, implementation, evaluation, and oversight.

**Conduct robust research and evaluation** to assess achieved reductions in energy usage. Such evaluations help document and clarify program performance. Impact evaluations measure the direct and indirect benefits from programs, while process evaluations provide systematic assessments of how programs operate. By completing robust evaluations, program planners can determine how to best improve their programs for greater impact and efficiency, and better meet the needs of the target community.

**Include quality control** as a core element of the services to ensure that energy efficiency services are effective, and homes are left in a safe condition. Many program implementers incorporate ongoing training for contractors and quality control professionals, viewing this as critical to program success and devoting project funding to regular trainings. Some program administrators also include strict quality control requirements for all projects rather than for a sample, which helps incentivize contractors to perform high-quality work. For example, Ouachita Electric Cooperative's HELP PAY program, a tariff-based residential energy efficiency financing program, evaluates every project after completion and facilitates trainings for its contractors in quality control techniques to ensure that all contractors understand the assessment methodologies.<sup>33</sup>

**Incorporate nonenergy benefits** into testing. Without monetizing nonenergy benefits, utility-operated low-income energy efficiency programs cost more to implement per household—and are less cost effective by traditional measures—than utility-operated energy efficiency programs serving higher income groups. However, low-income energy programs deliver benefits beyond energy savings to low-income households that are not typically incorporated into traditional cost-effectiveness testing methods. The *National Standard Practice Manual* discusses how low-income program benefits can be considered at the societal level.<sup>34</sup> States can decide to adjust cost-effectiveness tests for

<sup>30</sup> Efficiency Vermont. 2020. *Targeted Communities Program Update*. [www.energycvermont.com/trade-partners/targeted-communities-program-update](http://www.energycvermont.com/trade-partners/targeted-communities-program-update).

<sup>31</sup> Brown, M., A. Soni, M. Lapsa, and K. Southworth. 2020. *Low-Income Energy Affordability: Conclusions from a Literature Review*. ORNL/TM-2019/1150. [info.ornl.gov/sites/publications/Files/Pub124723.pdf](http://info.ornl.gov/sites/publications/Files/Pub124723.pdf).

<sup>32</sup> Levin, E., E. Palchak, and R. Stephenson. 2019. *The State of Equity Measurement: A Review of Practices in the Clean Energy Industry*. Winooski, VT: VEIC. [www.veic.org/Media/default/documents/resources/reports/equity\\_measurement\\_clean\\_energy\\_industry.pdf](http://www.veic.org/Media/default/documents/resources/reports/equity_measurement_clean_energy_industry.pdf).

<sup>33</sup> Gilileo, A., S. Nowak, and A. Dreihobl. 2017. *Making a Difference: Strategies for Successful Low-Income Energy Efficiency Programs*. Washington, DC: ACEEE. [aceee.org/sites/default/files/publications/researchreports/u1713.pdf](http://aceee.org/sites/default/files/publications/researchreports/u1713.pdf).

<sup>34</sup> National Efficiency Screening Project. 2017. *National Standard Practice Manual*. [nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM\\_May-2017\\_final.pdf](http://nationalefficiencyscreening.org/wp-content/uploads/2017/05/NSPM_May-2017_final.pdf). Page 58: Societal Low-Income Impacts.

low-income programs to incorporate these additional benefits. For example, Vermont uses the societal cost test as its primary test and incorporates a 15% adder for nonenergy benefits for low-income customers in its cost-effectiveness screening tool. Similarly, Colorado uses the total resource cost test and includes a 50% adder to account for the benefits from low-income programs.

### Renewables and workforce

**Integrate energy efficiency and solar** program offerings to maximize participant benefits. To do this, combined renewable and energy efficiency programs should first invest in energy efficiency to reduce the home's overall energy needs, and then invest in renewable energy so that individual households can install the right size solar system or many households can access community solar options. For example, the Connecticut Green Bank collaborates with PosiGen, a private company, to deliver both solar and energy efficiency to low-income customers. The Green Bank helps PosiGen generate capital to provide 20-year solar leases combined with energy

efficiency upgrades to program participants, leading to the most cost-effective investment.<sup>35</sup>

**Support the development of a diverse and strong energy efficiency workforce** that represents the local community. Ensure that training opportunities are linked to high-quality, well-paid, and stable careers in the energy efficiency and clean energy workforce sector. States and local governments, utilities, and other program implementers can focus on diversifying suppliers, increasing the worker pipeline by offering training for both contracting firms and students, and partnering with skills-training providers and state agencies—all while working to overcome barriers faced by historically excluded community members. Implementers can also co-deliver training for energy efficiency and renewable energy technologies. For example, the Chicago-based nonprofit Elevate Energy coordinates a Clean Energy Jobs Accelerator that trains individuals from economically excluded communities for careers in solar and energy efficiency.

<sup>35</sup> EDF (Environmental Defense Fund) and APPRISE (Applied Public Policy Research Institute for Study and Evaluation). 2018. Low-Income Energy Efficiency. New York. [www.edf.org/sites/default/files/documents/liee\\_national\\_summary.pdf](http://www.edf.org/sites/default/files/documents/liee_national_summary.pdf).









---

**To:** Brian Tholl, City of Fort Collins Utilities  
**From:** Noah Lieb, Jon Koler, Christina Carlson Apex Analytics  
**Subject:** Updated assessment of the Income Qualified Assistance Program  
**Date:** September 2, 2022

---

This memo details the research and findings from an update to a statistical billing analysis for the City of Fort Collins Income Qualified Assistance program (IQAP).

## Background

When Fort Collins Utilities launched its time of day (TOD) rates in October 2018, it also introduced an Income Qualified Assistance Program (IQAP) to ensure its rate structure remained equitable. The IQAP provides a 23 percent reduction on electric and water bills for Utilities customers who qualify for Colorado's Low-income Energy Assistance Program (LEAP) through Energy Outreach Colorado. The IQAP program was originally (starting in 2019) offered to Fort Collins utility customers who have received LEAP during the previous or current season, with offers for customers to opt-in to the reduced rate. Starting in the fall 2020 enrollment period, Fort Collins redesigned the delivery of the IQAP rate offering program to be exclusively opt-out, ensuring any income-qualified customer was automatically enrolled in the reduced rate.

As part of the eligibility for receiving the IQAP rates, Utilities has an educational and engagement requirement for customers to participate in conservation activities.<sup>1</sup> The potential for increased engagement with qualified customers, who have traditionally been underrepresented in efficiency programs, and the resulting opportunity to reduce energy use and achieve non-energy benefits was an important motivator for Utilities to offer the rate discount.

To help support ongoing program efforts and document potential energy impacts of the IQAP program, Utilities had engaged (in 2019) Apex to conduct a statistical analysis of bill impacts to IQAP participants. Apex found IQAP participants had increased their household electricity usage after receiving the reduced IQAP rates. With the change to program design and several years since the original IQAP participants received their reduced rates, Utilities sought to revisit the billing analysis with two primary objectives:

- › **Opt-out versus opt-in:** Determine whether new opt-out income qualified households have realized electric energy consumption changes as a result of their IQAP participation, and if there was any statistically significant difference in energy consumption changes resulting from the opt-out relative to the original opt-in group.
- › **Impact Persistence:** Determine the persistence in energy consumption changes attributable to the original opt-in cohort included in the previous billing analysis.

---

<sup>1</sup> IQAP participants receive "Utilities Insights", a monthly newsletter with tips to save energy and water to lower utility bills and are occasionally contacted directly regarding efficiency programs. There is no requirement for IQAP participants to attend workshops or participate in other conservation programs.

## Methodology

Apex conducted a statistical billing analysis to assess electric energy consumption changes as a result of IQAP participation but ran two separate models for each group (original opt-in and new opt-out group). To explain differences in monthly consumption, we modeled monthly energy consumption as a function of participation status (participant versus non-participant comparison households), time period (whether the period was pre- or post-IQAP rate introduction) and weather (monthly heating and cooling degree days). Apex developed two energy estimates: one for the actual year and one weather normalized to account for longer-range climate conditions.

Utilities provided data on households participating in IQAP. The analysis included 538 homes that received the IQAP rates as original IQAP opt-in program participants between October and December 2018 and remained as active status in the IQAP dataset.<sup>2</sup> The second group included 450 IQAP participants that were part of the new IQAP opt-out group, and all received the new IQAP rate in September 2021. Apex matched the original opt-in IQAP participant households to LEAP-qualified homes that did not participate in IQAP using a ranked comparison of households based on the pre-installation period consumption (usage between October 2017 and September 2018) to create a comparison group.<sup>3</sup> For the new opt-out group, Apex matched the IQAP participants using the same logic but opened to the entire residential customer database (exclusive of former IQAP participants). Statistical testing showed that both comparison groups' pre-participation energy consumption closely matched – and was therefore roughly equivalent – to each of the participant groups usage.<sup>4</sup>

## Key Findings

This section addresses findings related to each of the primary research questions.

- › **Post IQAP rate impacts to opt-out group:** Determine whether new auto-enroll opt-out income qualified households have realized electric energy consumption changes as a result of their IQAP participation and whether there was any statistically significant difference in energy consumption changes resulting from the opt-out relative to the original opt-in group.

The updated opt-out analysis group had a similar number of total available households as the original opt-in group but had lower attrition from data merging and outlier analysis, losing only 12% of premises relative to the original 18% of premises. The updated opt-out group also had marginally higher annual mean load, at 7,548, relative to the opt-in use of

---

<sup>2</sup> There were an additional 167 participants that were inactive, having received the rate for a short duration of time and were removed from the program due to closing of accounts among other reasons.

<sup>3</sup> Specifically, Apex identified the most equivalent non-participant comparison household match based on Euclidean distance (i.e., the lowest absolute difference in monthly usage compared to the participants).

<sup>4</sup> Apex modeled a period to quantify the “drift” of each comparison group relative to the participant homes electric usage. Using 2017 as a baseline matching period, we then examined the 2018 electric usage before IQAP participation to quantify the “drift” of the average comparison group versus participant group usage. The LEAP comparison group showed the lowest “drift”, with electric usage remaining almost perfectly aligned with the participant homes between January and September 2018.

7,408. A summary of the original opt-in and opt-out groups analysis are compared in **Table 1** below.

**Table 1. Active IQAP Participant Data Summary**

Analysis Group	Group	IQAP Start Date	Household Count Basis	Household Count Final	Analysis Attrition	Mean Annual Load
Opt-in	Participant	10/1/2018	538	442	18%	7,408 kWh
	Comparison	N/A	538	442		
Opt-out	Participant	9/1/2021	450	396	12%	7,548 kWh
	Comparison	N/A	450	396		

Like the original opt-in group, the opt-out analysis group's energy consumption increased after they received the IQAP rate reduction, but to a lesser degree. The new opt-out group experienced a 2.9% increase in annual use versus 5.1% from the original opt-in group. Both analyses were, individually, statistically significant with strong explanatory power. However, with overlapping confidence intervals, we cannot reject the hypothesis that the values are the same. The analysis would require approximately double the participation rates in order to narrow the confidence intervals sufficiently to validate the difference between the two group point estimates.

**Table 2. Mean Annual IQAP Billing Analysis Results**

Model	Change in Mean Study Period Household Usage	Weather Normal Household Usage Change	Mean Annual Load	Change as % of Annual Load	Explanatory Power (R <sup>2</sup> )	90 % Confidence Interval	Statistically Significant
Opt-in	+363 kWh	+380 kWh	7,408 kWh	+5.1%	0.76	+/- 155 kWh	Yes
Opt-out	+220 kWh	+220 kWh	7,548 kWh	+2.9%	0.75	+/- 145 kWh	Yes

- › **Persistence in post-IQAP Rate changes to consumption:** Determine the persistence in energy consumption changes attributable to the original opt-in cohort included in the previous billing analysis.

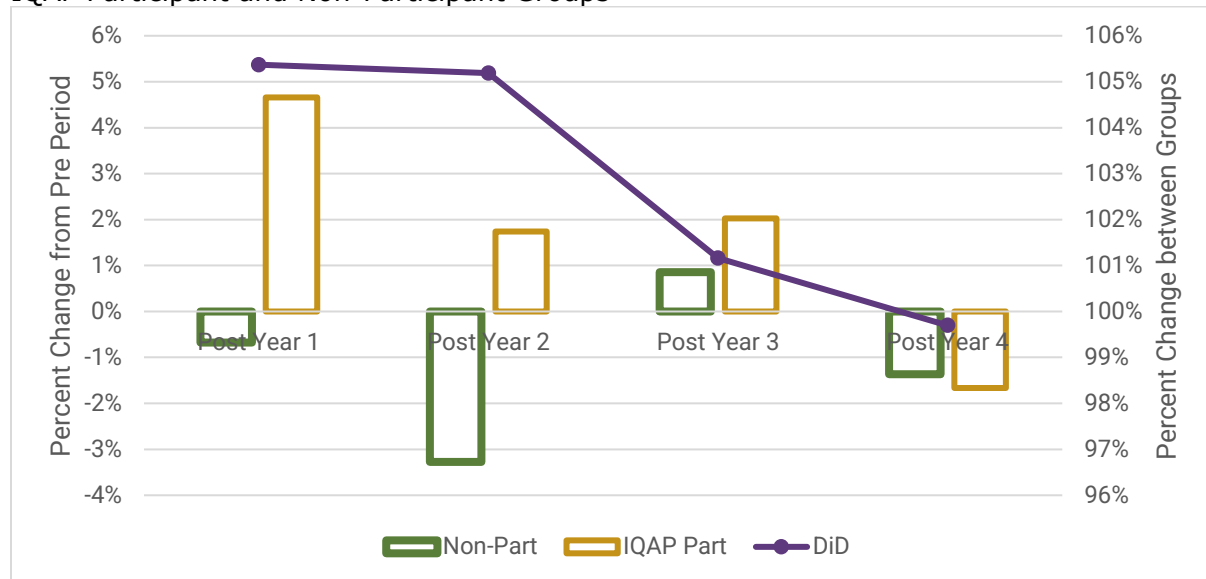
The original opt-in IQAP participants showed sustained increased usage during the first two years after receiving the reduced IQAP rate. Yet, over the following two-year period the opt-in participants use eventually reverted back to “normal” and was not statistically different than the non-participant comparison group. A summary of the annual difference in use between pre-and-post IQAP rate between the participant and non-participant comparison group is shown in Table 3 below.

**Table 3. Original opt-in IQAP Persistence in Use**

Post Year	Percent Increase in Use	Annual Pre-IQAP rate kWh	IQAP Participant Increased Use	Statistically Significant Difference
1	5.4%	6,759	363	Yes
2	5.2%	6,759	351	Yes
3	1.2%	6,759	78	No
4	-0.3%	6,759	-21	No

Viewing the same data but graphically demonstrates the year over year changes to usage relative to the pre-IQAP rate and the resulting percent change between groups (displayed as the purple difference-in-difference<sup>5</sup> – “DiD” in Figure 1 below). The most notable shift after the initial post year use (“post year 1”) occurs between year two and year three – coincident with COVID. We see there is a shift in use for the non-participant group from negative 3% to positive 1% - and this explains the majority of decrease in the DiD. Stated more succinctly, non-participant increased use in year three was primarily responsible for drop in the IQAP impacts (displayed as the purple DiD line).

**Figure 1. Annual Percent Change from Pre-IQAP Rate offering and percent change between IQAP Participant and Non-Participant Groups**

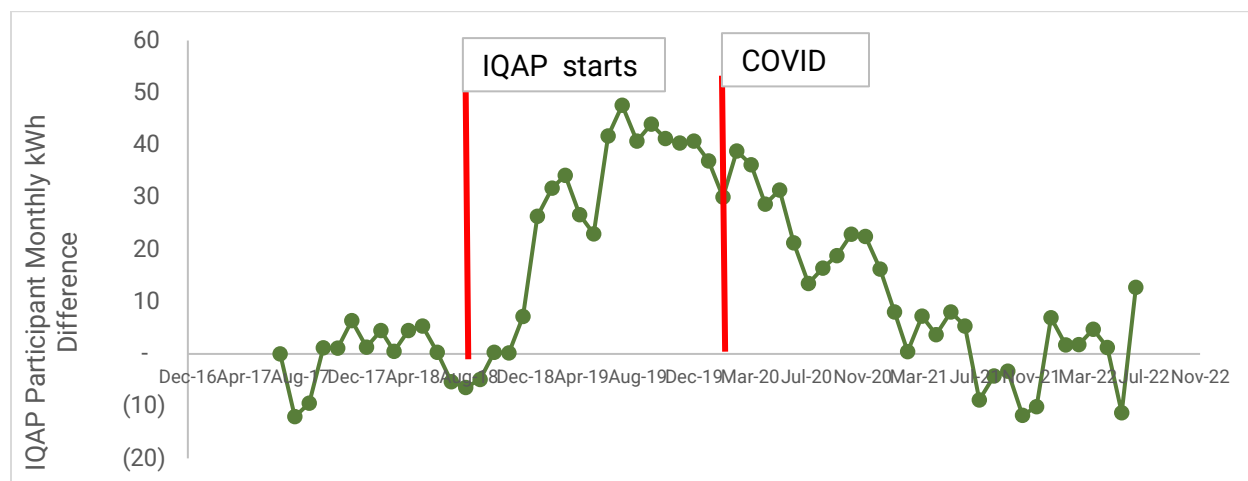


An examination of the monthly difference in use between the IQAP participants and non-participant comparison group demonstrates the evolution of impacts over time (Figure 2). IQAP participants displayed a steadily increasing average usage relative to non-participants immediately following the new reduced rates. Unfortunately, the timing of COVID appears to have confounded the influence of the drop in the IQAP participant usage where a statistical model could not distinguish between natural reversion to equivalent use and COVID-induced

<sup>5</sup> The DiD curve reflects the difference in percent change in use between the IQAP participant and non-participant, e.g., in post year 1, the +4.7% increase for IQAP parts plus the negative 0.7% decrease to non-parts equals the 5.4% DiD result.

changes. It is likely, though not certain, that COVID magnified the degradation of IQAP rate impacts.

**Figure 2. Average Monthly kWh Difference between IQAP Participants and Non-Participants**



## Conclusions

The new opt-out design of the IQAP rate program showed that households still tend to increase their energy consumption after receiving the discounted rate, yet at a lower degree than the original opt-in group. Though point estimates were almost 50% different between the original opt-in and new opt-out group, the analysis would require almost double the participants in order to conclude that the change in use were statistically different between groups. Consistent with the prior analysis, our findings suggest that this increase in energy consumption reflects households that are no longer as concerned about paying their energy bills choosing to keep their homes at a more comfortable temperature. Yet, with the new opt-out design, IQAP participants may not be as aware, conscious about the rate change, or might be less sensitive to their bills as the prior opt-in group. Additional customer feedback research would be required to help support these theories.

The analysis of the persistence of IQAP-based changes to consumption showed IQAP participants usage matched non-participant group usage by the third year, with no discernable difference in use by year four. Unfortunately, COVID's impacts on both groups usage in the post period prevents us from concluding the reversion in usage was influenced more by COVID or if IQAP participants were no longer increasing their use with lower bills. Evidence suggests the change may have been influenced more by the non-participant groups increased usage, though we don't know what drove this other than suspecting COVID.



Businessweek  
+ Equality

# A 'Tsunami of Shutoffs': 20 Million US Homes Are Behind on Energy Bills

Surging electricity prices spur worst-ever crisis in late utility payments.



About 1 in 6 American households are behind on their utility bills, the highest number on record, according to the National Energy Assistance Directors Association. *Photographer: Michael Nagle/Bloomberg*

By Will Wade and Mark Chediak

August 23, 2022 at 4:30 PM MDT *Updated on August 23, 2022 at 6:05 PM MDT*

Adrienne Nice woke up early on the morning of July 25 to news she'd been dreading. The power company, Xcel Energy Inc., had shut off the electricity to the small Minneapolis apartment she shares with her teenage son, just as a heat wave was bearing down on the city.

Nice had been struggling financially ever since the pandemic hit, racking up more than \$3,000 in past-due utility bills. The warnings she'd gotten on her monthly statement—"FINAL NOTICE" scrawled in big, bold letters—had prepared her to some degree, but it was still jarring to find the fridge dark and the air conditioner silent. With temperatures set to reach 95F (35C) in the coming days, she needed the power back on, and fast.

The Nice household is one of some 20 million across the country—about 1 in 6 American homes—that have fallen behind on their utility bills. It is, according to the National Energy Assistance Directors Association (Neada), the worst crisis the group has ever documented. Underpinning those numbers is a blistering surge in electricity prices, propelled by the soaring cost of natural gas.

## Total US Overdue Utility Balance

Source: National Energy Assistance Directors Association

The power bill crisis is even more acute in Europe, where the spike in natural gas prices has been far greater in the wake of Russia's invasion of Ukraine. Policymakers there have sprung into action, throwing billions of euros in aid at struggling families to help them pay bills. There's been no meaningful talk of doing anything on a similar scale in the US, where the hand-wringing has been dedicated, as always, to the gyrations of gasoline prices at the pump.

Utility shutoffs can have deadly consequences, though, a risk that's becoming more palpable as summer heat shatters records. Already gut-punched by soaring prices for just about everything, more and more people are facing a choice among food, housing, and keeping the power on. "I expect a tsunami of shutoffs," says Jean Su, a senior attorney at the Center for Biological Diversity, which tracks utility disconnections across the US.



Germany put a levy of \$296 on households to pay for natural gas and asked citizens, municipalities, and industrial consumers to save energy. *Photographer: Krisztian Bocsi/Bloomberg*

Nice, 45, is a housecleaner. Her work dried up almost overnight when Covid-19 swept through Minnesota in early 2020. Things are picking up again, but inflation is eating into the money she makes. Just filling up her old Saturn sedan to drive from house to house now costs about \$50 a week.

She found it impossible to set aside enough money for utilities, especially as her power bill effectively doubled over the past year. A friend who used to live in the apartment along with her two kids moved out in mid-2021. But though Nice's household is using less electricity, she's still getting charged about the same amount per month—\$244, on average. "I just don't understand how electricity can be so high," she says.

## Household Electricity Prices

Year-over-year change

Source: Consumer price index data compiled by official statistics agencies

California's PG&E Corp. has seen a more than 40% jump since February 2020 in the number of residential customers behind on payments. For New Jersey's Public Service Enterprise Group, the total is up more than 30% for customers at least 90 days late—and that's just since March.

The average price consumers pay for electricity surged 15% in July from a year earlier, the biggest 12-month increase since 2006. Regulation of electricity rates makes it hard for providers to immediately pass on higher fuel costs, so the recent hikes may be just the start.

The US is waking up to a problem that's plagued other parts of the world since last year. In Germany, the government slapped a levy of \$296 on households to pay for natural gas as Russia squeezes energy flows to Europe after the invasion of Ukraine. In the UK, government support for energy bills doubled, to \$482 for every household starting in October, but prices are rising so fast that the support might not be enough. More than 100,000 people have signed a pledge from campaign group Don't Pay UK to cancel their direct-debit energy payments beginning in October.





Demonstrators gathered outside the Glasgow headquarters of ScottishPower in August to protest the rise in energy prices and the cost of living. *Photographer: Jeremy Sutton-Hibbert/Alamy*

In Japan and Thailand, electricity bills are surging as the countries grapple with expensive fuel costs that have been made worse by their slumping currencies. Pakistan and Bangladesh, falling short in the global competition for costly fuel, have suffered from rolling blackouts and increasing power bills.

In the earlier days of the pandemic, some states and utilities halted power disconnections, shielding customers like Nice who'd fallen on hard times. But those measures wound down just as inflation gathered steam. US households owe about \$16 billion in late energy bills, double the pre-pandemic total, according to Neada. The average balance owed has climbed 97% since 2019, to \$792. "The bills just aren't affordable," says Mark Wolfe, Neada's executive director. "People on the bottom, they can't pay this."

For investor-owned US utilities, the financial repercussions of accumulating debt from unpaid customer bills are typically limited. That's because state regulators often allow utilities to recover their losses by adding a charge for customers who are paying their bills, or taxpayers help pick up the tab.

## One story you'll want to talk about. One story you'll want to talk about. One story you'll want to talk about.

Get The Big Take in your inbox, every day. Get The Big Take in your inbox, every day. Get The Big Take in your inbox, every day.

Enter your email

Please enter a valid email address

By submitting my information, I agree to the [Privacy Policy](#) and [Terms of Service](#) and to receive offers and promotions from Bloomberg.

In Nice's case, her power was out for only three days; the nonprofit Citizens Utility Board of Minnesota helped her negotiate a payment plan with Xcel. Her experience is common: Utilities shut off customers only as a last resort, according to Xcel. About 80% of US utility customers who experience a shutoff will have service restored in a few days, Wolfe says. The remaining 20%, though, may be close to eviction or on the verge of homelessness.





A nonprofit helped Adrienne Nice negotiate a payment plan with Xcel Energy, so her power was shut off for only three days. *Photographer: Ken Wolter/Alamy*

While the US government's Low Income Home Energy Assistance Program, or Liheap, helps low-income households pay energy bills, it doesn't come close to the scale of subsidies offered by some countries in Europe and Asia.

Calls for states and the federal government to offer more assistance are starting to grow. A bipartisan group of almost 60 US representatives and senators asked in early August for additional emergency funding beyond the \$4 billion set aside for Liheap for fiscal year 2023. California just passed a budget that will offer \$1.4 billion to help residents pay past-due utility bills.

[Entergy Corp.](#) agreed in July to a moratorium on shutoffs in New Orleans through October, after the City Council asked the company to voluntarily halt disconnections during the summer heat. But moratoriums are just a stopgap measure, says Wolfe, who anticipates a surge in disconnections across the US. "Inflation is hitting people pretty hard," he says. "Utilities are not set up to deal with the number of people who can't pay their bills."

## US Heat-Related Fatalities

Source: Centers for Disease Control and Prevention

Hotter summers are heightening the risk that, for some people, losing power will prove fatal. According to Indiana University's Energy Justice Lab, 41 states have some sort of protection against

utility shutoffs during the winter, whereas only 19 have laws or regulations preventing disconnections in sweltering weather. On average there were 188 heat-related deaths a year in the US from 2017 through 2021, up from an average of 81 in the five years before that.

Historically, states and regulators have focused on protecting customers during the cold winter months, but that will need to be reexamined with climate change expected to create longer and more persistent heat waves, says David Konisky, co-director of the Energy Justice Lab. Rising temperatures are already boosting demand for electricity and raising utility bills.

Shutoffs after people fall behind on bills “will likely become worse in the coming years and decades,” he says. “It’s higher prices. It’s heat waves and increasing needs for energy.” –*With Ben Holland, Shoko Oda, Stephen Stapczynski, and Rachel Morison*

*Read next: Wall Street Says a Recession Is Coming. Consumers Say It's Already Here*

*(Adds context for electricity-price data in ninth paragraph)*

---

Terms of Service Do Not Sell My Info (California) Trademarks Privacy Policy  
©2022 Bloomberg L.P. All Rights Reserved  
Careers Made in NYC Advertise Ad Choices Help

## Low-Income Household Energy Burden Varies Among States — Efficiency Can Help In All of Them

Nationally, low-income households<sup>1</sup> spend a larger portion of their income on home energy costs (e.g., electricity, natural gas, and other home heating fuels) than other households spend. This measure is often referred to as a household's "energy burden." One recent study found that low-income households face an energy burden three times higher than other households.<sup>2</sup> High energy burdens can threaten a household's ability to pay for energy, and force tough choices between paying energy bills and buying food, medicine, or other essentials.

But national averages do not tell the full story. While families facing a high energy burden live in every state, there is also significant regional variation in the energy burdens that low-income households face. As seen in the map to the left below, low-income households (those making less than 80% of the Area Median Income) in many Southeast states face energy burdens of 10% or higher. Many factors contribute to high energy burdens, including a home's heating fuel and local weather. Another key factor is high consumption of electricity.

In the five states with the highest low-income energy burden—Mississippi, South Carolina, Alabama, Georgia, and Arkansas—low-income households use 36% more electricity than the low-income national average. In these states, electricity is the dominant heating fuel and high air conditioning demand also contributes to high consumption. These factors contribute to the relatively high total energy burden, despite households paying lower prices per kilowatt of electricity, as shown in the map on the right. While weather, home age, and home size can also have an impact on energy consumption, low-income households in this region generally consume more energy and more electricity

than most other regions, even when controlling for these factors.

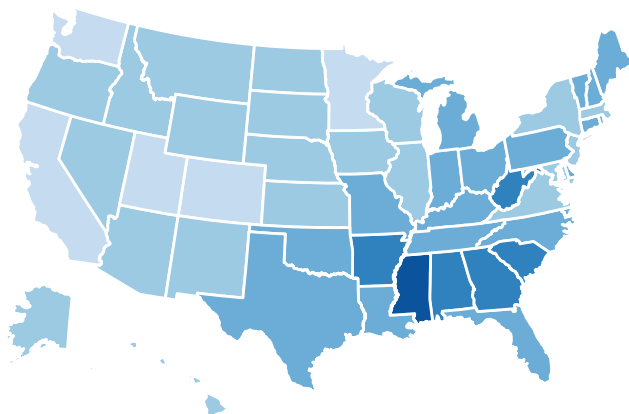
One way to address high energy burdens is by implementing cost-effective energy efficiency measures to help reduce consumption of electricity and other fuels. Efficiency is a low-cost resource across the country and can reduce household energy costs regardless of climate, heating fuel, or energy price factors in a state. The map on page 2 presents analysis from a new study which found cost-effective efficiency improvements, such as insulation and more efficient lighting and appliances, in low-income households can reduce electricity consumption by 13% to 31%. These measures reduce a household's energy costs, freeing up money for other vital budget items.

In addition to reducing energy costs, household energy efficiency improvements result in multiple benefits for families.<sup>3</sup> For example, properly insulating a home reduces heating and cooling costs, but also improves indoor air quality. This results in healthier environments and can decrease sick days and hospital visits for families.<sup>4,5</sup>

There are unique barriers to achieving energy savings in low-income households,<sup>6</sup> which means efficiency

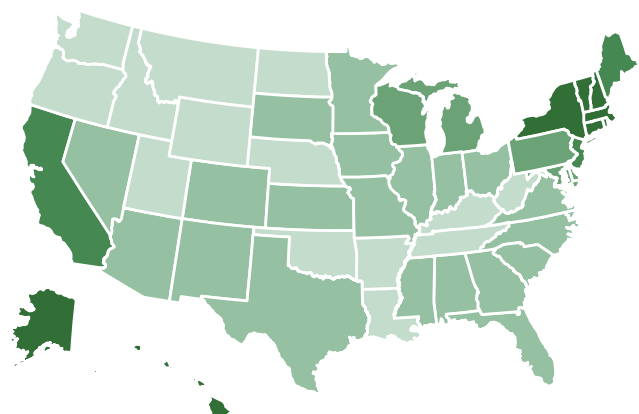
Low-Income Energy Burden (% of Income)

4%–6% 6%–8% 8%–10% 10%–12% 12%–14%



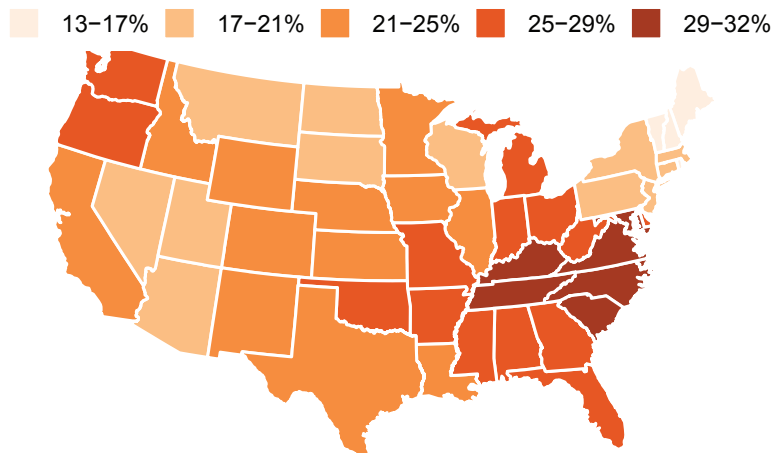
Average Electricity Price, 2015 (in cents/kWh)

9–11 11–13 13–15 15–17 17–29



Electricity prices are just one factor that contributes to a household's total energy cost. States with the highest electricity prices in the nation do not have the highest total energy burden.

## Potential Electricity Savings in Low-Income Households



Recent analysis of cost effective energy efficiency potential among households below 80% of Area Median income (AMI) showed potential household electricity savings between 13% and 31% for each of the contiguous 48 states. Source: <https://resstock.nrel.gov/page/publications>

programs serving low-income customers must be thoughtfully designed and implemented. The U.S. Department of Energy (DOE)'s **Weatherization Assistance Program** has partnered with states and community agencies for over 40 years to achieve energy and cost savings in low-income homes. DOE's Clean Energy for Low Income Communities Accelerator (CELICA) partnered with state and local leaders that committed \$335 million to help 155,000 low-income households access renewable energy and efficiency to save up to 30% or more on energy

bills. CELICA also developed the Low-income Energy Affordability Data (LEAD) Tool, which provides state, city, and county data on energy burden. In addition to energy burden, there are a number of other factors that could make it difficult for low-income households to afford their energy bills, some of which can be explored through the Home Energy Affordability Tool. More resources and tools to inform low-income program development are available at DOE's **State and Local Solution Center**: [energy.gov/eere/slsc](https://energy.gov/eere/slsc). ■

<sup>1</sup>There are a variety of methods for defining low-income households. Unless otherwise specified, the DOE analysis presented in this document defined low-income households as below 80 percent of the Area Median Income, as defined by the U.S. Department of Housing and Urban Development.

<sup>2</sup>For more information, see <https://www.energy.gov/eere/slsc/low-income-community-energy-solutions>

<sup>3</sup>DOE's Weatherization Assistance Program found an estimated \$2.78 in non-energy benefits for every \$1.00 invested in weatherizing homes. More info is available at [https://www.energy.gov/sites/prod/files/2017/05/f34/wap\\_factsheet\\_08.2017.pdf](https://www.energy.gov/sites/prod/files/2017/05/f34/wap_factsheet_08.2017.pdf)

<sup>4</sup>Tonn, Bruce et al. "Health and Household-Related Benefits Attributable to the Weatherization Assistance Program. Oak Ridge National Laboratory, 2014. [https://weatherization.ornl.gov/wp-content/uploads/pdf/WAPRetroEvalFinalReports/ORNLTM-2014\\_345.pdf](https://weatherization.ornl.gov/wp-content/uploads/pdf/WAPRetroEvalFinalReports/ORNLTM-2014_345.pdf)

<sup>5</sup>Wilson, Jonathan et al. "Home Rx: The Health Benefits of Home Performance." DOE, December 2016. <https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/Home%20Rx%20The%20Health%20Benefits%20of%20Home%20Performance%20-%20A%20Review%20of%20the%20Current%20Evidence.pdf>

<sup>6</sup>More information on these barriers, and resources for addressing them, is available at <https://www.energy.gov/eere/slsc/low-income-community-energy-solutions>

DOE is grateful for support from Ian Hoffman at LBNL for his contributions to the concept and framing of this document.

### Data Sources

Low-income Energy Affordability Data (LEAD) Tool <https://openei.org/doe-opendata/dataset/celica-data>.

2009 EIA Residential Energy Consumption Survey (RECS) <https://www.eia.gov/consumption/residential/>

NREL ResStock Low Income EE Estimates (forthcoming) <https://resstock.nrel.gov/>

### Additional Resources

Clean Energy Low-Income Accelerator (CELICA): <https://betterbuildingsinitiative.energy.gov/accelerators/clean-energy-low-income-communities>

Low-income Energy Affordability Data (LEAD) Tool: <https://openei.org/doe-opendata/dataset/celica-data>

Solar for All, Home Energy Affordability Tool layer: <https://maps.nrel.gov/solar-for-all>

State and Local Solution Center: <https://energy.gov/eere/slsc>

Weatherization Assistance Program: <https://energy.gov/eere/wipo/weatherization-assistance-program>

U.S. DEPARTMENT OF  
**ENERGY**

Office of  
**ENERGY EFFICIENCY &  
RENEWABLE ENERGY**

**For more information, visit:**  
[energy.gov/eere/wipo](https://energy.gov/eere/wipo)

DOE/GO-102018-5122 · December 2018





# PERFORMANCE & PROGRAM EVALUATION



## CITY REBATES / REDUCED-FEE PROGRAMS EVALUATION REPORT

February 2020

---

## TABLE OF CONTENTS

Table of Contents.....	2	Customer and Community Satisfaction .....	45
EVALUATION SUMMARY .....	2	Program-Specific Recommendations .....	46
ACRONYMS AND TERMINOLOGY .....	4	FINANCE REBATES: PROVIDING TAX RELIEF .....	48
TERMINOLOGY .....	5	History.....	48
REPORT OVERVIEW .....	6	Program Budget, Objectives, Outreach and Operation .....	49
City Motivation .....	6	Participation Patterns & Customer Satisfaction .....	51
Evaluation Scope & Included Programs .....	7	Program-Specific Recommendations .....	54
Poverty In Fort Collins.....	8	RECREATION REDUCED-FEE PROGRAM: IMPROVING QUALITY OF LIFE .....	57
EXECUTIVE SUMMARY PART 1: INDIVIDUAL REBATE/REDUCED-FEE PROGRAMS.....	12	History.....	57
Utilities Affordability Portfolio: Findings and Recommendations .....	12	Current Program .....	60
Finance Service Area Rebates: Findings and Recommendations .....	14	Program Budget, Objectives, Outreach and Operation .....	62
Recreation Reduced-Fee Program: Findings and Recommendations .....	16	Participation Patterns & Customer Satisfaction .....	63
EXECUTIVE SUMMARY PART 2: CROSS-CITY FINDINGS AND RECOMMENDATIONS .....	19	Program-Specific Recommendations .....	64
Key Findings .....	19	<b>PART 2</b>	
Recommendations .....	22	CITY-WIDE FINDINGS AND RECOMMENDATIONS .....	68
BACKGROUND .....	26	Only Half of Low-income People Participate in a City Rebate/Reduced-fee Program .....	68
The Price Of Being Poor .....	26	Variable Community Awareness and Under-Utilization of Community Partners .....	70
Economic Growth Alone Hasn't Reduced Poverty .....	27	City-wide, Low-Income Programming is Inefficient and Less Impactful .....	71
KEY POVERTY CONCEPTS.....	29	Low-Income Residents Are Not Viewed as a Unique Consumer of City-services .....	74
Poverty Drains the Very Resources Necessary For Overcoming Poverty .....	29	Summarized Findings.....	75
Poverty Influences Decision-Making.....	30	CROSS-CITY REBATE PROGRAM RECOMMENDATIONS .....	77
Low-Income People are Unique Users of Government Services .....	31	Strategy: City-wide Goal Setting.....	77
POVERTY IN FORT COLLINS .....	32	Structure: Centralization .....	78
How Many People Are Poor In Fort Collins? .....	33	Systems: Design For Low-income People As A Unique Customer Segment.....	79
What Characterizes The Poor In Fort Collins? .....	35	APPENDICES.....	81
Why is Understanding and Addressing Poverty Important for the City? .....	36	A. Nonprofit/community partner Questionnaire .....	81
<b>PART 1</b>		B. Spatial map of IQAP Participation.....	84
UTILITIES AFFORDABILITY PORTFOLIO: REDUCING ENERGY/WATER COSTS .....	40	C. UAP Process Map for IQAP .....	85
History .....	40	D. UAP Application: IQAP .....	86
Program Budget, Coordination, Outreach and Operations .....	41	E. UAP Application: MAP .....	88
Participation Patterns.....	45	F. FSA Rebate Application .....	90



G. Spatial Map of FSA Rebate Participation .....	92	Project Team Comments .....	98
H. FSA Rebate Process Map .....	93	STAKEHOLDERS, INTERVIEWS AND REVIEWERS .....	101
I. Reduced-fee Program Process Map .....	94	Internal Interviews, Stakeholders .....	101
J. Spatial Map of Recreation Reduced-fee Participation .....	95	External Interviews, Focus Groups, Survey Respondents .....	101
K. Recreation Reduced-fee Program Application .....	96	City of Fort Collins FC Lean Facilitators ...	102
INTERNAL STAKEHOLDER COMMENTS .....	97	Received Draft Report .....	102
Service Area Comments .....	97	Received Final Report .....	102



## PERFORMANCE & PROGRAM EVALUATION



## EVALUATION SUMMARY

**Report Title:** Evaluation of City Rebates and Reduced-Fee Programs for Low-Income Residents

**Date:** February 2020

**Report Requested By:** City Executive Leadership Team

**Evaluation Conducted By:** Katie Ricketts, Jo Cech

### P&PE PROGRAM DESCRIPTION:

The Performance and Program Evaluation (P&PE) program was established by the City in 2017 as a new element in its continuous improvement strategy. P&PE provides an analysis of City programs/initiatives to assess if stated objectives have been met, and to suggest improvements to create more efficient and effective program and service delivery. The P&PE evaluators bring both private and public-sector evaluation experience to the City's P&PE program. Each evaluation conducted by the P&PE team (also known as the Evaluation Team) is structured to identify program improvements to provide the organization with recommendations to learn, develop and implement more efficient and productive programs.

### SCOPE OF EVALUATION:

At the request of the Executive Leadership Team, the P&PE Evaluation Team pursues evaluations of specific programs, projects and policies in order to assess impact, gather learnings and facilitate opportunities for continuous improvement. As the City looks to strengthen its approach to serving low-income residents in the community, it was considered an appropriate time to review the objectives of current income-qualified programs, document the history and identify areas of opportunity and challenge within specific programs and policies.

The City Executive Leadership Team asked the Evaluation Team to:

- Provide a profile of the population(s) we reach currently.
  - Key questions: How are we reaching low-income populations through our City Rebates programs? How diverse (or similar) are the participants we reach across programs? Do the programs access the same pool of eligible residents? What are the learnings we should share across programs?
- Provide important information about the current state of programming and service provision.
  - Key questions: What does our current suite of programs accomplish? Do those outcomes meet City goals and objectives? What options may leadership want to consider and what are the related costs and benefits?
- Assess city-wide impact, opportunities and challenges
  - What are the opportunities for greater city-wide coordination of these programs? What are the tradeoffs for departments and residents?

The subset of low-income rebates and reduced-fee programming includes the following:

- **Finance Rebates** (grocery tax, utility sales tax, city-specific property tax (or rent tax reimbursement)).
- **Utilities Low-income Portfolio** (medical assistance program, income-qualified rate program, payment assistance fund for emergency assistance).
- **Recreation Reduced-Fee Program** (reduced-fee program for recreation courses and learning opportunities as well as facility use).

**Evaluation Goal:** Determine if the City's rebate/reduced-fee programs for low-income residents achieve City and community objectives, if they are efficient, and if they meet residents' needs.

## APPROACH AND METHODS

A mixed method approach (process evaluation plus outcome evaluation) was selected by the Evaluation Team.

P&PE uses the McKinsey 7S model of organizational effectiveness in its evaluation process. The model, called the Seven S (7S), has seven components that explain how organizations or programs/projects perform their work. The seven components also help to identify strengths and weaknesses of organizations/programs/projects. When the seven components are aligned and effective it creates organizational congruency, which leads to desired organizational or program/project outcomes.

P&PE organizes its program evaluation findings and recommendations using the 7S model to ensure consistency and comparability across all program evaluations. The model's seven components are:

- **Shared Values:** the core values that are evidenced in the organization's culture, the norms and standards of the organization.
- **Strategy:** the plan to maintain and build world-class customer service and innovation.
- **Structure:** how the organization/program is structured, who reports to whom, who is accountable.
- **Systems:** the daily activities, procedures, tools and infrastructure used by staff to get the job done.
- **Style:** the leadership style adopted.
- **Staff:** the employee base and their general capabilities.
- **Skills:** the skills and competencies of the employees, their ability to do the work.

## ACRONYMS AND TERMINOLOGY

### ACRONYMS

ACS	American Community Survey
AMI	Area Median Income
BEA	Bureau of Economic Analysis
BIT	Behavioral Insights Team, a public policy consulting group
CFCU	City of Fort Collins Utilities
CoFC	City of Fort Collins
CRM	Customer Relationship Management software system
CSRs	Fort Collins Utilities Customer Service Representatives
CSU	Colorado State University
EOC	Energy Outreach Colorado, a state-wide energy assistance program
Evaluation Team	City of Fort Collins Performance and Program Evaluation Team
FPL	Federal Poverty Level
FSA	Financial Services Area
FTE	Full-time Employee Equivalent
GDP	Gross Domestic Product
GTR	Grocery Tax Rebate
HCD	Human Centered Design
HUD	United States Department of Housing and Urban Development
ID	Identification
IQAP	Utilities Income-Qualified Assistance Program
IQR	Utilities Income Qualified Rate
LEAP	Colorado State Low-income Energy Assistance Program
MAP	Utilities Medical Assistance Program
PAF	Utilities Payment Assistance Fund
P&PE	Performance and Program Evaluation program within the City of Fort Collins
PSD	Poudre School District
PTR	Property Tax Rebate
SUT	Financial Services, Sales and Use Tax Office
ToD	Utilities Time of Day pricing
UAP	Utility Assistance Program
UC Health	A Northern Colorado hospital system
UTR	Utility Tax Rebate

## TERMINOLOGY

---

**Great Recession:** The Great Recession marks a period of general economic decline (recession) during the late 2000s and early 2010s. It was driven primarily by the collapse of the U.S. real-estate market and negatively affected global trade and fueled economic inequality in the U.S. and throughout the world.

**Human Centered Design:** Human Centered Design (HCD) is a process and approach for solving complex, social, environmental and economic problems by involving the human perspective in all steps of the problem-solving process. The process aims to make systems usable and useful by focusing first and foremost on the *users*, including their needs and requirements. Initial stages of HCD usually revolve around immersion, observation, and contextual framing whereby innovators immerse themselves with the problem as well as the affected community. Consequent stages focus on community brainstorming, modeling and prototyping and implementation in community spaces.

**Income-qualified programs:** Municipal (in this case) programs that are offered to residents based on their income level. Residents who apply must show proof of income and have income below the income threshold to participate in these programs.

**Prime earning years:** Prime earning years are generally thought to occur between one's late 30s to late 50s. Prime earning years differ for women versus men, whereby women's earnings start diverging sharply from men after age 34.

**Rebates and reduced-fee programs:** Throughout the report the terms 'rebate' and 'reduced-fees' are used generally and interchangeably. This includes referencing the UAP program, which does not technically issue a 'rebate' but assigns a new rate (IQAP, MAP), or a one-time payment (PAF) for qualifying utilities customers.

**Customers:** this report uses this term broadly to discuss the residents and businesses who are served by the City of Fort Collins government. In this report, this term is often used in context with low-income people who, as the report suggests, are unique consumers of government services.

## REPORT OVERVIEW

Municipally managed income-qualified programs typically include workforce-related investments, public benefits like housing vouchers or funding for human services, and rebates and reduced-fees that reduce the cost of city living for economically vulnerable segments of the population. This evaluation has a narrow focus: evaluating the efficiency and effectiveness by assessing the structure, strategy and systematic functioning of City rebates and reduced-fee programs for the City of Fort Collins.

In contrast to other reports generated by the City's Evaluation Team, which have covered a single program, this evaluation covers seven individual rebate programs within three City

---

*The report is broken up into two parts: Part 1, Individual Program findings and; Part 2, City-wide findings.*

---

*The Evaluation Team holds that the recommendations and findings in Part 2 are the highest priority.*

---

service areas. Part 1 of this report evaluates individual programs within specific departments. Part 2 evaluates how individual programs work together as a portfolio of low-income programs across the city organization.

These two parts, however, are not exactly equal. Within this evaluation, the Evaluation Team holds that the recommendations and findings in Part 2 are the highest priority. The

Evaluation Team agrees that a centralized, city-wide approach could align individual programs, articulate larger, city-wide goals, offer a single point of entry for participants, and ultimately deliver exceptional customer service for low-income individuals and families.

To the extent that Part 2 recommendations-- like city-wide centralization of income-qualified programs--will take time and resources, the Evaluation Team identifies in Part 1 where immediate department-level changes can be made in the interim.

## CITY MOTIVATION

The City's vision is to provide world-class municipal service and its mission is to provide exceptional service for an exceptional community, which includes the services and policies targeting resident customers who are low-income.

This report reviews the demographics and characteristics of this unique customer segment. Low income people in Fort Collins, like elsewhere, typically have shared needs but do not represent a fully homogenous group. In Fort Collins, certain demographic groups are disproportionately low-income, requiring different outreach, marketing and strategic efforts. In Fort Collins, this includes women, especially senior and adult women, in addition to people of color.

The demographics of low-income people may or may not be unique when compared to other communities, but better knowledge of this population and the unique demographics they embody offers an important opportunity for the City to better target, assess impact, and specifically design policies and programs for these users of government services.

---

**City Vision:** *To provide world-class municipal services through operational excellence and a culture of innovation.*

**City Mission:** *Exceptional service for an exceptional community.*

---



## EVALUATION SCOPE & INCLUDED PROGRAMS

---

The City of Fort Collins provides a variety of rebates and reduced-fee programs to help residents meet their basic needs in energy, transportation and tax relief, and to promote access to a high quality of life through recreation, arts and culture.

A subset of the City's rebate/reduced-fee programs were included in this evaluation of the City's income-qualified programs. Though arts, culture and transportation programs were not included in this evaluation, the Evaluation Team believes the findings around how the evaluated programs are or are not working together to generate synergies, reduce transaction costs and improve community impact are generalizable and applicable city-wide.

The subset of low-income rebates and reduced-fee programs evaluated include the following:

- **Utilities Affordability Portfolio (UAP).** Includes the Medical Assistance Program (MAP), Income-Qualified Assistance Program (IQAP), and the Payment Assistance Fund (PAF) for emergency utility assistance.
- **Finance Rebates.** Includes the Grocery Tax Rebate (GTR), utility-related Sales Tax Rebate (STR), City-specific Property Tax (or rent-tax) Rebate (PTR).
- **Recreation Reduced-Fee Program.** Reduced-fee program for recreation courses and facility use.

---

*Rebate and reduced-fee programs are policy tools local governments use to lower the high cost of city living for low-income people.*

*This report evaluates a selection of City reduced-fee and rebate programs to determine if these programs are positioned to achieve the intended objectives.*

---

Key areas of inquiry in this report include the profile of the populations in need and the current reach of the City's various programs in terms of size, demographic characterization and low-income customer satisfaction with the provided services. The history, goals and objectives and operations of the rebate and reduced-fee programs evaluated have each been documented along with key recommendations for individual program improvement. The final chapter of this report concludes with findings for better cross-program integration.

In Figure 1, how the evaluated programs (rightmost, red boxes) fit into a larger picture of income-eligible City programs is illustrated:

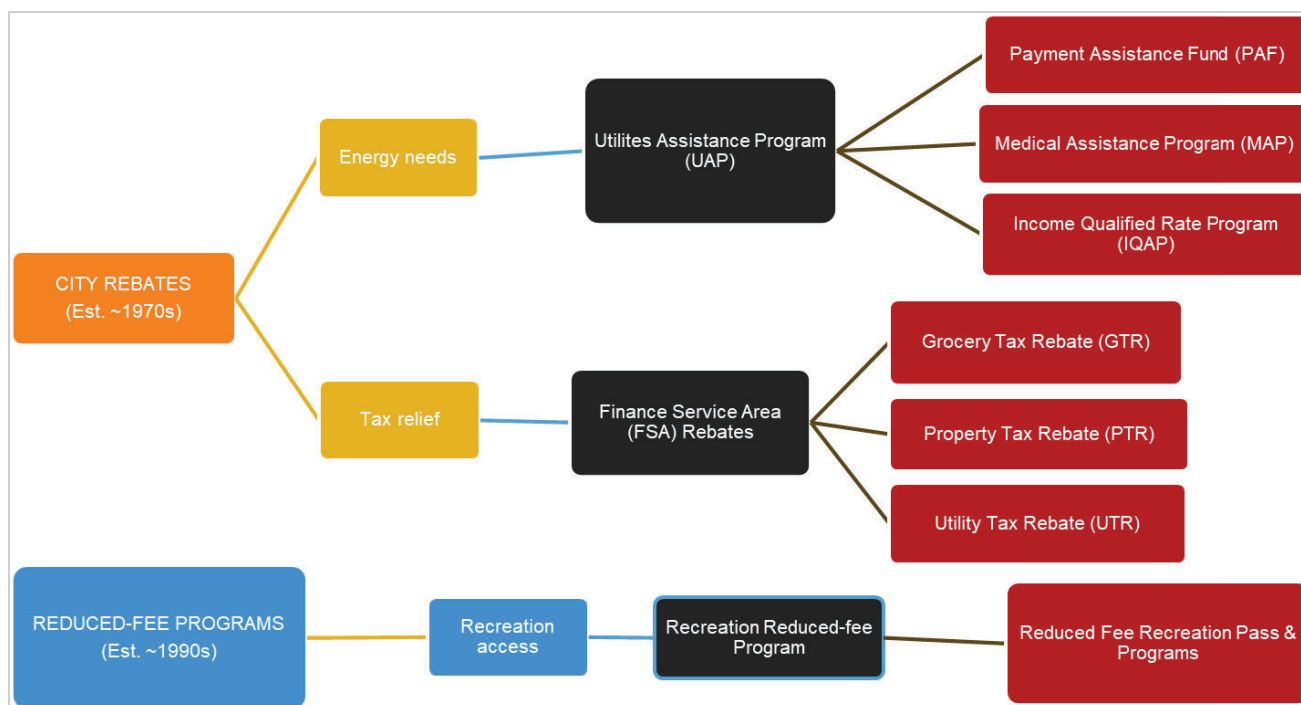


Figure 1: List of income-qualified programming evaluated by the P&PE Team

## POVERTY IN FORT COLLINS LOOKS LIKE TODAY

Economic statistics, including those focused on identifying low-income or impoverished groups, are gathered at different dimensions. These dimensions include individuals, families (2+ people who are related, living together and presumably sharing finances) and households (people who live together but may or may not be related, and may or may not be sharing finances).

Across all subsets of the population, the individual poverty rate in Fort Collins, according to the American Community Survey (ACS) administered by the Census Bureau, is 17%. When controlling for a high local student population<sup>1</sup>, **this report finds an average overall poverty rate of 12.2% of individuals.**

While some characteristics of individuals and families facing high poverty levels are well-known, others remain hidden and are specific to particular regions and unique economic realities. Like

***What characteristics make someone more likely to be poor in Fort Collins? Being Black, Hispanic/Latinx, and female. Women are 10% more likely than men to experience poverty.***

***How many people in Fort Collins are poor?***

- ***~2,000 families*** are poor. Families are household units of 2+ people, related by blood or marriage.
- ***~7,000-10,000 households*** are poor. Households are home units made of people who may be related or not.
- ***~25,000 individuals*** are poor. This number is based on a total population of 171,100 people.

<sup>1</sup> "Controlling" for students means accounting for the fact that our local student population has an outsized effect on the outcome of interest, in this case, poverty. Many students are stepping out of the economy and forgoing current wages in lieu of investing in their education in the hopes of future, higher earnings. By identifying and then isolating—as much as possible—students from the underlying population, we can see what poverty looks like in addition to, or outside of, students.

elsewhere in the country, race in Fort Collins plays an important role in elevating an individual's or family's risk of poverty. In Northern Colorado, **Native Americans, Blacks and Hispanic/Latinx people have lower incomes, higher poverty rates**, fewer assets, lower educational attainment levels, lower homeownership rates and poorer health outcomes than the majority white population<sup>2</sup>. In Fort Collins, the median household income for non-white racial groups is approximately \$42,333 lower than white households' median income<sup>3</sup>.

Age and gender also both play important roles in increasing poverty risk. At first glance, a high population of students indicates that the majority of the poor in Fort Collins (around 30% of the poverty population) are students between the ages of 18-24. When you control for the student population, however, a different picture of poverty emerges in Fort Collins. **Women ages 35-54 and those 55+ are disproportionately poor**: over the last five years and compared to their male counterparts, these women are 10% more likely to face poverty.

---

**Key Facts About Poverty in Fort Collins (ACS Census Data, 5-year 2013-2017 estimates):**

- **One in eight** (12.2%, 20,948) individuals out of a total population of 171,100 is considered low-income.
  - **One in sixteen** (6.4%, 2,146) families are low-income, out of a family population of 33,531. Families are distinct from households (61,532) in that the families are a distinct type of household unit of more than one individual, living together and related by marriage, birth or adoption.
  - **Poverty in Fort Collins is characterized by gender.** Women are 10% more likely—at any age—to be impoverished than men. 26% of households headed by females are low-income.
  - **Poverty in Fort Collins is characterized by race.** Latinx, Black and Native American people experience an elevated poverty risks.
  - ACS data supports, and community nonprofits agree, that **a higher proportion of the poor in Fort Collins today are 'working poor,'** earning insufficient wages to keep them and their families out of poverty.
- 

---

<sup>2</sup> Bell Policy Center, (2018). Guide to Economic Mobility in Colorado. <https://www.bellpolicy.org/wp-content/uploads/2018/01/Guide-to-Economic-Mobility-FINAL.pdf>

<sup>3</sup> City Plan Fort Collins, 2019. <https://ourcity.fcgov.com/cityplan/documents> (p.22-23).





## EXECUTIVE SUMMARY (PARTS 1 & 2)

*This evaluation is broken up into two parts, each with distinct findings. These include: **Part I: Department-level findings and recommendations** relevant for specific, individual programs operating within the city. **Part 2: Cross-city findings and recommendations** for the combined portfolio of low-income programs enacted here at the City of Fort Collins.*

# EXECUTIVE SUMMARY PART 1: INDIVIDUAL REBATE/REDUCED-FEE PROGRAMS

## UTILITIES AFFORDABILITY PORTFOLIO (UAP): FINDINGS AND RECOMMENDATIONS

---

### UAP KEY FINDINGS

Utilities has gained significant outreach and operational synergies by aligning with the state-wide Low-income Energy Assistance Program (LEAP).

- In its first year, the City of Fort Collins Utility (CFCU) Income-Qualified Assistance Program (IQAP) has enrolled close to 60% of the qualified LEAP participants who obtain CFCU services and live in Fort Collins.
- For each low-income subset, including the chronically poor, the temporarily or suddenly poor, and individuals and families managing disabilities or medical issues, there is a uniquely suited UAP program.
- UAP tracks outreach efforts and collaborates closely with community and regional partners. Out of City's three rebate and reduced-fee programs evaluated, the UAP program is most well-known among non-profit partners.
- Operational and strategic goals are lacking.
- The program enjoys strong support and community awareness, and program staff are highly respected among stakeholders.

### SUMMARY & RECOMMENDATIONS

As the pilot year of IQAP ends, an upcoming review with a year's worth of data will tell a lot about how the program is functioning, who is benefitting, and where improvements may be made. Even without a complete dataset, several recommendations are outlined in this report (see the adjacent table). The recommendations include structural changes, like the elimination of the MAP program, strategic changes like the identification of goals and objectives beyond simply administering the program, and systematic improvements like an improved customer feedback survey. Assessing how many MAP customers would not qualify for IQAP should be undertaken before elimination of the MAP program. However, even if 50% didn't qualify (~80 current MAP participants), the pool is small enough for CFCU to consider 'grandfathering' any unqualified individuals into the IQAP program.

Importantly, the program management staff running the UAP program enjoy strong community collaboration and are very much admired and respected for their hard work in the community. While they may improve by standardizing and strengthening a customer feedback survey, the UAP team benefits from a department-wide system (CFCU Customer Connections) to track outreach efforts. This department infrastructure enables the team to use historical data to identify what they have done (benchmarking) and what they can do to improve (goalsetting). A 2020 outreach action plan is currently being developed. A summary of recommendations can be found in the adjacent table.



Component <sup>4</sup>	Recommendation	Recommendation rationale
<b>Structure</b>	(1) Merge MAP with IQAP and remove duplication.	MAP is a small program that requires significant staff management. Alongside the IQAP, MAP is redundant as most users of MAP may be rolled into the IQAP.
<b>Strategy</b>	(2) Develop a strategic plan to include the remaining ~30-40% who participate in LEAP but not IQAP. (3) Identify and document operational and strategic goals and objectives.	Continuing to support LEAP participation (and thus IQAP participation) with non-profit partners, events, etc. Beyond simply administering a program, identify long and short-term goals, create milestones and further develop a framework for assessing impact.
<b>Systems</b>	(4) Reduce re-work and redundancies in developing an IQAP master-list with LEAP. (5) Standardize a user survey to track customer satisfaction.	Work with local LEAP program officers to eliminate redundancies in identifying eligible participants. E.g., eliminate construction of three different lists between LEAP and the City for identifying potential program participants. Survey used to assess participant satisfaction may be improved to provide greater insights with better questions, survey participation incentives and improved survey design, for identifying what customers perceive as the value of IQAP.

<sup>4</sup> The P&PE Team uses the McKinsey 7S framework for program evaluation. This includes assessments around Strategy, Structure, Shared Values and Systems, in addition to Style, Staff, and Skills. [www.mckinsey.com](http://www.mckinsey.com)

## FINANCE SERVICE AREA (FSA) REBATES: FINDINGS AND RECOMMENDATIONS

---

### FSA REBATE PROGRAM KEY FINDINGS

- The FSA Rebates program, including the utility-tax rebate (UTR), grocery tax rebate (GTR), and property-tax rebate (PTR) have not been evaluated since their origination almost 40 years ago.
- The administration of rebates in Financial Services Area (FSA) has never been fully and permanently resourced. This has had ramifications for Finance staff, who are temporarily diverted from their primary jobs, and the program itself, i.e., there is a lack of capacity for program improvement, strategic marketing efforts and community engagement.
- Starting in 2015, a seasonal, part-time full-time employee equivalent (FTE) was hired to manage applications during the three-month enrollment window.
- A seasonal FTE has little time to conduct outreach, develop community relationships, or work on long-term program development.
- In 2019, FSA was able to hire a new Sales Tax technician that will devote a proportion (33%) of time to year-round management of the FSA Rebate program.
- Compared to other evaluated City rebate programs, the Finance Rebates are relatively unknown to many community non-profit partners.
- A narrow focus on program administration and execution exists, absent a strategic plan.
- Declining program participation has occurred simultaneously with a growing pool of income-eligible households in Fort Collins.
- Compared to other City rebate programs, participants typically skew much older (mid 60s) and applicants come from smaller household sizes with extremely low-income levels. GTR applicants are an exception, with a median age of ~40, and 3+ in a household.
- Age-related eligibility requirements limit equitable access to the UTR and PTR. Evidence suggests there are a number of non-senior, impoverished families who may benefit from the rebates but do not meet the age requirements, i.e., are not age 65+.
- UTR and IQAP are duplicative. UTR was established pre-IQAP and is an artifact of an era where energy poverty was not addressed within Utilities. Verification of CFCU customer status for the UTR is time-consuming and burdensome for Finance staff to manage.

### SUMMARY & RECOMMENDATIONS

The UTR, GTR and STR, which together make up the FSA Rebates program, have never been reviewed or evaluated—though various improvements to the original ordinances have occurred (e.g., the 1980s inclusion of ‘disabled individuals’ identified in the target group). With a new, partially dedicated FTE, the FSA Rebates program is likely to benefit from improved service continuity, better nonprofit relationship management, and possible strategic objective development. However, the ability for this new resource to reasonably manage any program growth—in addition to necessary (and growing) Sales and Use Tax duties—is unlikely. Strategic planning and clear goal definition will help deduce what is required for FSA Rebate program success in terms of staff time, roles and responsibilities.

---

### **Resourcing constraints:**

*The FSA took an important step towards better program management by addressing the service continuity and relationship management issues inherent with a seasonal employee.*

---

Reducing age-specific criteria for the PTR could expand eligibility for the families already accessing the GTR, but unqualified for the PTR. The combination of the PTR + GTR may financially incentivize low-income residents to apply for the FSA Rebates, despite the work and coordination required (e.g., arranging

childcare, transportation, etc.) for these households to submit applications in-person to the City.

Combining the PTR with the GTR also achieves the following:

- **Reduces staff burden and operational costs.** Managing and monitoring divergent participation criteria for different Finance rebates is a 'heavy lift' for an already under-resourced program.
- **Ensures equity, targets the neediest.** When age-criteria were adopted for the PTR/UTR in the 1970s/1980s, it is probable seniors were a population with a high—perhaps the highest—likelihood of poverty. Today however, the most impoverished people in Fort Collins are women, including adult women between ages 35-54 and senior women over age 55 (see discussion on pages 14-17). Though seniors still represent a vulnerable population, Fort Collins today clearly has a high proportion of working families and adults in poverty. With stagnating usage of the PTR, extending PTR to the currently impoverished population makes sense to fully address the need of a changing low-income population.
- **More money into the hands of low-income people, especially families.** A female-headed household is more than 25% more likely to experience poverty with significant lifelong impacts for children. Research shows incremental household funds typically go to benefit children, and that interventions that benefit children have long-term positive effects on economies and societies.<sup>5</sup>

**Eliminating the UTR has positive benefits for the City, the FSA, the IQAP program and low-income customers.** Verifying CFCU customer status between CFCU and FSA is a lengthy and burdensome process for staff. Directing interested customers to the IQAP/LEAP program instead, could better utilize an existing City service and strengthen a state-wide program (i.e., LEAP). For low-income customers, attaining a long-term solution—a permanently lower utility rate—is almost certainly preferable to an annual cash rebate.

Eliminating the UTR could also reduce a portion of the administrative burden of the FSA Rebates program and free up time and resources for the important—but currently not completed—marketing and relationship-building work that needs to be undertaken for the GTR/PTR rebates.

FSA Rebate program staff should also consider how to identify and obtain resources for improving the online application system. Knowing that low-income families are constrained by transportation, childcare and other costs, an online application means that low-income people working multiple jobs and managing the high costs of city living are able to submit applications in a time and manner convenient for them. Additional recommendations are summarized in the adjacent table.

---

<sup>5</sup> UNICEF (2019). [https://www.unicef.org/socialpolicy/index\\_53294.html](https://www.unicef.org/socialpolicy/index_53294.html) Accompanying report: [https://www.unicef.org/socialpolicy/files/Investing\\_in\\_Children\\_19June2012\\_e-version\\_FINAL.pdf](https://www.unicef.org/socialpolicy/files/Investing_in_Children_19June2012_e-version_FINAL.pdf)

## RECREATION REDUCED-FEE PROGRAM: FINDINGS AND RECOMMENDATIONS

Component	Improvement & recommendation	Recommendation rationale
Structure	<ul style="list-style-type: none"> <li>(1) Ensure adequate FTE coverage of the FSA rebate program.</li> <li>(2) Merge GTR and PTR into a single rebate by removing age-specific criteria of PTR.</li> <li>(3) Eliminate UTR in lieu of pushing participants towards CFCU IQAP program.</li> </ul>	<p>With a new 2019 FTE spending 33% of their time on the FSA Rebates program, FSA has made a solid step towards service continuity. However, should Council prioritize program growth, appropriate resourcing should be reconsidered.</p> <p>Merging the GTR and PTR streamlines and creates value in the following ways:</p> <ul style="list-style-type: none"> <li>a. Reduces staff burden and operational costs.</li> <li>b. Ensures equity, targets the neediest.</li> <li>c. Puts more money into the hands of low-income families.</li> </ul>
Strategy	<ul style="list-style-type: none"> <li>(4) Identify and document goals and objectives of FSA Rebate program.</li> <li>(5) Standardize customer service feedback opportunities.</li> <li>(6) Increase marketing efforts via increased budget and/or staff time allocated to outreach.</li> </ul>	<p>Beyond simply administering a program, identify long and short-term goals, create milestones and further develop a framework for assessing impact.</p> <p>Adequate customer feedback is not currently obtained for assessing satisfaction and opportunities for design and process improvement.</p>
Systems	<ul style="list-style-type: none"> <li>(7) Make application period year-round.</li> <li>(8) Provide resources to improve online application option.</li> <li>(9) Consider ways to eliminate income verification.</li> </ul>	<p>In contrast to other city rebate/reduced-fee programs, the FSA Rebate program still operates as a seasonal program, which is challenging for staff who work on a compressed schedule, as well as applicants who must juggle yet another benefit timeline.</p> <p>The current online application option has not been designed-for, nor tested by, actual users. It is difficult to use, challenging to upload the correct documents, and usually requires more work for staff to track down missing application components.</p> <p>Income verification is an extremely burdensome step for City staff. Staff time could be better spent on targeted marketing and customer engagement/support<sup>6</sup>.</p>

<sup>6</sup> The UAP program eliminated income verification by accepting LEAP enrollment in lieu of UAP-specific program income verification.

## RECREATION PROGRAM KEY FINDINGS

- Among the City Rebate programs evaluated in this report, the Recreation reduced-fee program has by far the most users (more than 5,000 annually). These are mostly families and most primary applicants who submit applications on behalf of a household, are female.
- In contrast to other departments, the Recreation reduced-fee program uses a unique poverty measurement threshold of 185% of the federal poverty threshold. This is in-line with Poudre School district, a key community partner for the program, but out of alignment with the other City Rebate programs.
- Following a year of community and municipal partner outreach, Recreation's Reduced-fee Program underwent a major overhaul in 2017. The changes in 2017 simplified the discounts given and prioritized access to introductory sports, group activities and classes.
- Changes are occurring in the user base: adults ages 19-59 are shrinking as a user base (down by more than 10% over the last 5 years), while a proportionally smaller senior segment (ages 60+) is growing.
- The income verification step has a significant privacy risk for applicants, is complicated, and is burdensome for staff, especially Recreation office front desk staff. The process for moving, copying and validating sensitive tax and identification documents within the Recreation department is not formalized or secure, providing opportunities for sensitive applicant information to be lost or misused.
- The program maintains a strong focus on operational improvement and operational goals. It lacks a focus on long-term strategy and strategic goals.

## SUMMARY & RECOMMENDATIONS

The Recreation reduced-fee program has been successfully integrated into all Recreation department functions and there is significant program support and familiarity within the community and among community partners. Compared to other evaluated City rebate programs, the reduced-fee program serves many low-income people—especially families-- each year. The program has taken significant steps to improve the application process and offers access to recreation opportunities for a range of individuals and families that live in Fort Collins.

Importantly, the application itself has just benefitted from a FC Lean intervention, which reduced the application from five pages to one. The application now is simpler to understand, completion is expedited, and design factors that are known to be of great importance for low-income customers are incorporated.

Broadly, the Recreation Department's program would benefit from balancing a strong focus on operational improvement with a focus on long-term strategic impact. In other words, what does Recreation seek to accomplish in the long term with the reduced-fee program? Are short-term operational changes working in tandem with a larger vision and articulated long-term strategic goals? As of now, long-term strategy to guide operational action is missing.

Part of the imbalance between strategic and operational goals is the fact that the reduced-fee program is not thought of as a traditional Recreation program, with a dedicated program manager, a specific communications plan, etc. Rather, the reduced-fee program is 'everyone's' job, which means targeted communications and explicit responsibilities for this program's success lie with everybody in Recreation, but also with no one in particular. High-level questions about program effectiveness often don't land squarely with any staff member or specific workgroup. Clear ownership and milestones around who is responsible for program growth and

development may lead to programmatic improvements. Additional recommendations are found in the table below:

Component	Recommendation	Recommendation rationale
<b>Strategy</b>	<ul style="list-style-type: none"> <li>(1) Balance an operational focus by articulating a long-term, strategic plan.</li> <li>(2) Design and execute a communications plan, include outreach goals and key partners.</li> </ul>	<p>Beyond goals around program administration and operations, there are no clearly articulated strategic goals. What's the long-term objective of the program? What is the program trying to accomplish? How are operational goals in service to long-term strategic goal(s)?</p> <p>Let data insights guide goals and inform long-term and short-term targets. For example, consider a short-term goal of increasing adult usage (people between 19-59), given that this user group has been recently shrinking.</p> <p>Complete work of establishing and executing a marketing/communications plan.</p>
<b>Staff &amp; Structure</b>	<ul style="list-style-type: none"> <li>(3) Identify ownership of program tasks, program boundaries</li> </ul>	<p>Specific operational tasks are absorbed by multiple staff, making accountability and leadership difficult. Who is responsible for managing the program? Clarify which staff are charged with various tasks, including marketing/relationship management within the community.</p>
<b>Systems</b>	<ul style="list-style-type: none"> <li>(4) Strengthen the system for handling sensitive application materials.</li> <li>(5) Provide an online application option.</li> <li>(6) Align eligibility criteria with other City Rebates programs by using AMI instead of FPL.</li> </ul>	<p>A single, City-wide income-eligibility application could eliminate the burden of income verification for Recreation. Among other things, the current inter-office transfer of copies of sensitive documents among staff poses risks for residents' privacy.</p> <p>Complete work to provide an online application option.</p> <p>Measure poverty using a locally appropriate measure (% of AMI) consistent with other City rebate programs.</p>



## EXECUTIVE SUMMARY PART 2: CROSS-CITY FINDINGS AND RECOMMENDATIONS

This evaluation is broken up into two parts, each with distinct findings. They include:

- 1) **Department-level recommendations** and findings relevant for specific, individual programs operating within the city.
- 2) **Cross-city recommendations and findings** for the *combined portfolio* of low-income programs enacted here at the City of Fort Collins;

These two parts and accompanying sets of recommendations, however, are not exactly equal. Within this evaluation, the Evaluation Team prioritizes a centralized, city-wide approach on the basis that cross-city programming could align individual programs, offer a single point of entry for participants, and ultimately deliver the exceptional customer service that the City sets out to deliver for low-income people, which represent a unique set of customers accessing government services.

To the extent that centralization and establishment of city-wide goals will take time and resources, more immediate changes can be made in the interim via department level recommendations.

### KEY FINDINGS

Beyond individual rebate and reduced-fee program recommendations, this evaluation highlights several opportunities for an improved, city-wide approach to rebates and reduced-fees for low-income populations. This report estimates that less than half of eligible low-income individuals and families participate in one of the low-income City programs evaluated. Far fewer participate in more than one of these programs. **In fact, only 18% of the addresses used by an applicant are linked (by usage) to more than one of the rebate/reduced-fee programs evaluated in this study.** This means that significant progress may be made in the programs' overall reach (the absolute number of low-income individuals and families served) as well as participation depth (the proportion of participating families obtaining more of the City's opportunities).

Taken together, these individual rebate programs may function as a 'portfolio of options' that support and reinforce larger City goals around economic inclusion and poverty reduction. Right now, however, there is little strategic alignment between these programs. This includes the absence of an articulated set of shared, city-wide goals.

### LESS THAN HALF OF LOW-INCOME PEOPLE PARTICIPATE IN ONE CITY REBATE/REDUCED-FEE PROGRAM

Estimating the number of low-income individuals in Fort Collins is a complicated undertaking. A suite of federal, regional and local poverty measures describe poverty according to household type (i.e., a family versus a household versus an individual), income level, and household size (e.g., a single individual versus multiple family/household members). As a result, each poverty measure sets different income thresholds for determining the local low-income population size.

Also, the existence of a large student population here in Fort Collins attending Colorado State University (CSU) or other higher-education institutes within in the city further complicates the

picture. Further explanation of how the authors estimated the poverty population may be found in the body of the report (see Section entitled Background & Key Concepts)<sup>7</sup>.

Using application data from each of the three Service Areas/departments (Utilities, Finance and Recreation) and attempting to control for estimated overlaps between programs, the Recreation Reduced-Fee program reaches the highest proportion of the City's low-income population, followed by the FSA Rebates, followed by the UAP. Note that the population of the biggest component of the UAP, the IQAP program, is bounded by eligibility for state-wide LEAP. **Most importantly, more than half of all estimated City low-income households are currently not reached by any of the City of Fort Collins's reduced-fee/rebate programs evaluated herein.**

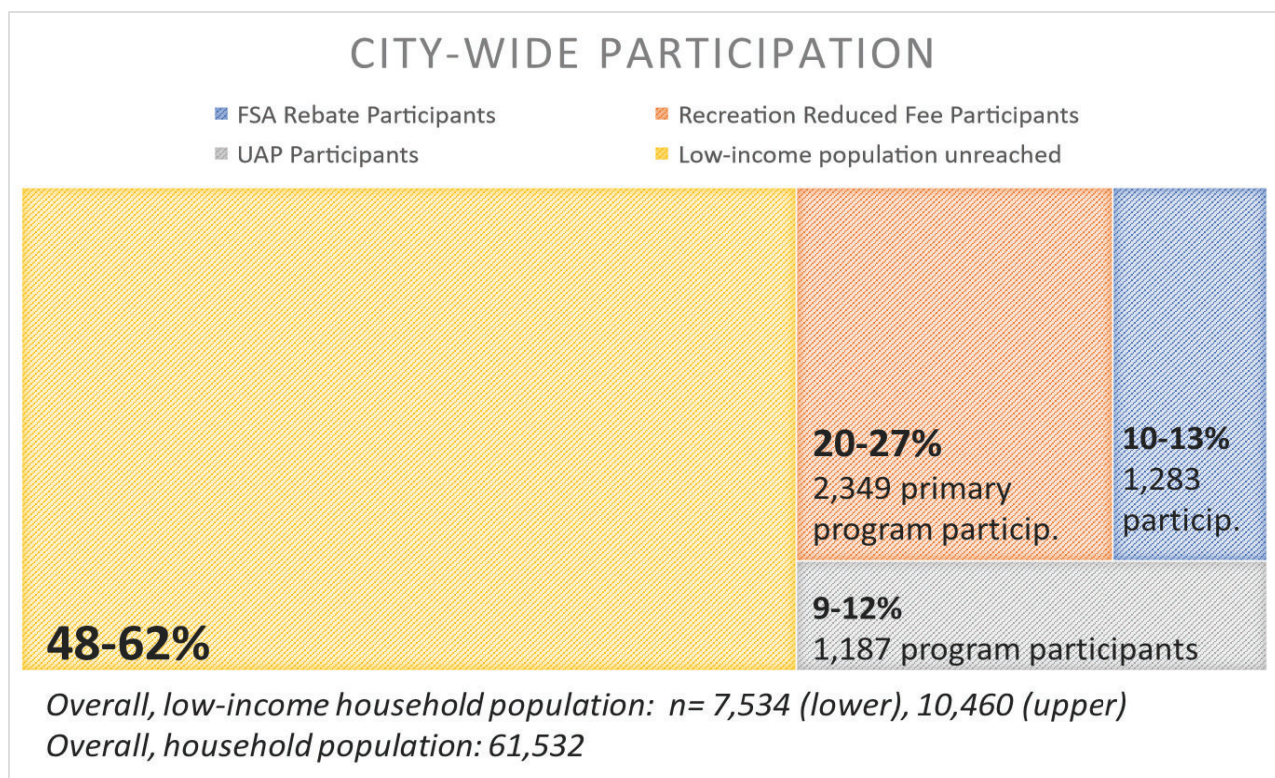


Figure 2: City-wide participation

## LOW-INCOME PEOPLE ARE NOT CONSIDERED A UNIQUE CONSUMER OF CITY SERVICES

Perhaps as important as the information on the low participation in these City programs, the City's low-income residents are not seen as unique users of the City's services, unlike, for example, how the business community is viewed by the City. By defining low-income people as a unique customer, it follows that departments will see value in crafting specific communications and designing programs with that unique user in mind. Without a common understanding of the low-income resident as a unique customer, knitting these programs together will remain a challenge.

<sup>7</sup> Fort Collins poverty estimates were calculated using 5-year estimates from the 2013-2017 American Census.

Explanations for why this population is unique include:

- **Geographic mobility.** These populations are managing temporary housing or moving frequently to find lower rent/housing costs.
- **Legal vulnerability.** Individuals and families might be dealing with legally challenging issues, including residency, immigration and criminal/civil problems.
- **Unique constraints.** When experiencing poverty, individuals and families juggle unique constraints that place different burdens on their time, decision-making and available resources (see discussion in Key Poverty Concepts). These conditions can include having multiple jobs, shift work, cognitive stress, family care, and transportation issues, among other things.

Recognizing low-income residents as a unique customer segment means:

- Developing a common language and poverty thresholds for this population.
- Adopting a set of strategic objectives and a strategic communications plan.
- Requiring standard user-specific design principles for programs and projects working with low-income populations.

## VARIABLE COMMUNITY AWARENESS AND UNDER-UTILIZATION OF COMMUNITY PARTNERS

17 individuals from nine non-profit organizations serving Fort Collins and Larimer County residents were surveyed about their knowledge of, and collaboration with, City of Fort Collins reduced-fee/rebate programs. These partner community organizations included CSU Care Program, various UC Health/Poudre Valley programs, the Volunteer Income Tax Assistance Program, Project Self Sufficiency, Neighbor to Neighbor, Energy Outreach Colorado, and the Food Bank of Larimer County (See questionnaire in Appendix A). Close to 80% of non-profit partners surveyed indicated they work directly with low-income people in Fort Collins (Figure 3).

Between 80-90% of respondents were familiar with the City's reduced-fee recreation pass and the Utilities IQAP program. On the contrary, less than half knew about the property tax and utility tax rebates managed in Financial Services (35%).

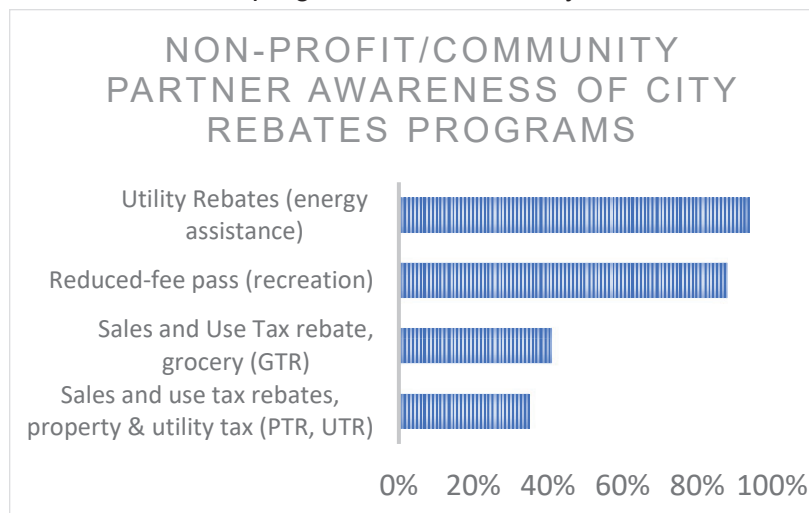


Figure 3: Cross-program rebate awareness of city stakeholders. Source: 2019 Survey data collected by Evaluation Team

As a result of differing levels of awareness and intentional collaboration, non-profits in Fort Collins extend varying levels of support for City reduced-fee and rebate programs. Lack of full support means lost marketing and outreach opportunities as well as lost opportunities for direct assistance with programs' application management, etc. Across the rebate/reduced-fee programs evaluated in this study, IQAP, followed by the reduced-fee recreation pass program, have the greatest

familiarity in the community and the most direct non-profit support.



## CITY-WIDE, LOW-INCOME PROGRAMMING IS INEFFICIENT

Crucially, low cross-program participation means a reduced return on City-sponsored social investments. Limited success in cross-program participation currently means a reduction in the potential combined impact of these programs—whereby the possible impact of the ‘portfolio of low-income services’ could be greater than the sum of independent department initiatives.

It also means that **each department charged with administering an income-eligible program pays the ‘full cost’ of its administration**, potentially re-processing the same applicant annually for multiple City services or expending the same time and energy trying to reach similar participants in the community.

Moreover, lack of centralization between these different programs has led departments to adopt different approaches, including different methods for leveraging community partners, variable eligibility thresholds affecting participation, and differing levels of staff/programmatic resources available for deployment. As a result, analysis performed for this report suggests that each department that manages a reduced-fee/rebate program has reached a slightly—or in some cases very different—low-income population.

## ADDITIONAL CROSS-PROGRAM FINDINGS

- **Departments struggle with income verification and are misaligned around poverty thresholds.** Not only does each department pay the full cost of administration, but their targeting is not consistent, each reaching a slightly different segment of the impoverished population. Also, lack of standardization around management of applicants’ sensitive income verification documents is an underappreciated privacy and legal risk for the City.
- **Lack of standardized data and data tracking makes assessing resident engagement across City rebate/reduced-fee programs nearly impossible.** Better systems are needed to understand how low-income people fully interact with—or are isolated from—available City services.
- **Key community partners and non-profits are unaware of certain rebate/reduced-fee offerings at the City.** Without awareness, non-profits are unable to alert their low-income clients of City opportunities and help improve City programming.
- **Key community partners may know about some rebate programs, but partners could be better utilized.** Of the non-profits and community partners surveyed, no more than 50% actively support City rebate/reduced-fee programs either directly (by supporting low-income clients to fill out applications) or indirectly (via marketing like posters or flyers, or social media mentions).

## RECOMMENDATIONS

---

### STRATEGIC GOAL SETTING & CENTRALIZATION OF RESPONSIBILITY

Departments operate their programs in ‘silos’ with minimal resources and little city-wide strategic guidance. There is no set of city-wide goals, no central responsibility for ensuring that each program pursue unified goals nor a mechanism for aligning department-level actions.

Beyond a lack of shared, long-term city-wide strategic goals, differing department values and divergent department constraints (funds, staffing) further complicate the ability of these programs to coordinate optimally for low-income residents. Most departments accept the mandate to provide these services, but this means the provision of low-income programming is

in service to narrower department-level goals and not in service to broader city-wide goals for a unique customer segment.

Opportunities for bridging the responsibility gap:

1. **Establish a set of strategic City-wide goals** shared across departments and functions. For example, the Climate Action Plan (Our Climate Future), is a unified program that blankets the entire City; something similar for low-income programs would be catalytic for departments interacting with low-income residents. Those departments could then link resources and workplans to meet established cross-functional objectives.

The City-wide goals may emphasize:

- Promoting economic security with assistance in meeting basic needs (energy, tax relief) for the low-income population, and
  - Opportunities to access cultural events and recreation.
2. **Centralization of program administration.** Centralize administration of low-income services with dedicated FTE program manager(s) and cross-functional participation by relevant Service Area Directors.
  3. **Conduct annual portfolio performance reporting.** Annually assess how rebate/reduced-fee programs work together to achieve the aforementioned City-wide goals. Assess participation 'depth' and how/if program participants participate in more than one rebate program; determine if needed adjustments of program marketing occur based on estimates of new/emerging low-income demographics.

## RECOGNIZE AND DESIGN FOR LOW- INCOME PEOPLE AS A UNIQUE CUSTOMER SEGMENT

Low-income residents within the city are not seen as unique users of the City's services. This contrasts, for example, with a similarly unique identified customer segment like the business community<sup>8</sup>. By defining low-income people as unique customers and reporting on their experience with City services, departments will see value in crafting specific outreach and programs designed with that unique user in mind. Without a common understanding of the low-income resident as a unique customer, knitting these programs together will remain a challenge.

Opportunities to recognize and design for a unique low-income segment include:

1. Developing a common language and poverty thresholds to describe this population.
2. Adopting strategic goals and developing a strategic plan and communication plan specifically for this population.
3. Requiring departments to leverage user-specific, human centered design principles when developing, improving and managing programs that target low-income populations.

---

<sup>8</sup> See the City's Business Engagement and Action Plan (BEAP), co-managed by a cross-functional group from the Economic Health Office, Utilities Customer Engagement Team, the City Manager's Office, etc.







## BACKGROUND AND KEY CONCEPTS

*The three sections in this chapter (Background, Key Poverty Concepts, Poverty in Fort Collins) explain the context for, the characteristics of and challenges faced by the City's low-income population. These sections provide an understanding of this unique customer segment, which is necessary to assess the impacts of the City's rebates/reduced-fee programs.*

## BACKGROUND

While certain populations are always at risk of being chronically poor, signals point to changing dynamics in Fort Collins and Northern Colorado. Many local community service providers are expressing increased concern that they are serving higher proportions of low-income people who work full-time (i.e., the ‘working poor’)<sup>9</sup>. This means that despite a low unemployment rate, which would otherwise signal a thriving workforce, the ability for working, low-income families to prosper in Fort Collins is questionable. This changing characteristic of low-income people in our community warrants a fresh look at the programs and policies that have been previously implemented.

### THE PRICE OF BEING POOR

#### PAYING MORE FOR ENERGY, HOUSING AND FOOD

Compared to their middle-class or upper-class community members, low-income Americans who live in poverty pay more than moderate or high-income families for basic necessities—far



Figure 4: Low-income energy use

more. As a percentage of income, poor families in the bottom 20% of income earners nationally, pay on average close to 10% of their annual income on energy costs. As a proportion of income, that’s almost seven times what the top 20% of income earners typically pay.

However, people who earn less aren’t just paying more for energy as a percentage of their income. For most low-income households, inefficient appliances and low-

quality residential buildings means that additional energy is required per square foot to heat, cool and otherwise operate a residence (Figure 4)<sup>10</sup>. The result is higher energy costs per square foot compared to middle- or upper-income families and individuals. Given that low-income families are more likely to rent, these families bear the cost of utility bills but have no ability nor incentive to make capital investments around energy efficiency upgrades on a home they don’t own. Meanwhile, landlords have few economic incentives to make efficiency upgrades that would save their tenants money.

The point at which energy costs become burdensome enough to contribute to poverty is typically cited as a household devoting more than 6% of its income to energy-related costs<sup>11</sup>.

<sup>9</sup> Non-profit, County government and community partner interviews, 2019. Includes input from Larimer County Food Bank, Low-income Energy Assistance Program (LEAP), Human Services Department of Larimer County, Project Self Sufficiency, The Family Center (La Familia).

<sup>10</sup> Goundswell (2016). <https://groundswell.org/study-finds-that-working-families-pay-the-most-for-electricity-despite-lower-price-trends-and-affordable-clean-energy-alternatives/>

<sup>11</sup> The Atlantic (2016). *Energy Poverty in Low-income Households*  
<https://www.theatlantic.com/business/archive/2016/06/energy-poverty-low-income-households/486197/>

Across Larimer County, a typical household below 50% of the federal poverty level spends more than 21% on energy-related costs; energy poverty is all too common across the Front Range<sup>12</sup>.

## HOUSEHOLDS ON THE BRINK

For many families, housing affordability is part of the broader problem of having a low income. If you don't make enough money, you have trouble affording anything—including housing in competitive markets like Fort Collins. Based on 2000-2014 data from the Bureau of Economic Analysis (BEA), analyzed in 2016 by Pew Charitable Trust, low-income households' housing costs grew by more than 50% over the last 19 years<sup>13</sup>. The strain that housing places on Fort Collins families is documented in the City's 2015 Affordable Housing Strategic plan and in the 2019 City Strategic plan. In 2017, Fort Collins homes appreciated at the highest rate in the state, at more than 11.8%<sup>14</sup>.

Using a measurement of 200% of the Federal Poverty Level (\$50,200 for a family of 4 in 2018), the Larimer County Food Bank today serves over 18,000 people with a Fort Collins address out of the nearly 50,000 individuals who would qualify to use the Food Bank

based on American Community Survey 2018 figures. In Larimer County the absolute number of Fort Collins residents within the Larimer County Food Bank database has grown by 15% over the last six years (2014-2019)<sup>15</sup>. While the Food Bank may have been able to reach more individuals in the last six years, the combination of high housing costs, rising healthcare costs and soaring childcare costs squeezes the budgets of low-income families to the point these households are now seeking food assistance.

---

*... average weekly wages in Colorado have been flat since 2000*

*—Bell Policy Center, 2018*

---

## ECONOMIC GROWTH ALONE HASN'T REDUCED POVERTY

While job-training programs and economic development are an essential part of promoting economic opportunity, climbing out of poverty is only possible when household earnings rise faster than the cost of living. In the decade after the Great Recession, the economy has benefited from growing national gross domestic product (GDP), job expansion, falling unemployment and rising stock prices<sup>16</sup>.

Yet in Colorado and elsewhere in the U.S, generating a steady, sufficient income by **obtaining and holding a single job is unlikely to completely lift an individual or family out of poverty**. Escalating costs of living continue to outpace wage growth, even though more Americans and Coloradans are working today than ever before<sup>17</sup>.

---

<sup>12</sup> Accounting Insights developed this interactive map and associated statistics based on information from the Energy Information Administration and from the U.S Census Bureau. <http://insideenergy.org/2016/05/08/high-utility-costs-force-hard-decisions-for-the-poor/>

<sup>13</sup> Bell Policy Center, 2018. Guide To Economic Mobility. <https://www.bellpolicy.org/wp-content/uploads/2018/01/Guide-to-Economic-Mobility-FINAL.pdf>

<sup>14</sup> Bell Policy Center, 2018. Guide To Economic Mobility. <https://www.bellpolicy.org/wp-content/uploads/2018/01/Guide-to-Economic-Mobility-FINAL.pdf>

<sup>15</sup> Larimer County Food Bank interview, August 2, 2019. Supplemental Food Bank information provided to the Evaluations Team on August 5, 2019.

<sup>16</sup> Brookings Metro Monitor, 2019. <https://www.brookings.edu/research/metro-monitor-2019-inclusion-remains-elusive-amid-widespread-metro-growth-and-rising-prosperity/>

<sup>17</sup> Bureau of Economic Analysis (2019): [https://www.bls.gov/eag/eag.co\\_fortcollins\\_msa.htm](https://www.bls.gov/eag/eag.co_fortcollins_msa.htm)

Why aren't wages keeping up with rising costs of living? In the past, during periods of low unemployment and strong economic growth, such as the late 1990s, wages went up faster than they have in recent years. Nationally, wages grew by about 4.8 percent annually in the late 1990s, compared to 3.4 percent today. The Bell Policy Center offers the following theories about why workers don't seem to be enjoying the same economic gains today as they have during other historic times of economic expansion<sup>18</sup>:

1. **Our low unemployment numbers aren't giving us the whole picture.** Throughout 2019, the local unemployment rate for Fort Collins hovered at a very low 2%. State economists agree that this number doesn't include discouraged or permanently unemployed workers who remain on sidelines—including those that fared the worst during the Great Recession.
2. **A growing imbalance between workers and employers.** A significant decline in unionization and an increase in the concentration of dominant employers in certain industries and areas has placed downward pressure on wage growth. Popular use of the contractor classification has also limited benefits for those workers and reduced payroll costs for employers.
3. **The workforce's changing composition makes wage growth appear lower than it really is.** Older, higher paid workers are leaving the workforce and being replaced by younger, lower paid workers. Also, new entrants into the workforce moving from part-time to full-time work are generally earning less than the typical full-time time worker.

Regardless of why wages aren't keeping up with costs of living, typically poor subsectors of the population, like seniors and persons with disabilities, are being joined by the 'working poor' which includes individuals and families, some of whom should be in their prime earning years. Even as labor participation (as indicated by declining unemployment rates) and U.S. GDP have grown, the rate of people in poverty across the country has continued to rise (Figure 5).

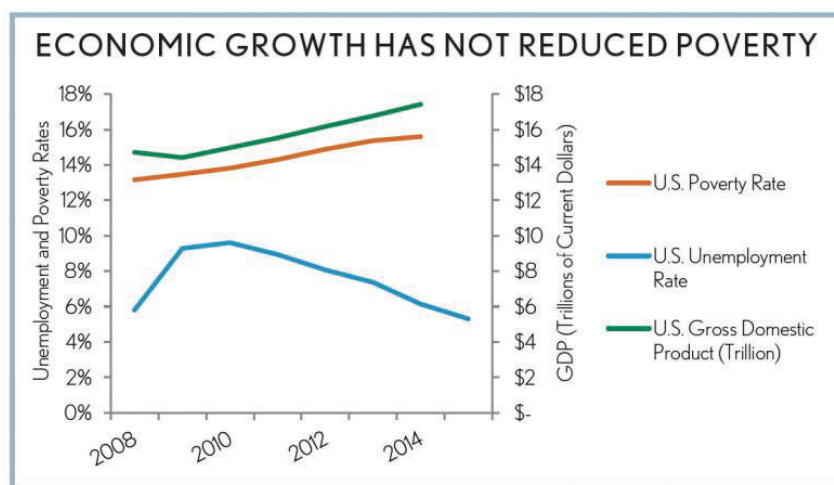


Figure 5: Source: Urban Opportunity Agenda, Center for Neighborhood Technology (CNT).

<sup>18</sup> Bell Policy center (2018). <http://www.bellpolicy.org/2019/05/02/wages-inflation/>

## KEY POVERTY CONCEPTS

Three behavioral science concepts have guided the findings and recommendations within this report:

- Recognition that poverty is multi-dimensional and much more than just a lack of money.
- Poverty imposes a significant cognitive burden on families and individuals. As a result, low-income people make very different decisions than their non-poor counterparts.
- Successful poverty alleviation programs/policies must address low-income people as unique users of government services and design for low-income users' behaviors and needs.

## POVERTY DRAINS THE VERY RESOURCES NECESSARY FOR OVERCOMING POVERTY

Behavioral research has shown that human beings leverage more than just economic capital (or the lack thereof) when making decisions about meeting needs and securing their well-being (BIT 2016)<sup>19</sup>. Figure 6, below, describes the types of resources (capital) relevant to this discussion of well-being and poverty alleviation.

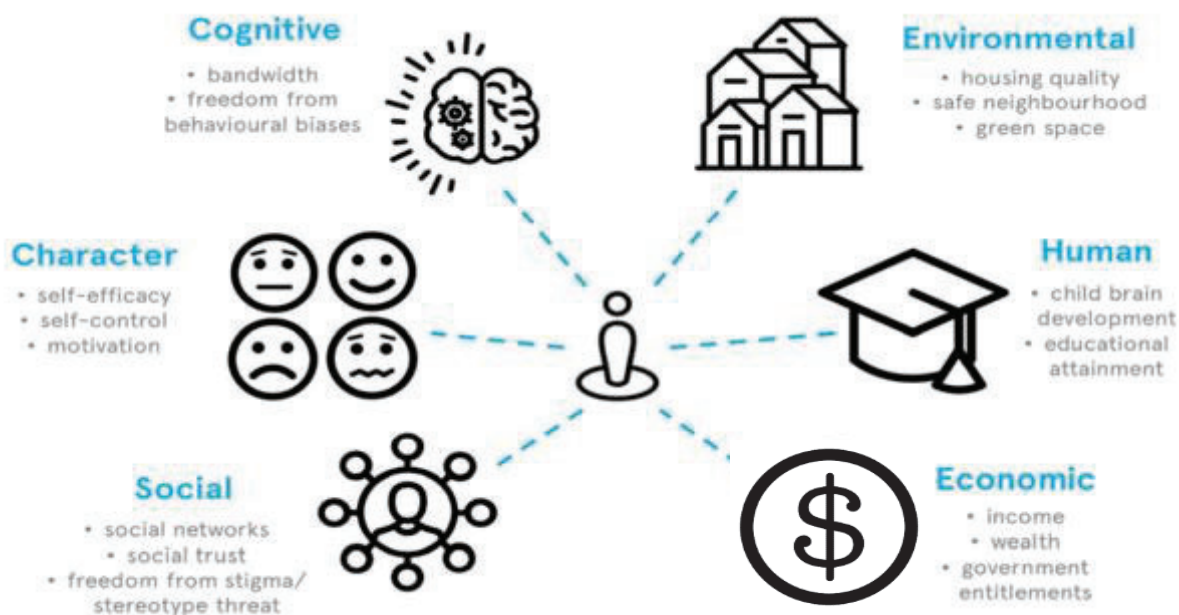


Figure 6: Behavioral research and capital types

An individual or family's ability to store or replenish stocks is necessary for building and sustaining overall well-being. This includes educational capital (educational attainment and technical qualifications), human cognitive capital (childhood brain development and decision-making capacity and mental bandwidth), environmental capital (e.g., housing quality, safety,

<sup>19</sup> Behavioral Insights Ltd. (2016). Poverty and Decision-Making: How Behavioral Science Can Improve Opportunity in the UK. <https://www.bi.team/wp-content/uploads/2017/02/JRF-poverty-and-decision-making.pdf>



access to natural space), social capital (e.g., social networks, freedom from stigma) and character capital (e.g., self-control, motivation). When one or more capital stocks or assets are low, individuals and families pull from other assets or capital stocks to compensate or cope. This is true for all people, including low-income people. However, for low-income people the consequences of chronic drains on various capital stocks or the underinvestment in certain stocks have implications for obtaining a healthy, happy and productive life, i.e., for ensuring well-being and reducing the chances of falling into poverty. Each of these capital stocks have consequences when depleted or underinvested in: impacts can last a short time, or entrench an individual, family or even a generation, into a cycle of poverty.

For government agencies and public policy makers, understanding how these types of capital work together toward—or against—various aspects of well-being is important to building policies and programs that disrupt these cycles and meet low-income people where they're at currently.

## POVERTY INFLUENCES DECISION-MAKING

---

Low income people are unique customers who apply for, access and benefit from municipal services. As noted above, poverty impacts the resources people draw upon to manage their lives and cope with the various economic, social or environmental shocks life might bring. Understanding the resource constraints low-income people typically manage and the way those constraints affect their decision-making may help the City and other public sector agencies better design programs specifically for low-income customer success. This section discusses how poverty affects cognitive capital and, ultimately, how many people experiencing poverty make decisions.

Recently, attention has focused on the cognitive burden that poverty imposes. In fact, recent neuroscientific research suggests that the condition of poverty imposes a mental burden akin to losing 13 IQ points (Mani et al. 2013)<sup>20</sup>. This means that impoverished families are not only trying to optimize their decision-making with a limited, disadvantaged resource/capital set, but they are trying to optimize under conditions that limit mental bandwidth. As a 2016 Behavioral Insights Team study points out:

*“...the context in which people on low-incomes live means that they have fewer opportunities to replenish or rest their cognitive resources compared to people on higher incomes. This includes the physical context in which they live, such as noisy urban environments without green space and with the emotional fatigue that comes from stifling negative feelings associated with job loss and stigma.*

*Poor families and individuals must also make many more critical decisions in a day compared to those who have financial and time-buffers, from complying with the conditions of welfare payments to coordinating irregular shift-work and managing childcare.” (BIT 2016, p. 13-14).*

Poverty exists as both a cause and consequence of reduced mental bandwidth, or cognitive capital<sup>21</sup>. Successful poverty alleviation efforts recognize that seemingly sub-optimal decisions

---

<sup>20</sup> Mani et al. (2013). Poverty Impedes Cognitive Function. Science, Vol 341 (6149), pp.976-980.

<https://science.sciencemag.org/content/341/6149/976.abstract>

<sup>21</sup> The Atlantic (2013). Your Brain on Poverty: Why Poor People Seem to Make Bad Decisions.

<https://www.theatlantic.com/business/archive/2013/11/your-brain-on-poverty-why-poor-people-seem-to-make-bad-decisions/281780/>



by low-income people may be made because those individuals exist in a very different environment and with a very different set of resources, than non-poor people.

## LOW-INCOME PEOPLE ARE UNIQUE USERS OF GOVERNMENT SERVICES

---

Given that poor people may have different resources and different decision-making abilities than their non-poor counterparts, they represent a unique group accessing government services. On the flip side, when government policies and programs are designed without a deep understanding of the poverty context, i.e., how low-income people make decisions, what resources they do/don't have available, etc., poverty alleviation programs at the local level may fail to make an impact.

Throughout this evaluation on income-eligible reduced-fees and rebates, the following design aspects and questions are considered:

- **Low-income people are unique users of government services. People experiencing poverty do not make decisions like their non-poor counterparts.**
  - What evidence exists that the policy/program has designed for the 'poverty experience?'
  - From a low-income user's point of view, what is going right? What might be missing?
  - What, if any, kinds of Human Centered Design<sup>22</sup> elements are incorporated?
- **Policymakers and program designers must minimize the time and mental costs of engaging with government or other locally available services.**
  - Where are we bundling application processes and eligibility requirements to streamline interactions?
  - How are policies and programs considering and/or alleviating the unique mental burdens associated with poverty?

This evaluation thus continues with a dual focus on evaluating the availability and efficiency of reduced-fee and rebate programs and the extent to which these policies/programs have a unique customer focus on low-income people.

---

<sup>22</sup> Human Centered Design principles and toolkit can be found at: <https://www.designkit.org/human-centered-design>

# POVERTY IN FORT COLLINS

Estimates of the number of households in poverty in Fort Collins are useful for determining how successful City Rebate programs have been in reaching low-income people. Are we reaching 5%, 25% or 90% of eligible households?

## MEASURING POVERTY

Multiple measures of poverty exist for divergent and diverse reasons. In the United States, poverty is typically measured by three, non-interchangeable indicators. These include Census Bureau poverty thresholds, the Federal Poverty Level (FPL) and area median income (AMI) thresholds. Each measure is relative to household size.

- **U.S. Census Bureau poverty thresholds** are measured annually, specific to region and used to determine official poverty population statistics for the nation, states and localities across the country. With this poverty threshold, one may broadly estimate not only how many people are poor, but how poverty is distributed by age, race, ethnicity, region and family type.
- **Federal Poverty Level (FPL) guidelines.** FPL reflects income cutoff levels annually issued by the Department of Health and Human Services. FPL is used administratively to determine financial eligibility for federal programs. While these guidelines do account for variability in cost of living across regions, FPL is not typically used to estimate regional poverty.
- **Area Median Income (AMI) thresholds** refer to the income level that divides the population income distribution of an area in half, with half the population above that income amount, and half below. AMI is generally analogous to the Department of Housing and Urban Development's (HUDs) Median Family Income estimates, which are broken down into low (households earning 80% of AMI), very low (households earning 50% of AMI) and extremely low (households 30% or less of AMI). These figures consider local area costs of living.

---

*Estimates of the number of households in, or adjacent to poverty in Fort Collins is useful for understanding how successful our City Rebate programs have been in enrolling low-income people.*

---

---

### ***Which poverty measure is most relevant for local government programming?***

*The Census Bureau's poverty thresholds are the same nationwide, no sperate figures for different states or cities. The FPL guidelines are simplified versions of the Census poverty thresholds and they exist only to determine financial eligibility for certain federal programs.*

***AMI is typically the most meaningful measure of poverty for most local government purposes. It accounts for local cost of living and is a good estimate of regional earnings.***

---

For estimating the larger pool of low-income individuals and families, this report uses the Census bureau poverty thresholds, given that the census is the most comprehensive dataset available that measures poverty locally and at different levels of age, household size and household composition. Generally, the Census poverty thresholds are slightly stricter, capturing more extreme poverty levels than, for example, the AMI estimates.

	Income limit for single individual	Income limit for family of 4	Current City Rebate/Reduced- Fee program using this measure...	How this report (2019 City Rebate Evaluation) uses this measure...
<b>Census bureau poverty thresholds</b>	<ul style="list-style-type: none"> <li>• \$13,064 (under age 65)</li> </ul>	<ul style="list-style-type: none"> <li>• \$25,465 (two adults, two children under 18)</li> </ul>	N/A	Estimating the pool of low-income individuals/households in Fort Collins.
<b>FPL guidelines</b>	200% FPL: <ul style="list-style-type: none"> <li>• \$24,280</li> </ul>	200% FPL: <ul style="list-style-type: none"> <li>• \$50,200</li> </ul>	Recreation: <ul style="list-style-type: none"> <li>• 185% FPL</li> </ul>	N/A
<b>AMI / HUD median family income estimates (separate estimates for county, state)</b>	60% State AMI: <ul style="list-style-type: none"> <li>• \$28,452</li> </ul> 50% County AMI: <ul style="list-style-type: none"> <li>• \$26,900</li> </ul>	60% State AMI: <ul style="list-style-type: none"> <li>• \$54,732</li> </ul> 50% County AMI: <ul style="list-style-type: none"> <li>• \$38,400</li> </ul>	<ul style="list-style-type: none"> <li>• LEAP/IQAP uses 60% of state AMI</li> <li>• FSA rebates uses 50% County AMI</li> </ul>	N/A

Lack of a comprehensive, localized poverty dataset for Fort Collins residents means that estimating the number of poor people in this community is a challenge.

Also, understanding the characteristics of these low-income households is important for evaluating the City's outreach effort and for assessing if any specific groups of people are not reached. For example, if female-headed households represent a significant proportion of our poor households, do we find a comparable proportion of them participating in our low-income programs?

If the absolute number of people participating in these programs is low or specific demographic characteristics are not represented in participant data, each has a bearing on the City Rebates programs' marketing effectiveness.

## HOW MANY PEOPLE ARE POOR IN FORT COLLINS?

Poverty rates are specific to the family, household or individual units of interest. Without controlling for students<sup>23</sup>, the individual poverty rate in Fort Collins according to the American Community Survey (ACS) administered by the Census Bureau, is 17%<sup>24</sup>. However, when controlling for a high student population (i.e., removal of all individuals between 18-35 years), the poverty rate falls to just over 6%. Knowing that not all residents in that age bracket within Fort Collins are students and that some students are, indeed, permanent residents in need of low-income services from the City, this report uses an average between 17% (as the upper

<sup>23</sup> Controlling" for students means accounting for the fact that our local student population has an outsized effect on the outcome of interest, in this case, poverty. Many students are stepping out of the economy and forgoing current wages in lieu of investing in their education in the hopes of future, higher earnings. By identifying and then isolating—as much as possible—students from the underlying population, we can see what poverty looks like in addition to, or outside of, students.

<sup>24</sup> 2017 American Community Survey 5-year Estimates 2013-2017. Note: all statistics use Fort Collins, City, not Metro Area.

bound) and 6% (as the lower bound) to arrive at a **city-wide poverty average of 12.2%**. With a population of 171,100 this means that over 20,000 individuals are low-income in this community.

The poverty rate for families, which, when compared to the total poverty rate of all individuals in the city, measures poverty within a much smaller pool that includes household units where 2+ people are related by blood or marriage (n= 33,531). The poverty rate for families is 6.4%. However, when the head of the family household is a sole female with no partner present, the rate is more than three times as high (20.8%).

Families are distinct from *households*, which include household units of one person or 2+ people that may or may not be related by blood or marriage (n= 61,532). Using the individual poverty rate of 17% as the upper bound and 12.2% (the poverty average that includes some students, but not all) as the lower bound, between 7,534-10,460 households are estimated to be poor within Fort Collins (Figure 7).

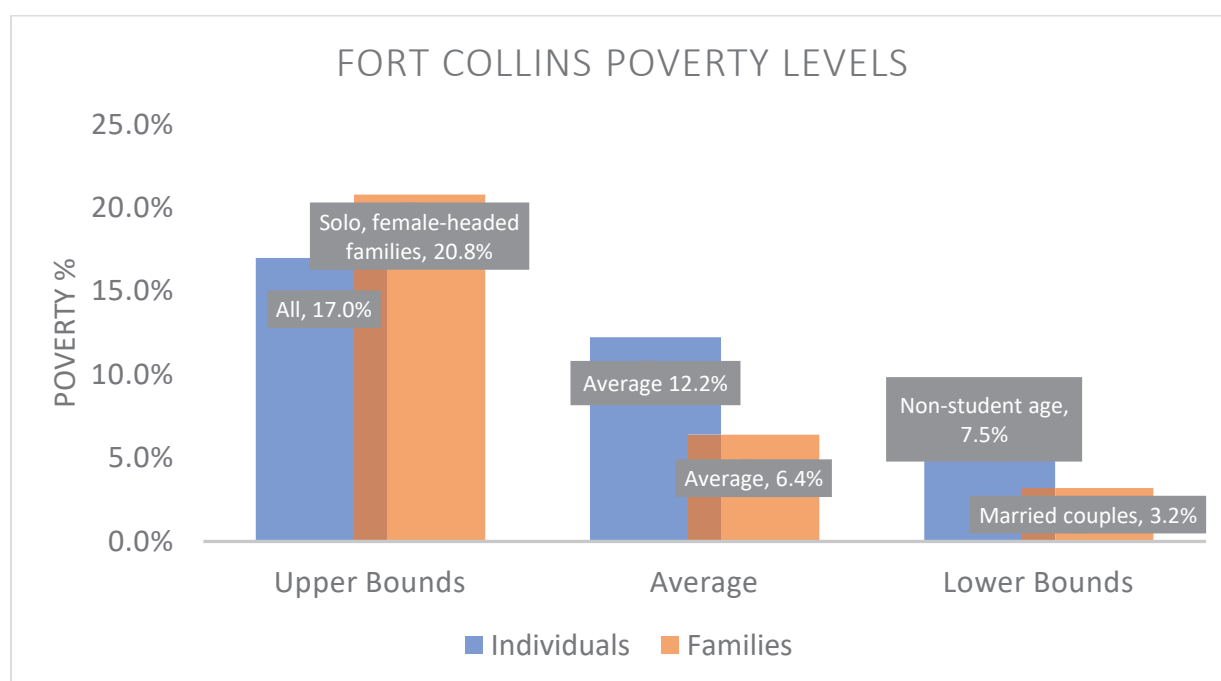


Figure 7: Fort Collins Poverty Levels

The difference between an adequate income, a sufficient income, and a low income is nuanced, and time bound. Being low-income means income insufficiency, i.e., not having enough income to cover basic expenses or living on ‘the edge’ of poverty. Adequate income means the general ability to recover from a life shock (an illness, a financial emergency). In Fort Collins, the Economic Policy Institute (EPI)<sup>25</sup> identifies an adequate income for 1 adult living in Fort Collins to be \$38,947. In contrast, the self-sufficiency standard for Larimer County is \$25,124, suggesting a significant gap between sufficiency and adequacy, in other words, between having or not having a financial cushion to survive a negative economic shock/event. In terms of income adequacy, a couple with two children would require an income of over \$89,000 for an ‘adequate’ life in Fort Collins (EPI 2019).

---

### ***Poverty in Fort Collins: getting the numbers straight***

---

- ***2,146 estimated poor families: defined as family units, 2+ people who live together who are related by birth or marriage.***
- ***7,534-10,460 estimated range of impoverished households: defined as home-units of one or more people who may or may not be related by birth, marriage, etc.***
- ***20,948-29,087 estimated impoverished individuals: total number of estimated individuals, based on a total population number of 171,100***

While measuring actual poverty rates in Fort Collins is important, knowing the number of people who are living on an income that puts them *at risk* of falling into poverty is also important. In our community, the latter is much greater than the former.

## **WHAT CHARACTERIZES THE POOR IN FORT COLLINS?**

---

While some of the characteristics of individuals and families facing poverty are well-known, others remain hidden and are specific to particular regions and unique economic realities. Within Fort Collins and across Colorado, race plays an important role. Native Americans, Blacks

and Hispanic/Latinx workers have lower incomes, higher poverty rates, fewer assets, lower educational attainment levels, lower homeownership rates and poorer health outcomes than the majority white population<sup>26</sup>.

In Fort Collins, the median household income for non-white racial groups is approximately \$42,333 lower than for white households<sup>27</sup>.

---

***What characteristics make someone more likely to be poor in Fort Collins?***  
*Being Black, Hispanic/Latinx, and female. Women are 10% more likely than men to experience poverty.*

***What kinds of families are poor in Fort Collins?***  
*26% of female-headed households (no partner present) experience poverty in this community.*

---

<sup>25</sup> The Economic Policy Institute (EPI) is a nonprofit, nonpartisan think tank created in 1986 to include the needs of low- and middle-income workers in economic policy discussions.

<sup>26</sup> Bell Policy Center, (2018). Guide to Economic Mobility in Colorado. <https://www.bellpolicy.org/wp-content/uploads/2018/01/Guide-to-Economic-Mobility-FINAL.pdf>

<sup>27</sup> City Plan Fort Collins, 2019. <https://ourcity.fcgov.com/cityplan/documents> (p.22-23).

While Latinx families have a higher probability of being poor when compared to their white counterparts, in terms of absolute poverty numbers, Latinx represent a smaller share of the poor

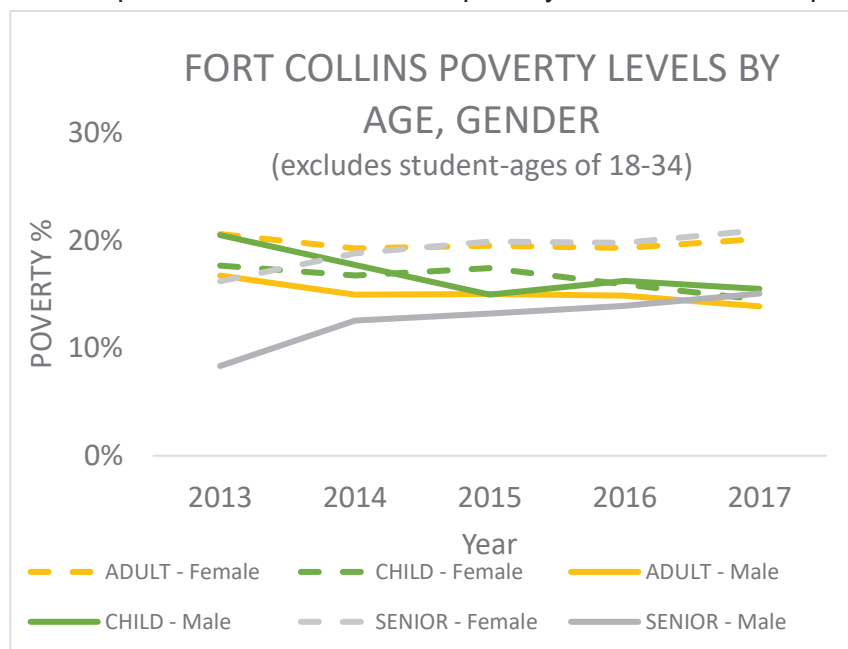


Figure 8: Poverty by age, gender

population at large. Nearly 3 out of 4 low-income individuals are classified as white.

Two other characteristics show up in the City's poverty data: age and gender (Figure 8). Each plays an important role in determining poverty status. At first glance, the City's high population of students indicates that the majority of the poor (around 30% of the local poverty population) are students between the ages of 18-24. However, controlling for a high the student population (i.e., removal of that age demographic), paints a different picture of what age

groups and genders are suffering poverty<sup>28</sup>. Senior females (ages 60+) and, surprisingly, adult women characterize the most impoverished demographics. Adult men are least likely to be impoverished. Throughout the last five years, this data suggests that women have a higher poverty percentage by more than 10 percentage points, compared to males.

## SUMMARY: WHY IS UNDERSTANDING AND ADDRESSING POVERTY NEEDS FOR FORT COLLINS IMPORTANT FOR THE CITY?

Understanding the characteristics of the city's low-income households is important for evaluating the City's outreach efforts and for assessing how and if specific low-income people are successfully participating in relevant City programs. **The City's vision is to provide world-class municipal service and its mission is to provide exceptional service for an exceptional community; this includes the services and policies targeting resident customers who are low income.**

Low-income people in Fort Collins, like elsewhere, are not homogenous. In Fort Collins, certain demographic groups are disproportionately low-income, requiring different outreach, marketing and strategic efforts. In Fort Collins, this includes women, especially senior and adult women, in addition to people of color.

The demographics of low-income people may or may not be unique when compared to other

**City Vision:** To provide world-class municipal services through operational excellence and a culture of innovation.

**City Mission:** Exceptional service for an exceptional community.

<sup>28</sup> Importantly, the typical datasets available through the census –as used in this evaluation-- do not capture data on non-binary or gender fluid individuals. The authors recognize that this leaves an entire population of people out, and laments another example of institutionalized gendering.



communities, but better knowledge of this population and the unique demographics that they embody offers an important opportunity for the City to assess impact, better target, and specifically design policies and programs for these users of government services.





## **PART 1: INDIVIDUAL REBATE & REDUCED-FEE PROGRAMS**

# UTILITIES AFFORDABILITY PORTFOLIO: REDUCING ENERGY/WATER COSTS

As an umbrella program, the Utilities Affordability Portfolio (UAP) houses multiple programs for low-income and/or vulnerable populations seeking to obtain affordable electrical, water and wastewater utility services from the City of Fort Collins. The UAP includes:

1. **Medical Assistance Program (MAP).** This program provides financial assistance for income-qualified individuals who have a doctor-approved medical condition that requires medical equipment that uses additional energy (e.g., a ventilator or air conditioning).
2. **Income Qualified Assistance Program (IQAP).** This program allows eligible low-income individuals to be charged a lower rate for their energy, water and wastewater service.
3. **Payment Assistance Fund (PAF).** This program provides one-time assistance for individuals who experience a sudden economic shock and are unable to pay for utility service temporarily.

To find the best program or programs for a customer, the City of Fort Collins Utility (CFCU) Customer Service Representatives (CSRs) or the UAP program manager work together to identify the best fit for a customer's unique needs.

## HISTORY

Energy prices are uniquely stable in Fort Collins and across Colorado, given the energy sources for heating and cooling available in the state. Throughout the span of the CFCU, various programs have existed within Utilities to support low-income customers, including some dating back to the 1980s<sup>29</sup>. In 2005, the CFCU implemented a Payment Assistance Fund and in 2012, City Council passed a tiered rate system for utility customers.

---

*2019 marks the first pilot-year of the Income-Qualified Assistance Program.*

---

At the time that the 2012 tiered system was adopted, concerns were raised about the impacts the tiered rates would have on low-income individuals and families. A small group of citizens expressed concern that their medical needs required them to use additional energy and thus they would be disproportionately affected by a change in utility costs. This confluence of events launched interest in and development of the Medical Assistance Program (MAP), which began that same year, and catalyzed a cross-functional City team to explore opportunities around greater low-income programming for energy and water assistance.

## LAUNCHING IQAP

While the MAP was launched quickly, the low-income programming work took much longer to design, develop and ultimately be approved by Council. Starting in 2013, a cross-functional exploratory group consisting of Utilities staff, City staff, and local non-profits, considered programs that could address chronic energy poverty as well as a temporary crisis. Regarding the latter, the City's Payment Assistance Fund (PAF) had been implemented in 2005, and the team considered what improvements could be made to strengthen and support the existing

---

<sup>29</sup> Ordinance No. 8, 1985 specifies the conditions and funding of the REACH program (formerly known as SAVE).

program. Major recommendations in the 2014 Low-Income Assistance Program Report, Fort Collins Utilities included:

1. Establish definitions of low-income criteria for participation, including:
  - Verification of low income (using AMI)
  - Confirmation as a Utilities customer
  - Participation in efficiency/conservation education
2. Administer temporary crisis relief via PAF.
3. Acknowledge chronic poverty situations with an income-qualified rate (IQR) for customers falling between 0-29% AMI and for those between 30-50% AMI.
4. Eliminate the MAP, given the above-mentioned rates for eligible low-income individuals and families.

When the recommendations for an IQR came through City Council in 2016, discussion was tabled and development and execution of an IQR stalled. Over the next year, the PAF and MAP continued to operate as staff waited for another opportunity to bring the IQR before Council. When Utilities took the Time-of-Day (ToD) Utilities pricing to Council in 2017, the conversation renewed interest and prioritization of an IQR. In early 2018, Council passed the IQR <sup>30</sup>.

Throughout 2018 the program was researched and conceptualized, and a pilot was launched in the fall of 2018. In the fall of 2019, the IQR, now called the Income Qualified Assistance Program (IQAP), completed its first pilot year and Utilities is scheduled to report initial progress to Council after analysis of the first year is completed by CFCU staff.

## PROGRAM BUDGET, COORDINATION, OUTREACH AND OPERATIONS

---

Today, the umbrella UAP manages multiple programs including the MAP, the PAF, and IQAP (previously discussed as the IQR). For the first-year pilot of IQAP, the program has leveraged a relationship with the Colorado Low-income Energy Assistance Program (LEAP), a state-wide effort to provide a more holistic set of services for low-income individuals requiring utility-cost reduction. While IQAP is still in its infancy, spatial mapping suggests that there is UAP participation across the city (Appendix B).

For IQAP participation, CFCU customers must first apply through LEAP and become LEAP-qualified to participate. Once an individual's status as a LEAP-qualified participant has been verified, the CFCU then confirms that the individual is a CFCU customer for one or more of following: water, wastewater and/or electricity. After submitting an IQAP-specific application (Appendix D), an individual's rate is then adjusted to provide a monthly discount. A full review of the IQAP program process may be found in Appendix C.

---

<sup>30</sup> City Council Work Session on January 30, 2018.

[http://citydocs.fcgov.com/?cmd=convert&vid=72&docid=3100394&dt=AGENDA+ITEM&doc\\_download\\_date=JAN-30-2018&ITEM\\_NUMBER=02](http://citydocs.fcgov.com/?cmd=convert&vid=72&docid=3100394&dt=AGENDA+ITEM&doc_download_date=JAN-30-2018&ITEM_NUMBER=02)

## BUDGET AND RESOURCES

	<i>2019 FTE</i>	<i>2019 Budgeted</i>
<i>Personnel</i>	2.35 (spread over 5 people)	\$129,740
<i>Programmatic</i>		\$16,939
<i>Annual program spending in 2019</i>		<b>\$146,679</b>

The UAP program provides dedicated budget resources for programmatic costs like marketing, printing, postage and other material and supply costs. One full-time FTE manages the portfolio year-round, building relationships with non-profits and key stakeholders, and directly interfacing with CFCU utility customers who are (or could be) enrolled in IQAP or MAP. The CFCU also devotes a proportion

of time from a supervisor and several support FTE (4 total) to support the UAP. Customer Service representatives may also devote time to UAP as they interact with and/or refer residents to the UAP program.

Given that IQAP and MAP represent reduced rates, the program estimates dollars 'saved' by customers as a method of estimating dollars invested in UAP programming. In other words, dollars saved represents revenue forgone for the CFCU in pursuit of a larger social goal. IQAP, for example, found actual customer savings of \$137,614 in 2019. Project staff expect the 2020 savings to increase due to rate increases.

Funds available for distribution within the PAF vary annually. The PAF is replenished by agreements with Energy Outreach Colorado who matches CFCU dollars 1:1 to support customers needing payment assistance. Additionally, unclaimed utilities funds are also annually deposited into the PAF and individual community donors may opt to pay into the PAF directly with an individual contribution<sup>31</sup>. From these sources, between \$120,000-\$160,000 are annually pooled for the PAF.

## COORDINATION WITH LEAP

The income verification step required by all City rebate and reduced-fee programs represents a time and data-intensive burden for staff. The processes require that departments provide training and follow adequate data security measures to ensure the privacy of participant data (see Appendix C, IQAP program process).

For IQAP, the coordination with the state-managed LEAP provides the following benefits:

1. Reduces the CFCU/UAP burden of income verification and eliminates a second round of income verification requirements for applicants.
2. Ensures low-income people are receiving information about additional, necessary energy/water assistance services available through State/local partners for services including weatherization and conservation education.
3. Provides increased program visibility via LEAP outreach that occurs through other local LEAP administrators such as non-profit agencies, etc.
4. Provides additional promotional opportunities via LEAP outreach assets, e.g., mobile LEAP application van at pop-up events, etc.

A list of potential IQAP applicants is circulated quarterly between LEAP and the UAP. The UAP uses this list to identify potential IQAP customers and verify LEAP status (which is a prerequisite

<sup>31</sup> For example, unclaimed funds deposited into the PAF in 2018 and 2019 were \$50,866 and \$59,327, respectively.



for IQAP participation). The UAP team does not verify income but does require an additional application apart from the original LEAP application. The steps in identifying IQAP participants include:

1. Verification that individuals on the 'master LEAP list' are in fact CFCU customers. Staff must also identify the type of service received (i.e., wastewater, water, wastewater and electricity). **In 2019, total LEAP participation with a Fort Collins address was 1,652.**
2. Sending this 'verified list' back to LEAP, whereby LEAP inserts additional sensitive information (mailing address, home type, etc.). **In 2019, 29% of LEAP-enrolled individuals are not verified CFCU customers.**
3. Upon receipt of the verified member list from LEAP, UAP may conduct marketing and outreach to grow IQAP membership or quickly verify LEAP status if a LEAP participant decides to participate in IQAP.

---

*In the 2018-2019 pilot year, CFCU's IQAP program reached ~60% of eligible, LEAP qualified participants.*

---

Even though IQAP applicants enrolled in LEAP have already had their income verified, the CFCU requires an additional IQAP application for enrollment. Staff designing the original program in 2014 had recommended an auto-enroll option once LEAP verification and CFCU customer status was confirmed. When the pilot eventually began, a then-Councilperson requested an additional IQAP application (which included an affidavit). Conversations among a new Council, Executive Leadership and UAP staff in 2019 have signaled renewed interest in understanding the merits of auto-enrollment without a separate application. Recently, Executive Leadership has asked for additional information about the need and use of affidavits for the City's public benefit programs<sup>32</sup>.

## OUTREACH

Nonprofit partners surveyed within the community indicated a strong familiarity with the program (Figure 9). This year, the IQAP program was promoted by CFCU and LEAP at various Larimer County Conservation Corps events like the 'How to Read Your Bill' training in January 2019. It

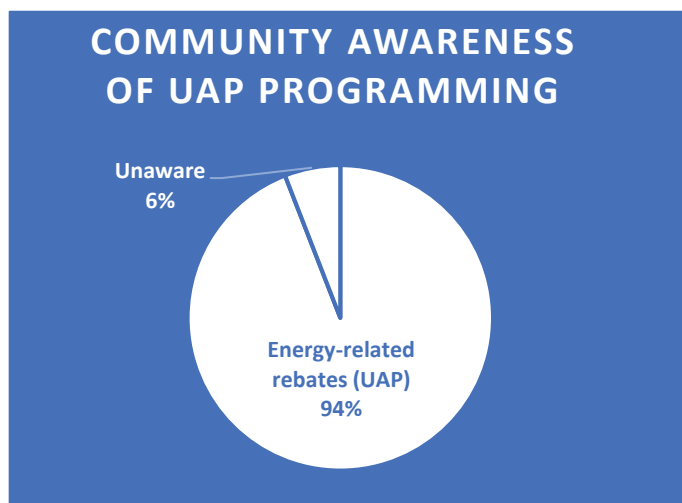


Figure 9: Community awareness of UAP programming

was also promoted at other community events like the Jax Homestead Day, the Work Life Balance Resource Fair, the CSU Career Discussion Panel and various CFCU billing trainings held at the Senior Center. IQAP outreach also benefits from 'pop-up' outreach provided by the mobile LEAP van. The van arrives at various community events throughout the year such as events put on by Larimer County, the Lions Club, CSU, and provides on-site enrollment.

The PAF, however, functions via referrals from non-profit agencies working with low-income individuals and families who are at risk of immediate utility shut-. CFCU may also identify individuals and families via

<sup>32</sup> January 2020 memo entitled City of Fort Collins Public Benefits and Legal Status Requirements Memorandum.

Customer Service Representatives.

## OPERATION

### UAP At a Glance<sup>33</sup>

PAF – emergency utility assistance	<b>Key Facts</b> <ul style="list-style-type: none"> <li>350 participants for 2018-'19 season.</li> </ul> <b>Rebate impact</b> <ul style="list-style-type: none"> <li>PAF allocates approximately \$80,000 to families.</li> <li>Average customer benefit \$250/month.</li> </ul>	<b>Application/requirements</b> <ul style="list-style-type: none"> <li>Applicant utility account must be in arrears.</li> </ul> <b>Income Verification</b> <ul style="list-style-type: none"> <li>Income verification is typically done through a non-profit partner.</li> <li>Income threshold is 80% Larimer County AMI<sup>34</sup>.</li> </ul> <b>Key Focus</b> <ul style="list-style-type: none"> <li>PAF is focused on one-time, emergency assistance.</li> <li>It is not intended to mitigate chronic poverty issues.</li> </ul>
	<b>Key Facts</b> <ul style="list-style-type: none"> <li>167 participants in 2019.</li> </ul> <b>Rebate impact</b> <ul style="list-style-type: none"> <li>Average savings were between \$86-\$185 annually, depending on medical device use and corresponding rate code.</li> <li>MAP customers saved ~22% on their overall energy bill in 2019<sup>35</sup>.</li> </ul>	<b>Application/requirements</b> <ul style="list-style-type: none"> <li>Unique application is required and managed by UAP (Appendix E).</li> <li>Medical justification described and signed-for by a medical doctor.</li> </ul> <b>Income Verification</b> <ul style="list-style-type: none"> <li>Income is self-reported via applicant and not typically verified by the CFCU.</li> <li>Income threshold is 60% Larimer County AMI.</li> </ul> <b>Key Concerns</b> <ul style="list-style-type: none"> <li>MAP and IQAP can be duplicative. Staff recommended back in 2014 that the MAP program be phased out once IQAP was established.</li> <li>IQAP tends to be a better rate for low-income customers who qualify.</li> </ul>
IQAP – reduced utility rate	<b>Key Facts</b> <ul style="list-style-type: none"> <li>~700 monthly participants in 2019.</li> </ul> <b>Rebate impact</b> <ul style="list-style-type: none"> <li>~23% discount applied</li> <li>Participants saved an average of 19% for electric, 20% for water, 23% for wastewater.</li> </ul>	<b>Application/requirements</b> <ul style="list-style-type: none"> <li>LEAP application &amp; acceptance is required.</li> <li>IQAP application and affidavit required (Appendix D).</li> <li>Must be a verified CFCU utilities customer.</li> </ul> <b>Income Verification</b> <ul style="list-style-type: none"> <li>Income is verified via the state-managed LEAP program.</li> <li>Income threshold for LEAP is 165% of Federal Poverty Line. For the 2019/2020 season, this changed to 60% State Median Income, effectively expanding the pool of eligible households.</li> </ul>

<sup>33</sup> Figures on participation and savings are current as of December 2019. In 2019, ~700 residents participated in IQAP of an available pool of 1,144 LEAP-qualified residents living in Fort Collins and receiving utilities from CFCU.

<sup>34</sup> This threshold is set by Energy Outreach Colorado, a statewide nonprofit agency that manages energy poverty work on behalf of the State and matches CFCU funds devoted to energy assistance 1:1.

<sup>35</sup> Savings are relative to non-discounted Utilities customers. Figures for MAP reflect 2019 August Year-to-Date.

---

### Key Concerns

- MAP and IQAP can be duplicative. Staff recommended back in 2014 that the MAP program be phased out once IQAP was established.
  - Lack of auto-enroll means that applicants to IQAP must fill out another application in addition to LEAP.
  - IQAP tends to be a better rate for low income customers so many MAP customers are pushed to apply for IQAP instead.
- 

MAP participants are typically identified through conversations with customers or through referrals (other customers, non-profits, etc.). CFCU does not typically conduct direct outreach for MAP, nor do they target specific individuals. There is ongoing discussion in Utilities about program redundancy for MAP, given the launch of the IQAP.

In general, the UAP team benefits from a CFCU department-wide system housed within the CFCU Customer Connections department that tracks outreach efforts in a systematic and standardized way. The department's prioritization of systematic data capture, combined with adequate documentation, ensures the UAP team uses historical and current data to identify what the program has done and benchmark against future progress.

## PARTICIPATION PATTERNS

---

With the pilot year completed, a picture of who is participating in IQAP is beginning to emerge. However, it will take several years of data to fully understand exactly what is driving participation numbers and how individual and household characteristics (family size, geography, socio-economic factors, etc.) describe participants (see Appendix B for geographical participation patterns).

Individuals and families dealing with energy poverty fall into one or more categories, each of which are served by a specific UAP program:

- **The chronically poor, often on fixed incomes.** These individuals and families are not pushed into poverty via sudden events or macroeconomic changes but have insufficient income regardless of any complicating external circumstances (Energy Outreach Colorado Interviews, 2019). These are customers best served by the IQAP and LEAP.
- **The temporarily or suddenly poor individuals and families.** This includes those experiencing a sudden, acute economic shock. These customers are best served by the PAF.
- **Individuals managing disabilities or medical issues.** Many of these individuals and families could be served by the IQAP but are currently served by the MAP. Importantly, it is not known exactly how many people qualify for MAP but would not qualify for IQAP.

## CUSTOMER AND COMMUNITY SATISFACTION

---

At the close of the first pilot year (2018-2019), the CFCU program manager for the IQAP ran a survey to understand the impact and satisfaction of customers participating in the inaugural IQAP program. Out of the 137 participants who filled out the survey, 42% replied with a comment specifically calling out the benefit of reduced stress or satisfaction with a lower bill. Nearly that same amount also cited the additional benefit of conservation education, a key part of the IQAP program.

---

*42% of surveyed IQAP customers specifically called out the benefit of reduced stress and satisfaction with a lower bill.*

---

After the completion of the pilot, additional research will be done to evaluate participant experiences. However, survey evidence suggests that respondent non-profits supporting low-income individuals and families in Fort Collins are

satisfied with the CFCU income-qualified assistance program. In part, the linking of the IQAP program with LEAP qualification means non-profit and community organizations are better able to leverage a single verification process for enrolling an individual and family into a more holistic set of services.

## PROGRAM-SPECIFIC RECOMMENDATIONS

---

As the pilot year of IQAP ends, an upcoming review with a year's worth of data will tell a lot about how the program is functioning, who is benefitting, and where improvements may be made. Even without a complete dataset, several recommendations are outlined in this report (see the adjacent table). The recommendations include structural changes, like the elimination of the MAP program, strategic changes like the identification of goals and objectives beyond simply administering the program, and systematic improvements like an improved customer feedback survey. Assessing how many MAP customers would not qualify for IQAP should be undertaken before elimination of the MAP program. However, even if 50% didn't qualify (~80 current MAP participants), the pool is small enough for CFCU to consider 'grandfathering' any unqualified individuals into the IQAP program.

Importantly, the program management staff running the UAP program enjoy strong community collaboration and are very much admired and respected for their hard work in the community. While they may improve by standardizing and strengthening a customer feedback survey, the UAP team benefits from a department-wide system (CFCU Customer Connections) to track outreach efforts. This department infrastructure enables the team to use historical data to identify what they have done (benchmarking) and what they can do to improve (goalsetting). A 2020 outreach action plan is currently being developed. A summary of recommendations may be found in the adjacent table.

Improvement area	Notable progress	Improvement & recommendation	Recommendation rationale
<b>Structure</b>	IQAP was successfully launched and progressed through first pilot year.	1. Merge MAP with IQAP and remove duplication.	MAP is a small program that requires significant staff management. Alongside the IQAP it is redundant, as most users of MAP could be rolled into the IQAP and receive comparable benefits.
<b>Strategy</b>	Targeted marketing is occurring with LEAP (IQAP) but less for other programs (PAF, MAP).	2. Target remaining residents who participate in LEAP but not IQAP. 3. Identify and document goals and objectives.	Continuing to support LEAP participation (and thus IQAP participation) with non-profit partners, events, etc.  Beyond administering the program, identify long and short-term goals, create milestones and further develop a framework to assess impact.
<b>Systems</b>	Successful, close working relationship with LEAP program.  Customer service survey implemented.	4. Reduce re-work and redundancies in developing IQAP master-list with LEAP. 5. Formalize and standardize user-survey to track customer satisfaction.	Work with local LEAP program officers to eliminate redundancies in identifying eligible participants. For example, eliminate construction of 3 different lists between LEAP and the City to identify potential program participants.  Survey used to assess participant satisfaction may be improved to provide greater insights (better questions, survey participation incentives and improved survey design) to identify what customers value in IQAP.

# FINANCE REBATES: PROVIDING TAX RELIEF

## HISTORY

The Financial Services Area (FSA) within the CoFC has been issuing three types of rebates to low-income Fort Collins residents since the early 1970s. These include:

- **Grocery Tax Rebate (GTR):** estimated average annual taxes paid on groceries are reimbursed. Eligibility: any income-qualified resident.
- **Property Tax Rebate (PTR):** a proportion of the amount of city property taxes obtained via property tax issuance (the majority of property tax is levied by the county) is refunded. If the eligible resident is a renter, a small proportion of annual rental payments are refunded. Eligibility: any income-qualified resident who is either age 65+ and/or is disabled or is caring for a disabled household member.
- **Utility Tax Rebate (UTR):** a portion of relevant city utility taxes (wastewater, electricity and water) paid as a part of the customer's overall utility bill are refunded. Eligibility: any income-qualified resident who is either age 65+ and/or is disabled or is caring for a disabled household member.

Collectively, the report refers to these three rebates as FSA Rebates.

## OBJECTIVES AND ELIGIBILITY EVOLUTION

Ordinances establishing the provision of the PTR (1972) and the UTR (1975)<sup>36</sup> focused on two aspects of eligibility: a resident had to be both elderly and prove that they were low-income (see application in Appendix F). Over the next 30 years, there was a slight expansion of eligibility criteria when, in 1980, disabled people were added via Ordinance No. 17.

In 1985, the Ordinance for the administration of the GTR was enacted. Unlike the PTR and UTR, however, this rebate was not age restricted. Any individual or family who met the low-income criteria threshold could obtain a City rebate for estimated taxes paid on groceries. Over the years, other differences between the various Finance rebates were harmonized (for example, differing income thresholds), but age restriction remains the major difference between the GTR and the PTR/UTR today.

The income threshold for all the rebates within the FSA Rebate program is 30% of County AMI. AMI is updated annually by the County in conjunction with the federal Department of Housing and Urban Development. While AMI is a shared measurement used by LEAP/IQAP, the income threshold for FSA rebate programs (30%) is much lower than that used by UAP (60%). Ultimately this means a smaller, much more impoverished pool of participants is eligible for FSA Rebates.

Importantly, and unlike the Utilities UAP program, the Finance Department continues to verify income directly and manually<sup>37</sup>.

---

<sup>36</sup> See Ordinance No. 17, 1980 of the Council of the City of Fort Collins. Also see Chapter 25, Article II, Division 2 of the City Code

<sup>37</sup> See Ordinance No. 17, 1980 of the Council of the City of Fort Collins. Also see Chapter 25, Article II, Division 2 of the City Code.



## MANAGED AS A 'SEASONAL' PROGRAM

As outlined in the original PTR Ordinance in the 1970s, the PTR program in Finance still functions on a rebate 'season,' running from August through October. During that period, the application window is 'open,' meaning submitted applications must be verified, reviewed, and any deficiencies followed-up on during that three-month period. Rebates and final application decisions may be made after the October 31 deadline, depending on application volume. While the window is open, the Sales Tax Team and the Accounts Payable staff manage increased traffic at the Finance Department front desk, upwards of a 75% increase over normal volume, on top of normal workloads.

For rebate seekers, all documentation gathering must occur and a complete application must be submitted before the October 31st deadline. For staff, the application season signals a period of intense customer contact, outreach to local non-profit partners to elicit their marketing support, data input and rebate issuance (or rejection). The month(s) before/after the application window is used for data input, outreach and process improvement.

## MANAGED WITH FEW/NO ADDITIONAL RESOURCES

Early in the program, the management of the FSA Rebates was done by a volunteer and later by an Executive Assistant who managed the program in addition to their full-time role. Not until the early 2010s were specific funds allocated to hire an hourly worker for three months to help process applications during the application window. Today, the program is managed by the Sales and Use Tax department in FSA, where a small but supportive staff of auditors, analysts and technicians juggle their current workloads with the rebate programs when the season occurs.

In 2019, Financial Services was successful in adding an additional permanent sales tax technician to the Revenue Department's staff. A portion of this position (33%) will be devoted to the FSA rebate program in order to address issues of continuity and build relationships with community partners for greater rebate usage and program success.

In addition, the Sales Tax team has recently utilized the City's enterprise wide Accounts Payable Automation software to process the rebate payment requests, saving the Accounts Payable staff significant back office work. While this was a change for the Sales Tax team and illustrated further need for system improvements within the Govern, sales tax software, Sales Tax team adoption of the standard payment processing system was beneficial in that it resulted in payment tracking, eliminated duplicate entry from the accounts payable staff, and decreased the time from payment submission to printed checks.

Importantly, beyond ensuring and improving the ability to take and process applications, there has been little time allotted for FSA Rebates staff to engage in strategic planning or outreach innovation. Finance staff associated with the program have leveraged existing City programs and non-profit partners to ensure cross-promotion of the rebates, but customer-centric outreach has remained an understaffed challenge.

## PROGRAM BUDGET, OBJECTIVES, OUTREACH AND OPERATION

---

Operational improvements have been made by dedicated Finance staff who contribute time in addition to their normal workloads. A strategic plan linking actions (marketing, outreach, etc.) to long- and short-term goals, however, is absent. As of 2019, short-term operational and long-term strategic goals need clarification and formalization via improved documentation and socialization with staff.

Informally, the FSA Rebate program tracks an annual goal of increasing participation by 10% based on the previous year's participation. This goal is documented via the City's dashboard metrics. Without a strategic plan articulating actions, identifying community stakeholders, and linking actions and collaboration efforts to goals, reaching this 10% goal of increased participation has been elusive in recent years (Figure 11).

After increasing from 2011-2014, overall rebate participation has declined in the last five years, even as renewed attention has been given to marketing efforts (Figure 10).

As a result, total funds issued to residents decreased from \$276,657 in 2014 to less than \$241,762 in 2018 (Figure 10). Out of a program budget of ~\$20,000, only approximately \$5,000 is dedicated to marketing and outreach.

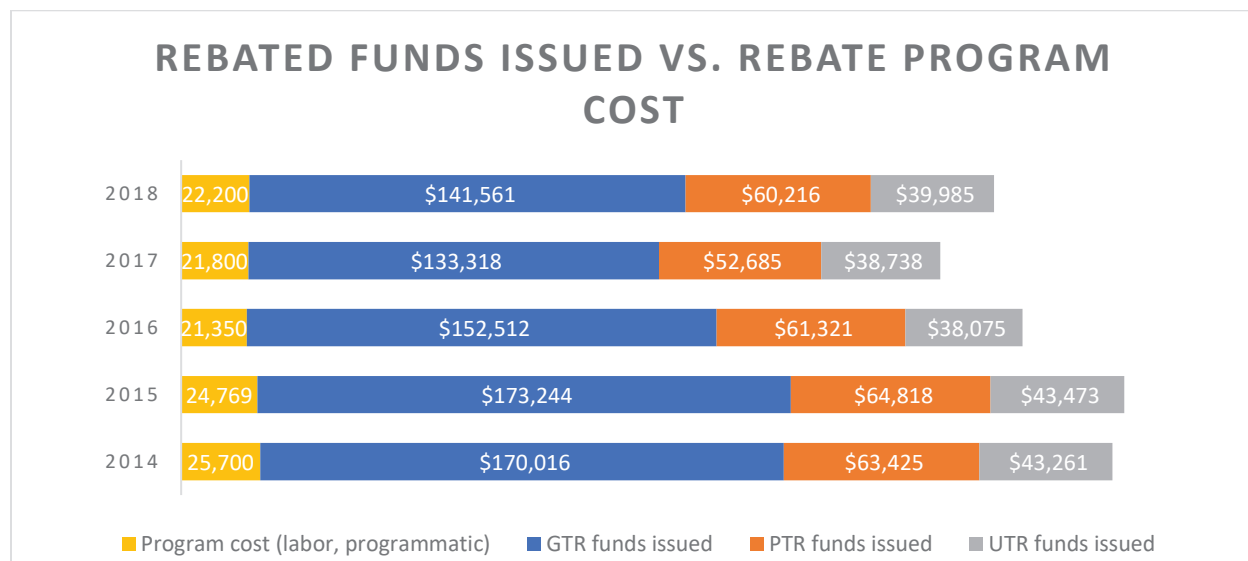


Figure 100: FSA Rebate Funds Issued vs. Program Cost

The basic operation of the FSA Rebates program is described below (see Appendix H for a rebate process map).

## Tax Relief: FSA Rebates At-A-Glance

### Program-wide facts

- 1172 participants in the 2018 rebate season (across rebate types)
- Approx. \$240,000 budgeted dollars for rebates.
- As of 2019, 33% of one FTE (Sales Tax Technician) is a devoted staff resource. Additional support is given in time donated by full-time, Sales Tax and other FSA staff.
- Little capacity to respond to program participation growth or engage in strategic planning, research and program development; the priority is keeping the program 'running.'

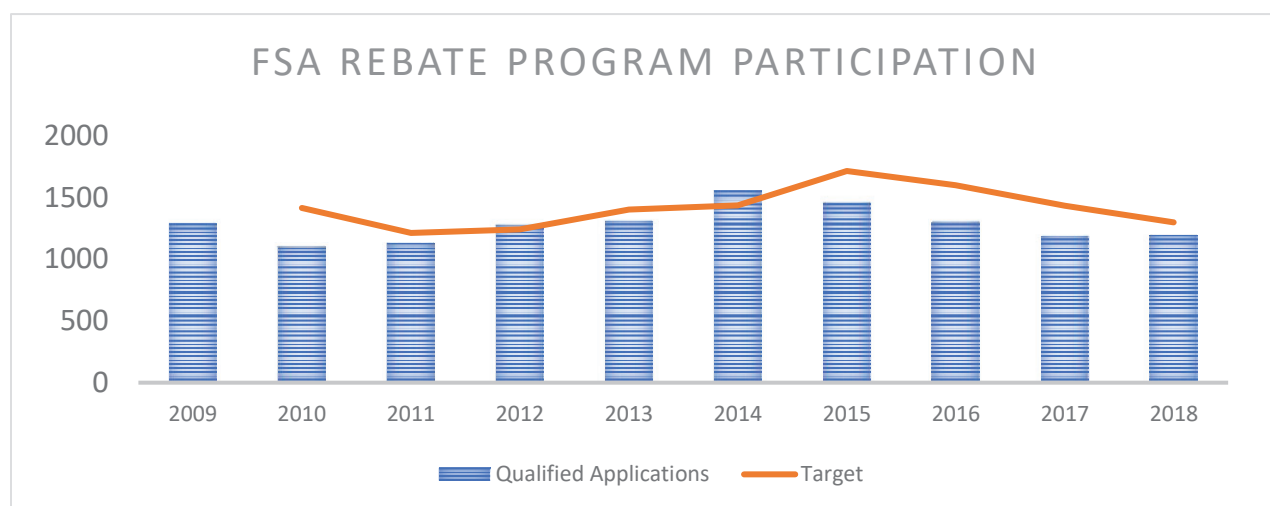
Grocery Tax Rebate (GTR)	Rebate and rebate amount:	Application Requirements
	<ul style="list-style-type: none"> <li>• Flat refund of estimated grocery sales tax paid. Estimates are calculated annually.</li> <li>• Rebate of \$64/qualifying household member.</li> <li>• 2016 average refund: \$117 per</li> </ul>	<ul style="list-style-type: none"> <li>• Proof of income less than 50% of Larimer County AMI; and,</li> <li>• Valid photo ID.</li> </ul> <p><b>Qualification criteria</b></p> <ul style="list-style-type: none"> <li>• Income;</li> </ul>

	household application.	<ul style="list-style-type: none"> <li>No age criteria.</li> </ul>
Property Tax Rebate (PTR)	<b>Rebate and rebate amount</b> <ul style="list-style-type: none"> <li>Reimbursement of the total City property tax paid on the property for the preceding year<sup>38</sup>.</li> <li>If renting, 1.44% of annual rent is reimbursable.</li> <li>2016 average refund: \$85 per household application.</li> </ul>	<b>Application requirements</b> <ul style="list-style-type: none"> <li>Proof of Income less than 50% of Larimer County AMI.</li> <li>Valid photo ID.</li> </ul> <b>Qualification criteria</b> <ul style="list-style-type: none"> <li>Income;</li> <li>Elderly (65+) and/or disabled.</li> </ul>
	<b>Rebate and rebate amount</b> <ul style="list-style-type: none"> <li>Reimbursement is based on the average monthly consumption of water, wastewater, wastewater and electric services. Applicant is entitled to a refund only for actual utility services received.</li> <li>2016 average refund: \$69 per household application.</li> </ul>	<b>Application requirements</b> <ul style="list-style-type: none"> <li>Proof of Income less than 50% of Larimer County AMI.</li> <li>Valid photo ID.</li> </ul> <b>Qualification criteria</b> <ul style="list-style-type: none"> <li>Income;</li> <li>Elderly (65+) and/or disabled.</li> </ul>

## PARTICIPATION PATTERNS & CUSTOMER SATISFACTION

### DECLINING PARTICIPATION DESPITE A GROWING POOL OF ELIGIBLE HOUSEHOLDS

Overall participation in the FSA Rebates program has steadily declined over the last five years (Figure 11). In 2018 there was a slight uptick, but the program has continued to serve a narrow demographic of older residents who have an average income of just over \$16,000 and small household sizes (1-2 people). Estimates from this study suggest that a growing number of poor,



<sup>38</sup> The following calculation is used to determine your property tax: Actual Value x Assessment Rate x Mill Levy / 1000 = Property Tax. Example: \$300,000 Actual Value x 7.20% Assessment Rate = \$21,600 Assessed Value \$21,600 Assessed Value x 86.49 mills/1000 = \$1,868.18 tax bill

working families are not captured in this program and that an updated understanding of the community's low-income population is necessary.

Using 2018 rebate usage data and 2016 5-year census estimates, the FSA Rebates program was estimated to have reached 10-13% of eligible households (7,534 – 10,460 households) (see Figure 2).

Based on an analysis of participant data, the characteristics of an individual or family leveraging the City's FSA Rebates program are as follows:

1. **In general, the smaller the household size, the older the applicant. The inverse is also true: the larger the household size, the younger the applicant.**
2. **Most applicants are seniors in their mid-sixties (median age across household sizes is 64).**
3. Most applicants come from **small household sizes of 1-2 people** (Figure 15).
4. **Median age for an applicant with three or more people in their household skews younger... much younger** (median age is ~40).
5. **Very low-income.** Across household sizes and over the last five years, a typical applicant had an income of approximately \$15,300 (median) per household. For a household of 4, a typical applicant had a median income of \$20,722 (86% of Federal Poverty Level).

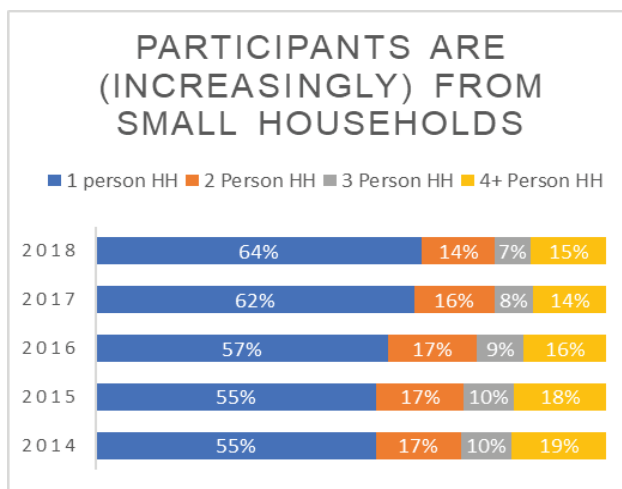


Figure 12: FSA Rebates and household size

## GEOGRAPHIC AND RESIDENCE-TYPE DIVERSITY

Spatial mapping of participants in the FSA Rebates programs shows wide participation across the city (see Appendix G). The top 10 addresses used by an applicant only account for 12% of rebates given over the last five years and typically are characterized as age-restricted locations or mobile home communities. Beyond the top 10, all remaining applicant addresses identified in the usage data each account for less than 1%. This suggests wide and diverse applicants among individual single-family homes, apartment complexes and manufactured/mobile home parks.

The top five addresses utilizing the FSA Rebates program include the following residential areas:

1. 3.3%: North College Manufactured Housing Community. Age-restricted (55+ and older) mobile home park.
2. 1.3% Woodbridge Senior Apartments (age restricted).
3. 1.3%: Hickory Village, mobile home park.
4. 1.1%: West Mulberry mobile Home Park.
5. 1.1% Harmony Village at Harmony Park mobile home park.

## COMMUNITY/CUSTOMER SATISFACTION

The Evaluation Team reached out to 25 well-known local non-profit and community partners to gauge their awareness and direct support of the FSA Rebates program. The survey was taken by staff at Colorado State University (CSU), UC Health (Community Health Improvement Program, Healthy Kids Club and other regional programs), Project Self Sufficiency, The Family Center, Volunteer Income Tax Assistance (VITA) program, the Food Bank of Larimer County and Energy Outreach Colorado. Additional focus groups and interviews were also granted by five non-profit and community partners, including the Larimer County Human Services Department and the state of Colorado Low-income Energy Assistance Program (LEAP).

Nearly 80% of respondents indicated that the clients they served were low-income, with ~70% being families. While over 90% of the respondents knew about the City's efforts to reduce utility costs for low-income families (i.e., the IQAP program), more than 75% weren't aware of the tax rebate programs run out of FSA (Figure 13).

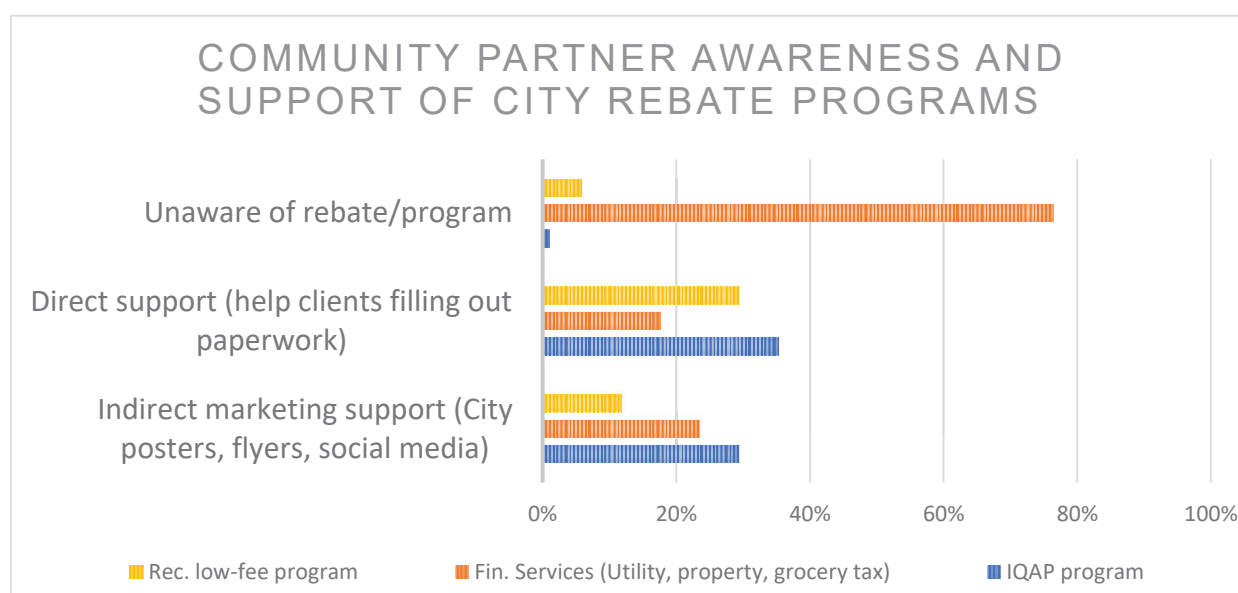


Figure 13: Community Partner Awareness

Possible reasons for lack of awareness on behalf of non-profit partners include staff turnover at the non-profits as well as a lack of continuity and poor relationship-building given FSA program management via a seasonal employee. To be sure, the Finance Department isn't alone in not fully leveraging community service providers: none of the rebate programs evaluated had more than 50% of the non-profits and community partners we surveyed for this report actively supporting City rebate/reduced-fee programs, either directly (by supporting low-income clients to fill out applications) or indirectly (via marketing like posters or flyers, or social media mentions).

## AN INCOMPLETE SOLUTION: THE ONLINE APPLICATION SYSTEM

In response to a 2017 Council request—which occurred with no additional budget or resources—FSA staff was asked to make an online application option available to low-income residents. FSA staff worked to make an online application available with the tools and technology available within the department. This meant that FSA staff had to design within systems that were not at all intended to be user friendly, an external facing application

management tool. Users and staff alike found this work-around to be a challenge and have suggested requesting additional funding for a well-designed application management system.

Originally, the objectives of utilizing an online application opportunity included:

- For the City, less time spent doing ‘re-work’ for missing/incomplete applications.
- For applicants, no need to make a special trip to City offices, greater flexibility to submit a complete application at their convenience.

In the 2018 and 2019 rebate seasons, only approximately 10% of all applications were submitted online. For staff, the online FSA Rebates application (designed within the existing Govern platform used, among other things, for sales tax management) has generated significant issues. For example, the improvised online system does not adequately coordinate documents and typically requires staff to do a lot of re-work to track down missing application components.

Moreover, when an applicant successfully identifies the online application portal, the directions posted are confusing and s/he must navigate equally confusing questions about applicable file types accepted and required documentation.

## PROGRAM-SPECIFIC RECOMMENDATIONS

The UTR, GTR and STR, which together make up the FSA Rebates program, have never been reviewed or evaluated—though various improvements to the original ordinances have occurred (e.g., the inclusion of ‘disabled individuals’ as a part of the target group in the 1980s, etc.). With a partially dedicated FTE, the FSA Rebates program could benefit from improved service continuity, non-profit relationship management, and strategic objective development. Of course, this will depend on how much time is actually allocated to the FSA Rebates program, given the heavy workload of the Sales and Use Tax team. Strategic planning and clear goal definition will help deduce what is required for FSA Rebate program success in terms of staff time, roles and responsibilities.

In contrast to the use of a seasonal contractor (for 4 months, 33% of the time over a year), a year-round salaried FTE will devote the equivalent amount of time in combination with duties as a Sales Tax Technician. Notably, this is thus not net increase in staff capacity (as there is still only 33% of a FTE devoted), but this FTE does address the continuity issue of service provision and relationship management. By contrast, an *additional* resource could help manage and

---

### **Resourcing constraints:**

*In 2020, a newly created Sales and Use Tax Technician position will address a backlog of sales tax related duties and spend 33% of their time on the FSA Rebates program. The ability for this person to manage program participation growth, however, is unlikely.*

---

accelerate program participation, should that be illuminated as a Council priority.

Regardless of the objectives around program participation growth and adequate resource allocation, the long-term use of a seasonal contractor has had consequences. It is one reason why the wider community (as identified in surveys and interviews with nonprofit partners) has little understanding of program’s operation and why the installment of a permanent staffer to field questions, build

relationships, and maintain overall continuity is so important. Moving forward, these non-profit partnerships will remain essential for successful municipal low-income programming, as low-income populations are not only logistically difficult to reach but expensive for cities to adequately to reach on their own.



Reducing age-specific criteria for the PTR could expand eligibility for the families already accessing the GTR, but currently unqualified for the PTR. The combination of the PTR + GTR may financially incentivize low-income residents to apply for the FSA Rebates, despite the work and coordination required (e.g., arranging childcare, transportation, etc.) for these households to submit applications in-person to the City.

Combining the PTR with the GTR also achieves the following:

- **Reduces staff burden and operational costs.** Managing and monitoring divergent participation criteria for different Finance rebates is a ‘heavy lift’ for an already under-resourced program.
- **Ensures equity, targets the neediest.** When the age criteria were adopted for the PTR/UTR in the 1970s/1980s, it is probable seniors were a population with a high—perhaps the highest—likelihood of poverty. Today however, the most impoverished people in Fort Collins are women, including adult women between ages 35-54 and senior women over age 55 (see discussion on pages 14-17). Though seniors still represent a vulnerable population, Fort Collins today clearly has a high proportion of working families and adults in poverty. With stagnating usage of the PTR, extending PTR to cover more people who need it, would achieve participation increase objectives.
- **More money into the hands of low-income people, especially families.** A female-headed household is more than 25% more likely to experience poverty with significant lifelong impacts for children. Research shows incremental household funds typically go to benefit children, and that interventions that benefit children have long-term positive effects on economies and societies.<sup>39</sup>

**Eliminating the UTR has positive benefits for the City, the FSA, the IQAP program and low-income customers.** Verifying CFCU customer status between CFCU and FSA is a lengthy and burdensome process for staff. Directing interested customers to the IQAP/LEAP program instead, could better utilize an existing City service and strengthen a state-wide program (i.e., LEAP). For low-income customers, attaining a long-term solution—a permanently lower utility rate—is almost certainly preferable to an annual cash rebate.

Eliminating the UTR could also reduce a portion of the administrative burden of the FSA Rebates program and free up time and resources for the important—but currently not completed—marketing and relationship-building work that needs to be undertaken for the GTR/PTR rebates.

FSA Rebate program staff should also consider how to identify and obtain resources for improving the online application system. Knowing that low-income families are constrained by transportation, childcare and other costs, an online application means that low-income people working multiple jobs and managing the high costs of city living are able to submit applications in a time and manner convenient for them. A summary of recommendations may be found in the adjacent table.

---

<sup>39</sup> UNICEF (2019). [https://www.unicef.org/socialpolicy/index\\_53294.html](https://www.unicef.org/socialpolicy/index_53294.html) Accompanying report: [https://www.unicef.org/socialpolicy/files/Investing\\_in\\_Children\\_19June2012\\_e-version\\_FINAL.pdf](https://www.unicef.org/socialpolicy/files/Investing_in_Children_19June2012_e-version_FINAL.pdf)

Component	Notable Progress	Improvement & recommendation	Recommendation rationale
Structure	Dedicated FTE was resourced to the project in fall 2019.	<ul style="list-style-type: none"> <li>(1) Ensure adequate FTE coverage of the FSA rebate program.</li> <li>(2) Merge GTR and PTR into a single rebate by removing age-specific criteria of PTR.</li> <li>(3) Eliminate UTR in lieu of pushing participants towards CFCU IQAP program<sup>40</sup>.</li> </ul>	<p>With a new 2019 FTE spending 33% of their time on the FSA Rebates program, FSA has made progress toward service continuity. However, should Council prioritize program growth, adequate resourcing should be considered.</p> <p>Merging the GTR and PTR streamlines and creates value in the following ways:</p> <ul style="list-style-type: none"> <li>a. Reduces staff burden and operational costs.</li> <li>b. Ensures equity, targets the neediest.</li> <li>c. Puts more money into the hands of low-income families.</li> </ul>
Strategy	Pending prioritization from the Sales Tax office and workload, the dedicated FTE resource in Sales Tax may be able to devote time to strategic planning.	<ul style="list-style-type: none"> <li>(4) Identify and document goals and objectives of FSA Rebate program.</li> <li>(5) Standardize customer service feedback opportunities.</li> <li>(6) Increase marketing/outreach efforts.</li> </ul>	<p>Beyond simply administering a program, identify long and short-term goals, create milestones and further develop a framework for assessing impact.</p> <p>Adequate customer feedback is not currently obtained for assessing satisfaction and opportunities for design and process improvement. Budget and staff time is not optimized to meet outreach needs.</p>
Systems	Appeals to Council and clarification of ordinances have previously been made to include new vulnerable groups (e.g., disabled people).	<ul style="list-style-type: none"> <li>(7) Make application year-round.</li> <li>(8) Provide resources to improve online application option.</li> <li>(9) Consider ways to eliminate income verification.</li> </ul>	<p>In contrast to other city programs, the FSA Rebate program still operates as a seasonal program, in part because it is under-resourced to grow program participation. Seasonal programs are challenging for applicants who must juggle yet another benefit timeline.</p> <p>The current online application option has not been designed-for, nor created with, actual users. It's not only difficult to use, but typically requires additional work for staff to track down missing application components.</p> <p>Income verification is an extremely burdensome step for City staff; time could be better spent on targeted marketing and customer engagement<sup>41</sup>.</p>

<sup>40</sup> GTR participants are the largest group of Financial Services Rebate users. UTR rebate users, if they do not qualify via LEAP, could possibly be grandfathered into the UAP program.

<sup>41</sup> The UAP program eliminated income verification by accepting LEAP enrollment (whereby income is verified by a state-funded program) in lieu of UAP-specific program income verification.

# RECREATION REDUCED-FEE PROGRAM: IMPROVING QUALITY OF LIFE

## HISTORY

The Recreation department in the CoFC has provided a low-income rate for use of facilities and/or classes since at least the early '90s. The Evaluation Team found little historical documentation about the department's or City's approach to providing low-income recreation programming prior to a 1992 Ordinance<sup>42</sup> that outlined the rate at which discounts would be applied. That Ordinance reads:

*"...a fee reduction for designated low-income people will receive a discount equivalent to 1/3 of the published fee for a City-offered sports, drop-in recreation, wellness, or arts and crafts programs." –Resolution 91-156*

In 2016, however, opportunities for low-income families and individuals were reviewed by Recreation staff<sup>43</sup>. A department-wide team (Reduced-Fee Action Team) gathered throughout 2016-2017 to consider how to better serve low-income populations by focusing on<sup>44</sup>:

1. Financial and eligibility barriers for low-income residents
2. The application process (simplification for applicants and department administration)
3. Marketing, awareness and streamlined communications

## 2017 REVISIONING

The Reduced-Fee Action Team's review included community outreach and a citizen survey in addition to benchmarking. The team also reviewed Recreation's fee structure, conducted outreach directly with the community and consulted with community partners like the Poudre School District and various non-profits about what a new reduced-fee program might include.

The three phases of the outreach review included (1) research, participant feedback analysis and needs establishment, (2) visits with boards and City departments to discuss proposed changes and (3) direct community outreach. The latter included a 10-question survey for community members interested in a revision of the reduced-fee program<sup>45</sup>.

As part of the research phase, a peer-city review was completed. The Action Team reached out to in-state cities like Longmont, Windsor, Thornton, Greeley and Westminster, in addition to other U.S. cities including Lincoln, Burbank, Ann Arbor, Provo, and Boise. The Action Team's findings illuminated 'both consistencies and inconsistencies between Fort Collins and other communities offering a reduced-fee recreation program for low-income residents<sup>46</sup>.

In addition to hosting focus groups and open houses, an outreach survey was extended by the Recreation Department. It received over 200 responses. Respondents indicated strong support for an online reduced-fee program application and registration, year-round application acceptance, and possible changes to program costs. At the time, the community indicated popular support for both the existence of the program and the revisioning effort.

---

<sup>42</sup> Resolution 91-156, "Cultural, Library and Recreational Services Fees and Charges Schedule."

<sup>43</sup> Recreation Department Reduced-fee Program and Proposed Updates

<sup>44</sup> Recreation Department 'Reduced-Fee Action Team.' First meeting agenda from 11/14/2016

<sup>45</sup> 2017 Report for Recreation Reduced-fee Program Survey

<sup>46</sup> The Evaluation Team did not review this peer-review report or the accompanying analysis.

The Action Team's recommendations were addressed and implemented in the fall of 2017. Changes to Recreation rates are outlined in the chart below. Fee discounts for recreation programs are now available to all permanent residents who demonstrate a financial need, regardless of age or ability. If a student within Poudre School District (PSD) qualifies for free or reduced lunch benefits, that student's family also qualifies for the reduced-fee recreation program with submission of a letter of free-and-reduced lunch status.

<b>Change Type</b>	<b>Prior Approach</b>	<b>2017 Changes</b>
<b><i>Discount rates<sup>47</sup></i></b>	<ul style="list-style-type: none"> <li>• Individual pass: \$25 per 6 months</li> <li>• Child pass cost: \$6 per 6 months</li> </ul>	<ul style="list-style-type: none"> <li>• Individual adult pass: \$25, per year</li> <li>• Individual youth/60+ senior pass: \$6 per year</li> <li>• Family/couple pass: \$40 per unit, unlimited kids, per year</li> </ul>
<b><i>What's discounted</i></b>	<ul style="list-style-type: none"> <li>• Drop-in rate for facilities (unlimited)</li> <li>• Fitness class discount: Adult, 50%. Senior, Youth, Adaptive Recreation, 90%</li> <li>• Adult activity: 50% discount, 4 per year</li> <li>• Youth activity: 100% discount, 4 per year</li> </ul>	<ul style="list-style-type: none"> <li>• Drop-in rate for facilities (unlimited)</li> <li>• Fitness class discount: 70% for all classes</li> <li>• Tiered class and activities discounts. Community/team-based sports programs discounted at a higher rate (introductory soccer, group swimming) than advanced, individualized programs (e.g., private lessons)</li> <li>• No limit on programs/classes discounted per year</li> <li>• A separate pass for Adaptive Recreation users was eliminated in favor of using a single "reduced-fee" pass type</li> </ul>
<b><i>Application window</i></b>	Every 6 months must renew	Membership good for one-year

<sup>47</sup> Standard fee schedule for an annual pass as of Jan. 2020 is the following: \$207/youth; \$306/adult; \$207/senior; \$495/family or couple. <https://www.fcgov.com/recreation/recpass>

Additional Recreation reduced-fee program changes are outlined in the next chart, accompanied by their current status. In 2019, additional improvements were made in collaboration with the City's process improvement team (FC Lean), specifically around improving and simplifying the application document.

<b>2017 Reduced-Fee Action Team recommendation</b>	<b>Implementation Progress as of 2019</b>	<b>Notes</b>
<b><i>Development of an online application process</i></b>	Partially completed	Enrollment in programs can occur online, but only after a reduced-fee application has been submitted (verification and submission must happen in person). Online application submission has not been completed.
<b><i>Tiered discounts based on levels of proficiency (introductory, intermediate and advanced)</i></b>	Completed	See information on previous page.
<b><i>Unlimited enrollment in all recreation programs (no longer capped at 4 per year)</i></b>	Completed	See information on previous page.
<b><i>Simplified application, year- round application acceptance</i></b>	Completed	Applications are now accepted year-round.  The new application is shorter (2 pages versus 5 pages) with focused, streamlined information. It also provides information on what benefits are included. The new application was published on November 1, 2019.
<b><i>Reduced-fee program communications and awareness plan</i></b>	Not completed	Recreation staff have not yet developed a communications plan specific to the reduced-fee recreation program.
<b><i>Purchase of a (discounted) drop-in pass is required for benefits to be activated</i></b>	Completed	See information on previous page.

## CURRENT PROGRAM

---

### GOALS AND OBJECTIVES

The revised reduced-fee recreation program is underpinned by a vision to make recreation opportunities available to diverse and disadvantaged communities across Fort Collins. This includes children and their families who qualify based on PSD's free/reduced lunch, even if that child lives outside of Fort Collins city limits<sup>48</sup>.

While short-term operational goals for the revised program have been enumerated, long-term strategic goals (e.g., what percent of disadvantaged communities should be reached?) were not articulated. In a 2019 memo to Executive Leadership<sup>49</sup>, the stated goals included:

- Simplify Reduced-fee Program application and registration process (the online application / registration option).
- Simplify Reduced-fee Program application process (offerings, process improvements).
- Simplify Reduced-fee program administration (generate consistencies in discounting programs).
- Simplify approval/eligibility period.

These 2019 goals clarify how to improve the program's efficiency. They are operational, not strategic goals. Strategic goals give direction and estimate the type and degree of impact expected and desired. Strategic goals support a vision and are measurable, usually with one or two major indicators. While operational goals ask "how" work gets done, strategic goals answer "what" is being accomplished. The current Recreation reduced-fee program, like the UAP and FSA Rebates, lacks strategic goals.

---

### Recreation Reduced-Fee Program At-A-Glance

#### Program-wide facts

- 5,130 applicants were approved in 2018 for a reduced-fee pass
- \$190,000 was approved for reduced-fee scholarships for youth in 2018
- \$24,837 was approved for reduced-fee discounts for adult enrollments
- Reduced-fee pass holders visited recreation facilities over 35,000 times in 2018

---

#### Rebate and rebate amount

Recreation pass: Drop in pass is \$25 (individual), \$6 senior/youth, \$40 (family). Pass includes:

- Fitness class discount: 70% for all classes.
- Discounts are tiered for classes and activities.

#### Application Requirements

- 185% FPL or verification via enrollment in a state/federal assistance program including Free/Reduced Lunch program through PSD,
  - Valid photo ID for any applicant/member over 18,
  - Proof of residency, and
  - Completed application (Appendix K).
- 

---

<sup>48</sup> Evaluation interviews with Recreation Dept. staff, 2019.

<sup>49</sup> Executive Leadership Memo dated February 28, 2019, to Darin Atteberry, City Manager, from Bob Adams, Recreation Director.



## APPLICATION MANAGEMENT AND ONLINE ACCESS

A new application was developed in conjunction with the process improvement team (FC Lean) in 2019. This shorter, simplified application was released for public use in November 2019. Since 2017, applicants are still required to submit their application in person (or by mail) along with documentation confirming residency, lawful presence in the United States and income. An online application process whereby the applicant submits materials that are verified fully online, is not currently available. Required application documents include:

- **Identification.** Legally recognized driver's license, military ID., etc.
- **Residency.** Residency proof including a Fort Collins utility bill or three pieces of official mail, to the applicant at a City of Fort Collins address.
- **Proof of income eligibility using 185% of FPL.** Applicants must show income (tax returns) under 185% of FPL, or PSD reduced/free lunch eligibility, or enrollment in state or federal assistance program (e.g., Medicare, WIC, Social Security).<sup>50</sup>

In 2017, a resource guide was given to front desk recreation staff at various recreation facilities to help staff assess acceptable income verification documents for a reduced-fee membership. Required documentation for enrollment is extensive.

Reduced-fee applications are processed manually (Figure 14). Importantly, the documents required for an application are not only numerous, but also require disclosure of an applicant's personal and private information. An application managed as shown below takes between 7-10 business days to complete (see Appendix I for full program process map).

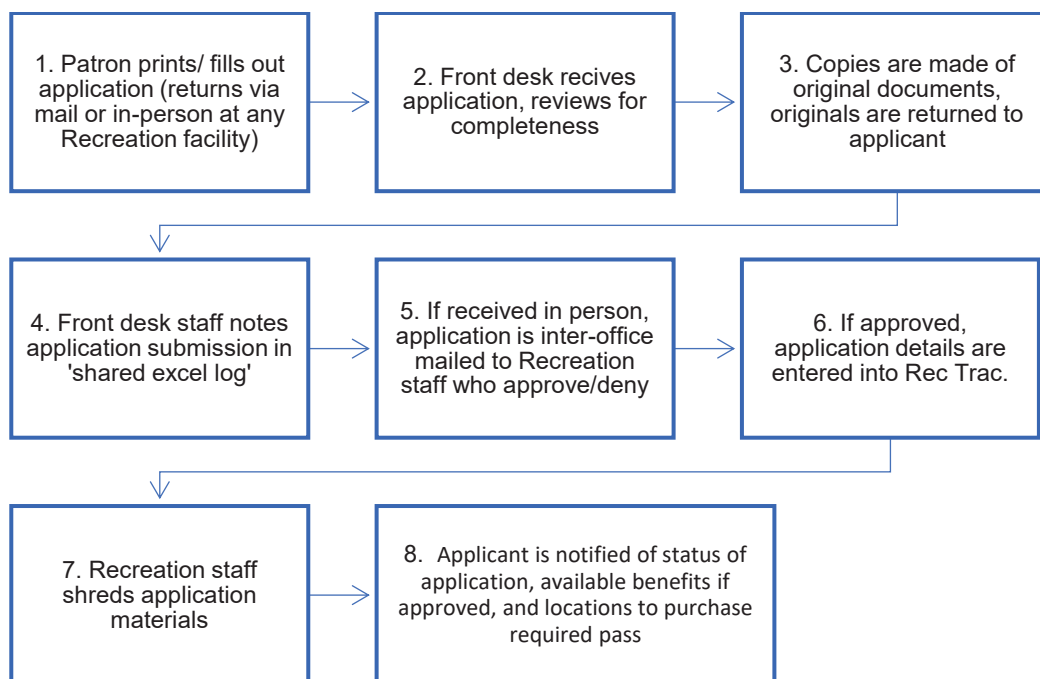


Figure 14: Recreation Reduced-fee program application flow

Once an individual or family is signed up with a reduced-fee pass, online registration for specific classes or programs occurs easily via the Recreator portal.

<sup>50</sup> 185% FPL in 2018 was equivalent to a maximum income of \$47,638 for a family of 4 or a maximum income of \$23,107 for a single individual.

In its review of the application process, the Evaluation Team noted a patchwork of systems used by staff to get application documents routed and ultimately approved by assigned Recreation staff. These include interoffice mail and notations made in online shared documents. The Evaluation Team was unable to verify how and when application documents are shredded. Without a formalized, secure system in place, the Evaluation team noted there is opportunity for sensitive applicant information to be copied, lost or misused.

## COMMUNICATION AWARENESS PLAN AND OUTREACH

There is no marketing plan nor marketing efforts specifically targeted for the Reduced-Fee Recreation program outside of general Recreation marketing. This includes marketing (advertisements) in the *Recreator*, a comprehensive community resource guide that offers information on the City of Fort Collins' Recreation facilities, classes, programs, events and overall community activities. It is published quarterly. Information on the reduced-fee program may also be obtained on the department website.

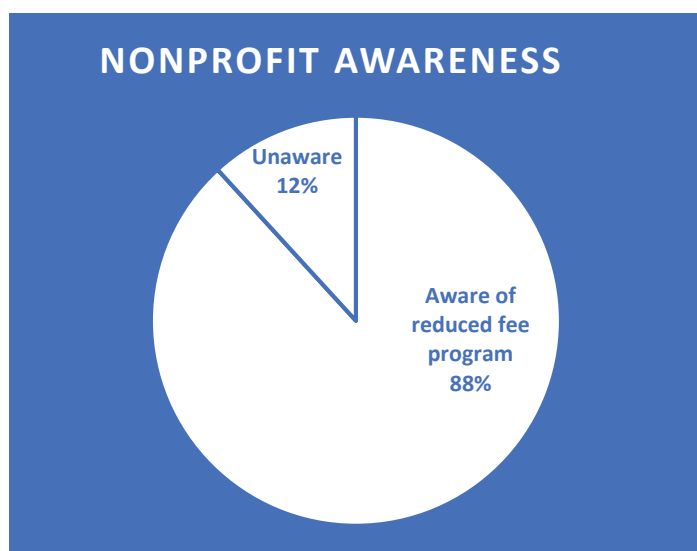


Figure 15: Reduced-fee Recreation Program: Community/nonprofit awareness

To communicate the reduced-fee program the Recreation Department depends on grassroots outreach via community partners like Sava, the Murphy Center, Columbine Health, and Title I<sup>51</sup> schools with Poudre School District (PSD). Staff members at the Northside Aztlan Center occasionally do outreach directly with these organizations on the reduced-fee program.

A survey extended for the purposes of this evaluation asked 17 individuals from nine of the major non-profits in town about their awareness of the reduced-fee recreation program. Over 80% indicated some level of familiarity, suggesting successful external partner engagement (Figure 15).

## PROGRAM BUDGET, OBJECTIVES, OUTREACH AND OPERATION

The reduced-fee program is managed without dedicated resources. Responsibility is shared among multiple hourly staff at the front desk as well as salaried full-time employees (a Business Support Specialist III, a Financial Analyst II, Supervisors, etc.) who take on this work as part of their wider Recreation Department duties.

### BUDGET

The reduced-fee program is not managed as a clearly delineated program with fully dedicated program staff, a clearly defined budget and a scope of work unique to that program. Tasks associated with management of the reduced-fee program are diffused into the workloads of various recreation staff.

<sup>51</sup> Title 1 schools are those known to have high concentrations of low-income students. With this designation, a Title 1 school can receive additional federal funding for providing services to low income students.

Without a delineated budget, for purposes of this evaluation study, the Recreation staff and the evaluation team attempted to reverse-engineer a budget based on associated personnel costs and programmatic (material-related) costs (see adjacent table).

	2019 FTE	2019 Actual Costs
<i>Personnel</i>	0.6 (spread over 5 people)	\$79,600
<i>Programmatic</i>		\$4,305
<i>Annual program spending in 2019</i>		<b>\$83,905</b>

Annual revenue increases (losses) due to the existence of the program were not estimated for the following reason: it is unknown how many low-income individuals would have bought a reduced-fee pass without the discount. For the number who would have bought a pass even without a discount, there exists a revenue loss. For those that would not have bought a pass without a discount, there exists an argument for a revenue gain. The exact proportion of each is unknown, though with more research

some estimates could reasonably be made.

## PARTICIPATION PATTERNS & CUSTOMER SATISFACTION

Participation in the reduced-fee program has swelled from 4,402 in 2014 to more than 5,000 individual participants in 2018. The five-year average between 2014-2018 is 4,880 total participants. A primary applicant is an adult applicant who signs up themselves or themselves plus a family, for participation in the program. In 2018, 2,349 primary applicants (i.e., household units) were enrolled in the reduced-fee program.

Specific characteristics of an individual or family leveraging the City's program are as follows:

1. **They are mostly families.** More than 80% of primary applicants sign up 2+ people.
2. **Primary applicants are mostly women.** Over 70% of primary applicants are women.
3. **Women typically sign up bigger families.** The average size of a reduced-fee family is 3 people. When the primary applicant is a female, the average family size increases to 4 people.
4. **Adults (ages 19-59 years) are shrinking as a user base.** This age demographic shrank by approximately 10% over the last five years (Figure 16)
5. **Senior participation is growing.** As a proportion of the larger pool of participants, senior-aged users have steadily grown from 3% (2014) to more than 5% (2018)
6. **Seniors experience high enrollment turnover.** Over 80% of seniors participating in a given year obtained their pass in the prior 1-2 years.

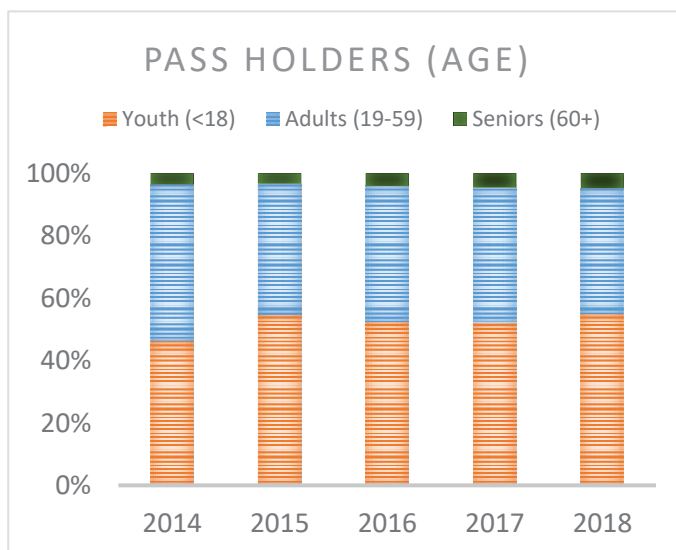


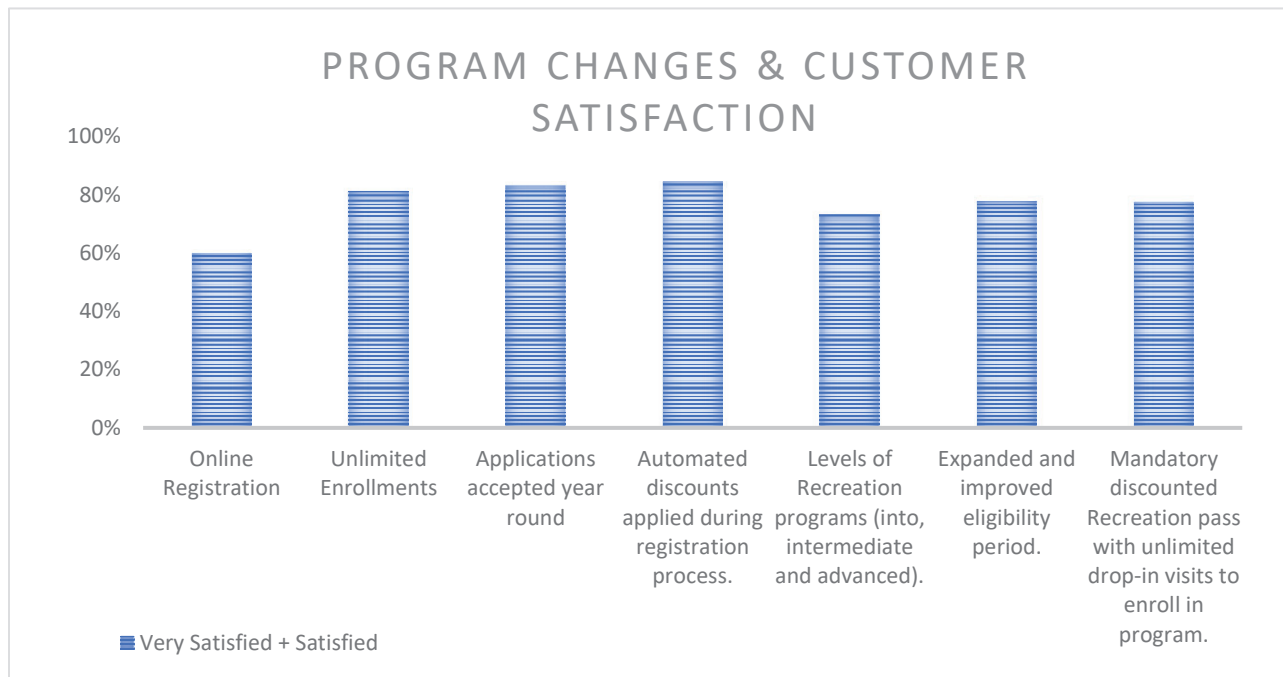
Figure 16: Average age of reduced-fee pass holders

Less than 9% have had a pass for three years or longer.

7. **High turnover suggests a dynamic user base.** Annually, close to 50% of patrons did not have a pass the prior year.

Mapping the location of reduced-fee pass holders suggests that the program is widespread around the City, including in areas that are outside the City boundaries but within PSD. The north and northwest corner of the city have the highest concentration of reduced-fee pass holders (Appendix J).

In March of 2019, the recreation department extended a customer satisfaction survey (n=130) and identified that Reduced-fee program changes were supported by the community members surveyed (Figure 17).



## PROGRAM-SPECIFIC RECOMMENDATIONS

The reduced-fee program has been successfully integrated into all Recreation department functions and there is significant program support and familiarity within the community and among community partners. Compared to the other evaluated City Rebate programs, the reduced-fee program serves a large number of low-income people—especially families—each year. The program has taken important steps to improve the application process and offer access to recreation opportunities for the range of individuals and families that live in Fort Collins. Notably, the application has just benefitted from a FC Lean intervention, which cut the application down from five pages to one (Appendix K). The application now is simpler to understand and expedites completion, design factors that are known to be of great importance for low-income customers.

Broadly, the Recreation reduced-fee program would benefit from balancing a strong focus on operational improvement with a focus on long-term strategic impact. What does the recreation program seek to accomplish in the long term? Are short-term operational changes working in tandem with that larger vision and with articulated strategic goals? As of now, a strategy guiding operational action is missing.

Part of the imbalance between strategic and operational goals is the fact that the reduced-fee program is not thought of as 'traditional' program, i.e., a standalone program with a dedicated program manager, a specific communications plan, etc. The reduced-fee program is 'everyone's' job in Recreation, which means that targeted communications and specific responsibilities for this program's success lie with everybody, but also with no one in particular. High-level questions about program effectiveness often don't land squarely in any staff member's workplan. Establishing clear ownership and milestones around who (or what department) is responsible for program growth and development may lead to programmatic improvements.

Finally, various systematic improvements could help with city-wide rebate alignment and customer-centric security. Strengthening the application systems that handle sensitive information and working toward a centralized city-wide approach could decrease the data privacy risk and reduce the burden on Recreation staff as well as other relevant service areas like the FSA. With a standardization of low-income eligibility criteria and use of a common application across the City, an alignment of rebate programs may be achieved. In the meantime, Recreation may consider steps to align with other city rebate/reduced-fee programs that use AMI for the income threshold (like UAP/LEAP and FSA Rebates), instead of 185% FPL.

Improvement area	Notable Progress	Improvement & recommendation	Recommendation rationale
<b>Strategy</b>	<p>The program reaches a significant number of low-income households.</p> <p>A strong collaboration with the PSD has contributed to high levels of participation from families.</p>	<p>(1) Balance the operational focus by articulating a long-term, strategic plan.</p> <p>(2) Design and execute a communications plan, include outreach goals and key partners.</p>	<p>Beyond goals around program administration and operations, there are not clearly articulated strategic goals. What's the long-term objective of the program? What is the program trying to accomplish? How are operational goals in service to long-term goal(s)?</p> <p>Let data insights guide goals and inform long-term and short-term targets. For example, a goal might be to target adults (ages 19-59), given that this user group is shrinking. Develop new operational goals once previous operational goals (e.g., providing a year-round application window) are accomplished.</p> <p>Complete work of establishing and executing marketing/communications plan.</p>
<b>Staff &amp; structure</b>	<p>Front desk staff at any recreation center are able to accept applications.</p>	<p>(3) Identify program ownership, program boundaries.</p>	<p>Specific operational tasks are absorbed into duties of multiple staff making accountability and leadership difficult. Who is responsible for managing the program? Clarify which staff are charged with various tasks, including marketing/relationship management within the community.</p>
<b>Systems</b>	<p>Revised application in 2019 simplified application steps and made process much easier to understand.</p>	<p>(4) Strengthen systems handling sensitive application materials.</p> <p>(5) Provide online application option.</p> <p>(6) Align eligibility criteria with City Rebates programs, using AMI instead of FPL.</p>	<p>A single, City-wide income-eligibility application could eliminate the burden of income verification for front desk Recreation staff while improving security. Inter-office transfer of copies of sensitive documents among staff poses risks for resident privacy.</p> <p>Complete work of providing an online application option.</p> <p>Measure poverty using a locally appropriate measure (% of AMI) consistent with other City rebate programs.</p>





## **PART 2: CITY-WIDE FINDINGS & RECOMMENDATIONS**

## CITY-WIDE FINDINGS AND RECOMMENDATIONS

For City rebates and reduced-fee programs, each department has worked to optimize its program given available resources. However, lack of centralization between these different Service Areas/departments has led to different approaches, including different methods for leveraging community partners, variable eligibility thresholds affecting participation, and differing levels of staff/programmatic resources available for program deployment. As a result, our analysis suggests that each department that manages a reduced-fee/rebate program has reached slightly—or in some cases very— different low-income populations. Diversified approaches have also led to diffused impact, with several rebate/reduced-fee programs functioning for decades but only reaching one out of three low-income households in 2018.

Some program cross-marketing opportunities have been encouraged: for example, a comprehensive, citizen-facing list of discount, rebate and service programs for low-income individuals and families was developed and posted online in 2018<sup>52</sup>. However, no substantial programmatic changes in eligibility, program design, resource allocation (dedicated FTE, programmatic funding), application centralization or broader outreach efforts have been made across the programs<sup>53</sup>. For applicants, this means an individual or family must submit a different application with different required documents for each program and do so within each program's unique timetable.

### ONLY HALF OF LOW-INCOME PEOPLE PARTICIPATE IN ONE CITY REBATE/REDUCED-FEE PROGRAM

Estimating the number of low-income individuals in Fort Collins is a challenge. A suite of poverty statistics captures different aspects of poverty, most of them outlining different and often confusing income thresholds depending on different household size, respondent age or household composition (e.g., a 'family' versus a 'household' versus a 'mix' versus a 'single' individual). Moreover, the existence of a large local student population further complicates the picture.

Using application data from each of the three departments and controlling for estimated overlaps between programs (around 18%), the Recreation Reduced-fee program reaches the highest proportion of the City's low-income people, followed by the FSA Rebates, followed by the UAP. Note that the population of the biggest component of the UAP, the IQAP program, is bounded by eligibility for state-wide LEAP. **Less than half of all estimated low-income households are currently not participating by one of the City of Fort Collins reduced-fee/rebate programs evaluated (Figure 18).**

---

<sup>52</sup> See Discount Programs, Rebates and Services web page at fcgov.com:

<https://www.fcgov.com/socialsustainability/discounts.php>

<sup>53</sup> The Low-income Application Working Group, with City staffers from Sustainability Services, Recreation, Utilities, City Managers Office and Planning, Development and Transportation (PDT) have been meeting and working to coordinate marketing efforts (online and paper materials) and share information 2018.

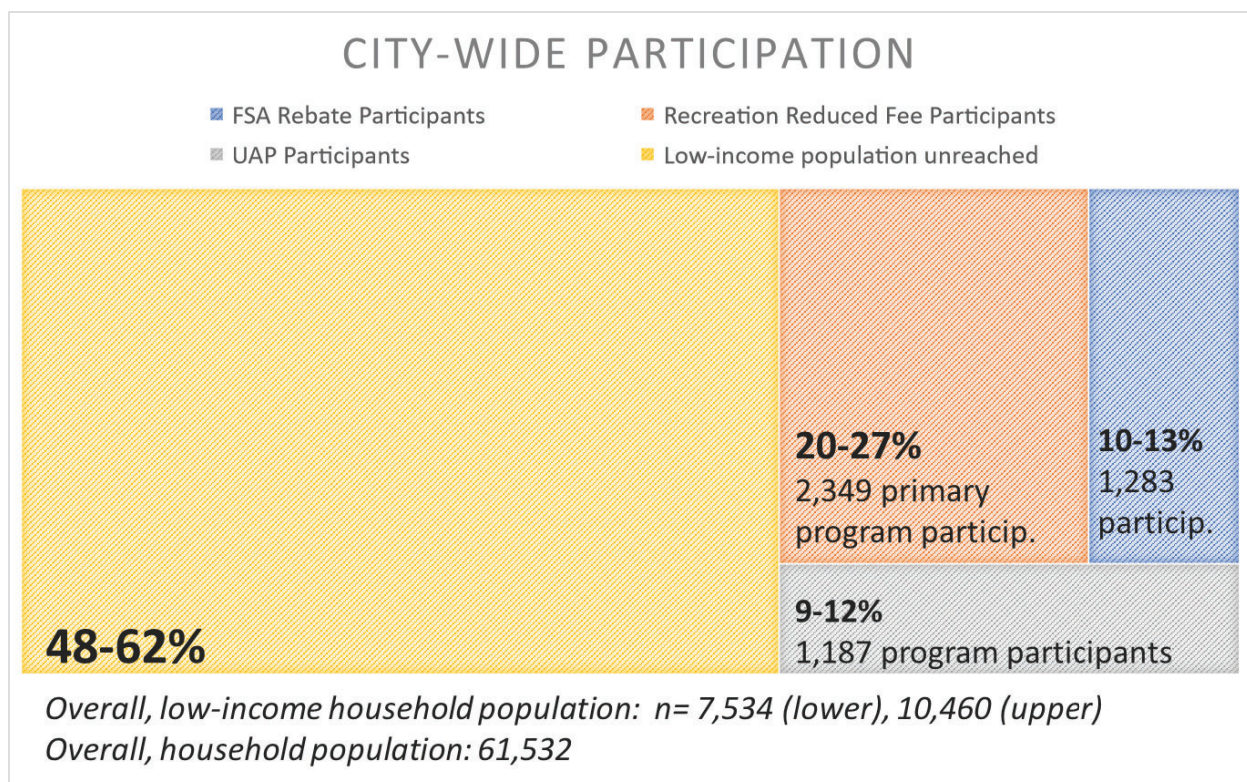


Figure 18: Community-wide participation in income-qualified city programming

An important factor in understanding city-wide rebate and reduced-fee program performance is to understand participation depth: in other words, do qualifying individuals and families participate in only one reduced-fee/rebate program, or, do they take advantage of the multiple rebate and reduced-fee programs offered across the City? Essentially, how well do these programs perform together as a portfolio? Assessing participation depth may illuminate how well-integrated these programs are (or are not). It may also suggest if City resources—including outreach efforts—may be better leveraged between programs.

Analyzing participation patterns in the available data presents opportunities and challenges. Because the programs are managed independently, each program retains its own unique data collection approach and utilizes a unique system for data management. Recreation uses RecTraQ and a combination of excel spreadsheets; the FSA Rebates program manages information via the Govern system; and Utilities IQAP participation data is stored both within the LEAP program database and the CFCU customer database. Without a common, city-wide customer relationship management (CRM) system, tracking an individual resident or household with a unique ID number is impossible.

For the five-year period between 2014-2018, this evaluation matched 3,003 valid addresses to an accepted application for one of the three evaluated City rebate/reduced-fee programs (IQAP, Finance Rebates, and Recreation Reduced-fee passes)<sup>54</sup>. Within this pool, only 18% had participated in more than one rebate/reduced-fee program. Put another way, 82% of application addresses were included because of participation in only one City rebate/reduced-fee program.

<sup>54</sup> Aggregating based on first and/or last names is unreliable for a number of reasons (e.g., name duplications, data entry misspellings, under/overcounting when individuals sign up a household for benefits). However crude, applicant addresses are used to track participation across City rebate/reduced-fee programs, although the merging of datasets is time-consuming and not without drawbacks.

Notably, 3,003 addresses do not equate to 3,003 households or individual participants. An address may designate an apartment complex or mobile home park with many rebate/reduced-fee participants living there.

As previously mentioned, low-income people have different resources and different decision-making capacities than their non-poor counterparts, they represent a unique service group for obtaining government services and participating in government programs. When government programs are designed without deep understanding of the poverty context (i.e., how low-income people make decisions, what resources they do/don't have available, etc.) poverty alleviation programs risk being ineffective.

---

*Cross-program participation is low – only 18% of participant addresses are linked to two or more City rebate/reduced-fee programs.*

---

## VARIABLE COMMUNITY AWARENESS AND UNDER-UTILIZATION OF COMMUNITY PARTNERS

17 individuals from nine non-profit organizations serving Fort Collins and Larimer County residents were surveyed about their knowledge of, and collaboration with, City of Fort Collins reduced-fee/rebate programs. These partner community organizations included CSU Care Program, various UC Health/Poudre Valley programs, the Volunteer Income Tax Assistance Program, Project Self Sufficiency, Neighbor to Neighbor, Energy Outreach Colorado, and the Food Bank of Larimer County. Close to 80% of non-profit partners surveyed indicated they work directly with low-income people in Fort Collins.

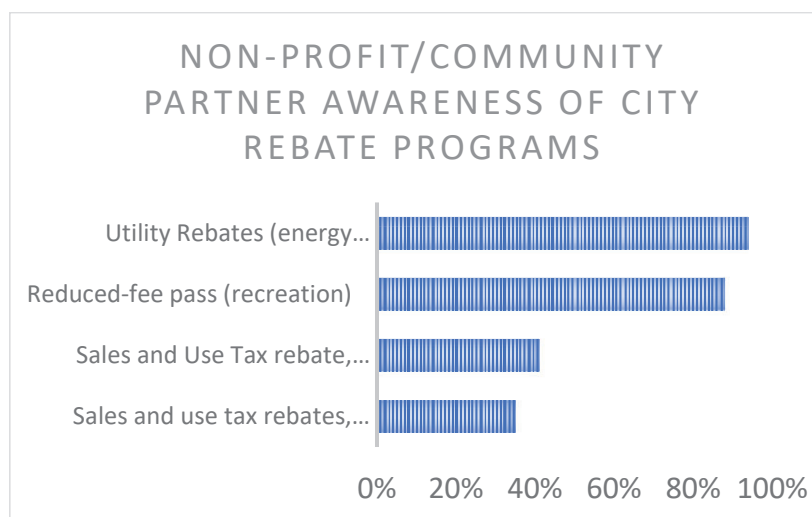


Figure 19: Non-profit/Community Awareness of City Rebate Programs

rebate programs. Lack of full support from partners means lost marketing and outreach opportunities as well as lost opportunities for direct assistance with application management, etc. Across the rebate/reduced-fee programs evaluated in this study, IQAP, followed by the reduced-fee recreation pass program, enjoys the greatest familiarity in the community and the most direct non-profit support (Figure 20).

The FSA Rebates, with only seasonal FTE support, has the least familiarity by and direct support of community partners. In particular, the property tax (PTR) and utility sales tax (UTR) rebates are the least well-known rebates and community partners are

Between 80-90% of respondents were familiar with the City's reduced-fee recreation pass and the Utilities IQAP program. On the contrary, less than half knew about the property tax and utility tax rebates managed out of the Finance Department (35%) (Figure 19).

As a result of differing levels of awareness and intentional collaboration, non-profits in Fort Collins extend varying levels of support for City reduced-fee and

---

*In particular, the property tax and utility tax rebates housed in the Finance Department, have the lowest level of non-profit familiarity. It benefits the least from non-profit support and coordination*

---



not well-leveraged to support them. Moreover, based on interviews, a few individuals working for the Larimer County Food Bank were unaware of the FSA Rebate program’s provision of a grocery tax rebate (GTR).

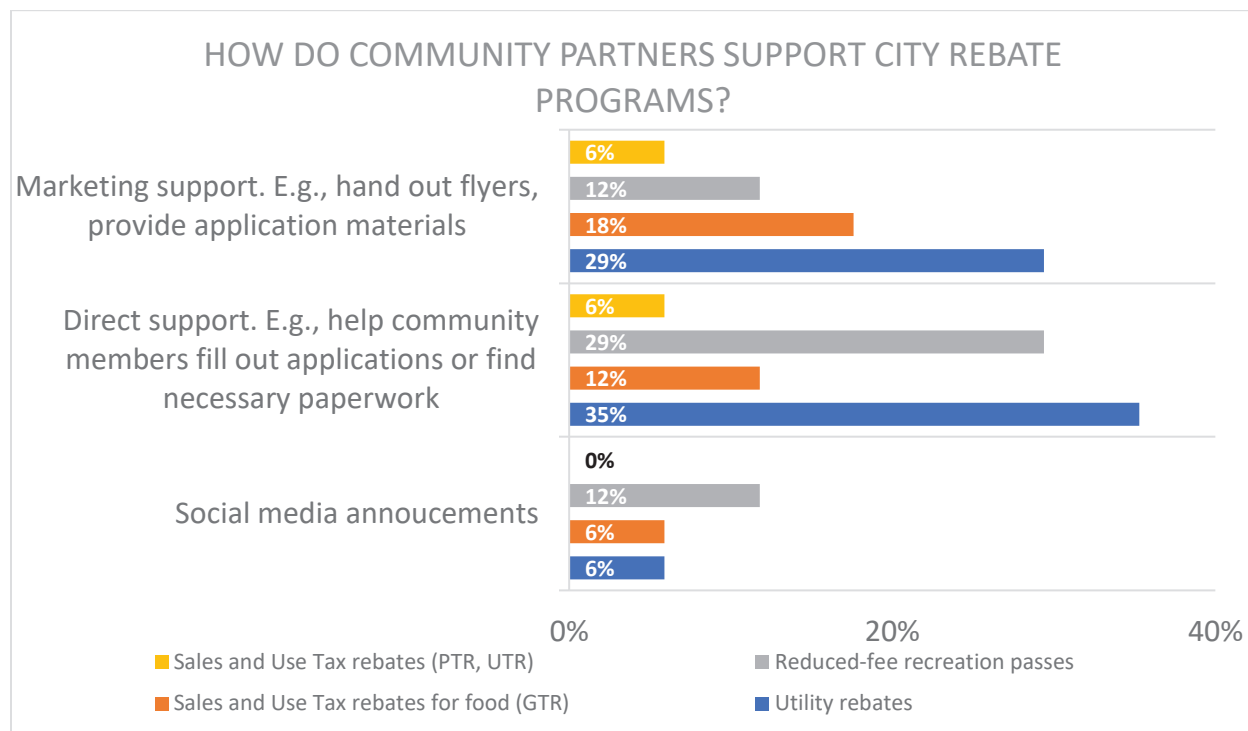


Figure 20: How community partners support City-wide rebate programs

## CITY-WIDE, LOW-INCOME PROGRAMMING IS INEFFICIENT AND LESS IMPACTFUL

Limited success in cross-program participation currently means a reduction in the potential combined impact of these programs—whereby the possible impact of the ‘portfolio of low-income services’ could be greater than the sum of independent department initiatives.

It also means that **each department charged with administering an income-eligible program pays the ‘full cost’ of its administration**, potentially re-processing the same applicant annually for multiple City services or each expending the same time and energy trying to reach similar participants in the community.

Moreover, lack of centralization between these different programs has led to the adoption of different approaches, including different methods for leveraging community partners, variable eligibility thresholds affecting participation, and differing levels of staff/programmatic resources available for deployment. As a result, analysis performed for this report suggests that each department that manages a reduced-fee/rebate program has reached a slightly—or in some cases very different—low-income population.

## DIVERGENT INCOME THRESHOLDS AND OTHER CRITERIA MEAN DIFFERENT POVERTY POPULATIONS ARE TARGETED AND SOME ARE LEFT OUT

Each reduced-fee/rebate program evaluated in this study utilizes a unique threshold for determining income-eligibility, based on household size: the Finance Rebates program uses estimates of area median income from Larimer County; the Recreation Department uses 185%

of FPL (or verification of enrollment in PSD free-and-reduced lunch); and the Utilities IQAP aligns with the state-wide LEAP program criteria of 60% of state area median income (see Figure 21). For example, Recreation's alignment with the PSD free-and-reduced lunch program targets families with school-aged children, while the prerequisite of senior/disability status for certain Finance Rebates ultimately targets a different demographic. As a result, each program reaches individuals and families at slightly different income thresholds and with different household compositions, making city-wide targeting difficult and applicant navigation a challenge.

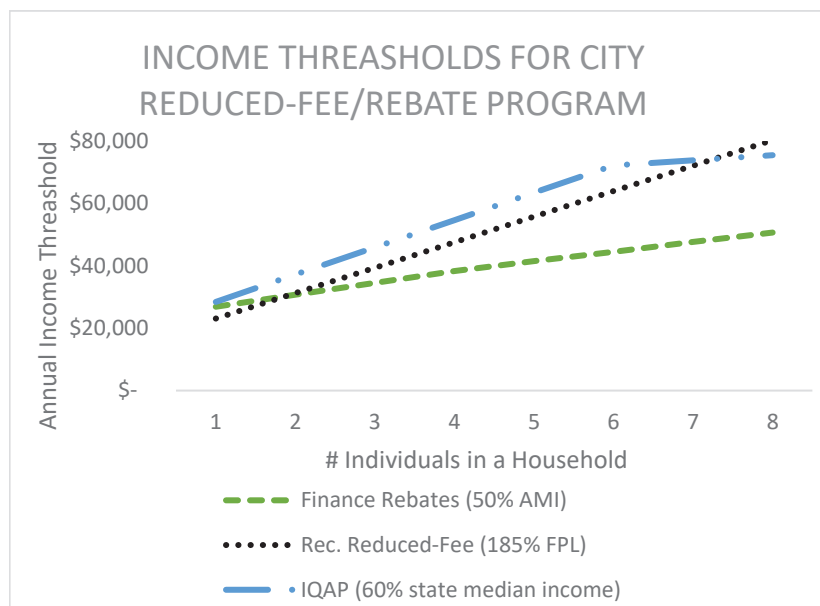


Figure 21: Cross-program Poverty Thresholds. Source: City of Fort Collins departments/service areas

When compared to the other income-qualified programs the Finance Rebates program sets the highest bar for participation, meaning they require an individual or household to be relatively worse-off than households qualifying for IQAP (energy assistance) or the Recreation reduced-fee program.

Moreover, the Finance Rebates program requires not only proof of relatively more extreme poverty than the other programs, but an additional criterion of being either elderly and/or disabled to qualify (for the PTR, UTR). Thus, even if an

individual or family qualifies based on income, they may not qualify based on age or lack of disability.

In terms of outreach, the FSA Rebates program has been less successful than other City rebate/reduced-fee programs, as indicated below.

- **Finance:** reaches ~8-10% of estimated, overall income-qualified families. However, this is likely higher due to additional program requirements beyond income.<sup>55</sup>
- **IQAP:** reaches 70%+ of Fort Collins based LEAP qualified participants.
- **Recreation Reduced-Fee program:** reaches ~80% of income-qualified families.

*Compared to other City programs, the Finance Service Area Rebates have the most restrictive criteria for participation. They have the lowest threshold for income (i.e., only the poorest qualify) and 2 out of the 3 Finance rebates offered are restricted based on age or disability status.*

<sup>55</sup> This does not take into account disability status or age, meaning that the penetration is likely much bigger, considering these additional restrictions.



## WIDE VARIATION BETWEEN DEPARTMENTS IN TERMS OF RESOURCES DEVOTED TO RUNNING LOW-INCOME REBATE/REDUCED-FEE PROGRAMS

There are several explanations for why the different service areas and different departments have unique approaches to managing and income-qualified program. These include:

1. Delineated vs. non-delineated program budgets. This has ramifications for:
  - Accurate knowledge of resources available for long-term planning and programmatic investing;
  - Alignment of resources toward achieving specific milestones;
  - Accountability for use of resources toward achieving specific objectives.
2. Dedicated vs. seasonal FTE. This explains differences in:
  - Marketing efforts;
  - Ownership of the process and opportunities for process improvements;
  - Relationship management with community partners.
3. Leveraging vs. non-leveraging of community partners. This has ramifications for:
  - Ability to build awareness and effectively market to and reach challenging populations;
  - Outsourcing aspects of program operations (application management, income verification, cross-promotion, etc.).

Rebate Program	Delineated budget?	Allocated full-time FTE?	Highlighted FTE role(s)	Level of Community Partner Support
Utilities- UAP	Mostly	<b>YES</b> <ul style="list-style-type: none"> <li>• 1 FTE (Program Manager; year-round)</li> <li>• 1.35 FTE (spread out amongst 4 staff)</li> </ul>	Cross-city coordination Marketing, event support Partnership building Direct engagement with participants Process improvement	<b>HIGH</b> <ul style="list-style-type: none"> <li>• LEAP</li> <li>• Non-profit partner meetings</li> </ul>
Finance Rebates (UTR, PTR, GTR)	YES	<b>PARTIAL</b> 33% staff-time (moved from contractual, seasonal position to permanent position).	Application verification, data processing No cross-city coordination currently Seasonal marketing (not year-round)	<b>LOW</b> <ul style="list-style-type: none"> <li>• As of fall 2019</li> </ul>
Rec. Reduced-fee Program	<b>NO</b> Specific program budget is not clearly delineated within larger department budget	<b>PARTIAL</b> .75 FTE (spread across multiple people)	Application management Application verification Marketing/outreach with PSD	<b>MODERATE</b> <ul style="list-style-type: none"> <li>• PSD knows and supports this program, but how communication between PSD and City works is unclear.</li> </ul>

## LOW-INCOME RESIDENTS ARE NOT VIEWED AS A UNIQUE CONSUMER OF CITY-SERVICES

Typically, the ordinances underpinning a rebate reflect the neediest demographics of the period within which they were written. For the FSA rebates, this would have been the poverty population of the 1970s and 1980s. Council should consider updating these ordinances to reflect the demographics of the low-income community today. For example, while seniors do represent a vulnerable population in 2020, the evidence put forth in this Evaluation suggests that attention should now extend to the families that represent the ‘working poor’ as well as female heads of households (see pages 14-18).

Beyond a recalibration of criteria to better target and reflect the realities of poor individuals and families in Fort Collins today, low-income residents have not been understood as a separate and unique consumer of City services.

Per the discussion throughout the section entitled *Background and Key Concepts*, the following questions about customer service and design were evaluated for each City rebate program within scope of this report:

	(1) <u>What evidence exists that the policy/program has been designed for the ‘poverty experience?’</u>	(2) <u>What evidence suggests that this program/policy hasn’t been designed—or has more work to do—to accommodate the ‘poverty experience?’</u>
Utilities- IQAP	<p><b>Moderate/significant evidence exists.</b></p> <ul style="list-style-type: none"> <li>Marketing efforts are intended to ‘reach people where they are at’ via the LEAP mobile ‘sign-up’ van, pop-up events in the community and presence at existing community events.</li> <li>Strong collaboration with nonprofit partners means leveraging the existing relationships community organizations already have with low-income populations.</li> </ul>	<p><b>UNKNOWN</b>—IQAP program is still in its first pilot year.</p>
Finance Rebates (UTR, PTR, GTR)	<p><b>Limited/no evidence exists:</b></p> <ul style="list-style-type: none"> <li>Individual staffers have volunteered to help improve the process in small ways, but lack of a program manager has complicated process ownership/improvement opportunity.</li> <li>Application materials have been revamped for clarity but have not benefited from a Human-Centered Design (user-centered design) approach.</li> </ul>	<p><b>NEED TO DESIGN FOR USER POVERTY EXPERIENCE</b></p> <p><b>Evidence: declining user-base</b></p> <ul style="list-style-type: none"> <li>Possible equity issues – PTR and UTR are limited to seniors and/or people with disabilities. A low-income family can only apply for the GTR.</li> </ul> <p><b>Evidence: aging user base</b></p> <ul style="list-style-type: none"> <li>Limited impact: Weigh the efficacy of reaching low-income people with the limiting age-specific criteria.</li> </ul> <p><b>Evidence: online system lacks user-friendliness</b></p>

		<ul style="list-style-type: none"> <li>• Unproductive online system means applicants must transport themselves to City offices or send sensitive information in the mail.</li> <li>• Impractical hours (applicants must come to City offices to drop off applications during work hours).</li> </ul> <p><b>Evidence: process imposes high cognitive burden</b></p> <ul style="list-style-type: none"> <li>• Applicants must remember seasonal application window (August-October).</li> <li>• Applicants must remember unique set of document requirements.</li> <li>• Unique income threshold that is dissimilar from other City rebate/reduced-fee programs.</li> </ul>
Recreation Reduced-Fee Program	<p><b>Moderate evidence</b></p> <ul style="list-style-type: none"> <li>• Type of passes offered, and recreation opportunities discounted were informed by public outreach.</li> <li>• Application has recently undergone FC Lean 'Form Fest' review, which dramatically shortened and clarified the application.</li> <li>• While application materials have been revamped for clarity there has not been an effort to leverage Human Centered Design (user-centered design) concepts.</li> </ul>	<p><b>NEED TO DESIGN FOR USER POVERTY EXPERIENCE</b></p> <p><b>Evidence: declining adult use, despite high numbers of impoverished adults</b></p> <ul style="list-style-type: none"> <li>▪ Reaching singles and adults is problematic for this program; it primarily draws households with children.</li> </ul> <p><b>Evidence: lack of information security</b></p> <ul style="list-style-type: none"> <li>• Front-desk staff copy/manage sensitive applicant information without secure privacy processes.</li> </ul> <p><b>Evidence: application process requires moderate cognitive burden</b></p> <ul style="list-style-type: none"> <li>• Separate application is required, similar to other City programs.</li> <li>• Unique income thresholds that differ from other City rebate/reduced-fee programs.</li> </ul>

## SUMMARIZED FINDINGS

Merging these datasets and considering the low participation rates plus the user design opportunities and challenges among these programs, suggests the following about the City's reduced-fee/rebate programs:

- **Close to 50% of low-income residents remain unserved by the City's low-income programs.** Of those that do participate, only 18% of addresses associated with a low-income resident is linked to more than one reduced fee/rebate program.
- **Low-income people almost certainly find navigation of City services a challenge.** If the City is serious about low-income people as a unique customer service segment and offering customer-centric service, low-income programming should be managed centrally and coordinated intentionally with both FTE and programmatic resources.
- **Departments struggle with income verification and are not aligned around poverty thresholds.** Not only does each department pay the 'full cost' of their program administration, but their targeting is unfocused, each reaching a slightly different

impoverished population. Also, lack of standardization around management of sensitive income verification documents is an underappreciated privacy and legal risk for the City.

- **Unlike other unique populations, low-income residents are typically not considered a unique customer segment** and thus do not have dedicated resources available in the City to support, navigate or advocate for the unique needs, behaviors and circumstances of low-income people.<sup>56 57</sup>
- **Ordinances underpinning several rebate programs reflect an outdated view of who is low-income in Fort Collins.** Consider mechanisms to continually update target demographics, based on current data about what types of individuals and families are low-income in Fort Collins.
- **Lack of standardized data and data tracking makes assessing resident engagement across City programs nearly impossible.** Better systems are needed for understanding how low-income people fully interact with—or are isolated from—available City services.
- **Few staff resources (FTE) are devoted to managing successful outcomes for this unique user group (low-income people).** With resources available to better market programs, develop relationships with community partners, improve application processes and better deliver service to low-income residents, the City could improve cross-program participation outcomes for this user group.
- **Key community partners and non-profits are unaware of certain rebate/reduced-fee offerings at the City.** Without awareness, non-profits are unable to alert their low-income clients of City opportunities and help improve City programming.
- **Key community partners may know about some rebate programs, but they could be better utilized.** Of the non-profits and community partners surveyed, no more than 50% actively support City rebate/reduced-fee programs either directly (by supporting low-income clients to fill out applications) or indirectly (via marketing like posters or flyers, or social media mentions).

---

<sup>56</sup> For example, Key Accounts Representatives in Utilities manage relationships with select Utilities business customers, Economic Health Office staff liaise with small business owners, and CityGive manages donor relationships.

<sup>57</sup> The IQAP program is an exception. It provides dedicated, year-round support to low-income customers served by the IQAP, MAP or PAF assistance programs.

# CROSS-CITY REBATE PROGRAM RECOMMENDATIONS

This evaluation highlights several opportunities for an improved, city-wide approach to rebates and reduced-fee programs for the local low-income population. Less than 20% of the participant data for the programs analyzed in this study indicates that low income customers participate in more than City-managed rebate/reduced-fee program. Low-income people find navigation of City services a challenge and siloed programming is minimizing impact and causing administrative cost duplication. Each department pursues their own path for marketing and outreach (or not) to a low-income customer type that a department itself defines in a vacuum. The results have included divergent income and eligibility thresholds, different targeting techniques and overall a less effective way to spend public funds for social impact. Without a city-wide strategy outlining a common language, definition, design, and marketing approach, low income people will continue to be overlooked as the unique users of government services that they are.

Customer segmentation of low-income customers, prioritization, and program management centralization could ensure that these currently siloed programs align to create a 'portfolio' of integrated, cross-functional work. The Evaluation Team believes this can be undertaken in three steps covering strategy, structure and systems:

- 1) Strategy: city-wide goal setting.
- 2) Structure: program centralization (a single application system paired with a dedicated FTE, a 'benefits expert'). The program should be governed in a cross-functional way, with input and alignment happening among reduced-fee/rebate offering departments.
- 3) Systems: a commitment to program design principles that reflect the City's understanding that low-income people represent a unique customer segment.

## (1) STRATEGY: CITY-WIDE GOAL SETTING

Departments implementing low-income rebates and reduced-fee programs typically operate their programs in 'silos' with minimal resources and little city-wide strategic guidance. A set of strategic City-wide goals to guide low-income programming should be shared across departments. Strategic goal setting around low-income programming will also act as an orienting principle, standardizing the language, metrics, marketing and resources utilized at the department level.

Similar cross-functional programming efforts, where departments work towards specific department-relevant goals that align to larger city-wide goals focused on low-income service delivery, have been undertaken successfully before. See, for example, the staff and executive governance model and execution underway with City's current Climate Action work<sup>58</sup>.

For low-income programming, targets paired with City-wide goals should be researched thoroughly and deeply considered, perhaps by a third-party. Topically, they may include:

- Promoting economic security with assistance in meeting basic needs (energy, tax relief);
- Opportunities to access high-quality cultural events and recreation.

---

<sup>58</sup> City of Fort Collins Climate Action: <https://www.fcgov.com/climateaction/>

Participation targets and success indicators should be linked to each of the articulated goals in order to track and evaluate progress.

## (2) STRUCTURE: CENTRALIZATION

---

Simply put, departments are developing and offering low-income rebate and reduced fee programs in isolation and that's both expensive and less effective than managing cross-functional efforts centrally. At the moment, individual programs do not benefit from the economies of scale that could otherwise come from strong collaboration. Instead, they experience high administrative burdens and absorb duplicative marketing and outreach costs.

For low-income customers, they must navigate the multiple applications, unique and specific entry requirements, differing deadlines, and keep track of individual program offerings.

Centralization could accomplish the following:

- **Streamlined administration:** obtain economies of scale and eliminate the duplicative marketing, application management and income verification currently undertaken by each individual department.
- **Unified programming that maximizes impact:** increase success of cross-program participation with a single application.
- **Meaningful marketing that targets the 'neediest' per Council and Executive guidance:** address these customers' unique marketing and outreach needs and improve customer service.
- **Clear roles and responsibilities:** centralize administration of low-income services with dedicated FTE program manager(s) and cross-functional participation by relevant Service Area Directors.

## MODELS TO CONSIDER

Notably, the City of Fort Collins can benefit from centralization and navigation models already underway with several non-profit and regional partners nearby. For example, the Larimer County Public Health Department's Human Services Department manages a single application through the state-run PEAK<sup>59</sup> application that, with an online application portal and

---

*Centralization models for similar program objectives already exist in our community. These include:*

*The "navigator" model used by non-profit and for-profit partners like UC Health*

*Single application portals paired with knowledgeable benefit analysts like the one used by PEAK/Larimer County Human Services Department*

---

knowledgeable benefit experts, covers multiple state and regional programs that each have unique eligibility thresholds. A potential customer comes in or enrolls online, providing one set of documents that can enroll them in multiple programs, depending on which ones the individual qualifies for.

Similarly, at UC Health, 'navigators' are hired to help recently diagnosed individuals navigate local, state and regional services that can improve quality of life or sustain successful treatment. These navigators work closely with local

---

<sup>59</sup> Colorado Department of Human Services: <https://www.colorado.gov/pacific/cdhs/cash-assistance>



stakeholders to manage cases and enroll patients in beneficial programs.

## CROSS-FUNCTIONAL GOVERNANCE

Resourcing with a dedicated FTE (a benefits ‘expert’), should occur in tandem with a commitment by each department and associated Service Area Director to provide alignment and oversight. A cross functional governance structure—either via a steering committee or executive-level committee— is essential to create department and service-area buy-in as well as cross-collaboration opportunities.

## MONITORING AND REPORTING

Without centralization, aggregation of participant data in individual programs remains a nearly impossible challenge. For this evaluation, a unique, cross-sectional dataset had to be constructed from individual datasets in various departments in different digital forms (logged in RecTrac, in Access, buried in Govern, and tabulated in excel).

If centralization is to occur, successful programming will only happen when program managers and leadership can use verified, accurate data to draw insights into program operation and outcome success. For example, the integration of city-wide rebate/reduced-fee participation data will finally be able to tell us who is participating, who is not participating and provide insight into outreach improvements.

Assuming centralization and aggregation of data is possible—staff resourcing and programmatic dollars for an online application system with back-end analytical capabilities of user-data would be required—regular monitoring and reporting to leadership, Council and a relevant cross-functional steering committee should be regularly scheduled.

## (3) SYSTEMS: DESIGN FOR LOW-INCOME PEOPLE AS A UNIQUE CUSTOMER SEGMENT

---

Low-income residents within the city must be seen and managed as a unique subset of City customers—by central program staff, participating departments and the wider City organization. Fortunately, the City has already engaged in efforts to segment customers and address differing needs. For example, the City uses a cross-functional team to coordinate outreach, streamline programming and synchronize relationship management with the business community, as well as with philanthropic donors<sup>60</sup>. The City’s Business Engagement Action Plan (BEAP) represents a cross-functional team that coordinates responses to the business community and co-manages business relationships amongst the Economic Health Office and the CFCU, among other departments.

A common approach and design for low-income programming will align

---

*Low-income residents within the city must be seen and managed as a unique subset of City customers.*

*Fortunately, the City has already engaged in efforts to segment customers and address differing needs.*

---

---

<sup>60</sup> See the City’s Business Engagement Action Plan (BEAP), co-managed by a cross-functional group from the Economic Health Office, Utilities Customer Engagement Team and City Manager’s Office. For the philanthropic and donor community, there is cross-city coordination undertaken by the CityGive program.

department efforts for this specific group using government services. Opportunities to recognize and design for a unique low-income segment will require:

1. **Development of a common language to describe the targeted population(s).** Include a standardized inventory of services and adopt a common measurement for determining 'low-income' status<sup>61</sup>. Specifically, this requires associated departments across the City to:
  - Agree upon a common definition of poverty or utilize an income range.
  - Agree on how/when updates to this definition may occur, based on demographic shifts and changes in economic status, costs of living, etc.
2. **Adopt a strategic action and communications plan for a defined low-income population for departments to follow.**
  - Establish a common communications approach when working with low-income individuals or relevant community partners.
  - Specify outreach and cross-promotion commitments for each department.
  - Identify and agree on executive-level, department-level, and team-level roles and responsibilities.
  - Articulate executive-level support and specify how executive engagement will be maintained.
3. **Require departments to institute user-specific, human centered design principles.** Utilize these principles when developing, improving and managing programs that target low-income populations.
  - Prioritize Human-Centered Design when developing or making improvements in programs targeting low-income people<sup>62</sup>.
  - Recognize that people experiencing poverty do not make decisions like their non-poor counterparts and that they face unique constraints and employ a unique set of responses and behaviors.
  - Minimize the time and cognitive costs for a low-income person engaging with a City service. For example, prioritize:
    - Shorter, simplified applications and eligibility criteria.
    - Online application submission
    - Leveraging programs low-income people already sign-up for. For example, programs like LEAP, Medicare/Medicaid, free-and-reduced lunch, etc.
    - Revisit the use of affidavits and other legal documents known to intimidate vulnerable populations.

---

<sup>61</sup> The City Rebate Taskforce has developed an inventory, but it is not clear the definition of 'low-income' continues to be interpreted differently within each associated department and rebate program.

<sup>62</sup> See Human Centered Design approaches: <https://www.designkit.org/human-centered-design>

# APPENDICES

## A. NONPROFIT/COMMUNITY PARTNER QUESTIONNAIRE

1. Organization you represent: \*

2. Your name, title: \*

3. What tends to characterize the populations you work with? Choose all that apply \*

- ☐ They are low-income
- ☐ Mostly families
- ☐ Mostly kids (up to 12 years)
- ☐ Mostly youth (13-17 years)
- ☐ At-risk (experiencing homelessness, illness, abuse, etc.)
- ☐ Gender/orientation-specific (specific focus on women, men, LGBTQ+)
- ☐ Industry-specific (e.g. artists, musicians)
- ☐ All of the above (please explain)  \*
- ☐ None of the above (please explain)  \*

4. Enough about our categories, how do you prefer to describe the community members you work with?

5. What City-sponsored low-income rebates/programs are you familiar with?

- ☐ Rebates to cover energy needs (e.g., utility rebates)
- ☐ Rebates to alleviate tax burden (e.g., city property tax rebates)
- ☐ Rebate to reduce grocery/food cost (e.g., grocery sales tax rebate)
- ☐ Scholarship programs for the arts/culture (e.g., Museum of Discovery, Gardens on Spring Creek)
- ☐ Reduced fee programs for recreation (Recreation reduced fee passes/programming)
- ☐ Other City reduced fee programs
- ☐ Other  \*
- ☐ None

6. Which, if any, of these City programs have you never heard of before? \*

- ☐ Utility Rebates
- ☐ Sales and Use Tax Rebates (city property tax)
- ☐ Grocery Rebates
- ☐ Reduced fee programs (arts/culture)
- ☐ Reduced fee programs (recreation)
- ☐ At a minimum, I've at least \*heard\* of all these opportunities

7. How do you interact with the City's low-income programs? Choose all that apply \*

	I help market this opportunity at my place of work with City posters, flyers, applications, etc.	I help community members fill out, find or access the necessary paperwork to sign up.	I announce this opportunity at special events	I announce this opportunity over social media.	I'm unaware of this rebate/reduced-fee program	N/A (this falls outside my scope)
Utility Rebates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales and Use Tax Rebate (City property tax)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grocery rebate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduced fee programs (arts/culture)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduced fee program (recreation)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other reduced fee programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Utilities rebates, sales and use tax (property tax rebates), and grocery rebates are intended to reduce the cost of living in Fort Collins. In your opinion, do you agree that these rebates effectively meet this objective? \*

	Yes, these rebates effectively reduce the cost of living in Fort Collins.	No, these rebates do not effectively reduce the cost of living in Fort Collins	I'm familiar with this rebate, but I'm not sure it's effective or not.	I'm not familiar with this rebate and couldn't say.
Utility rebates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales and Use Tax Rebate (City property tax)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grocery rebate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

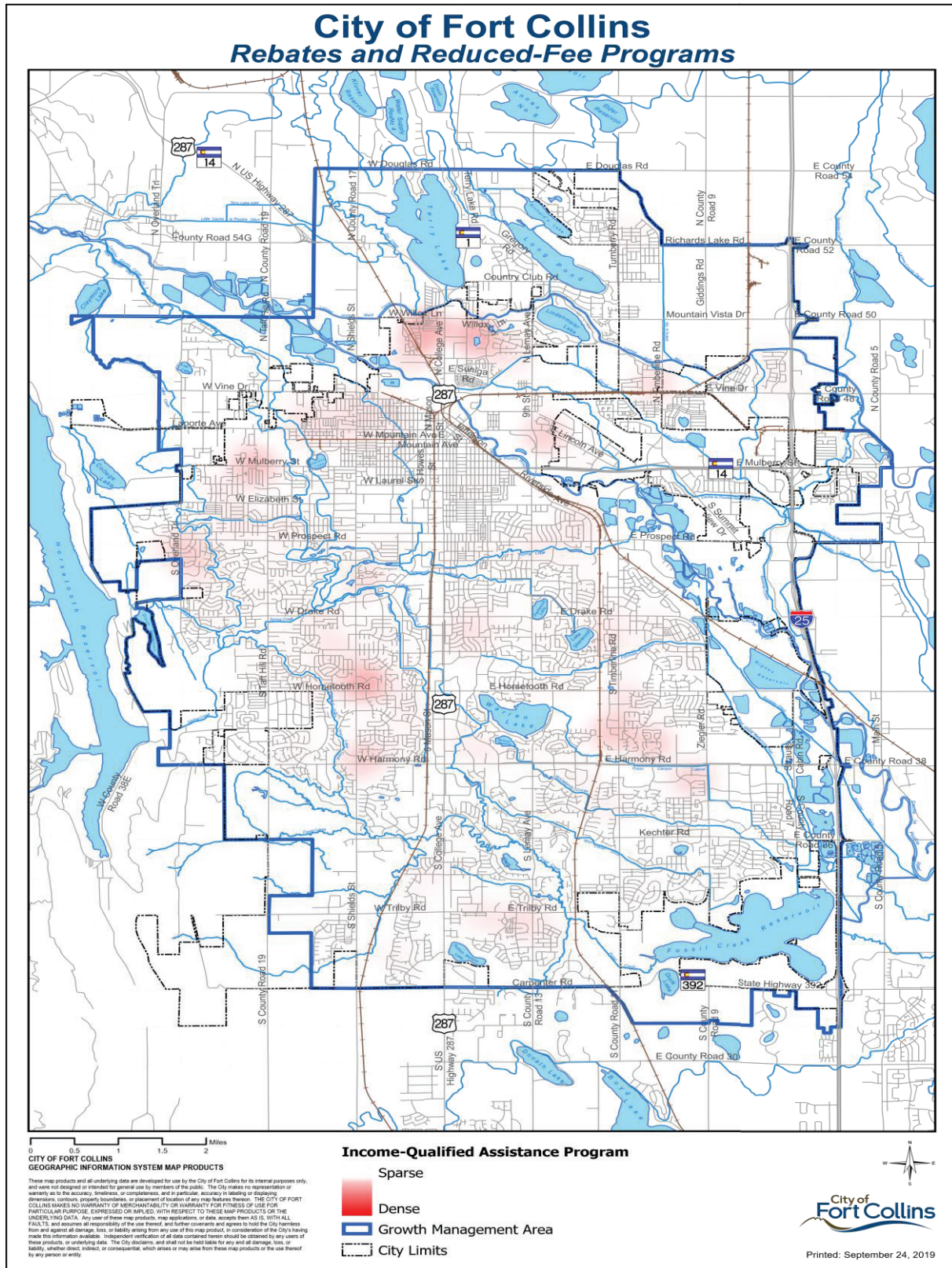
9. Reduced-fee programs aim to make a 'good life' in the City more affordable for a range of families and individuals. In your opinion, which of the reduced-fee programs are meeting this objective? \*

	Yes, this reduced-fee program makes a good life in Fort Collins more affordable.	No, this reduced-fee program doesn't make a good life in Fort Collins more affordable.	I'm not familiar with this reduced fee program and couldn't say.	I'm familiar with this reduced fee program, but I'm not sure how it impacts people.
Arts/culture reduced fee programs (Museum of Discovery, Gardens on Spring Creek)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation reduced fee programs (recreation facilities, recreation programs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. What else would you tell us about the City's rebate/reduced fee programs? For example, is the application easy to complete? Is the acceptance criteria reasonable? Is there enough time to complete and submit an application? \*

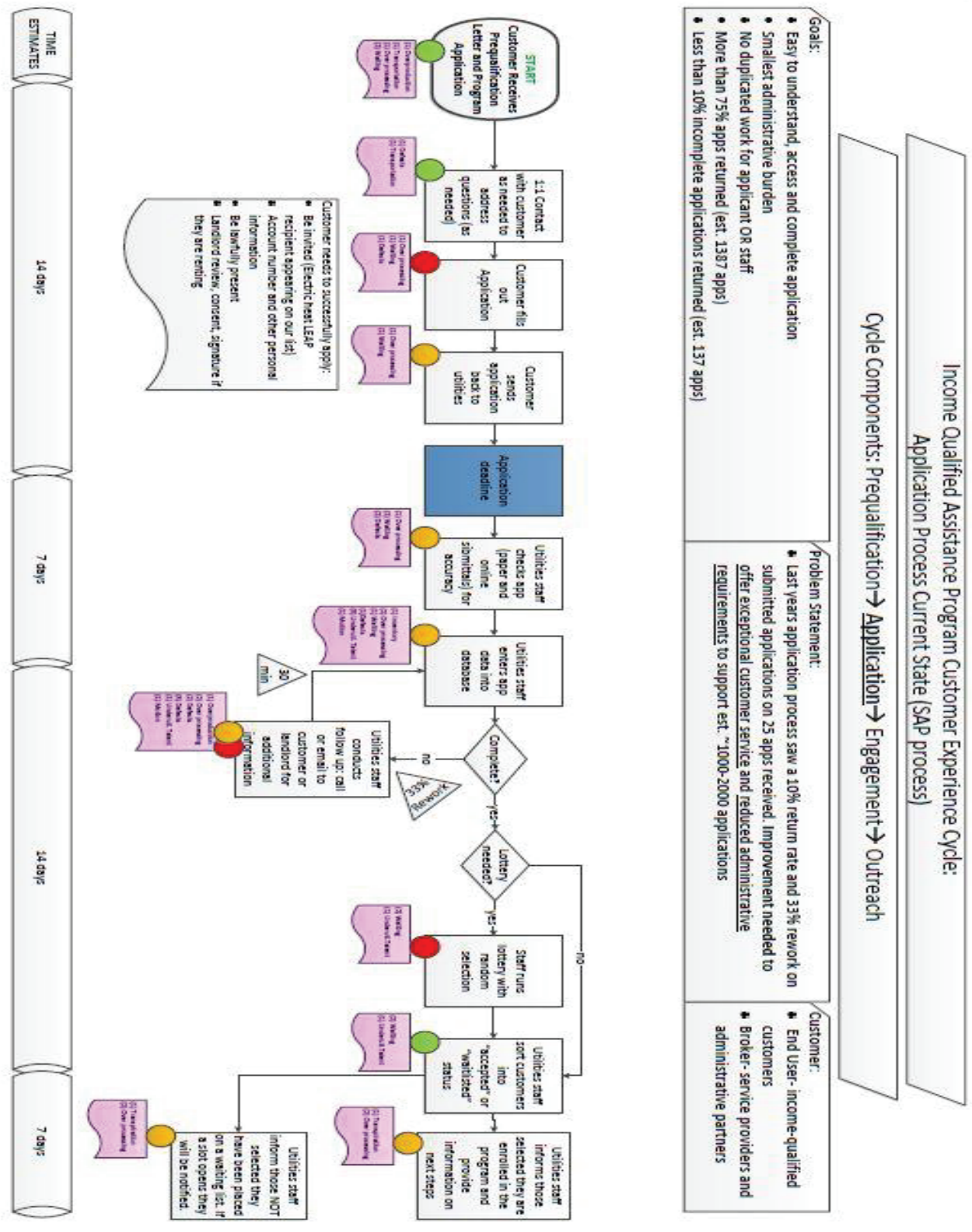


## B. SPATIAL MAP OF IQAP PARTICIPATION





## C. UAP PROCESS MAP FOR IQAP



## D. UAP APPLICATION: IQAP

# LEAP INTO MORE SAVINGS

You may qualify for IQAP if you received LEAP during the previous or current season and live in a household with an eligible Fort Collins Utilities electric, water and/or wastewater account.

IQAP lowers your utility bill so you can focus on other critical expenses.

You can benefit from money-saving opportunities beyond the reduced rate through free home efficiency and educational activities by dedicating about two hours of your time a year.

### How to Participate:

- Fill out and return the IQAP application after you've been approved for LEAP.
  - You will be informed of IQAP acceptance within four to eight weeks.
- Participate in free efficiency and educational activities (approximately 2 hours per year).
- Renew IQAP after applying for LEAP each year.
  - The rate is in effect until the September following enrollment.

### Need Help or More Information?

[fcgov.com/IQAP](http://fcgov.com/IQAP)

[utilitiesaffordability@fcgov.com](mailto:utilitiesaffordability@fcgov.com)

970-212-2900, V/TDD 711

*Esta información sobre el programa "Income-Qualified Assistance Program", que ofrece una tarifa de luz y agua a descuento, puede ser traducida, sin costo para usted.*

### TAKE CONTROL OF YOUR ELECTRIC BILL

Off-peak prices are approximately 70% less than on-peak prices. Save money by *shifting* your electric use to the lower-priced, off-peak hours or by *reducing* your use.

- **Off-peak hours:** 19-20 hours each weekday, all weekend hours and major holidays

*Major holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving and Christmas*

- **On-peak hours:** October-April 5-9 p.m., weekdays only
- **On-peak hours:** May-September, 2-7 p.m., weekdays only

Learn more: [fcgov.com/TOD](http://fcgov.com/TOD)



*Switching to LED bulbs is an easy improvement that helps lower your utility bill long term.*



This document can be translated into any language by calling 970-212-2900. Auxiliary aids and services are available for persons with disabilities. V/TDD 711

Apply here or online at [fcgov.com/IQAP](http://fcgov.com/IQAP)



## E. UAP APPLICATION: MAP

### Medical Assistance Program 2020 Application

The Medical Assistance Program provides financial assistance through electric medical rates to residential customers who:

- require the use of medically necessary equipment in their home, and/or
- have medical conditions that require air conditioning during the summer billing months.

**Please note:**

- Program is available to all qualifying residential electric customers.
- Customers are required to apply for this electric medical rate each calendar year. Your 2020 electric medical rate will be discontinued if a renewal form is not received by Jan. 1, 2020. Applicants between July 1 and Dec. 31, 2019, do not need to renew until Jan. 1, 2021.

#### PHYSICIAN INFORMATION

Patient's full name: \_\_\_\_\_

Physician's full name: \_\_\_\_\_ Phone: \_\_\_\_\_

Office address: \_\_\_\_\_ City: \_\_\_\_\_ ZIP code: \_\_\_\_\_

Physician must complete and sign this section.

Please check all that apply. For a list of HCPCS codes, visit [hcpcs.codes/e-codes](http://hcpcs.codes/e-codes).

☐ Medical equipment\* (E126/A126)

My patient, residing at the service address on this application, has a medical condition that requires the following medically necessary equipment at the patient's residence: \_\_\_\_\_

**REQUIRED: HCPCS Code (Healthcare Common Procedure Coding System Code):** \_\_\_\_\_

☐ Medically necessary air conditioning (E127/A127)

My patient, residing at the service address on this application, has a severe immune compromising medical condition (multiple sclerosis, quadriplegia, paraplegia, scleroderma or hemiplegia), and air conditioning at such patient's residence is medically necessary.

☐ Medical equipment and air conditioning (E128/A128)

My patient requires medically necessary equipment and air conditioning at the service address on this application.

**REQUIRED: HCPCS Code (Healthcare Common Procedure Coding System Code):** \_\_\_\_\_

Physician's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Colorado medical license number: \_\_\_\_\_

#### SUBMITTAL INSTRUCTIONS

**Complete all areas of this form:**

- Physician/ HCPCS Code information (completed by physician)
- Affidavit of lawful presence in the United States (reverse side)
- Customer information (reverse side)
- Affidavit of income eligibility (reverse side)

**Return to Fort Collins Utilities.**

Mail to: Fort Collins Utilities  
Customer Service Division  
PO Box 580  
Fort Collins, CO 80522-0580

In person: Fort Collins Utilities  
Customer Service Division  
222 Laporte Ave.  
Fort Collins, CO 80521

Find this application and  
information at:  
[fcgov.com/medical-assistance](http://fcgov.com/medical-assistance)



[fcgov.com/utilities](http://fcgov.com/utilities) • [utilities@fcgov.com](mailto:utilities@fcgov.com) • 970-212-2900 • V/TDD 711

# Medical Assistance Program

## 2020 Application



### CUSTOMER INFORMATION

**Applicant must complete and sign this section. To be completed by Fort Collins Utilities account holder - PLEASE PRINT**

Account holder(s) name(s): \_\_\_\_\_

Account number: \_\_\_\_\_ - \_\_\_\_\_ Name of resident at this address requiring assistance: \_\_\_\_\_

Phone number: \_\_\_\_\_ Email: \_\_\_\_\_

Service address\*: \_\_\_\_\_ ZIP code: \_\_\_\_\_

Number in household: \_\_\_\_\_ Annual Household Income Range (select one option on next line):

☐ Less than \$10,000 ☐ \$10,000-\$14,999 ☐ \$15,000-\$24,999 ☐ \$25,000-\$34,999 ☐ \$35,000-\$49,999 ☐ \$50,000-\$74,999 ☐ \$75,000+

*\*If you move and will remain a Fort Collins Utilities Customer, you must notify Utilities to move the rate to the new address.*

### Affidavit of lawful presence in the United States

to be completed by Utilities account holder

I, \_\_\_\_\_, swear and affirm under penalty of perjury under the laws of the State of Colorado that:

☐ I am a citizen of the United States

☐ I am not a United States citizen but I am lawfully present in the United States pursuant to federal law

I understand that this sworn statement is required by law because I have applied for a public benefit. I understand that I must provide proof per state law that I am lawfully present in the United States and submit a secure and verifiable document verifying my lawful presence if requested.

### Affidavit of income eligibility

to be completed by Utilities account holder

This program is intended to assist customers for whom the costs of running a medical device results in an economic hardship. The income threshold for this program has been set at 60% of the Larimer County Area Median Income (as determined by the Federal Housing Authority). Based on the number of people within this residence and the income ceiling provided in the table at right, I certify that the total household income is less than the income ceiling and, thus, this account is eligible for this program. I agree, as a condition of my participation in this program, that if asked, I will provide copies of my financial records establishing my household income, including copies of my IRS tax returns.

**60% Larimer County Area  
Median Income - 2019**

# in Household	Income Limit
1	\$36,600.00
2	\$41,880.00
3	\$47,100.00
4	\$52,320.00
5	\$57,520.00
6	\$62,720.00
7	\$67,920.00
8+	\$69,120.00

My signature below certifies all information on this application is true and accurate, that I am lawfully present in the United States, the total household income for this residence is less than the household size adjusted income ceiling in the table above, and the resident named above lives at this address full time and requires medically necessary equipment, used at this address, which requires electricity to operate. I further acknowledge that making a false, fictitious, or fraudulent statement or representation in this sworn affidavit is punishable under the criminal law of Colorado as perjury in the second degree under C.R.S. 18-6-503, and it shall constitute a separate criminal offense each time a public benefit is fraudulently received.

Account holder's signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Application does not guarantee uninterrupted electric service nor prevent disconnection for non-payment.**

Customers who are denied medical assistance may submit an appeal to the Utilities executive director based on financial or medical exceptions.

\*Medically necessary equipment for this electric medical rate is defined as any durable medical equipment requiring electricity to operate that is required on an ongoing basis by a patient within the residence receiving electric service from Fort Collins Utilities.

Auxiliary aids and services are available for persons with disabilities. Esta información puede ser traducida, sin costo para usted.

[fcgov.com/utilities](http://fcgov.com/utilities) • [utilities@fcgov.com](mailto:utilities@fcgov.com) • 970-212-2900 • VTDD 711

## F. FSA REBATE APPLICATION

### FORT COLLINS 2019 REBATE APPLICATION

(for the 2018 Tax Year)

215 N. Mason St., 2nd Floor, Fort Collins, CO 80524 | (970) 416-2304 | [fcgov.com/rebate](http://fcgov.com/rebate) | [groceryrebates@fcgov.com](mailto:groceryrebates@fcgov.com)

Did all household members live in the City limits of Fort Collins or the growth management area of Fort Collins from January 1 through December 31, 2018? Please contact the rebate office or visit [fcgov.com/salestax/address-lookup](http://fcgov.com/salestax/address-lookup) if you are uncertain. Yes ☐ No ☐

If "No," please do not continue with the application because you do not qualify for the rebate.

#### APPLICANT

Last Name	First Name		Middle
Address of Residence	City	State	Zip Code
Mailing Address (if different than residence)	City	State	Zip Code
Daytime Phone Number	Alternative Phone Number	Date of Birth	Age
Fort Collins Utility Account Number	Disabled* Yes <input type="checkbox"/> No <input type="checkbox"/>	Email Address	

\*First-time applicants and those with a change in disability status must provide proof of disability.

PLEASE COMPLETE THE FOLLOWING FOR ANY OTHER MEMBERS WHO LIVED WITH YOU THE FULL YEAR OF 2018

Name	Relationship to You	Date of Birth	Age	Disabled (if yes, provide proof)		U.S. Citizen		Not a U.S. Citizen but lawfully present?	
				Yes	No	Yes	No	Yes	No

MORE INFO ON NEXT PAGE



**HOUSEHOLD INCOME FOR 2018** Please attach copies of proof of income—federal income tax return, SSI statements, etc. Include total income for the year 2018 for all adults 18 and over in the household (does not include food stamps).

Type of Income	Dollar Amount Received
Salaries, wages, tips, and other employee compensation	
Social Security benefits or SSDI	
Larimer County Human Services Assistance (cash assistance, OAP, TANF, AND)	
Pensions and annuities	
Alimony and child support	
All other income—(please explain)	
<b>TOTAL Income</b>	<b>\$</b>

#### PROPERTY TAX/RENT AND UTILITY REBATES\*

If a household member is 65+ years of age as of 12/31/18, or disabled, please complete the following.

- ☐ **OWN** (applicant must be the name listed on the assessor's page) If you own(ed) the property at the address above, please provide name(s) of any co-owners: \_\_\_\_\_
- ☐ **RENT** (applicant name must be on the lease) If you rent, please list the amount of rent you personally paid in 2018. Mobile home owners please list the lot rent. \$ \_\_\_\_\_  
Provide a receipt for calendar year 2018.

\*Properties exempt from property tax are not eligible for the property tax/rent rebate.

How did you hear about the rebate program? \_\_\_\_\_

#### AFFIDAVIT — RESTRICTIONS ON PUBLIC BENEFITS

I, \_\_\_\_\_, swear or affirm under penalty of perjury under the laws of the State of Colorado that (check one)

- ☐ I am a United States citizen.
- ☐ I am not a United States citizen but I am lawfully present in the U. S. pursuant to Federal law.

I understand that this sworn statement is required by law because I have applied for a public benefit. I understand that state law require me to provide proof that I am lawfully present in the United States prior to receipt of this public benefit. I further acknowledge that making false, fictitious, or fraudulent statement or representation in this sworn affidavit is punishable under the criminal laws of Colorado perjury in the second degree under Colorado Revised Statute 18-6-503 and shall constitute a separate criminal offense each time a public benefit is fraudulently received.

**X**

Primary Applicant Signature

Date

#### DECLARATION

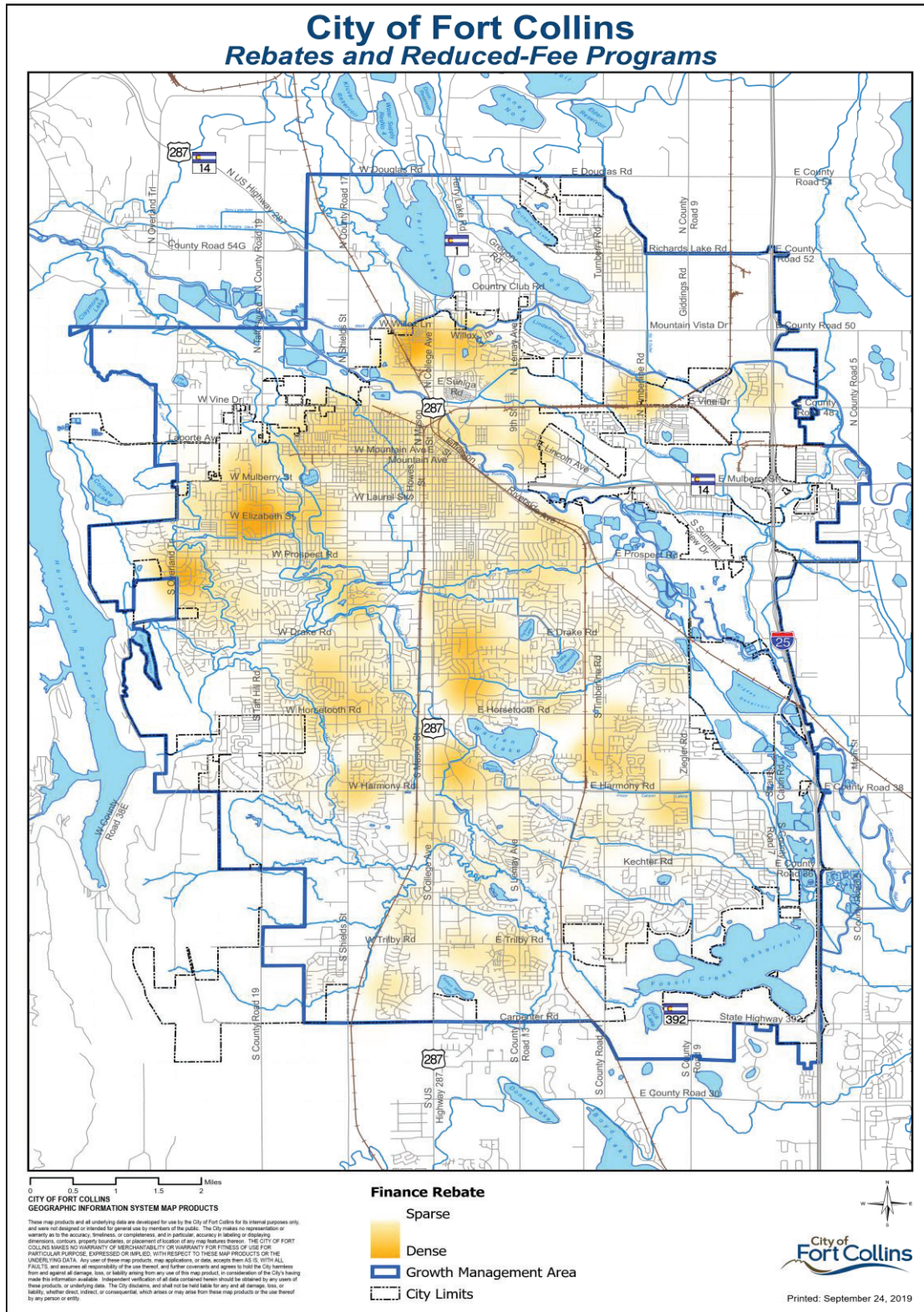
Under penalty of perjury, I declare that I have read and understand the information and qualifications of this application and that all members of this household meet the eligibility criteria. I also understand that I will be permanently disqualified from this program if any information on this application is proven fraudulent.

**X**

Primary Applicant Signature

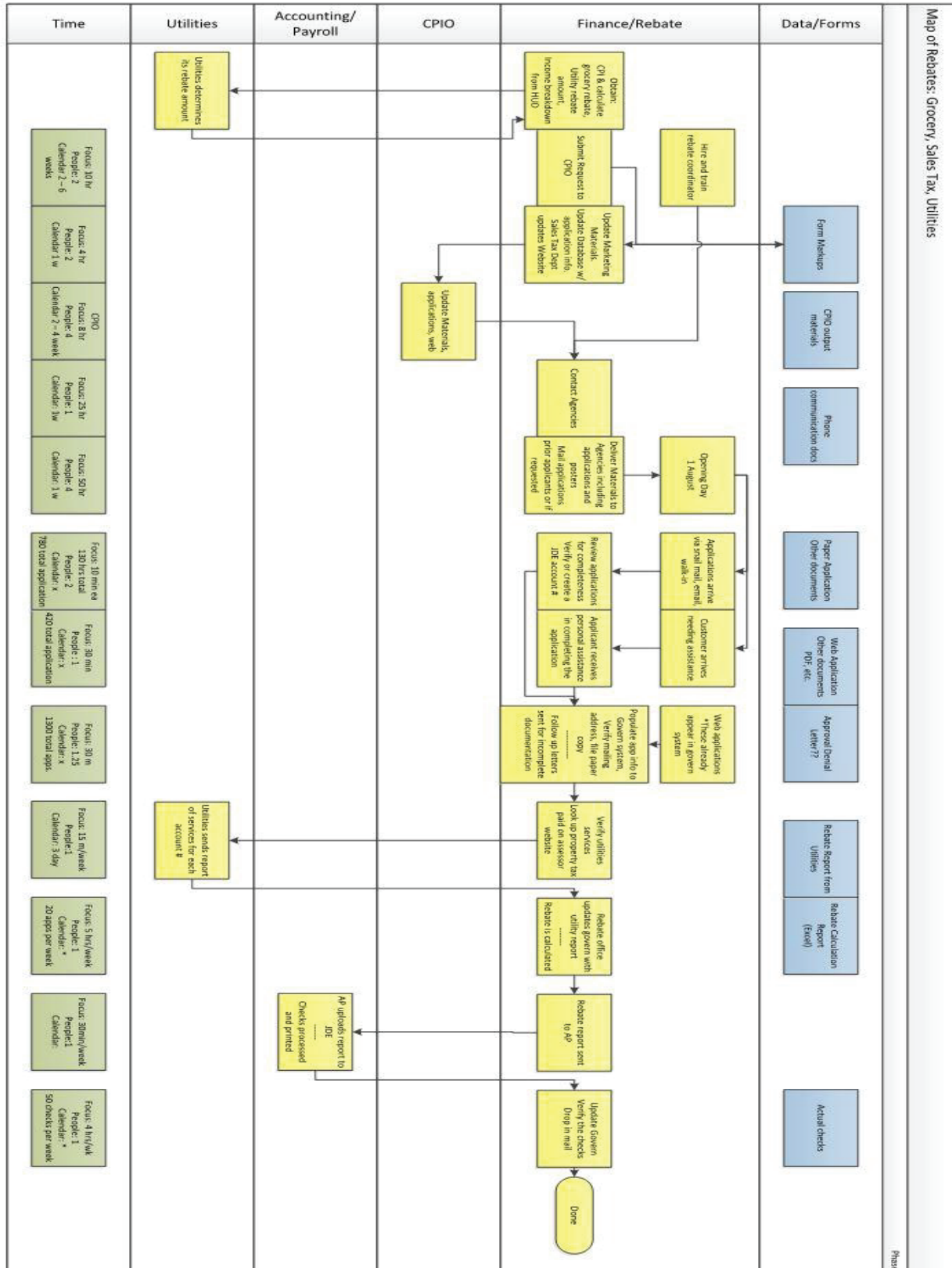
Date

## G. SPATIAL MAP OF FSA REBATE PARTICIPATION

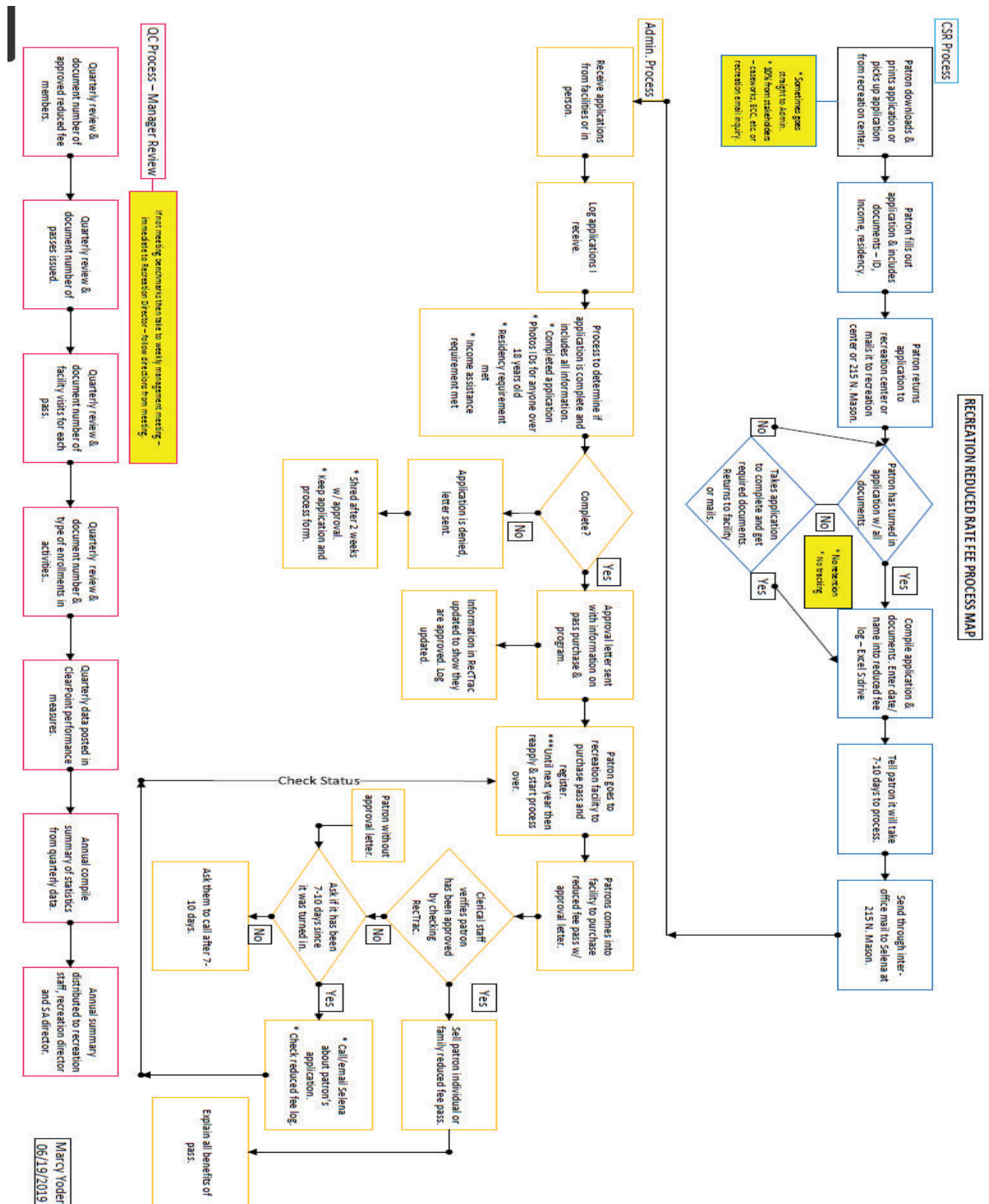




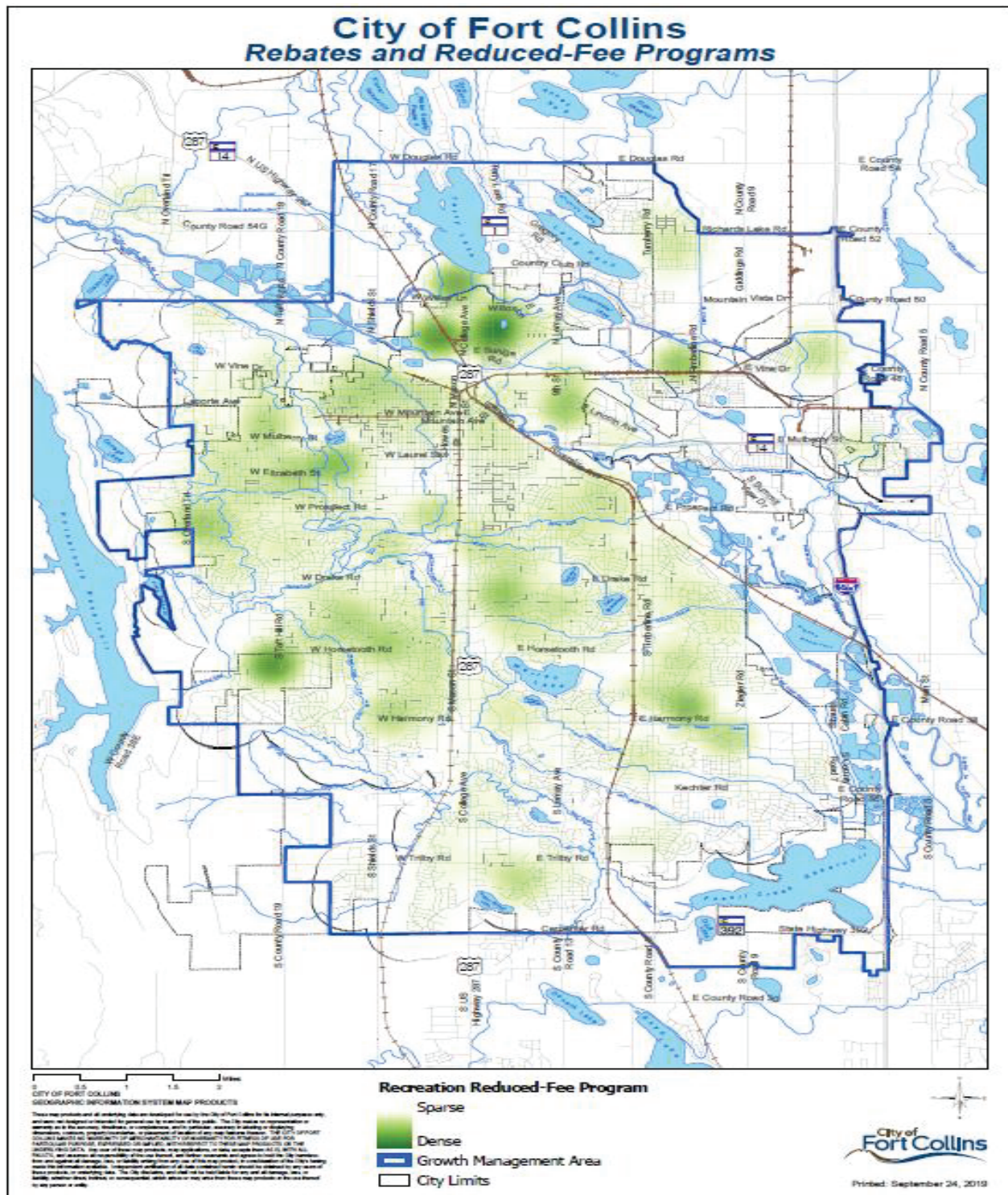
## H. FSA REBATE PROCESS MAP



# I. REDUCED-FEE PROGRAM PROCESS MAP



## J. SPATIAL MAP OF RECREATION REDUCED-FEE PARTICIPATION





## K. RECREATION REDUCED-FEE PROGRAM APPLICATION



### REDUCED FEE PROGRAM APPLICATION

970.221.6655 • [fcgov.com/reducedfee](http://fcgov.com/reducedfee)

#### PLEASE COMPLETE ALL FIELDS

Applying for: ☐ Self only ☐ Children under 18 only ☐ Household

Name \_\_\_\_\_

Date of Birth \_\_\_\_\_ Gender (optional) \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Name and contact information of person assisting with application, if applicable \_\_\_\_\_

#### Additional household members applying for benefits

	Name	Date of Birth	Relationship	Gender	Grade
1.					
2.					
3.					
4.					
5.					
6.					

#### VERIFICATION – Please attach to application

##### Income (select one)

☐ PSD Free/Reduced Lunch Letter

OR

☐ Current Proof of Federal or State Assistance Program

OR

☐ Most Recent Tax Return (Total Household Income)

##### AND Residency (select one)

☐ PSD Free/Reduced Lunch Letter

OR

☐ City of Fort Collins Utility Bill in Your Name

OR

☐ Three Pieces of Mail with Your Name and Address

##### AND Identification

☐ State or Federal Government issued ID (applicants 18 + must provide)

Visit [fcgov.com/reducedfee](http://fcgov.com/reducedfee) for specific documents accepted

Applicant Signature (Required)

*I verify the information stated on this application is true.*

Date

Adult Age 18 + Affidavit Signature

*I am a U.S. citizen or legal permanent resident, or otherwise lawfully present in the United States (not required if applying for children only).*

Date

Additional Adult Age 18 + Affidavit Signature

*I am a U.S. citizen or legal permanent resident, or otherwise lawfully present in the United States (not required if applying for children only).*

Date



# INTERNAL STAKEHOLDER COMMENTS

## SERVICE AREA DIRECTOR COMMENTS

**NAME:** Kelly DiMartino

**TITLE:** Deputy City Manager

1. Please provide any comments you may have on the evaluation report's findings or lessons learned.

*I found the structure of the report to be very helpful, with both individual program and cross-city findings. Of particular note to me was that low-income people are not considered a unique consumer of City services. I think this shift in thinking has the potential to drive numerous service delivery improvements.*

*The findings specific to the Recreation reduced-fee program were also insightful. I appreciate the recognition of the significant improvements that have been made to the application process. Additionally, the findings regarding privacy risk help illuminate the need for further process change.*

2. Please provide any comments you may have on the evaluation report's recommendations.

*My bias is to move toward the cross-city recommendations, acknowledging that it may take additional resource to make this happen. With this Council's focus on equity and inclusivity, the timing seems good to implement the recommendation regarding establishing strategic city-wide goals. Further consideration is needed regarding the best way to do this, and who would lead that effort.*

3. Please provide any additional comments you may have.

*Job well-done! The evaluation provided valuable documentation and insights to consider as we look to further improve the effectiveness of these programs. While I was part of the team that agreed upon this defined project scope, I believe an important next step will be to conduct a "review lite" of other reduced-fee programs, particularly in Cultural Services and Transportation.*

**NAME:** Jacqueline Kozak-Thiel

**TITLE:** Chief Sustainability Officer

1. Please provide any comments you may have on the evaluation report's findings or lessons learned.

*I think one of the greatest impacts of this work will be the paradigm shift of how we understand and serve our low-income residents as a distinct segment of our community (with different needs, access points, etc.).*

2. Please provide any comments you may have on the evaluation report's recommendations.

*I am especially excited about the recommendation for how a coordinated strategy and dedicated resource could result in achieving socio-economic outcomes and council's priority of a streamlined approach to low income offerings and increased participation.*

3. Please provide any additional comments you may have.

*As always, this was so thorough and well done. I think it will have tremendous insight for low income programs that are currently in design, such as broadband.*

**NAME: Mike Beckstead**

**TITLE: Chief Financial Officer**

1. Please provide any comments you may have on the evaluation report's findings or lessons learned.

*All comments have been shared at meetings and the majority have found their way to this document.*

2. Please provide any comments you may have on the evaluation report's recommendations.

*There are several recommendations (i.e., combining the UTR with the IQAP) that can be directly pursued by the FSA. Others will require a central point-person to pursue to avoid having each of the three rebate programs develop individual solutions to common problems. This includes the online application, central-point of access, and unified marketing.*

3. Please provide any additional comments you may have.

*Great work and an outstanding report. Thank you.*

## **PROJECT TEAM COMMENTS**

---

**UTILITIES AFFORDABILITY PORTFOLIO: Jamie Gaskill, Senior Supervisor; Lisa Schroers, Utilities Affordability Program Specialist**

1. Please provide any comments you may have on the evaluation report's findings or lessons learned.

*The need for a city-wide strategy and program to address the needs of low-income community members is ever-increasing. The working-poor is a growing population that needs consideration when designing and implementing future iterations of low-income offerings.*

*It appears that many of the [City's] programs were created to fit a "need at the time" rather than as part of a strategic plan. The program staff, the community members and the community as a whole would benefit from a more strategic approach.*

*The findings regarding WHO is experiencing poverty in Fort Collins is helpful for us to direct our efforts going forward.*

*While we were not surprised by the findings about the Utilities Affordability Portfolio we are pleased that community partners have great awareness of the UAP. We will continue to build on that awareness and will work with agencies to connect their clients to additional UAP offerings such as building retrofits.*

2. Please provide any comments you may have on the evaluation report's recommendations.

In Utilities we view low-income customers to be a unique customer segment and dedicate resources to supporting programs that serve the low-income population.

The UAP team is already implementing many of the recommendations in the report. Actions underway include:

- Development of a strategic plan with measurable goals and objectives
- The strategic plan is accompanied by a robust outreach and engagement plan that targets existing and new partner agencies as well as direct-customer outreach. Additionally, the outreach and engagement plan includes collaboration with other city departments that offer low-income programs.
- Analysis of the impacts of eliminating MAP and encouraging customers to enroll in LEAP/IQAP instead
- Feasibility analysis of auto-enroll of CFCU customers who are LEAP qualified into IQAP

3. Please provide any additional comments you may have.

**FINANCIAL SERVICES REBATE PROGRAM: Jennifer Poznanovic**, Senior Manager, Sales Tax/Revenue

1. Please provide any comments you may have on the evaluation report's findings or lessons learned.

*Appreciate the thorough evaluation done to review income qualified rebates/programs across three City departments for a more holistic approach. Already aware of findings for the finance rebates but appreciate the well-researched and formalized report.*

2. Please provide any comments you may have on the evaluation report's recommendations.

*Great take-away to recognize and focus on a new customer segment across the City for low-income residents. Collaboration across departments, more resources and time will be needed to achieve many recommendations.*

*In the near term, looking forward to focusing on the grocery and property tax rebates out of finance with an elimination of the utility rebate in lieu of the newer IQAP program out of Utilities.*

3. Please provide any additional comments you may have.

*In the two years that I have been at the City, the Income Qualified Working Group and the program evaluation have led to a better understanding of programs across the City with more collaboration and breaking down silos.*

**RECREATION DEPARTMENT: Bob Adams**, Director; **Janice Saeger**, Financial Analyst

1. Please provide any comments you may have on the evaluation report's findings or lessons learned.

*I appreciated the acknowledgement of the unique target demographics and purpose of each rebate program, whether to ease the cost of living in Fort Collins (basic needs) or accessibility to quality of life opportunities (culture and recreation).*

2. Please provide any comments you may have on the evaluation report's recommendations.

*Centralization would offer greater efficiency for all programs with the correct level of resourcing in staff and technology, however it may be challenging to increase cross-participation in programs because of each individual's situation, desires, and needs. This ties back to developing a strategic City-wide goal of what is to be achieved with the rebate programs as a whole.*

*Recreation has designed its reduced fee program in support of Strategic Objective 1.3 - Improve accessibility to City and Community programs and services to low- and moderate-income populations. (This objective has had many similar iterations over the years) The practical application of this objective means anyone who meets the income qualifications receives the benefits of the reduced fee program and is not turned away. As a revenue-generating department this can/does have resourcing implications as the program expands.*

*If all program income qualifications are tied to AMI through centralization, consideration should be made to increase the percentage of AMI used so as not to exclude a number of Recreation's current participants in the program.*

3. Please provide any additional comments you may have.

*No additional comments.*

# STAKEHOLDERS, INTERVIEWS AND REVIEWERS

## INTERNAL INTERVIEWS, STAKEHOLDERS

---

**Aimee Housh**, Specialist, Utilities Customer Connections, Fort Collins Utilities  
**Amy Resseguie**, Senior Communications Specialist, Community & Public Involvement  
**Ben Belt**, Accounts Receivable / Billing Coordinator, Fort Collins Utilities  
**Beth Sowder**, Director, Social Sustainability Office  
**Blake Schlup**, Accounts Receivable / Billing Coordinator, Fort Collins Utilities  
**Bob Adams**, Director, Recreation Department  
**Dianne Tjalkens**, Specialist, Social Sustainability  
**Jacqueline Kozak-Thiel**, Chief Sustainability Officer, Sustainability Services Area  
**Jamie Gaskill**, Senior Supervisor, Utilities Customer Connections, Fort Collins Utilities  
**Janice Saeger**, Financial Analyst II, Recreation Department  
**Jenne Loffer**, Senior Supervisor, Customer Support, Fort Collins Utilities  
**Jennifer Poznanovic**, Senior Manager, Sales Tax/Revenue  
**Jolee Sawyer**, Senior Supervisor, Customer Support, Fort Collins Utilities  
**Kelly DiMartino**, Deputy City Manager, City Manager's Office  
**Kendal Dawson**, Business Support I, Fort Collins Utilities  
**Kevin Gertig**, Utilities Executive Director, Fort Collins Utilities  
**Lance Smith**, Director, Financial Planning and Analysis, Fort Collins Utilities  
**Lisa Schroers**, Utilities Affordability Program Specialist, Fort Collins Utilities  
**Mike Beckstead**, Chief Financial Officer, Financial Services  
**Peggy Streeter**, Financial Analyst II, Planning, Development and Transit Administration  
**Pete Iengo**, Senior Specialist, Public Engagement, Fort Collins Utilities  
**Rachel Spingob**, Manager, Payroll, Accounting and Treasury  
**Rachel Wagner**, Coordinator, Customer Connections, Fort Collins Utilities  
**Randy Reuscher**, Lead Analyst, Utility Rate, Fort Collins Utilities  
**Ryan Malarky**, Assistant City Attorney II, City Attorney's Office  
**Salina Hemmen**, Business Support III, Recreation Department  
**Stan Suppes**, Accounts Receivable / Billing Coordinator, Fort Collins Utilities  
**Sue Jordanger**, Accounts Receivable / Billing Coordinator, Fort Collins Utilities  
**Taylor Blomquist**, Public Engagement Specialist, Customer Connections, Fort Collins Utilities  
**Tracy Brann**, Senior Supervisor, Accounts Receivable / Billing, Fort Collins Utilities  
**Wendy Williams**, Assistant City Manager, City Manager's Office  
**Zachary Delissio**, Supervisor, Recreation Department

## EXTERNAL INTERVIEWS, FOCUS GROUPS, SURVEY RESPONDENTS

---

**Colorado LEAP Program:** Melinda Bennett, Eric Crosby  
**The Family Center**, Deirdre Sullivan  
**Emma Chavez**, CARE Program at CSU  
**Enrique Hernandez**, Energy Outreach Colorado  
**Food Bank of Larimer County**  
**Harry Love**, Volunteer Income Tax Assistance  
**Larimer County Human Services Department**, Laura Sator, Vanessa Fewell  
**Neighbor to Neighbor**  
**Project Self Sufficiency:** John Kinnaird, Stephanie Alley, Hannah Dahl, Neva Menchaca,  
**UCHealth:** Deanna O'Connell, Jill Taylor, Laurie Zenner, Colette Thompson, Eileen Hendee,  
JoAnn Herkenhoff, Karen Ramirez, Julie Knighton

## CITY OF FORT COLLINS FC LEAN FACILITATORS

---

**David Suckling**, Fort Collins Utilities  
**Jami McMannes**, Recreation Department  
**Marcy Yoder**, Senior Manager, Neighborhood Services  
**Rik Johnson**, Planning, Development and Transportation  
**Roland Guerrero**, Lead Specialist, FC Lean, Financial Services

## RECEIVED DRAFT REPORT

---

**Beth Sowder**, Director, Social Sustainability Office  
**Bob Adams**, Director, Recreation Department  
**Ingrid Decker**, Senior City Attorney, City Attorney's Office  
**Jacqueline Kozak-Thiel**, Chief Sustainability Officer, Sustainability Services Area  
**Jamie Gaskill**, Senior Supervisor, Utilities Customer Connections, Fort Collins Utilities  
**Janice Saeger**, Financial Analyst II, Recreation Department  
**Jeff Mihelich**, Deputy City Manager  
**Jennifer Poznanovic**, Senior Manager, Sales Tax/Revenue  
**Kelly DiMartino**, Deputy City Manager, City Manager's Office  
**Kevin Gertig**, Utilities Executive Director, Fort Collins Utilities  
**Lisa Schroers**, Utilities Affordability Program Specialist, Fort Collins Utilities  
**Mike Beckstead**, Chief Financial Officer, Financial Services  
**Ryan Malarky**, Assistant City Attorney II, City Attorney's Office  
**Evaluation Core Team members:** Kathy Collier, Dave Lenz, Tyler Marr, Terri Runyan, Jennifer Selenske, Crystal Shafii, Victoria Shaw, Jo Cech, Adam McCambridge, Dean Klingner

## RECEIVED FINAL REPORT

---

All persons who received Draft Report, plus:  
**Aimee Housh**, Specialist, Utilities Customer Connections, Fort Collins Utilities  
**Amy Resseguie**, Senior Communications Specialist, Community & Public Involvement  
**Ben Belt**, Accounts Receivable / Billing Coordinator, Fort Collins Utilities  
**Carrie Daggett**, City Attorney  
**Caryn Champine**, Director, Planning Development and Transportation  
**Darin Atteberry**, City Manager  
**Jacqueline Kozak-Thiel**, Chief Sustainability Officer, Sustainability Services Area  
**Jeff Swoboda**, Chief of Police  
**Jenne Loffer**, Senior Supervisor, Customer Support, Fort Collins Utilities  
**Jolee Sawyer**, Senior Supervisor, Customer Support, Fort Collins Utilities  
**John Stokes**, Deputy Director, Community Services  
**Kendal Dawson**, Business Support I, Fort Collins Utilities  
**Lance Smith**, Director, Financial Planning and Analysis, Fort Collins Utilities  
**Nina Bodenhamer**, City Give Director  
**Peggy Streeter**, Financial Analyst II, Planning, Development and Transit Administration  
**Pete Iengo**, Senior Specialist, Public Engagement, Fort Collins Utilities  
**Rachel Spingob**, Manager, Payroll, Accounting and Treasury  
**Salina Hemmen**, Business Support III, Recreation Department  
**Stan Suppes**, Accounts Receivable / Billing Coordinator, Fort Collins Utilities  
**Sue Jordanger**, Accounts Receivable / Billing Coordinator, Fort Collins Utilities  
**Taylor Blomquist**, Public Engagement Specialist, Customer Connections, Fort Collins Utilities  
**Tom DeMint**, Poudre Fire Authority, Fire Chief





## PERFORMANCE & PROGRAM EVALUATION



# Utilities Income-Qualified Assistance Program



Pilot Wrap-Up/Discussion About Program Adoption

Heather Young, Sr. Community Engagement Manager  
Shannon Ash, Utilities Affordability Program Manager

10-20-2022



Shannon Ash

Affordability Programs Manager



Colleen Bannon

Project Analyst



Matthew Netherby

Lead Rep, Customer Support

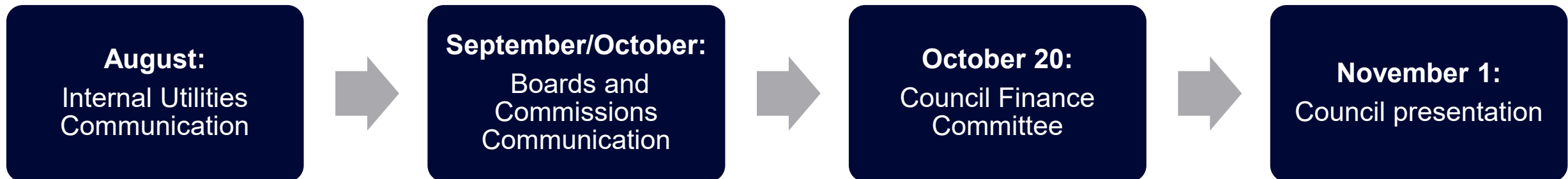


Heather Young

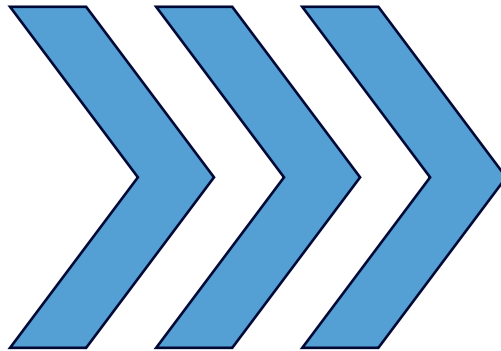
Sr Manager, Public Engagement

- Seeking Council approval to make the Income-Qualified Assistance Program (IQAP) an adopted program (Yes and adopt ordinance or no)
- Follow up on existing program structure

## 2022 Timeline



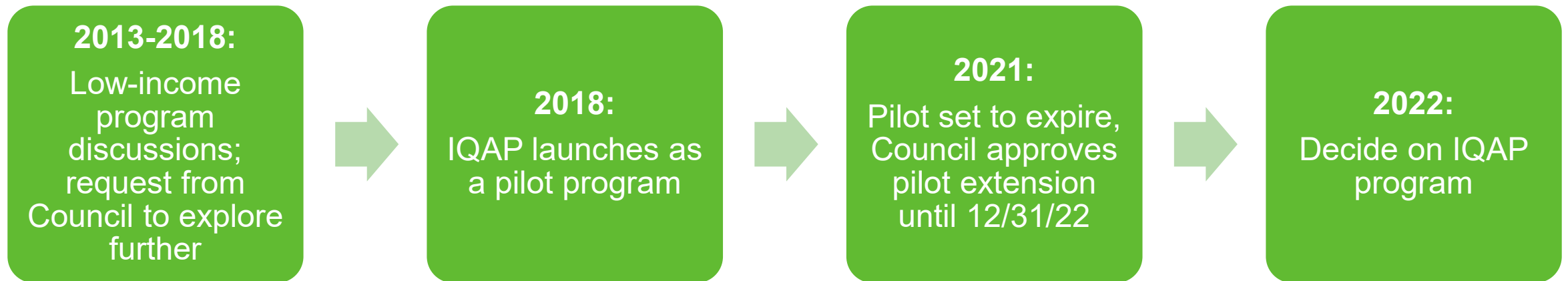
- Neighborhood Livability and Social Health (NLSH) 1.3:
  - Improve accessibility of City and community programs to low- and moderate-income residents and increase participation in services to eligible income-qualified residents.
- Our Climate Future
  - Big Move 7 – Healthy Affordable Housing: Everyone has healthy stable housing they can afford
  - Big Move 12 – 100% Renewable Energy: Everyone in the community receives affordable and reliable 100% renewable electricity, including from local sources



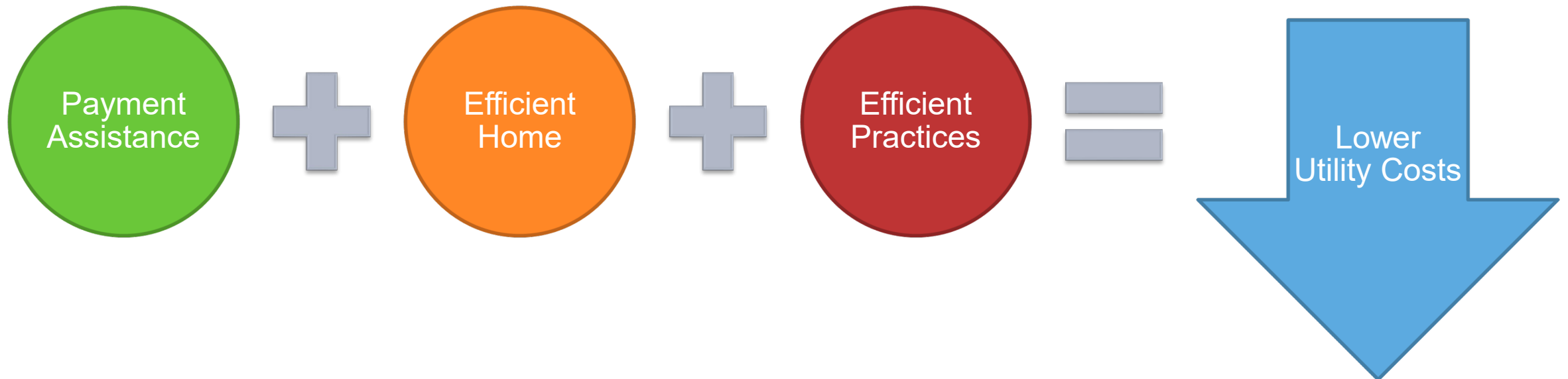


# Background





## How We Help Income-Qualified Customers Reduce Utility Costs





## Payment Assistance

### Income-Qualified Assistance Program

~23% rate reduction

Customers are approved through the Low-income Energy Assistance Program (LEAP)

Customers are automatically enrolled/renewed in IQAP based on LEAP approval

Customers must be at 60% State Median Income or below

## Colorado State Median Income (60%) - 2022

Number in Household	Income Limit
1	\$33,109
2	\$43,297
3	\$53,484
4	\$63,672
5	\$73,860
6	\$84,047

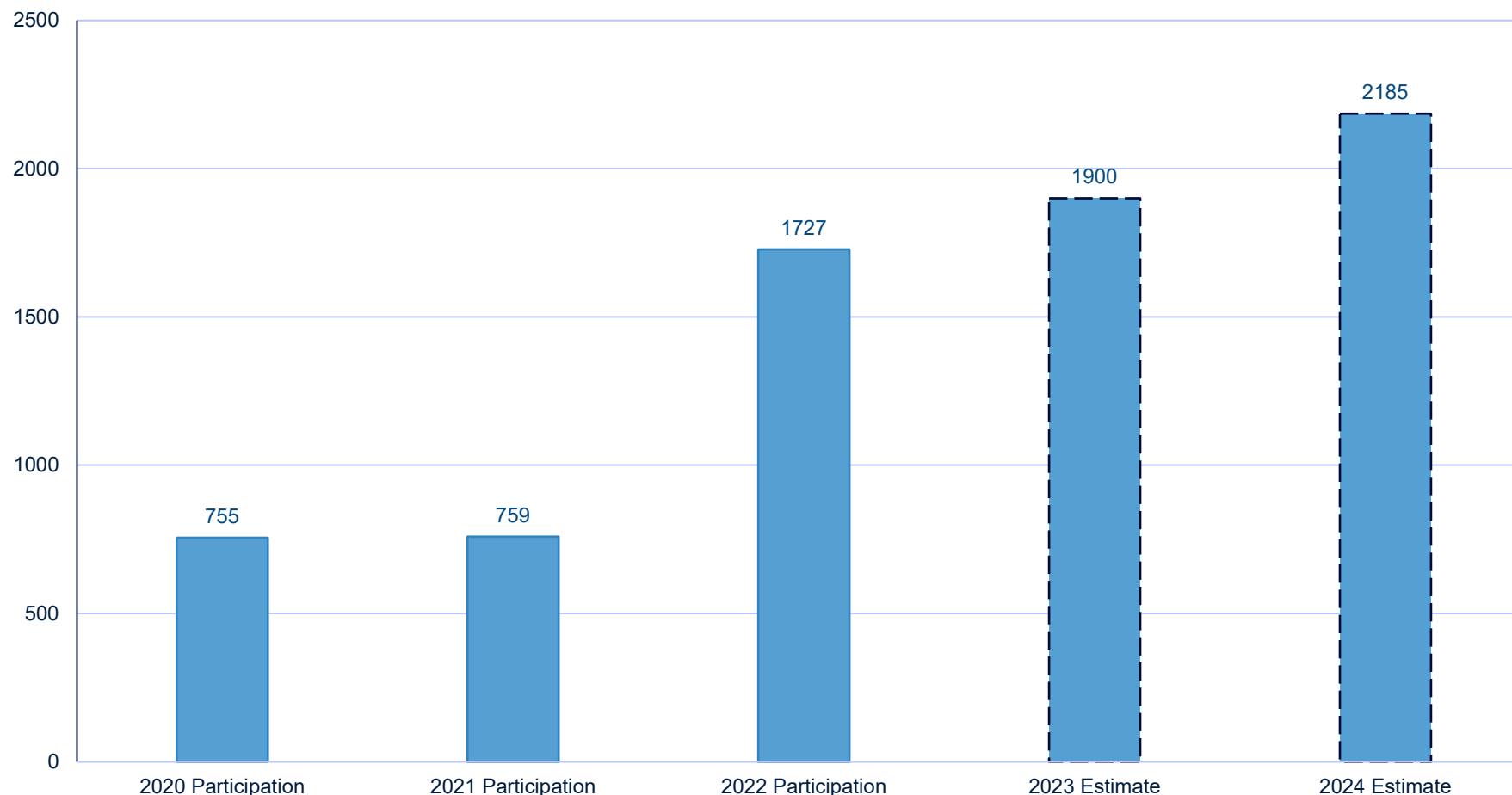
## Area Median Income - Larimer County (60%) - 2022

Number in Household	Income Limit
1	\$45,120
2	\$51,540
3	\$57,960
4	\$64,380
5	\$69,540
6	\$74,700

**According to the 2020 Census, 16% of Fort Collins residents live in poverty.**

<https://www.census.gov/quickfacts/fortcollinscitycolorado>

Number of Participants for IQAP



- Assumes a 10% increase in program participation for 2023 and a 15% increase in 2024.
- Estimated total reach is 10,000 households using a city-wide poverty rate of ~16%, based on 2021 Census Bureau data combined with controlling for the student population in Fort Collins (City Rebates Eval Report, 2019).
- There are currently nearly 70,000 households in our electric service area.

- Engagement
  - Monthly Utilities Insights newsletter
  - Customer surveys
  - Direct customer engagement at events and through targeted outreach
  - Participation in efficiency programs
- Outreach
  - Increased outreach for the 2022-2023 LEAP season. Events planned at the following:
    - La Familia
    - CSU (staff and off-campus students)
    - Northside Aztlan Community Center
    - Senior Center
    - Old Town Library
    - CARE Housing

## UTILITIES INSIGHTS

Small Changes, Big Differences

September 2022 | Issue 9

Monthly newsletter for Fort Collins Utilities customers with tips to save energy and water to lower utility bills.

Renters can reduce energy use, too! Whether you own or rent, these tips will help you save.

### LAUNDRY

Switch from hot to warm water when using your washing machine. This alone can cut energy use in half! Switch to cold water to save even more.

### UPGRADES

Receive free energy efficiency upgrades. Both you and your landlord fill out applications.

- CO Affordable Residential Energy: [fcgov.com/CARE](https://fcgov.com/CARE)
- Weatherization Assistance Program: [fcgov.com/WAP](https://fcgov.com/WAP)

### WATER HEATER

Turn the water heater temperature down to 120°, as recommended by the Department of Energy. For most household water heaters, this switch can save between \$30 and \$60 per year.

### TRACK USE

Sign up for My Energy to track energy use, find new ways to save, and earn rewards that can be used in stores. Learn more: [fcgov.com/portals](https://fcgov.com/portals)

Turn off your sprinkler system by **Oct. 1!**

Take the pledge at [fcgov.com/off](https://fcgov.com/off).

Winterize your system a little earlier than normal this fall. Lawns will come back healthy and green in the spring.

Eligible residential Fort Collins Utilities water customers who pledge and turn off their sprinklers will be entered into a drawing for **\$50 off your water bill!**

fcgov.com/UAP | utilitiesaffordability@fcgov.com | 970-212-2900

Auxiliary aids and services are available for persons with disabilities. V/TDD 711

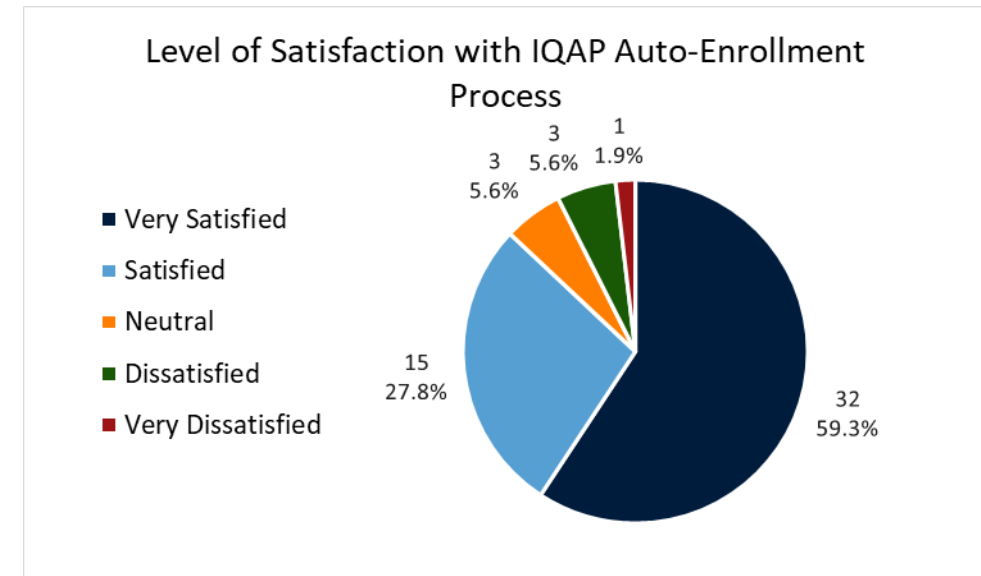
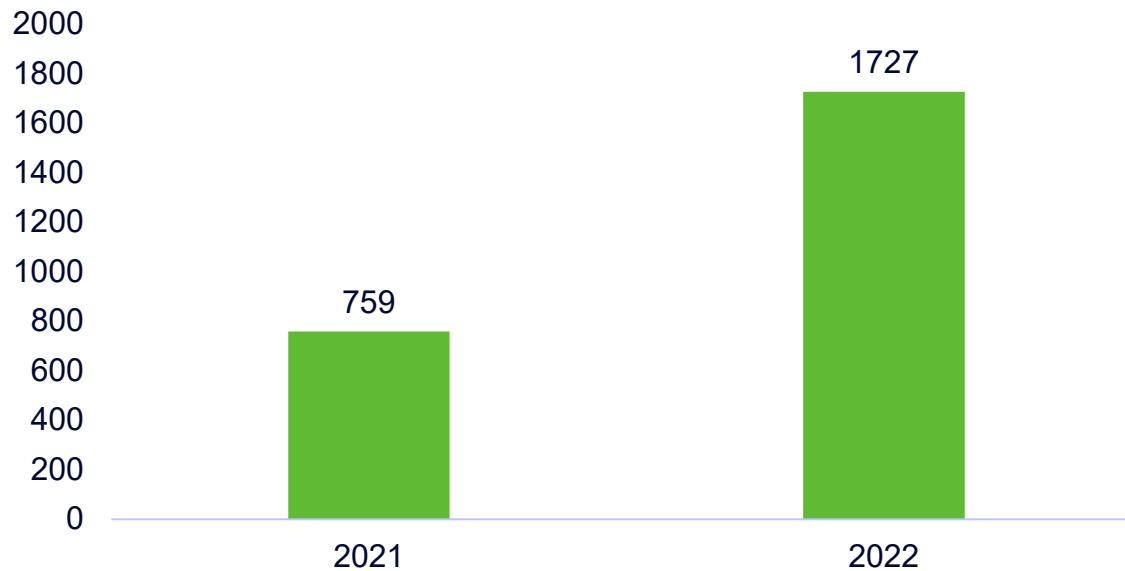




# Program Update

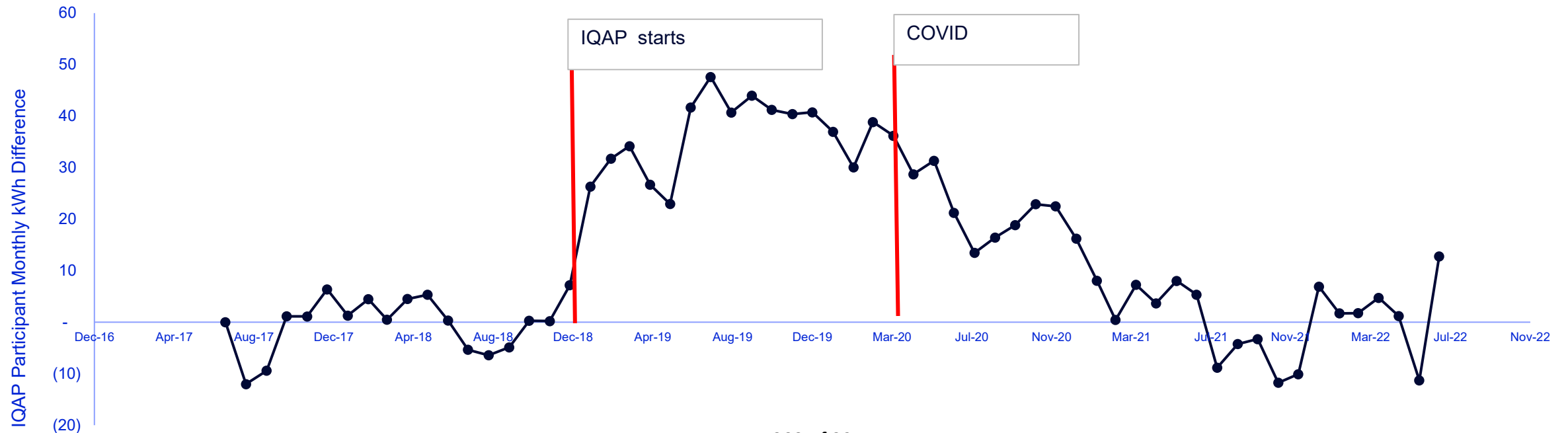
- In 2021, we removed the IQAP application. Now, customers enroll in LEAP and staff enrolls them in IQAP.
  - Enrollment has increased 128%
  - One less application for customers to fill out
  - 87% of auto-enroll customers are satisfied or very satisfied in the ease of auto-enrollment
  - Less staff time to process

Average IQAP Participation



## Energy Use Analysis

- Energy use from auto enroll IQAP participants initially increased by 2.9% on average (220 kWh/year)
- This increase likely reflects that households are no longer as concerned about paying their energy bills choosing to keep their homes at a more comfortable temperature
- By year 3 of enrollment, both IQAP and non-IQAP participants had similar energy use



## Customer Survey

Every year, participants in IQAP are offered an opportunity to complete a program survey. Participants are asked questions such as, “What has been the biggest benefit of receiving the IQAP utility bill discount?” And “Is there anything you would like to change about the Income-Qualified Assistance Program?”

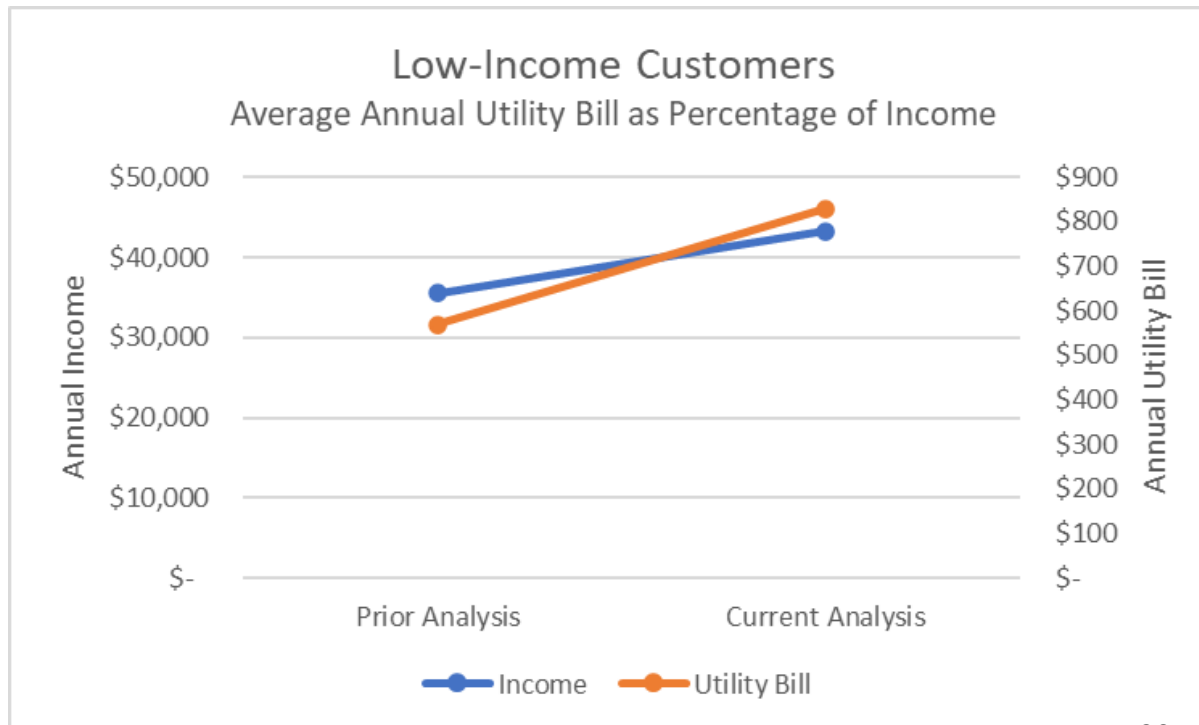
### **Benefit responses included:**

- increased quality of life
- being able to save money for other expenses
- decreased stress with paying bills
- being educated on ways to conserve energy
- budgeting on a fixed income

**When asked about changes they would like to see to the program, a larger discount was listed repeatedly.**

*"The IQAP program is an integral and essential part of our lives. Being on a fixed income is difficult and this program makes it easier to continue to live in this beautiful city we have called home for many decades. We use the money we save each month to buy essentials such as food, insurance, fuel, clothing, shoes. We do not waste it or spend it frivolously. Thank you for offering the IQAP."*

- In 2021, Council requested that we evaluate whether a 23% rate reduction is still sufficient
  - Methodology: Aim for low-income customers to spend a similar percentage on utilities as someone who makes 100% of area median income
  - Takes LEAP benefit and gas bills into consideration
- Recommendation: Increase rate reduction to 25% moving forward, evaluate every 3-5 years



**Why? Since 2018, Utility bills have increased more than income has increased.**

	23% rate reduction (current)	25% rate reduction (proposed)
Average annual discount/customer	\$220.50	\$240
Average annual Utility cost*	\$392,000	\$415,000

*\*Based on 1727 enrolled participants. Prior projections estimated that 2,000 customers would be enrolled during the pilot phase. Total cost is nominal (0.3% of \$138M), would minimally impact other Utilities customers.*

**With a 25% rate reduction, customers would save an average of \$20/month on their Utilities bill.**



Group	Outcome
Energy Board – June 25, Sept. 8	Supportive of this program
Affordable Housing Board – Oct. 6	Supportive of this program
Council Finance Committee – Oct. 20	
Water Commission – Oct. 20	



# Question for Discussion

- Income disparity and energy inequity exists in our community, largely driven by race, ethnicity and low-quality housing
  - “High energy burdens and energy insecurity are well-documented and pervasive national issues. Even in 2017, a time of economic prosperity, well over one-quarter of all U.S. households experienced a high energy burden.” (1)
- Utility costs continue to increase at a faster rate than income, locally and nationally
  - Some customers are on a fixed income, especially seniors
  - Inflation means people have less to spend on basic needs like utilities
  - Without access to heating, cooling, and water unpaid utility bills can have dire health impacts
  - “It’s higher prices. It’s heat waves and increasing needs for energy.” (2)
- Additional factors
  - Energy costs increase as we work towards carbon neutrality
  - Climate change = hotter temps = more energy use

1) <https://www.aceee.org/energy-burden>

2) <https://www.bloomberg.com/news/articles/2022-08-23/can-t-pay-utility-bills-20-million-us-homes-behind-on-payments-facing-shutoffs>

- Supporting low-income customers and providing energy equity aligns with the policies of Fort Collins Utilities and the City of Fort Collins
  - As a municipal utility provider, we aim to offer equitable service to all customers, yet a significant portion of our customers are not receiving equitable service
  - Utilities serve a unique role where we provide foundational services to community members and, by offering these services at a reduced rate, we can ease some of the burden of this disparity

- Adopting the Income-Qualified Assistance Program:
  - Aligns with existing priorities
  - Invests in our community - the total financial cost is small compared to the customer and community impact.
  - Would have minimal impact to future rate increases, given current and projected participation numbers and a 25% rate reduction
  - Is a responsible use of rate payer dollars because IQAP builds on existing benefits through LEAP, leveraging this partnership to help share the cost
- Future updates on the impact of this program would be included in rates and fees updates

- Should the Income-Qualified Assistance Program become an adopted Utility program?
  - Yes, adopt ordinance
  - No





**THANK YOU!**





### One-Time Payment Assistance

- Payment Assistance Fund
- Utilities Pandemic Assistance
- Neighbor to Neighbor Funding



### Reduced Rates

- Income-Qualified Assistance Program
- Medical Assistance Program
- Digital Equity Rate



### Retrofit Programs

- Larimer County Conservation Corps Water and Energy Program
- Colorado Affordable Residential Energy



### Outreach

- Utilities Insights Newsletter
- Direct customer engagement
- Outreach to agencies



### One-Time Payment Assistance

- Payment Assistance Fund

- Can receive funding once per season (Oct. 1 – Sept. 30)
- Bills must be past due
- 80% of Area Median Income
- Energy Outreach Colorado matches funds 1:1
- Contact partner agencies to receive funding:
  - Neighbor to Neighbor – 970-484-7498
  - Catholic Charities – 970-484-5010
  - La Familia/The Family Center – 970-221-1615
  - Discover Goodwill – 1-888-775-5327
  - CSU (students and staff only) – 970-491-8051

Funding source	Where to apply	Customers served	Number of customers served (2020/2021)	Amount distributed (2020/2021)	Average per customer	Utilities funds remaining
Utilities Pandemic Assistance	Fort Collins Utilities	Residential and commercial	647	\$296,386	\$458	\$466,712
Consolidated Appropriations Act	Neighbor to Neighbor	Residential, income-qualified, renters	898	\$261,734	\$291	?
Payment Assistance Fund – Energy Outreach Colorado	La Familia Neighbor to Neighbor Catholic Charities Discover Goodwill CSU	Residential, income-qualified	1,443	\$562,380	\$390	\$333,961
CARES Act	Fort Collins Utilities	Residential and commercial	1,423	\$575,910	\$405	\$0
<b>Total</b>			<b>3,528</b>	<b>\$1.4 million</b>	<b>\$405.71</b>	<b>\$1.1 million</b>



## Reduced Rates

- Income-Qualified Assistance Program
- Medical Assistance Program
- Digital Equity Rate

Income-Qualified Assistance Program	Medical Assistance Program	Digital Equity Rate
Launched in 2018 with Time-of-Day electric rates	Launched in 2012	Launched with Connexion
~23% rate reduction	~23% rate reduction	\$19.95/month rate
Qualifications: <ul style="list-style-type: none"> <li>• Approved through the Low-income Energy Assistance Program (LEAP)</li> <li>• Automatically enrolled/renewed in IQAP based on LEAP approval</li> <li>• 60% State Median Income</li> </ul>	Qualifications: <ul style="list-style-type: none"> <li>• Medically necessary electric equipment or air conditioning</li> <li>• Physician certification</li> <li>• 60% Area Median Income</li> </ul>	Qualifications: <ul style="list-style-type: none"> <li>• 60% Area Median Income</li> </ul>



## Retrofit Programs

### Larimer County Conservation Corps Water and Energy Program

Basic inspection of home, appliances, windows, toilets and heating/cooling system

Install efficiency measures

Partnership with Larimer County, Loveland utilities

Annual program targets:

- 350 assessments
- 175,000 kWh
- 1.9M gal water

### Colorado Affordable Residential Energy

Comprehensive upgrades available for air sealing, insulation, HVAC, windows and appliances

Assessment and efficiency measures installed

Partnership with Energy Outreach Colorado, Xcel Energy, Platte River Power Authority

Annual program targets:

- 40 upgrades
- 15,000 kWh



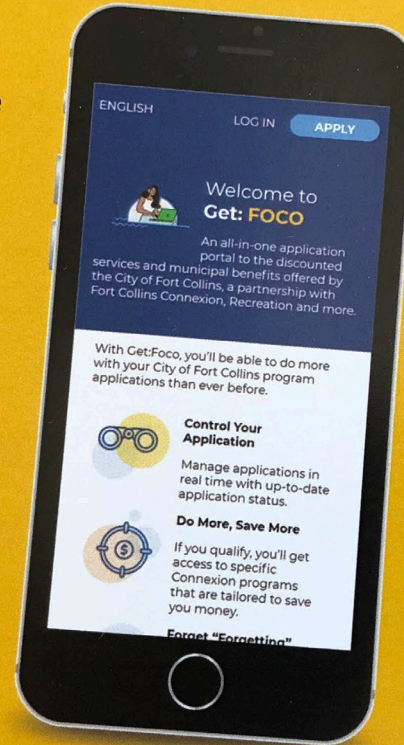
## Welcome to **Get: FOCO!**

An all-in-one application to discounted services offered by the City of Fort Collins for income eligible residents.

- Discounted 1 Gig Internet but Not at Reduced Speed or Service
- An Annual Grocery Tax Rebate
- Reduced Fees for Recreation Programs and Access to City Facilities
- And more!

### **One application, multiple possible discounts!**

Serving full-time residents of Fort Collins with a demonstrated financial need.



## ¡Bienvenido a **Get: FOCO!**

Se trata de una aplicación que permite obtener descuentos en los servicios que ofrece la ciudad de Fort Collins para los residentes con derecho a percibir ingresos.

- Internet de 1 Giga con descuento, pero sin reducir la velocidad ni el servicio
- Una rebaja anual del impuesto sobre los alimentos
- Tarifas reducidas para programas de ocio y acceso a las instalaciones de la ciudad
- ¡Y aún más!

### **¡Obtenga múltiples descuentos posibles con tan solo una aplicación!**

Sirviendo a los residentes de Fort Collins de tiempo completo con necesidades financieras demostradas.

[fcgov.com/getfoco](http://fcgov.com/getfoco)



[fcgov.com/getfoco](http://fcgov.com/getfoco)

## Charter Article XII, Sec. 6:

*All net operating **revenues** of the city's utilities **shall be held within the respective utility's fund and may be expended only for renewals, replacements, extraordinary repairs, extensions, improvements, enlargements and betterments to such utility, or other specific utility purpose determine by the Council to be beneficial to the ratepayers of said utility.***

- When a customer is not disconnected the Utility saves ~\$24/avoided disconnect in printing, mailing, and staff costs

Process Step	Cost
Send disconnect notice (Printing and mailing)	\$0.60
Actual disconnect	\$6.06
Collect payment	\$5.15
Reconnect service once payment is made	\$6.06
Send customers to collections	\$6.06
<b>Total cost</b>	<b>\$23.93</b>

Low-Income Household Water Assistance Program (LIHWAP) provides funds to assist low-income households with water and wastewater bills.

- The City of Fort Collins is not able to participate in this program due to our current billing system.
- Funds are required to only be applied to the water portion of the customer's bill and our current system does not allow payments to be separated per service.
- A new billing system is in the RFP process and will hopefully include the ability to apply payments to specific utility services.

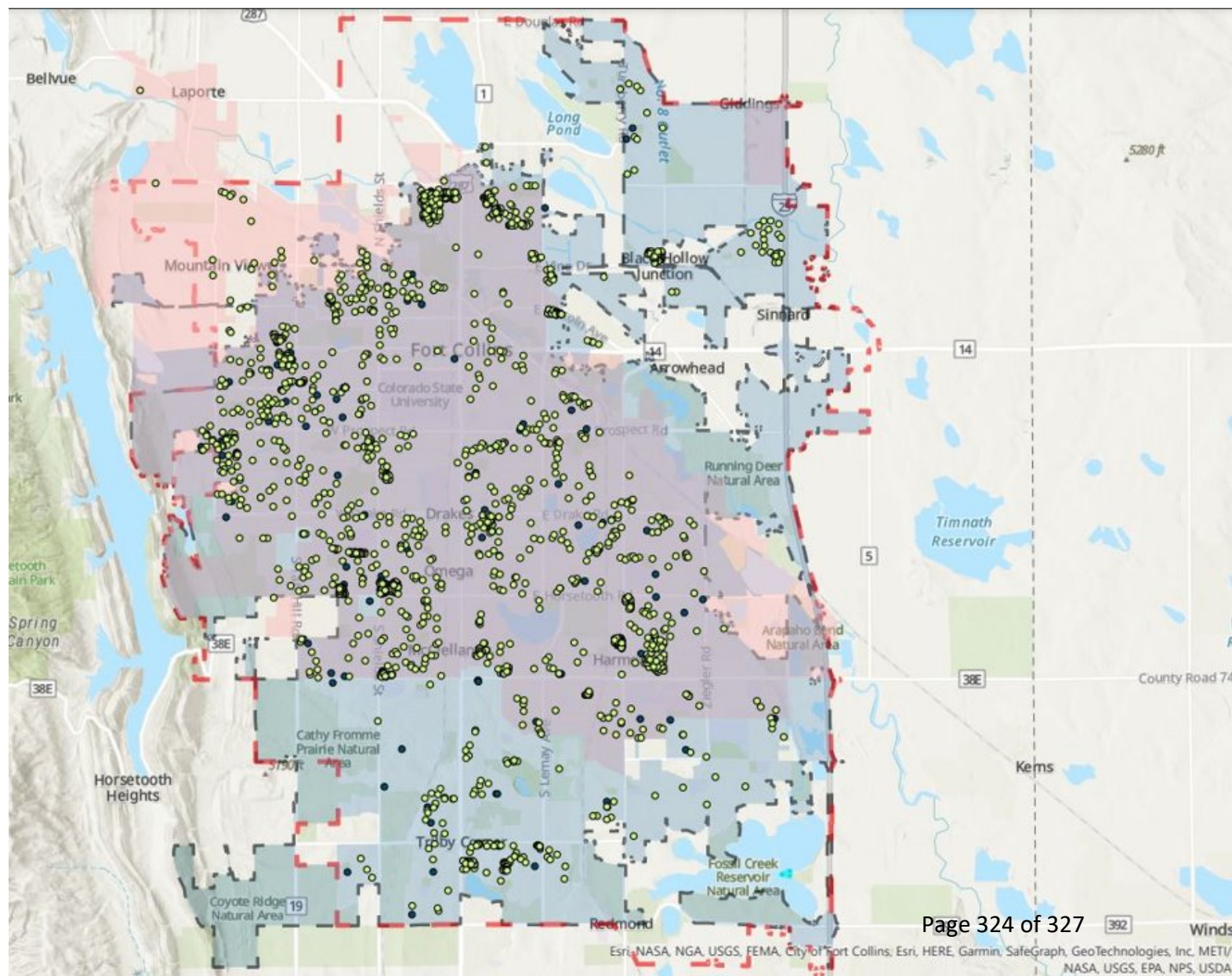
Colorado's LIHWAP, which began in November 2021, is a temporary, emergency program managed and operated at a state level by the Colorado Department of Public Health, where the state is responsible for processing benefit payments to water service providers. Colorado's LIHWAP provides a one-time benefit payment for a maximum benefit amount of \$2,000. To determine the benefit level, Colorado will consider the amount past due to continue service or the total amount to be paid to the water service vendor to re-establish water service by bringing the household debt balance to zero.

- Enrollment in IQAP provides a year-round discounted rate on water and wastewater.



The Low-income Energy Assistance Program (LEAP) program works to keep communities warm during the winter (November through April) by providing assistance for heating costs, equipment repair and/or replacement of inoperable heating tools. While the program is not intended to pay the entire cost of home heating, it aims to help alleviate some of the burdens that come with Colorado's colder months.

- The City of Fort Collins billing system does not allow for payments to be applied to specific portions of a customer's bill.
- Customers receive an EBT card in the mail for the benefit amount, withdraw the money from the card, and apply it to their bill.
- Customer Care and Technology is requesting to implement a system that would allow EBT cards to be processed as a form of payment.





For most mobile home parks in Fort Collins, the property manager/owner is the utilities customer for water utilities such as stormwater, wastewater, and drinking water, and the resident is the customer for electric utilities. In this case, a park will receive a bill from the utility company for the water services, which they may choose to then re-bill to residents or include these utilities as a part of the monthly rent. Residents that are electric customers will receive their own separate electricity bill from their provider.

If residents are charged individually for water, the following rules apply: Each month, property managers must provide water billing information for the entire mobile home park's monthly water bill, amount owed to the utility provider, and amount paid by park management. Property managers must also provide the formula used to calculate the amount each mobile home resident owes for water. No additional administrative fees for water utility billing are allowed.

If water is included in the rent as an amenity, there are currently no rules regarding transparency of water billing.

We are exploring a rebate program to assist residents with the water portion of their bill.

Fort Collins Utilities received \$469,000 from Platte River Power Authority and \$381,550 from the American Rescue Plan Act (ARPA) to directly support our customers in need as a result of the pandemic.

As of September 1, 2022, the following has been allocated:

Residential	Commercial
839 customers	21 customers
\$324,658.21 total funding spent	\$35,471.90 total funding spent
\$386.96 - average per customer	\$1,689.14 - average per customer

A new program is being developed to reach property managers that will be able to apply for these funds to cover inactive accounts that have been unpaid.

- Utilities sets rates and fees for each Utility to cover the cost of service (electric, water, wastewater)
- Funding is set aside for operating and maintenance expenses.
- Instead of a rate cost, IQAP falls under operating and maintenance expenses.