

Road to 2020 and the 2017-2018 Budget

Offers Above the Line:

Direct Offers

6.76 ENHANCEMENT - Utilities: Light & Power - Energy Services – Funded

2017 – \$950,000 2018 - \$950,000

This offer provides incremental funding to achieve the increased goals of the Energy Policy and Climate Action Plan. The Energy Policy annual portfolio savings targets increase in 2017 and 2018 to 1.75% and 2.0% of community electricity use respectively.

This offer funds:

- Continuing the pilot Efficiency Works Neighborhoods program on an ongoing basis. The pilot of this new program model already shows great promise in reaching higher project savings and increased participation levels for existing home efficiency projects. The program accomplishes this through streamlined customer and contractor processes for home improvement packages tailored to specific neighborhoods and enhanced targeted outreach (\$250,000).
- *Additional incentives to support increased participation in the Efficiency Works Business program (\$600,000)
- *Additional incentives to support increased participation in the Integrated Design Assistance Program (\$100,000)

This offer is also related to offer 6.77, which would provide one Energy Services Engineer FTE. This incremental staff position will enable the Energy Services team to both plan and develop new programs and services while continuing to serve a growing level of participation in efficiency programs.

Savings also result in annual carbon emissions reductions of more than 5,000 metric tons. Efficiency program savings are generated at an average cost of 3.5 cents per kilowatt hour, 40% lower than the cost of wholesale electricity. 100% of the funding in this offer provides direct rebates or services to customers.

The City's efficiency and conservation programs are important parts of the Climate Action Plan (CAP), comprising over 50% of the required savings to reach the 2020 goals. Efficiency and conservation are widely acknowledged as the most cost-effective path toward carbon emissions reductions.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- ECON 3.8 - Maintain electric utility systems, services, infrastructure integrity and stable, competitive rates

6.79 ENHANCEMENT - Utilities: Light & Power - Renewable Non-Residential Solar Rebates – Funded

2017 - \$500,000 2018 - \$500,000

This offer supports expansion of midsize non-residential solar projects through up front rebates. Utilities currently does not offer rebates for projects greater than 20 kilowatts. Projects of this type are generally located on large commercial rooftops and are “net metered” to benefit the project owner through reduction in on site utility bills. These projects increase the amount of local solar resources.

This offer addresses goals of the Climate Action Plan (CAP) and the Fort Collins Energy Policy goal of 2% local distributed renewable and 20% overall renewable generation by 2020. As proposed this offer, over the 2017-18 period, has the potential to add 2.0 megawatts of new local solar capacity.

This offer funds:

- Rebates for midsize non-residential solar projects.
- An expanded solar photovoltaic rebate program would serve five to ten projects at a 100 to 200 kilowatt scale (total of up to 1,000 kilowatts for each year) with a rebate incentive in the range of \$0.50 per Watt.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- ECON 3.8 - Maintain electric utility systems, services, infrastructure integrity and stable, competitive rates

6.78 ENHANCEMENT - Utilities: Light & Power - Renewable Non-Residential Solar Power Purchases – Funded

2017 - \$72,500 2018 - \$282,500

This offer supports the expansion of midsize non-residential solar projects through twenty year power purchase agreements. Projects of this type are generally located on large commercial rooftops or may be ground mounted, and are “in front of meter” resource purchases which benefit all rate payers. These projects are comparable to utility owned generation except that it is distributed over multiple roofs and/or sites and purchased under long term contract with the site owner and/or developer. These local solar resources increase the renewable energy portion of the community's electricity mix. This offer addresses goals of the Climate Action Plan (CAP) and the Fort Collins Energy Policy goal of 2% local distributed renewable and 20% overall renewable generation by 2020. As proposed this offer, over the 2017-18 period, has the potential add 2.0 megawatts of new local solar capacity.

This offer funds:

- First and second year payments for power purchase agreements for midsize solar systems in the non-residential sector
- The expanded solar program will support up to 1000 kilowatts installed annually for two years at a target rate of \$0.095 per kilowatt hour

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- ECON 3.8 - Maintain electric utility systems, services, infrastructure integrity and stable, competitive rates

3.7 ENHANCEMENT: Low Stress Bike Route Design and Construction – Funded

2017 - \$0 2018 - \$209,740

Funding from this offer will supplement and leverage grant dollars and Community Capital Improvement Program funds to implement the 2020 low-stress bike network per the 2014 Bicycle Master Plan. This offer relates to the FC Bikes Enhancement Offer (3.11), which supports smaller projects such as adding buffered bike lanes through street maintenance, or adding green paint at intersections. This offer supports the implementation of complete bike corridor projects along the low-stress network. The Bike Plan recommends a low-stress bike network to strategically advance safe and comfortable bicycling opportunities across the community. This network leverages existing low-traffic and low-speed streets, and identifies key arterial crossing improvements to help people safely navigate the network.

This network is comprised of more than 50 corridors; each corridor includes recommended projects related to improving intersection crossings, striping, and wayfinding signage. The Remington Greenway and Pitkin Corridor Project are examples of the types of corridor projects that will be supported through this funding.

Examples of future projects include:

- Hampshire/Ponderosa N/S corridor improvements, including wayfinding and arterial intersection improvements
- Stover N/S corridor improvements, including wayfinding and an improved crossing at Prospect
- Columbia E/W corridor improvements, including wayfinding and an improved crossing at Lemay

The City's arterial street system provides direct connections for people bicycling; however, research shows that the majority of people do not feel comfortable bicycling on streets with high traffic volumes and speeds. Establishing accessible bicycling routes by enhancing the local and collector street system holds significant potential to achieve the City's goals of a 20% bicycle mode share, zero bicycle fatalities, and fewer annual bicycle-related injuries, while offering other environmental, economic and social sustainability benefits.

This Offer supports the following Strategic Objectives:

- TRAN 6.1 - Improve safety for all modes of travel including vehicular, pedestrian and bicycle
- TRAN 6.5 - Fill the gaps for all modes of travel and improve the current transportation infrastructure while enhancing the aesthetic environment
- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)

6.80 ENHANCEMENT - Utilities: Light & Power - Renewable Community Shared Solar – Funded

2017 - \$250,000 2018 - \$250,000

This offer supports expansion of community shared solar projects by providing customer rebate funding which can be applied to shared solar developments. This offer addresses goals of the Climate Action Plan (CAP) and the Fort Collins Energy Policy goal of 2% local distributed renewable and 20% overall renewable generation by 2020.

This offer funds:

- Rebates for Fort Collins customers to participate in a planned Platte River Power Authority community shared solar project (2017) and additional local community solar projects (2018).
- Over a two year period, this offer has the potential to add 1.0 megawatts of shared solar capacity.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- ECON 3.8 - Maintain electric utility systems, services, infrastructure integrity and stable, competitive rates

26.8 KFCG ENHANCEMENT: Efficiency Pilot Projects and Innovation Fund – Funded

2017 - \$382,000 2018 - \$53,000

Funding this offer will establish Efficiency Innovation/Pilot Projects Fund to foster locally innovative and relevant approaches to goals outlined in the City's 2020 goals. The goal is to leverage and engage the world class expertise that exists in Fort Collins to achieve the goals. In addition, the fund will allow the City to act nimbly when presented with related opportunities (i.e., cash match for grants) and to test focused concepts that might be replicated throughout the city and the nation. Building on the 2016 CAP Pilot Projects and Innovation Fund (funded by City Council in April 2016), this fund would be open to projects developed within City departments, collaborations with community organizations, and projects from neighborhoods, businesses, and academia.

Funding at this level could include implementing the following initiatives:

- Incentive based competition focused on outcomes and solutions (“reverse RFP”), e.g., how would you or your business eliminate 200,000 metric tons of carbon from our community or how would you engage 10,000 residents to reach the 2020 goals.
- Do it Yourself Workshops for the private sector to implement initiatives, e.g., workshops for landlords/tenants, for energy efficiency upgrades or to support shifts toward more sustainable living practices.
- Waste to Energy solutions at scale.
- A “hackathon” to identify messages to engage the public or to reduce policy barriers to achieving 2020 goals.
- Incorporate 2020 initiatives into existing efforts, e.g., neighborhood connections or social equity initiatives.

- Emerging demonstration projects that advance goals and explore and measure new models to connect energy, financial and behavioral systems.

Other cities have incorporated similar funding tools into their Climate Action Plans. Portland, OR, for example, uses a Clean Energy Fund focused on making GHG reducing efforts accessible to households and building owners throughout the community.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.3 - Engage citizens in ways to educate and encourage behaviors toward more sustainable living practices
- ECON 3.2 - Enhance employment opportunities through business retention, expansion, incubation and attraction

This Offer supports the following Strategic Objectives:

- HPG 7.6 - Enhance the use of performance metrics and benchmark data to assess results and program effectiveness
- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- TRAN 6.6 - Develop long-term transportation plans that improve local and regional transportation networks

Enabling Offers

3.23 ENHANCEMENT: Travel Behavior Survey - Funded

2017 - \$100,000 2018 - \$50,000

Funding this offer will provide the development of an annual community-wide travel behavior survey program that collects comprehensive and accurate data on resident and employee multimodal travel.

Establishing this program will help the City know if transportation projects and programs are having the desired impacts and will support data analysis of key transportation indicators such as Vehicle Miles Traveled (VMT), which is a critical input for greenhouse gas calculations. The data will provide a more comprehensive way of tracking mode shift, which the City uses in reporting metrics.

The program will include the development of an app and companion hard-copy survey that could collect the following:

- Trips by mode (biking, walking, transit, driving, etc.) and purpose (work, shopping, school, etc.)
- Telecommuting trends
- Trip characteristics by mode
- Vehicle occupancy
- Vehicle ownership and availability
- Trip distance
- Trip start times
- Traveler demographics (age, occupation, gender, etc.)

The current method of estimating mode share and other travel behavior relies upon regional or census surveys that are infrequent, not always statistically valid, and lacking in critical areas, such as non-work trips. This yields less confidence in the data and its use in decision-making. Establishing this program to collect transportation data will directly benefit the City's sustainability goals, as well as other long-term planning efforts, such as the Transportation Master Plan.

This funding will kick off the program, which includes survey and app development, distribution of the survey, and analysis of the results. The survey would then be conducted on an ongoing basis (e.g., annually).

23.6 KFCG ENHANCEMENT: Messaging and Engagement Priorities – Funded

2017 - \$90,000

2018 - \$90,000

This offer will fund messaging, engagement and branding support for key City projects and programs like the Climate Action Plan (CAP) and the Road to 2020 implementation plan. This offer is funded 50% by Communications and Public Involvement (CPIO) and 50% by Utilities. Messaging, engagement and branding associated with the Road to 2020 implementation plan is a Council and City priority. The CPIO team is currently over capacity supporting existing departments and programs. This offer will provide additional resources to assist CPIO and Utilities in developing and executing branding and communication strategies and will contribute to the overall success of project implementation and public engagement.

This Offer supports the following Strategic Objectives:

- ENV 4.3 - Engage citizens in ways to educate and encourage behaviors toward more sustainable living practices
- HPG 7.2 - Promote a values-driven organizational culture that reinforces ethical behavior, exercises transparency and maintains the public trust
- HPG 7.5 - Broaden methods of public engagement to reach all segments of the community by giving additional consideration to diverse backgrounds, languages and needs.

26.17 ENHANCEMENT: City Energy Project - Matching Funds for Fort Collins Participation –Funded

2017 - \$50,000

2018 - \$50,000

Funding this offer will allow the City to compete in the City Energy Project (CEP), which is a national initiative run jointly by the Institute for Market Transformation (IMT) and Natural Resources Defense Council (NRDC). An initial 10 cities are just finishing their two-year projects, and IMT and NRDC are searching for the next 10 cities to participate in 2017 2018. CEP works in collaboration with participating cities to develop innovative solutions to energy efficiency in existing buildings. While CEP cities can prioritize the initiatives they ultimately pursue, they all share three primary goals, which are aligned with the City's Road to 2020: (1) substantially reducing citywide energy use and carbon pollution; (2) improving the local economy by investing in skilled local jobs; and (3) expanding market opportunities for private sector investment in energy efficiency. This offer provides \$50,000 in 2017 and \$50,000 in 2018 to match CEP funds, which will be provided on at least a 1:1 basis.

For this match, the City receives the following:

- A full time staff person hired by IMT and NRDC for two and a half years and staffed at the City to assist us in implementing our energy efficiency goals;
- A position of national leadership and recognition as one of the participating cities;
- Additional assistance from IMT and NRDC, including access to hub staff at their main offices, communications and technical support, and network access to other participating cities.
- Some limited additional funding may be available from IMT and NRDC for contracting with local consultants and conference travel.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- HPG 7.7 - Address long-term funding requirements by diversifying the revenue base and finding new revenue sources

26.11 ENHANCEMENT: 0.5 FTE Road to Zero Waste Support – Funded

2017 - \$47,318

2018 - \$48,741

Funding this offer will allow the City to continue important systems based, long term planning & enhance targeted education and support for business and resident recycling undertakings that are critical for the Fort Collins community to reach adopted Zero Waste and Climate Action goals. What we typically think of as “waste” is a

material that has energy embodied in it and may have economic value. Finding better uses for these resources than landfilling them is at the heart of “Sustainable Materials Management” concept. Sustainable Materials Management is an innovative and effective method for comprehensively addressing the products, materials and food coming into the community, as well the waste going out, and examining their full life-cycle impacts rather than only disposal impacts.

This offer creates 0.5 FTE to expand the existing 0.5 FTE planner working to foster the innovations and transitions necessary to build a comprehensive materials management framework in the municipal organization and community. It funds a targeted analysis of community solid waste by Colorado State University that will provide critical information for strategies and policies designed to curb waste. Implementing the materials management approach, within a collaborative, regional context, will support our local economy, reduce greenhouse gas emissions, inform purchasing decisions and reduce inefficiencies.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.3 - Engage citizens in ways to educate and encourage behaviors toward more sustainable living practices
- ENV 4.6 - Work towards long-term zero waste goals within the community and the City organization

6.77 ENHANCEMENT - 1.0 FTE - Utilities: Light & Power - Energy Services Engineer - Funded

2017 - \$101,260 2018 - \$104,073

This offer provides incremental funding to support one new Energy Services Engineer FTE. This incremental staff position will enable the Energy Services team to both plan and develop new programs and services while continuing to serve a growing level of participation in efficiency programs. This offer is related to offers 65 (Energy Services Ongoing) and 76 (Energy Services Enhancement). The Energy Policy annual portfolio savings targets in increase in 2017 and 2018 to 1.75% and 2.0% of community electricity use respectively. This position, along with the Energy Services offers, provides the resources necessary to meet these increasing goals. The City's efficiency and conservation programs are important parts to the Climate Action Plan (CAP), comprising over 50% of the required savings to reach the 2020 goal. Efficiency and conservation are widely acknowledged as the most cost effective path toward carbon emissions reductions.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- ECON 3.8 - Maintain electric utility systems, services, infrastructure integrity and stable, competitive rates

5.26 ENHANCEMENT - Utilities: Light & Power - Electric Distributed Battery Pilot Program - Funded

2017 - \$100,000 2018 - \$100,000

This offer will provide funding for a feasibility and pilot study that will examine how to incorporate distributed storage (batteries) into the electric distribution grid.

- The goal of this study is to:
- Determine what utility scale storage technology is available
- Work through the engineering details of incorporating the storage on the grid
- Install a pilot battery on the grid 4.
- Analyze the costs and benefits realized from the pilot

This study is needed because the energy plan and the Climate Action Plan (CAP) call for dramatically increasing the amount of distributed renewable on the electric grid. Batteries will need to be incorporated into the grid in order to manage these levels of distributed generation, i.e. match when renewable energy is supplied to when energy is demanded by customers. The data from this analysis will also be used to update the capital expenditure

model which shows how customer demand can be met at the lowest capital costs. Thus this study will allow for the integration of CAP modeling with long range capital planning.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ECON 3.8 - Maintain electric utility systems, services, infrastructure integrity and stable, competitive rates
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach

26.10 KFCG ENHANCEMENT: Community and Municipal Electric Vehicle Readiness Roadmap –Funded

2017 - \$40,000 2018 - \$0

Funding this offer will create a strategic plan for the community & City government to advance electric vehicle (EV) use in Fort Collins. Deployment of EV's is a major component of the 2015 Climate Action Plan Framework, with an objective of achieving over 17,000 electric vehicles cumulatively in Fort Collins between 2015 and 2030. The City organization strives to lead by example with a goal to reduce traditional fuel use and has 67 EV's in its own fleet. In 2013, Fort Collins partnered with Loveland, Colorado State University, and the Electrification Coalition on the Drive Electric Northern Colorado (DENC) initiative that offers opportunities for the public and City staff to test drive and learn about EVs, thus reducing barriers to EV use. While many efforts are underway, the City and community need a coordinated strategic plan to increase EV usage and align internal/external resources. The offer will fund outside expertise to develop the readiness plan in close cooperation with City staff from several departments, DENC and other key partners.

The proposed EV Readiness Plan will seek to address the following elements:

- Infrastructure needs & placement locally and regionally
- Education, outreach & incentives
- Policies, codes, permitting & enforcement
- State & federal regulations/legislation
- Timeframes to optimize progress in alignment with the greening of Fort Collins electric supply
- Electric rate structures to shift peak load and incent EV use
- Bidirectional charging issues
- City fleet & transit opportunities
- Roles & responsibilities of the public sector (multiple City departments) & the private sector

The EV Readiness Plan will provide the clarity and alignment needed to advance Fort Collins to the next level of EV adoption. It can inform City Plan and the Transportation Master Plan update and the upcoming analyses of the electric grid distribution system planned by Fort Collins Utilities.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- TRAN 6.6 - Develop long-term transportation plans that improve local and regional transportation networks

26.15 ENHANCEMENT: 1.0 Contractual FTE: Climate Action Plan Program Assistant – Funded

2017 - \$48,501 2018 - \$49,961

Funding this offer will establish a permanent contractual position within Environmental Services to provide program support to the City's Journey to 2020 efforts. This position has been supported by a full time hourly position, and due to the changes in City policy, staff is seeking to provide these services via a contractual

position. The vision is to provide a two year opportunity to recent graduates or those with a strong passion for sustainability issues to develop and hone their communication, research, and logistics skills while providing key support for the City's efforts to reach its goals. The framing of this position as a two year opportunity is why staff is seeking a contractual FTE. The City is on a 34 year journey to achieve carbon neutrality, and this journey requires dedicated resources to assist in the coordination of the 11 Strategic Initiative Teams, the Executive Team, and the Community Advisory Committee – all of which include almost 80 City staff members and 45 citizens. Providing this entry level position not only supports the community's goals, it also provides recent graduates with a critical learning opportunity to learn about the municipal government organization and interaction with sustainability leadership at all levels.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- HPG 7.3 - Improve core Human Resources systems, develop a total reward system and address workforce planning and career development

Municipal Offers

26.16 ENHANCEMENT: Alternative Fuel Municipal Lawn and Garden Equipment Fund – Funded

2017 - \$50,000 2018 - \$50,000

Funding this offer will accelerate the turnover of municipally owned gasoline and diesel lawn and garden equipment, in favor of alternatives such as compressed natural gas (CNG) and electric powered engines. Reduction of these emissions is important as they contribute to ozone pollution and greenhouse gas (GHG) concentrations. Currently, the City is part of the Denver Metro/North Front Range Ozone Non-Attainment Area, which means our highest measured ozone levels exceed the EPA health-based standards. Additionally, the City has adopted ambitious carbon reduction goals which will require significant reductions in fossil fuel consumption. Although this is relatively new technology, the City already trends toward purchasing alternative fuel heavy equipment during equipment turnover, and currently owns one large liquid propane gas mid-sized turf mower and a number of electric hand blowers, chain saws and hedge trimmers. These additional funds would help Parks, Cemetery, Natural Areas and Operations Services accelerate turnover of smaller municipally owned gas powered lawn & garden equipment (e.g., hand blowers, hedgers, weed whips, chain saws, push mowers, small roto tillers, etc.) and larger conventionally fueled equipment (e.g., riding lawn mowers). This would also demonstrate and promote the feasibility of alternatively fueled commercial lawn and garden equipment for the private sector. Specific purchases with these funds will be informed by leveraging market research from the Regional Air Quality Council (RAQC), an organization that leads regional planning efforts to reduce emissions that contribute to ozone formation. The RAQC is conducting market research on current technologies and impacts of alternatively fueled lawn and garden equipment, with a report expected in summer 2016. These funds will enable purchase of equipment as information from the RAQC becomes available, and leading by example will help the RAQC promote these strategies in other communities.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.4 - Implement indoor and outdoor air quality improvement initiatives

26.7 ENHANCEMENT: Expanded Municipal Innovation Fund – Funded

2017 - \$50,000 2018 - \$50,000

Funding this offer will support innovative, sustainability focused improvements to the City's property, buildings and operational procedures and build upon past success. In 2015, the Innovation Fund financed the City's first Innovation Workshop, FC Innovates, which received stellar evaluations from participants. FC Innovates, planned again in 2016, is an opportunity for staff to form cross-functional groups to discuss key ideas in an open forum and identify resources and opportunities to pilot ideas. Projects developed through this Fund have been replicated across the organization and have leveraged and engaged non-profits, academic partners, HOAs, businesses and community members. Over the past five years, more than \$500,000 was invested in projects through the

Innovation Fund. The investments yielded \$3,160,365 in cumulative savings and carbon emissions reductions of 58,590 metric tons. These projects also reduced energy, water use and transportation emissions. Projects are evaluated by an interdepartmental team using a triple bottom line approach in a weighted database scoring tool. To support intelligent risk taking and promote innovation, funding is needed for projects that are experimental in nature and should be piloted first. Additionally, the program has undergone an annual evaluation. In 2016, the Innovation Fund Team awarded 10 grants to employees who are building on the credibility of the City as a leader, using the concept of continuous improvement, and enhancing innovation, Road to 2020 goals and sustainability efforts. 10 awards were funded to 7 departments; 2 awards are projects serving all departments. More than \$130,000 in requests were considered for 2016. This is the third year that proposal requests were 3X the available funds. Additional funding will facilitate greater savings and GHG reduction.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.6 - Work towards long-term zero waste goals within the community and the City organization

19.9 ENHANCEMENT: Compressed Natural Gas Fueling Site - Funded

2017 - \$500,000 2018 - \$0

This offer provides the opportunity to construct a compressed Natural Gas (CNS) facility for City vehicles and also as a redundant system for Transfort buses. For the past two years, the City of Fort Collins and Larimer County have been working with a private company to construct a CNS site located in north Fort Collins. To date, this site has not been approved and no station has been constructed. The City has received several grants to purchase alternative fueled vehicles and, if this site is delayed any longer, we risk having vehicles that can't be fueled. We anticipate a partnership with other government agencies to build this site. It is also important to note that if another site is not constructed, and we have a catastrophic failure at the Transfort site, our fleet of buses has no good way of getting fuel.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.4 - Implement indoor and outdoor air quality improvement initiatives
- ECON 3.1 - Improve effectiveness of economic health initiatives through collaboration with regional partners

Offers Below the Line:

Direct Offers

3.17 ENHANCEMENT: Trip Reduction and Efficiency Program - Unfunded

2017 - \$250,000 2018 - \$250,000

This offer will fund a contract for a consultant to develop and run a new program to deploy innovative trip and parking demand reduction and trip efficiency solutions across Fort Collins. A major focus of this program will be to work with downtown employers to create transportation efficiency for employees. The City currently tackles congestion through intersection improvements (better turn lanes), a state of the art traffic management system (where all the traffic lights are controlled), traveler information on FC Trips, and programs like FC Bikes and ClimateWise. Reducing the demand on roads and parking infrastructure (in particular from single-occupancy automobiles) is a proven strategy to address congestion.

Trip reduction strategies apply a number of approaches involving coordination across departments, including:

- Parking management strategies such as parking planning and priority parking programs
- Improved access to and coordination of transportation options such as biking, walking, transit and ride sharing
- Incentive programming for telework and flex schedules, congestion pricing, road space allocation and access to transit passes
- Technology applications including programming for mobile devices and intelligent transportation systems

Transition to EVs is an important part of the City's strategy to improve efficiency and air quality, while reducing greenhouse gas emissions as called for in the Climate Action Plan. Promoting and ensuring the right policies and infrastructure are in place to accommodate the expected growth in EVs is a critical part of this proposed program. This new program will focus first on the Downtown, as recommended in the Downtown Plan, and will grow over time to include the entire city. Downtown, the program will coordinate parking planning and management solutions that help integrate on- and off-street parking with transit, bike and pedestrian facilities.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ECON 3.5 - Foster sustainable infill and redevelopment
- TRAN 6.2 - Improve traffic flow to benefit both individuals and the business community

3.22 ENHANCEMENT: Bicycle Safety and Promotion Programs - Unfunded

2017 - \$80,000 2018 - \$80,000

Funding this offer will support the continuation of bicycle programming initiatives, including education, encouragement, enforcement, and evaluation as recommended in the City's 2014 Bicycle Master Plan. These programs, in combination with bicycle infrastructure investments, create a comprehensive set of strategies to increase bicycle ridership and improve safety. Currently, substantial funding for FC Bikes' programs is provided through a Congestion, Mitigation and Air Quality grant, which expires in March 2017.

This offer will ensure the continuation of the following programs in 2017 and 2018 at the current level of operation until other grant dollars is available:

- -Bicycle Ambassador Program -Bicycle Friendly Driver Program
- -Bike to Work Days -Open Streets events -Bike Map updates
- -Bicycle enforcement initiatives -Bicycle count technology
- -Bike light giveaways
- -Helmet distribution

In the absence of future supplemental grant funding, ongoing programming costs are expected to maintain the current level of service offered by FC Bikes:

Previously funded FC Bikes programs have produced positive results. In 2015, FC Bikes increased the number of Bicycle Ambassadors from 44 to 90, offered 40 bicycle education classes, and reached more than 3,500 people with bicycle safety education. Also, in four months after FC Bikes launched the Bicycle Friendly Driver program, 525 people were trained as Bicycle Friendly Drivers. Bicycle promotion events, like Open Streets and Bike to Work Day, have also grown each year; in 2015 these events alone reached nearly 19,000 participants. In 2014 and 2015, bicycle crashes decreased by 20% indicating positive results from the City's comprehensive bike safety programs. Promoting bicycling through a comprehensive set of bicycle programs can help the City achieve its sustainability goals by increasing the number of people who choose to bicycle for transportation and utilitarian trips, while offering health, economic and social benefits.

This Offer supports the following Strategic Objectives:

- CR 2.2 - Improve low and moderate income citizen access to, and participation in, City programs and facilities
- TRAN 6.1 - Improve safety for all modes of travel including vehicular, pedestrian and bicycle
- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)

26.18 ENHANCEMENT: Climate Action Plan Support - Unfunded

2017 - \$1,500,000 2018 - \$1,500,000

Funding this offer will establish a Climate Action Plan (CAP) Reserve account. This Fund will allow the City to respond nimbly to opportunities and initiatives as they arise. Meeting the CAP goals will require significant public/private partnerships and these opportunities will not always align with a two year cycle. Why fund this offer? There are only two budget cycles (including this cycle) until 2020, which is the City's first goal around the Climate Action Plan – to achieve a 20% reduction in greenhouse gas emissions below 2005 levels. The most recent inventory puts the community's emissions 9% below 2005 levels. Significant work remains to achieve the 2020 goal and engage the community in these efforts both for this interim goal and as the community moves toward the 2030 goal (80% reduction) and being carbon neutral by 2050. The establishment of a CAP Fund was discussed with City Council in a Work Session, and Councilmembers recommended establishing this fund to support new projects as they come online, new opportunities emerge, or new technology becomes available.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.7 - Increase the community's preparedness and resiliency for changes in climate, weather and resource availability

Enabling Offers

25.2 KFCG ENHANCEMENT: Enhanced Innosphere Support - Unfunded

2017 - \$50,000 2018 - \$50,000

Funding this offer will enhance the City's support of the Innosphere and recognize historic funding of the Innosphere as a strategic co-creation partner. In 2015, the City adopted the Economic Health Strategic Plan (EHSP), which includes a number of thematic areas. The Innosphere specifically address the "Grow Our Own" theme, which emphasizes support of start-ups and entrepreneurs. The funds in this offer will be used to support activities historically funded elsewhere within the budget as well as increase the funding for new activities. The Innosphere has been a partner in delivering on the "Grow Our Own" thematic area since its inception as a virtual business incubator in 1998.

Specifically, the Innosphere supports the following EHSP goals:

- B.1 – Increase Economic Activity through Innovation and Entrepreneurism
- B.2 – Increase the Number of New Start-Ups and Entrepreneurs
- B.4 – Increase Capital to Support Start-Up Companies and Entrepreneurs

Historically, the Innosphere has received funds from the City in a number of ways, including: Operational Support – The Innosphere receives operational support in the amount of approximately \$80,000 annually from the City. These funds come from two sources: (a) General Fund \$60,000 (currently in the EHO Core Offer 25.1), and (b) the Platte River Power Authority (PRPA) community economic development funds approximately \$20,000. Innovation After Hours Sponsorship – The Innosphere receives \$10,000 annually from Industry Cluster funds to support monthly gatherings of start-ups and entrepreneurs hosted at the Innosphere Building. Annually more than 1,000 Fort Collins residents and business people attend this event. By consolidating the support of the Innosphere into one offer, the support of this strategic partner becomes more transparent. This offer provides an

additional \$20,000 to support scouting by Innosphere for new businesses and entrepreneurs that are developing technologies complimentary to the City's CAP and GHG reduction goals.

6.75 ENHANCEMENT - Utilities: Light & Power - Distributed Energy Resource Management System – Unfunded

2017 - \$179,400 2018 - \$50,712

Funding this offer supports the evolution of the current Demand Response Management System into a Distributed Energy Resource Management System (DERMS). DERMS is an innovative and flexible platform to control, manage and dispatch grid resources located in customers' homes and businesses (e.g. behind the meter). This offer is related to L&P offer 5.23, Operational Technology, which is related to distribution system DER management. Resources that could be integrated include thermostats, electric vehicle chargers, smart solar inverters and battery storage systems. Over time, it is expected that this system will be able to deliver additional value to the electric system beyond the simple reduction of peak demand.

This offer includes:

- Adding 500 homes to the thermostat program in 2017 and 'Bring your own Device' (BYOD) to enable selected thermostats from third party manufacturers to be enrolled in the program
- Adding 500 homes to the program will continue to build the peak resource by approximately 500 kW, with additional avoided power purchases of approximately \$25,000 annually.

Additional capacity supports demonstration with Platte River Power Authority for managing demand response for overall system benefits. It should be noted that the base offer already includes the installation costs of these 500 homes (a \$55,000 value) –even if no installations are performed as the vendor technicians will be doing maintenance service during 2017. While it would likely add a limited number of customers during this two year period, BYOD is an enhancement to develop experience with new technologies to prepare for upcoming Internet of Things technologies and provide exceptional customer service through choice.

This Offer supports the following Strategic Objectives:

- ECON 3.8 - Maintain electric utility systems, services, infrastructure integrity and stable, competitive rates
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)

7.19 ENHANCEMENT - 1.0 FTE Utilities: Customer Service & Administration - Program Coordinator Supervisor - Unfunded

2017 - \$80,380 2018 - \$90,159

Funding this offer will allow the Community Engagement team to expand the promotion and administration of both energy and water efficiency/conservation programs and projects to achieve goal reductions (by 2020 for energy and 2030 for water) by increasing participation in the existing 17 programs, and future programs by 25%. The position will enable program execution and metric tracking to manage the enhancement or exit strategies for existing programs, as well as the verified business case analysis for maintaining a prioritized innovation pipeline of programs and projects with the Program Management Office (PMO). A classified 1.0 FTE

Program Coordinator Supervisor will:

- Execute and manage program monitoring with metrics of program plans with project manager
- Develop and manage with the project manager the program and portfolio monitoring to determine the criteria for enhancing or exiting a program
- Align with the community and City on participation in events that promote awareness and participation in programs, with a goal of 25% increase by 2020
- Create and execute with PMO the innovation pipeline that contains a robust amount of programs and projects that can be prioritized for execution to manage goal alignment with the Climate Action Plan, Energy Policy and Water Efficiency Plan based on the customers' price point.

Community Engagement exists to foster a resilient and engaged community, facilitating participation in programs and services through education and partnerships that build trust with strategic community stakeholders, and the public, to enhance Fort Collins Utilities' reputation as a world class utility service provider and the best source of utility information for the services and programs we provide.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.2 - Protect and provide a high quality water supply and implement appropriate conservation efforts and long-term water storage capability
- HPG 7.1 - Provide world-class services that meet the needs of the community

Municipal Offers

30.2 ENHANCEMENT: Police Solar Panels/Covered Parking - Unfunded

2017 - \$480,000 2018 - \$0

This offer will fund approximately 120 kilowatts of solar power generation using photovoltaic panels at the Police Services building. This commitment to alternative energy also provides convenient parking awnings for on duty patrol officers. The original building design for Police Services included covered close in parking for multiple shifts of on duty patrol officers that make hundreds of trips a day into and out of the building. In the winter, snow and ice accumulate in the edges and corners of the parking lot where it is difficult to plow. Police employees have suffered significant injuries, to include broken bones, falling on ice within 15 feet of the entry door. During snowstorms, officers are delayed, sometimes significantly, when clearing their police cars of snow and windshield ice while also needing to respond to an emergency. To generate 120 kilowatts of solar power, about 35 covered parking spaces would be created. On a typical weekend night, as many as 40 patrol officers are on duty in Fort Collins. Police Services has already taken steps to mitigate the pooling of water and ice by re-engineering the parking lot drainage to move standing water away from the entry doors. PV parking awnings would complete a corrective plan to reduce injuries in the parking lot. In the summer, the south side of the Police Services building provides an excellent platform for PV panels. While collecting power, the panels would shade the on duty patrol cars when officers are working in the building, making their vehicles more comfortable and reducing the need for excessive air conditioning in the vehicle. Currently, Police Services does not have on site alternative energy generation capabilities. This project would provide benefits to the community by reducing employee injuries, reducing greenhouse gasses, and increasing the City's alternative energy portfolio. This project includes 1% going to Art in Public places.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- HPG 7.4 - Develop and implement initiatives to achieve safety goals and continue to focus on employee health and wellness

19.8 ENHANCEMENT: Municipal Fleet Efficiency Fund - Unfunded

2017 - \$100,000 2018 - \$100,000

Funding this offer allows Operation Services to create a new dedicated funding pool to significantly advance the City organization's ability to implement cost saving, carbon and petroleum fuel reductions in a timely way. Investment in these projects demonstrates a good return on investment and will save the City tax payer dollars and achieve Climate Action Plan goals.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.4 - Implement indoor and outdoor air quality improvement initiatives
- HPG 7.8 - Optimize the use of City assets through capital improvement planning, preventative maintenance and asset management

26.13 KFCG ENHANCEMENT: Leading By Example: Municipal Strategic Initiatives - Unfunded

2017 - \$270,250 2018 - \$21,800

This offer will enhance the organization and community ability to achieve the 2020, and accelerated 2030 carbon reduction goals and Road to Zero Waste goals. As the City adds buildings and services, meeting the new and existing goals (i.e., peak demand, on site distributed energy, alternative fuels, biodiversity, water reductions, health and wellness) has become a challenge. This offer includes using internal expertise to mentor managers, staff, and community members about projects that optimize operations through resource conservation.

To “Lead by Example,” funding this offer will support the following projects (cost estimates in parentheses):

- Electric Vehicle Charging Stations: to increase adoption rates. Current adoption rate is less than 1 %. CAP Framework plan calls for 50% by 2030. (\$46,000)
- Sustainability Home Tour: to showcase homes that incorporate energy efficiency and renewable energy. (\$2,500)
- Solar Showmobile: to replace coal generated electricity with solar as a demonstration project. (\$26,000)
- Pet waste Composting Structure: to enclose and expand pilot composting bins. Estimated 30 MT carbon reductions. (\$27,000)
- Recycling Containers at Golf Courses: to increase municipal diversion rate. (\$3,500)
- Electric Zamboni: to replace the 11-year-old Zamboni with a cleaner fuel source to improve indoor air quality. Estimated savings: \$20,000 and 59 MT of carbon. (\$145,300)
- Electric Cart: to be used at the Senior Center to enhance EV/LEV Program. (\$ 8,950)
- Water Bottle Dispensers: to reduce use of single serving plastic bottles. The dispensers are more energy efficient than the water fountains at the Northside Aztlan Center. (\$10,500)

Funds are needed to:

- Implement and model potential strategies, support tracking and progress reporting.
- Replicate successful programs across the organization and community.
- Respond to and provide leadership on emerging CAP strategies.

This Offer supports the following Strategic Objectives:

- HPG 7.8 - Optimize the use of City assets through capital improvement planning, preventative maintenance and asset management
- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- TRAN 6.5 - Fill the gaps for all modes of travel and improve the current transportation infrastructure while enhancing the aesthetic environment

6.24 ENHANCEMENT CAPITAL- Utilities: Water - Water Treatment Solar Energy System - Unfunded

2017 - \$0 2018 - \$1,883,000

This offer funds the construction of a photovoltaic power array capable of producing up to 500 kilowatts (kW) of electricity at the Water Treatment Facility. This array will add to the existing 100 kW solar array currently operating at the facility. The Water Treatment Facility currently consumes about 3 million kilowatt hours (kWh) of electricity at a cost of ~ \$250,000 per year. The proposed 500 kW solar array will offset current power supply needs, will reduce GHG emissions by 1,163 metric tons of CO₂, and will result in a cost savings of ~\$81,000 per year.

As part of its Asset Management Program, Utilities determines its capital project priorities through established levels of service for sustainability, product quality, product availability, reliability, regulatory compliance, customer satisfaction and safety. Performance and targets for established levels of service (see performance measures) as well as organizational objectives drive the priorities of the Utilities Capital Improvement Plan.

The proposed 500 kW solar project was evaluated in the Utilities Capital Improvement Planning and Prioritization process and ranked No. 29 out of 38 projects. The relatively low rating was driven by comparing this project to other capital projects that contribute significantly to safety, regulatory compliance and/or reliability. The solar array project, while rating low for its contribution to safety, compliance and reliability, ranked high for sustainability for its contribution to the City's 2020 goals. The installation of the solar array will eliminate the annual burning of about 1.0 million pounds of coal while providing power to the City's drinking water treatment process.

The project will pay for itself in 18 years, which is close to the expected life of the solar panels in the array. It should be noted that the project cost estimate is based upon a conceptual design level that was developed during the Water Treatment Facility Master Plan process.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- ECON 3.7 - Sustain high water quality to support the community and water-dependent businesses

5.21 ENHANCEMENT CAPITAL - Utilities: Light & Power - LED Street Light Conversion - Unfunded

2017 - \$500,000 2018 - \$950,000

Funding this offer will facilitate a pilot replacement of primarily 150 Watt high pressure sodium (HPS) streetlights and provide research results that will inform the project design for future LED streetlight replacement programs. Funding will also support research to assess lighting levels on the streets in Fort Collins and determine appropriate replacements for other wattage classifications.

Prices for longer lasting LED streetlights have now fallen to the point where the upfront investment to convert from traditional lights to LEDs can be recovered in about 8 years through energy savings and reduced maintenance costs. However, LEDs can have different color hues and coverage patterns than our current street lights. This study will help Light and Power gather data and experience to better understand which kinds of LED lights might be the best fit for our community. This study will be coordinated with the Night Skies Initiative currently underway.

LED streetlights are expected to last three times longer than HPS streetlights. This is the primary economic mechanism by which LED replacements are justified.

Lighting technologies using light emitting diodes (LEDs) can also:

- improve energy efficiency
- reduce maintenance costs through increased life cycle performance
- reduce light trespass and glare issues when correctly implemented

Additionally, this offer will fund a pilot advanced street lighting control system that would allow for remote control and supervision of street lighting.

This Offer supports the following Strategic Objectives:

- ECON 3.8 - Maintain electric utility systems, services, infrastructure integrity and stable, competitive rates
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach

94.1 ENHANCEMENT: Wind and Solar Energy for Municipal Operations – Unfunded 2017 - \$951,037 2018 - \$1,022,851

Purchasing this offer will allow the City of Fort Collins to buy 40,800 MWh of wind and solar energy for municipal purposes. This amount is 100% of the City’s municipal energy use. (Excluding street lights). If the City were to acquire this energy through Platte River’s Renewable Energy Service (known as Tariff 7), the estimated cost would be \$979,250 in 2017 and \$1,069,042 in 2018. The following is a breakdown of usage by department and cost.

This Offer supports the following Strategic Objectives:

- ENV 4.1 - Achieve Climate Action Plan (CAP) goals by reducing greenhouse gases (GHGs)
- ENV 4.5 - Work towards long-term net zero energy goals within the community and the City organization using a systems approach
- ENV 4.9 - Meet all regulatory requirements while supporting programs that go beyond compliance

General Fund	2015 Electricity Use (kWh)	2017 Cost	2018 Cost
Community Services	7,820,859	\$195,521	\$204,907
Safer Communities	111,504	\$2,788	\$2,921
High Perf. Gov.	2,461,917	\$61,548	\$64,502
Fleet	145,800	\$3,645	\$3,820
Golf	676,766	\$16,919	\$17,731
Library	4,263	\$107	\$112
Parking	1,441,069	\$36,027	\$37,756
Streets	512,840	\$12,821	\$13,436
Traffic Op's	149,920	\$3,748	\$3,928
Transfort	749,048	\$18,726	\$19,625
Subtotal	14,073,986	\$351,850	\$414,929
Utilities Fund			
Utilities	21,942,464	\$526,619	\$574,892
Laporte Water Trmt	3,023,674	\$72,568	\$79,220
Subtotal	24,966,138	\$599,187	\$654,113
Total	39,040,124	\$951,037	\$1,022,851