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AGENDA

Council Finance & Audit Committee
December 15, 2016
1:30 - 3:00 PM
Colorado River Community Room - 222 Laporte Ave.

1. Broadband Review - Financial, Economic & Social	90 minutes	A. Gavaldon J. Birks S. Kendall

Council Finance Committee & URA Finance Committee

Agenda Planning Calendar 2016

RVSD 12/13 mnb

Dec 15			
	Broadband Review – Financial, Economic, Social	90 min	A. Gavaldon J. Birks S. Kendall
URA			

Dec 19			
	Future Utility Debt Requirements – Water & Stormwater	45 min	L. Smith
	Utility Plant Investment Fee Updates	45 min	L. Smith
	Audit Findings Response Review	20 min	T. Storin
URA			

Jan 23			
	Revenue Diversification Outreach Update	30 min	T. Smith
	Water – Raw Water Fee or CIL	30 min	C. Webb
	Utility Time of Use Rate Pilot Results	30 min	L. Smith
	Water's Edge Residential Metro District	30 min	T. Leeson J. Birks
URA			

Feb 27			
	City Foundation		
URA			

Future Council Finance Committee Topics:

Strategy Map Metrics Review – QI 2017
Parking Garage Financing – QII 2017
BFO Discussion – one-time and on-going funding guardrails
County IGA – URA TIF Evaluation Process

Future URA Committee Topics:

Annual URA District Updates

WORK SESSION
AGENDA ITEM SUMMARY TEMPLATE

Staff: Mike Beckstead, Chief Financial Officer
Jeff Mihelich, Deputy City Manager
SeonAh Kendall, Economic Health Manager

SUBJECT FOR DISCUSSION Broadband Plan Update – Overview Community Outreach and Staff Recommendation

EXECUTIVE SUMMARY
The purpose of this item is to provide City Council an update on the Broadband Plan and review the community outreach, Request for Information interviews, executive site visits, and City Manager recommendation.

GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED
Staff requests the ability to bring forward language to create a retail municipal broadband service through amendments to the Fort Collins Utility charter, while continuing to explore a third-party alternative.

BACKGROUND/DISCUSSION

City Broadband Strategic Objectives
The City's 2016 Strategic Plan includes Strategic Objective 3.9 – "Encourage the development of reliable high speed internet services throughout the community". The Broadband Plan overall objective is to bring reliable, Gig speed internet to the city of Fort Collins, while making an informed decision through evaluation of risk and opportunities. Broadband is defined by the FCC as internet download speed of 25 megabits per second ("Mbps") and upload of 3 Mbps or faster.

Additional benefits sought include:
- Competitive pricing (residential market pricing at $70/month or less for 1 Gbps and an affordable internet tier);
- Universal coverage across the Growth Management Area;
- Underground service for improved reliability; and
- Timely implementation to providing services within a reasonable timeframe (less than five years).

In August 2016, city staff presented the four different model options to City Council: retail, wholesale, private third party and do nothing.

Municipal-owned Retail:
The municipal utility/retail model is similar to the model that Longmont, CO is providing. The municipality would build and maintain the physical fiber infrastructure network to pass all premises. The municipality acts as the internet and voice service provider and manages all customer acquisition and services. The current model does not include video services; however, based on input from other communities, staff is still evaluating video as a potential option.

Critical assumptions in the Retail model include:
- Cost to build the network: estimated $984 per premise passed
- Overall residential subscription rate at 30.2%
- Pricing: 50 Mbps at $39.95/month; 1G at $49.95/month
- 15-year payback of debt

Staff is continuing to evaluate the $49.95 1G rate and contemplating a $60 - $70/month 1G service, which is more consistent with the national industry pricing and provides a higher degree of financial stability and quicker payback period.

The retail model requires modifications to the City Charter to allow the existing Light and Power (L&P) enterprise to expand into telecommunications. Initial analysis assumes financing the capital cost through revenue bonds issued and backed by the rate-making strength of the L&P enterprise. Although another option for structuring the retail model might be the creation of a free-standing new utility enterprise for telecommunications, including broadband, such a structure would not permit revenue bonds to be secured by L&P electric service revenues and financing may be an impediment to such a structure. A more detailed analysis of funding options would be a part of the next step business planning phase. Modification of the governance process for telecommunications would also be recommended to allow effective operations within a competitive environment, which is not part of the current L&P business model.

Wholesale:
Community examples of the wholesale model (public/private partnerships) are Huntsville, Alabama (Google Fiber) and Westminster, Maryland (Ting). Each wholesale model is unique to the community and private partner. The general basis is that the City would build and maintain the physical fiber network to pass all premises, and create an "open access" platform for other service providers to utilize. The private partner or "retailer" is responsible for all other functions/costs such as customer acquisition, connection, internet service provider and customer service. The municipality is compensated via monthly per passing (connected or not) and/or per connected premises fees. Success is dependent upon the retail provider.

The wholesale model would also require modification of the City Charter associated with L&P operations, similar to the description above.

Third Party (formerly called "franchise"):
A third-party model is similar to Google Fiber in Kansas City and Allo in Lincoln, NB. The municipality would look to attract a third party to come into the community, finance the network, operate the network and provide services directly or through other retail providers. The City could potentially partner with the third party and encourage the private provider to enter into the market through utility fees; premises passed and expedited reviews. End user fees are not specified or regulated other than non-discriminatory pricing. The private provider builds and maintains the physical infrastructure and acts as the Internet Service Provider ("ISP") who manages all customer acquisition and services. A disadvantage for a municipality is that there is less control of pricing, quality, availability and technological advances. Additionally, companies such as Google Fiber have moved away from this type of model and toward a public/private partnership.

A detailed financial model has been developed for the Retail and Wholesale model. A summary of the financials are provided below. The Capital Expenditures ("CapEx") for the retail model could increase based on a decision to provide video services and if the increased take rate went from 30% to 50%.

	Municipal Retail	**Wholesale**	**Third Party**
CapEx (Years 1 – 5)	$110M	$85M	$0
CapEx (Years 6 – 15) – upgrades/maintenance	$15M	$3M	$0
Total CapEx	$125M	$88M	$0
FTE	33	5	0
Project Break Even	15 Years	12 – 18 Years	N/A

Public Outreach Summary
From September to November, City staff conducted broadband outreach with the community focusing on exploring four options: do nothing, franchise, wholesale and retail. All outreach has included polling on level of support of each option and handouts of the models. (Attachment 2). Different mediums of outreach were used to engage citizens such as online video presentation and polling (Camtasia), City spotlights, Telephone Town Hall, and face-to-face open houses. In all, City staff held 10 engagement opportunities to reach the public.. Note: At the time of the outreach, the third-party alternative was called "franchise." Colorado statute does not allow telecommunication franchises and therefore is now being referred to as third-party.

Face-to-face presentations included a CityWorks Alumni forum, two traditional Broadband open houses, Fort Collins Area Chamber of Commerce Local Legislative Affairs Committee, Community Issues Forum, and a Spanish-speaking Open House. Staff also engaged a variety of Board and Commission members at the December Super Issue Meeting. The results of all in-person outreach show that 76% of participants are "absolutely not" or "not supportive" of the do nothing option, 60% of participants also do not support the franchise model. The retail option saw 68% of participants "somewhat supportive" and "very, very supportive" in the face-to-face polling.

On Monday, Nov. 14, 2016, the City conducted its first telephone "town hall" meeting on broadband services. Similar to a live radio show, Mayor Wade Troxell, City Manager Darin Atteberry and Chief Financial Officer Mike Beckstead previewed the city's four broadband model options and answered questions from citizens. Of the 15,000 calls out to citizens, 1,339 attendees participated in the telephone town hall.

Why Fiber-to-the-Premise ("FTTP")

Questions have arisen as to why the City would enter a market that traditionally only private companies have been active in. The FCC has noted that the real culprit of slow, expensive internet in the U.S. is the lack of competition among providers. New broadband entrants into the market have a substantial impact on price reductions, increased customer service and accelerated infrastructure upgrades. Incumbents typically try to utilize existing infrastructure such as copper, wireless and hybrid approach. Non-fiber infrastructure can create dependability concerns due to the life and reliability of copper. Fiber ("FTTP"), which is being explored in the City's broadband plan, is not susceptible to weather or electromagnetic interferences and has a lifespan of 25 – 40 years. Currently, wireless is a complement to wired connections, not a substitute.

Comcast's recent announcement of the rollout of DOCSIS 3.1 includes upgrade requirements of cable modem replacement and firmware upgrades. DOCSIS – "data over cable service interface specifications" provides internet access over the existing hybrid fiber-coax cable systems and is not symmetrical (same upload/download speed). No date has been released for the roll out of DOCSIS 3.1 in Fort Collins.

Economic and Social Opportunity

City staff has spent the last few months researching and discussing social and economic impacts of high-speed broadband. Due to the formative nature of high-speed broadband, much of the economic impact information is incremental. Additionally, a majority of the research on increased economic activity due to broadband is related to closing the digital divide and does not address the speed divide. Lack of data at the local and national level on closing the speed divide is particularly challenging. However, there is a causal relationship between internet speed and economic growth. University of Tennessee-Chattanooga Economist Dr. Bento Lobo found that the economic value of the fiber infrastructure was much greater than the cost of installing and maintaining the infrastructure through business efficiencies, customer savings, education, taxes, smart grid, new investment, etc. (Attachment 3)

Faster internet is widely considered a productivity tool for businesses – increased output, more labor utilization, access to a wider customer base, etc. Dr. Lobo points to enhanced productivity from "savings in personnel time, streamlined and automated process flows, fewer errors, economies of scale and from lower processing costs per unit." Service disruptions happen at the hyperlocal (block to block) level and are hard to quantify because they might not be significant enough to report to the FCC. High-speed internet improves productivity by allowing residents and businesses to do more.

Economics and community brand are tied together – the City of Fort Collins is known as a connected, innovative community. The community brand draws the attention of both businesses and talent to the area. A study from "Site Selection Magazine" states that broadband is no longer a luxury, but critical infrastructure in evaluating future relocation or expansion projects. Furthermore, citizens have expressed high brand recognition and trust in Fort Collins Utilities and the City organization. As seen in the community outreach, Fort Collins residents are supportive of a "shop local" mindset that supports local choice, employment and accountability.

Again, the FCC noted that the real culprit of a slow, expensive internet in the U.S. is the lack of competition among providers. New broadband entrants into the market have a substantial impact on price and service. Dr. Lobo estimated that a new entrant into the market brought pricing down by 20% (equivalent to $15/month/subscriber) due to competitive pressures.

Retail Broadband Community Tours
Recently, the City Manager, Deputy City Manager and Chief Financial Officer visited several municipal-run broadband providers. The communities visited include Wilson, NC; Chattanooga, TN; Cedar Falls, IA and Longmont, CO. The site visits allowed the attendees to openly discuss the challenges and opportunities that a municipal-owned retail ISP can have on the local community (Attachment 4). Particular emphasis was placed on the governance of their municipal-owned broadband. The visit to Longmont, CO is scheduled for Friday, December 17, which is after the printing of this agenda item summary.

	Cedar Falls, IA	Wilson, NC	Chattanooga, TN
Start Date	1995/2013	2008	2013
Market Share	85%	40%	55%
Price – 50/100 Mbps	$58/mth	$35/mth	$60/mth
Price – 1G	$117/mth	$100/mth	$70/Mth
Households Served	12,000	8,300	84,000
1G Customers	36	100	5,000
Governance	Board of Trustees	Council Self-Executing Memo	Board of Trustees L&P CEO decision

Additional lessons learned from the site visits include:

- Broadband is hard and very different from L&P – business mindset, market, etc.
- Broadband is a part of the community brand and sense of place
- Broadband creates economic advantage over those without connectivity
- Each of the communities would do it again

Request for Information (RFI) Interviews
The city issued a Request for Information (RFI) in late August 2016. A team made up of staff and members of the Broadband Technical Group evaluated respondents based on their experience and capability, business model proposed, motivation and willingness to partner, business structure and financial strength.

Recently, staff interviewed four of the nine respondents to learn more about the companies and their proposals. Of the four interviewees, staff has identified a viable, third-party alternative. Axia has proposed funding, building and maintaining a ubiquitous Active Ethernet network throughout the City within 2 – 3 years. Axia treats fiber as infrastructure and designs the network in a way that others can purchase access to the network on equal terms with flexible technical and financial options. Additionally, Axia requires a 40% Expression of Interest ("EOI") of city households before launching the network and requests that the City support in marketing opportunities to meet the 40% EOI. Axia would create a partnership with the City on co-branding to meet the 40% EOI. Significant due diligence and work is needed to fully assess the viability of this potential opportunity around areas of Axia as a business, customer service requirements, reliability, technology upgrades, etc.

Next Steps
Staff will continue to develop next steps for the retail municipal broadband services including modifications to the City Charter for an April or November 2017 election. Modifications would include a request to voters to add Telecommunications within the Light and Power enterprise and to seek voter support for the debt required ($117M to $140M) to launching broadband.

Concurrently, staff will continue third party due diligence exploration of Axia concerning the business viability of a potential partnership.

ATTACHMENTS (numbered Attachment 1, 2, 3,…)

1. PowerPoint Presentation
2. Broadband Outreach and Social Media Report
3. The Realized Value of Fiber Infrastructure in Hamilton County, Tennessee by Bento J. Lobo, Ph.D., CFA, 18 June 2015
4. Community Profiles for Site Visits, November 2016

City of Fort Collins

BROADBAND

DECEMBER 20th

2016

Agenda

- Overall Policy Objectives & Option Review
- Broadband Economic & Social Impacts
- Broadband Site Visits
- Retail Model – Base Case Financial Summary
- 3rd Party Alternative
- Public Outreach
- Recommendation/Next Steps

Overall Policy Objectives

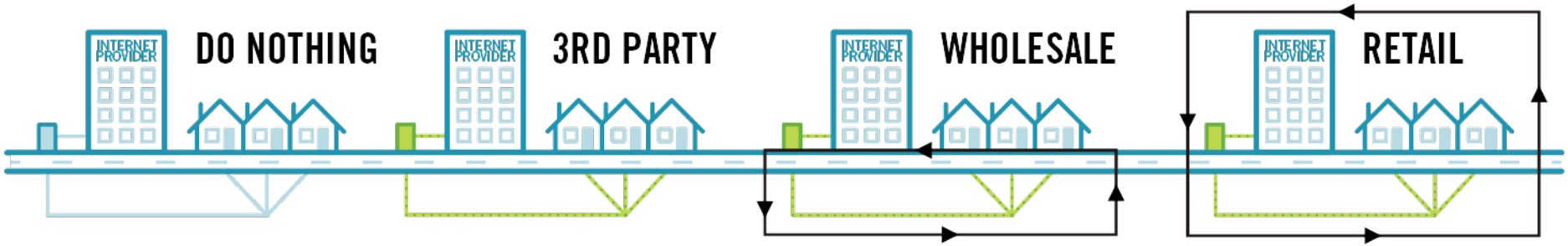
Strategic Objective 3.9

- Encourage the development of reliable, high speed internet services throughout the community

Secondary Factors

- Network reaching all residents of Fort Collins GMA
- Timely implementation requires base network build <5 years
- Competitive market pricing
- Outstanding customer service

Options Reviewed



- MARKET DRIVEN

- NO COST
- NO CONTROL

- COSTLY
- SOME CONTROL

- MOST COSTLY
- MOST CONTROL

Economic/Social Opportunity

Economic Impact of Broadband is Indirect/Intangible

- Economic Advantage – Visionary Leadership
- Market Impact
- Productivity and Attraction
- Digital Divide vs Speed Divide

- Smart City is part of Sense of Place – schools, amenities, healthcare, etc.
- Gig City brand

Economic/Social Opportunity

Economic Impact of Broadband is Indirect/Intangible

- Economic Advantage – Visionary Leadership
- Market Impact
- Productivity and Attraction
- Digital Divide vs Speed Divide

Lower cost of service due to competition in many communities

Economic/Social Opportunity

Economic Impact of Broadband is Indirect/Intangible

- Economic Advantage – Visionary Leadership
- Market Impact
- Productivity and Attraction
- Digital Divide vs Speed Divide

- Talent
- Merchant services
- Entrepreneurship/Small Businesses

Economic/Social Opportunity

Economic Impact of Broadband is Indirect/Intangible

- Economic Advantage – Visionary Leadership
- Market Impact
- Productivity and Attraction
- Digital Divide vs Speed Divide

Little data on tangible impact of speed.

Broadband Site Visits

Cities Visited:

- Cedar Falls, IA
  - Nov. 30
- Wilson, NC
  - Dec. 1
- Chattanooga, TN
  - Dec. 7
- Longmont, CO
  - Dec. 16

Objective:

- Learn from Communities that have launched Municipal Broadband
- Understand challenges, successes and economic impacts

Staff:

- Darin Atteberry – City Manager
- Jeff Mihelich – Deputy City Manager
- Mike Beckstead – Chief Financial Officer

Broadband Site Visits

DATA	CEDAR FALLS	WILSON	CHATTANOOGA
Started Broadband/Gig Speed	1995/2013	2008	2013
Market Share	85%	40%	55%
Pricing – Gig	$117	$100	$70
Pricing – 50/100 Mbps	$58	$35	$60
Total Customers	12,000	8,300	84,000
Gig Speed Customers	36	100	5,000

Site Visit Takeaways

- Complex
- Governance
- Economic Benefits

- Significantly harder than running a L&P Utility – competition & learning curve

Site Visit Takeaways

- Complex
- Governance
- Economic Benefits

- Wilson – Council; Self-Executing Memos
- Cedar Falls – Board of Trustees
- Chattanooga – Board of Trustees; L&P CEO decisions

Site Visit Takeaways
CITY GOVERNANCE

City Governance to address adaptability and ability to operate in a competitive market

- Strategy
- Marketing
- Pricing
- Technology

Site Visit Takeaways

- Complex
- Governance
- Economic Benefits

- Part of the brand and sense of place – like schools, parks, healthcare
- Creates advantage over those without connectivity, would do it again

Findings

- Wholesale not attractive option
- Status quo unacceptable
- Two remaining alternatives:
  - 3rd Party Partnership (Franchise)
  - Retail Model

Critical Retail Model Variables

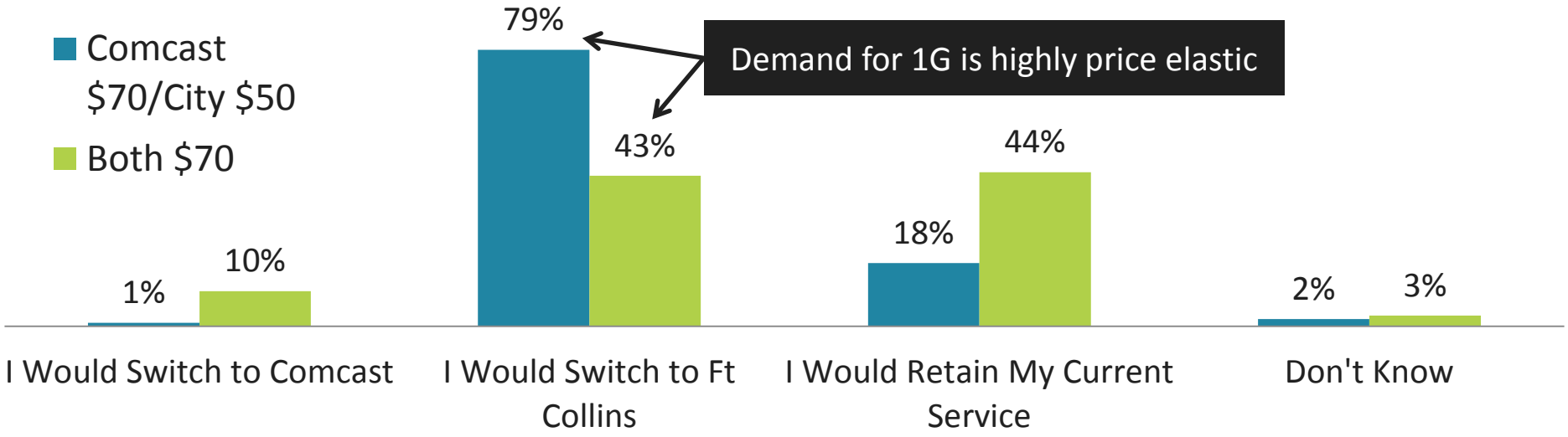
1. **Passing Cost - $984/premise**
   - average cost to get close to each premise in Fort Collins

2. **Take Rate – 30.2%**
   - Percentage of households that will subscribe to service

3. **Pricing - $49.95 gig speed charter rate ($99.95 non-charter rate)**
   - Monthly cost to subscriber 50 mbps $39.95

Approximately 450 Different Variables in Retail Model
3 Variables Account for the Majority of Results

Model Driving Variables - PRICING



Customer Willingness to Switch to Fort Collins Service from Current Service Decreases Significantly if Pricing is Neutral

Investment

$117M Bonds

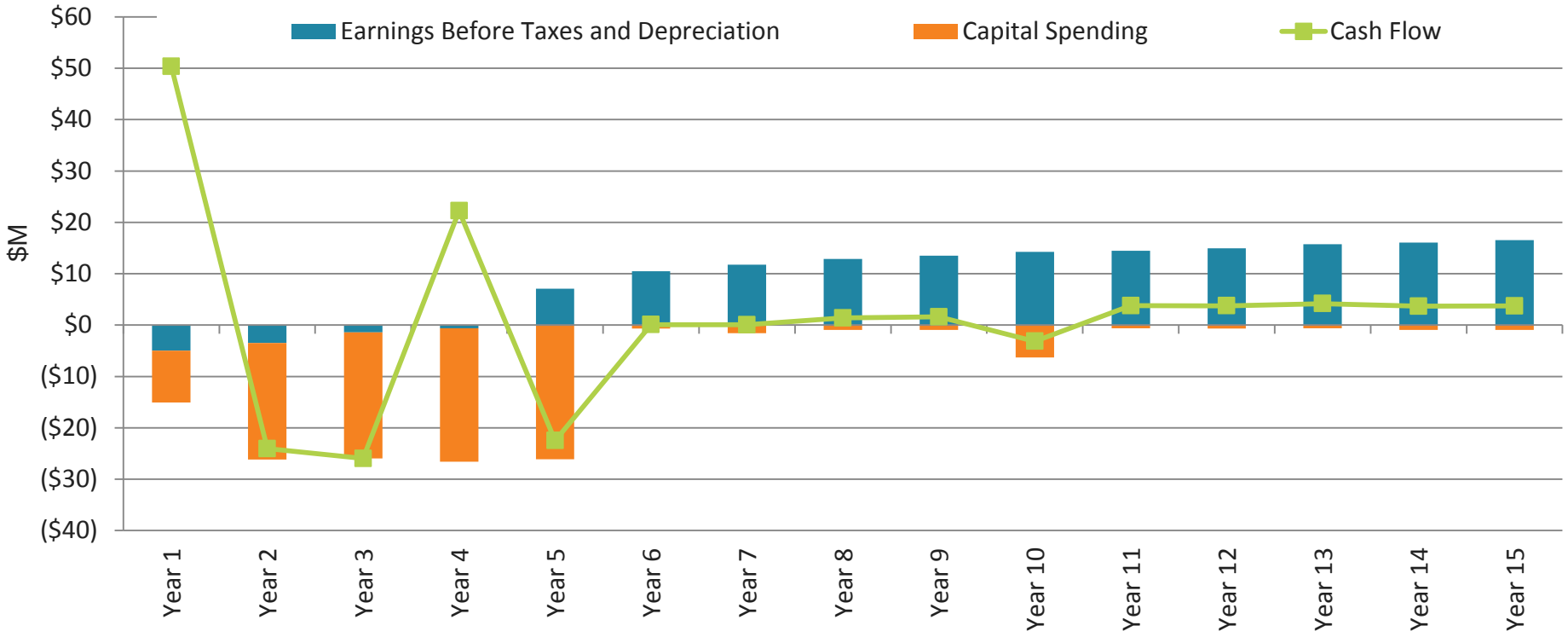
+ $8M Working Capital

$125M Total Investment

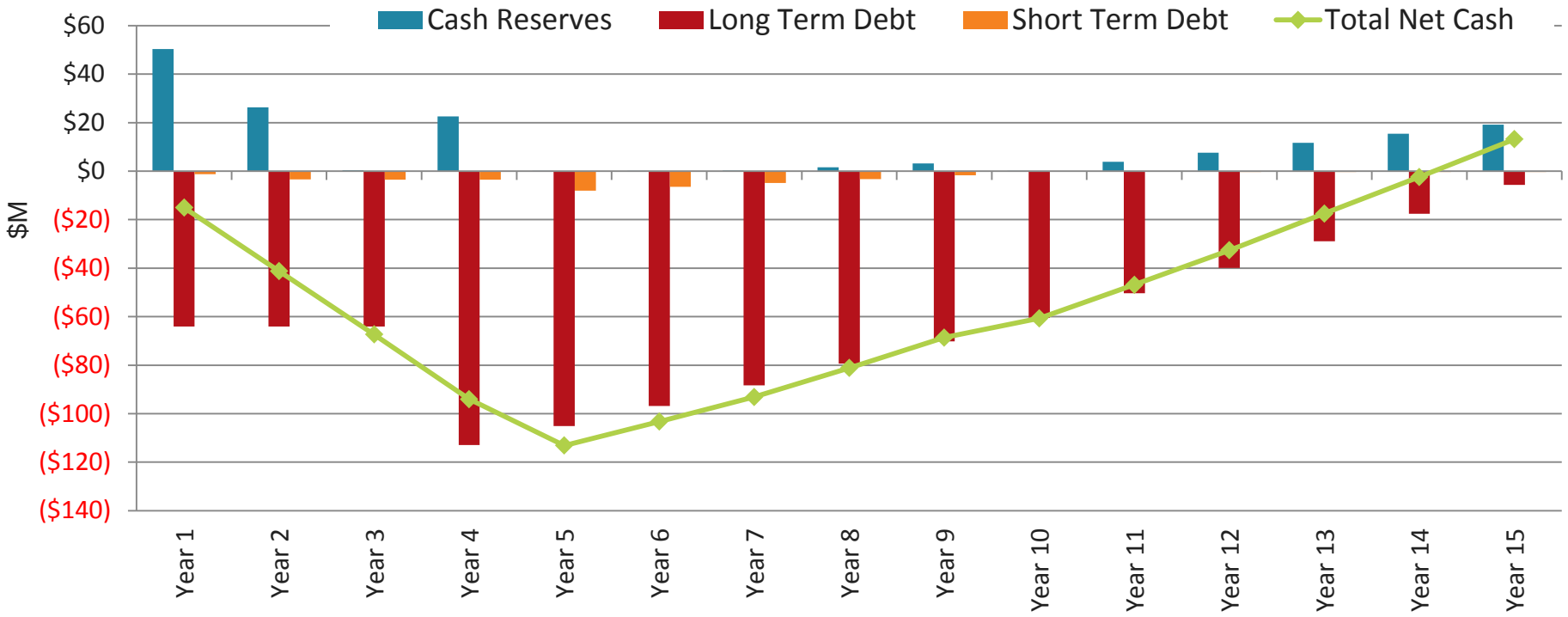
I. $80M = Network Construction
II. $29M = Equipment, Facility, Install, Engineering
III. $8M = Bond issuance cost, capitalized interest

External borrowing of $117M. Internal working capital of $8M funding TBD
Total investment increases if take rate exceeds 30.2% or add video

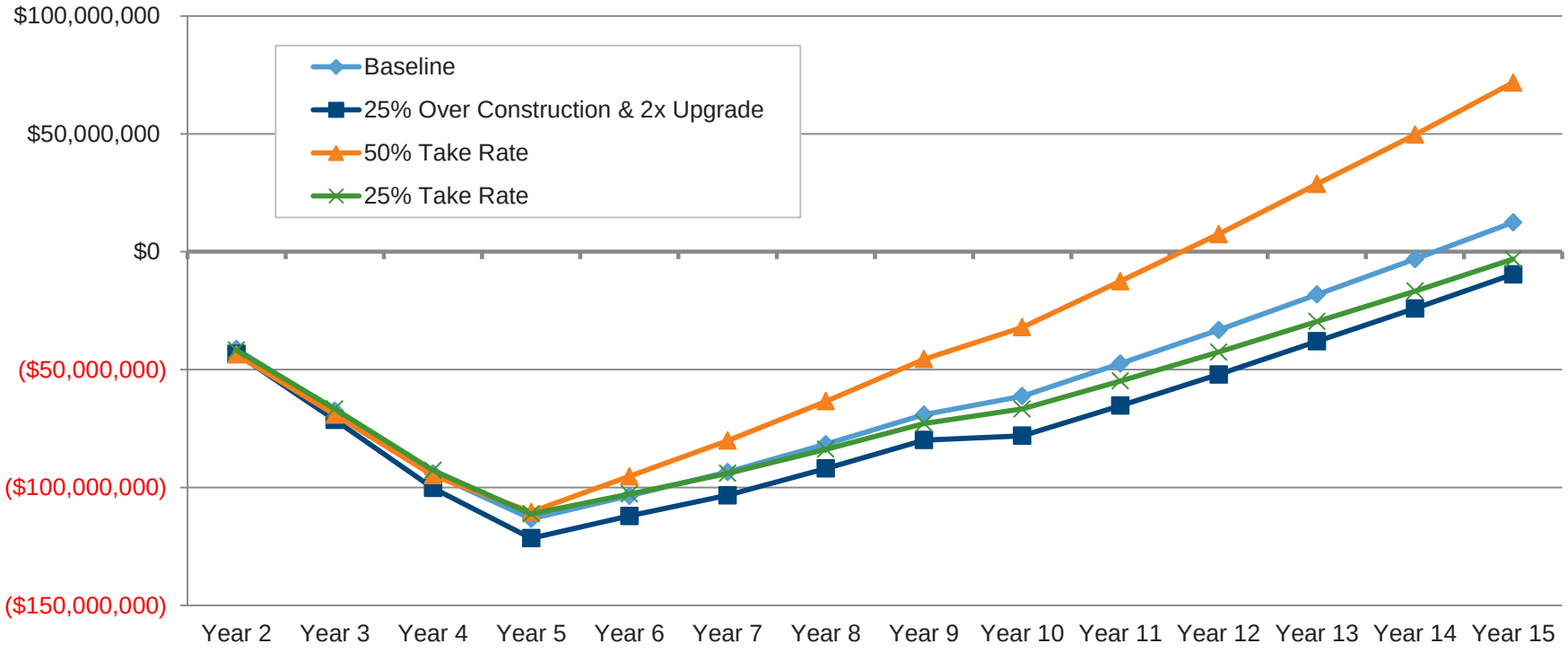
Base Case Results – CASH FLOW



Base Case Results – PAYBACK



Sensitivity Analysis



Retail Model
STRENGTHS & RISKS

STRENGTHS

- City Brand & Customer Service
- Control of build out and customer service standards
- Right of way management
- Strong local support

RISKS

- Business Start-up
- Governance & Culture
- Technology
- Financial

3rd Party Alternatives

- Request for Information (RFI) Issued August 29th, 2016
- 9 Respondents – 4 selected for interviews based on proposals
- Team evaluation based on
  - Written proposal submitted per RFI
  - Two hour discussion with each
- Need: Significant due diligence and additional work required to fully vet and access potential

RFI Response – Axia

- Experience in large fiber builds – Alberta, Singapore, France, Massachusetts
- 1.5M homes connected, ISP in Canada & France, network operations in Massachusetts
- 18 year history, financial strength thru parent

PROPOSAL

- Fund and build ubiquitous fiber network throughout City in 2-3 years
- Maintain network & provide ISP & customer service
- Requires 40% Expression of Interest prior to launch
- Residential Service Pricing
  - 100 Mbps – 1 yr contract = $59, 2 yr contract = $69 ($99 activation fee)
  - 1 Gbps – 1 yr contract = $89, 2 yr contract = $79

3rd Party Model
STRENGTHS & RISKS

STRENGTHS

- Experience with fiber design and build
- Experience with ISP market
- Financial Partner & Resources

RISKS

- Loss of Control
  - Customer service and technology
  - Pricing
  - Enforceability of service requirements
- Potential Risk of Partnership Change – future partner (mergers and acquisitions)

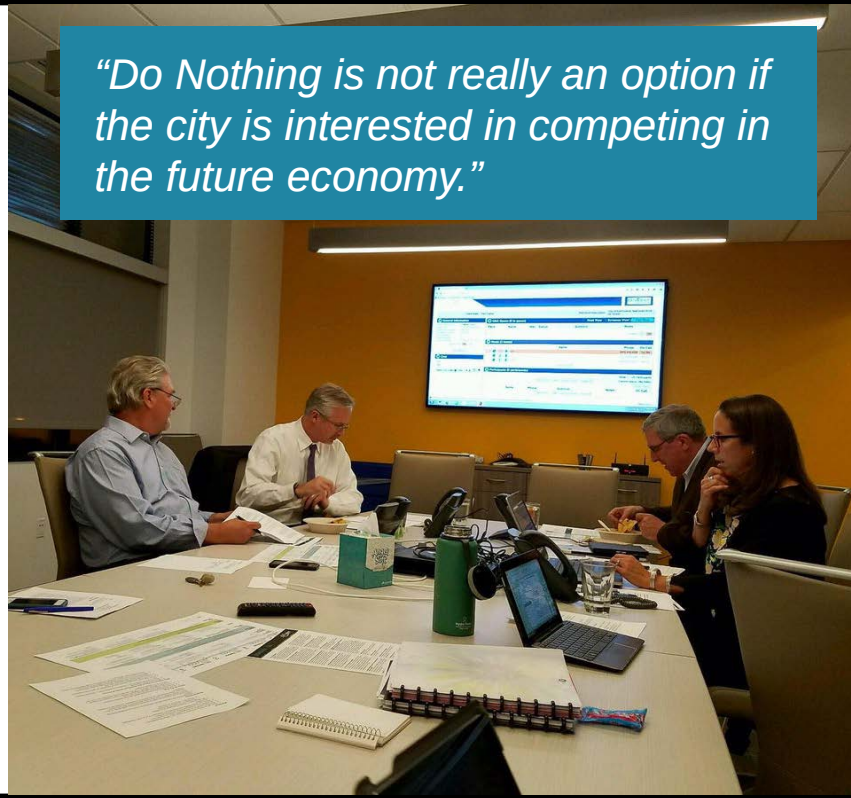
Viable Alternative – Model, Experience, Capability

Public Outreach Summary

- 8 Open Houses reaching ~**160** citizens
- Online Video & Feedback Poll received **657** responses
- Telephone Town Hall
  - **15,000** dial out;
  - **72** inbound calls
  - **1,339** attendees
- Broadband Technical Group
  - Community Experts – **4** meetings
- Citizen Ad-hoc Committee

Public Outreach Summary

- 68% of Citizens strongly support or support City providing Retail Broadband services
- 76% strongly do not support the Do Nothing option
- Business community input is mixed
  - Chamber LLAC has concerns
  - NCEA strongly supports



"Do Nothing is not really an option if the city is interested in competing in the future economy."

Two Alternatives

3RD PARTY PARTNERSHIP

Next Steps

- Company Due Diligence
- Define Customer Srvc Commitments
- Define Co-Branding Relationship
- Develop Service Agreement
- Market 40% Expression of Interest

Time to complete: 3 – 6 months

CITY MUNICIPAL MODEL

Next Steps

- Ballot Measure in April/November
  - Modify L&P to include Telecom
  - Debt of $117M - $140M
- Develop Solution & Modified Governance
- Form/Hire/Fund Implementation Team
- Develop Business/Implementation Plan
- Debt Analysis, Issuance, Working Capital
- Detailed Network Design

Time to complete: 12 months from Team formation and funding

City Manager's Recommendation

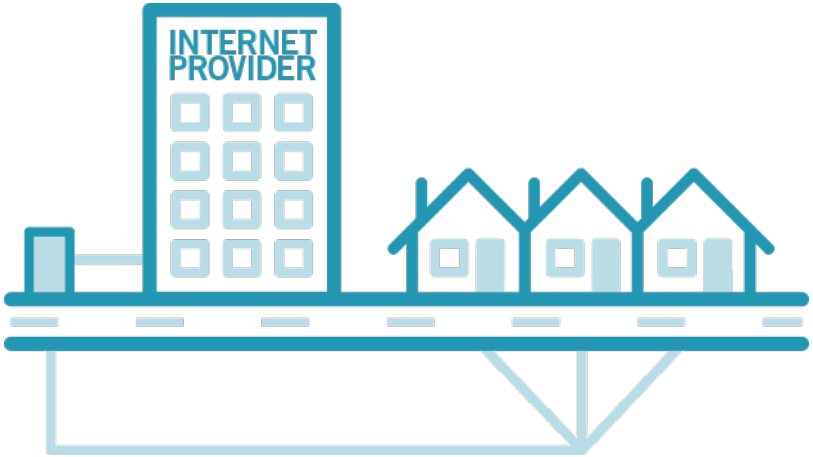
- Retail Model & Election to modify Light & Power to include Telecommunication & Debt

- Due Diligence on 3rd party alternative

- Election Options:
  - April 2017
  - November 2017

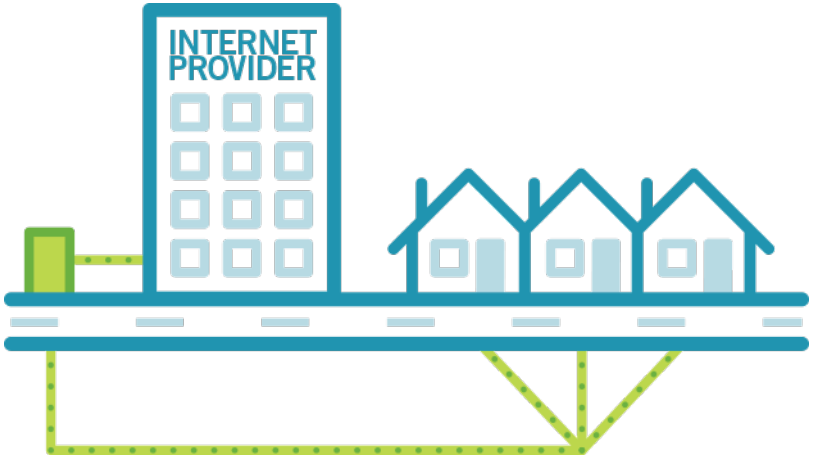
BACKUP

Do Nothing



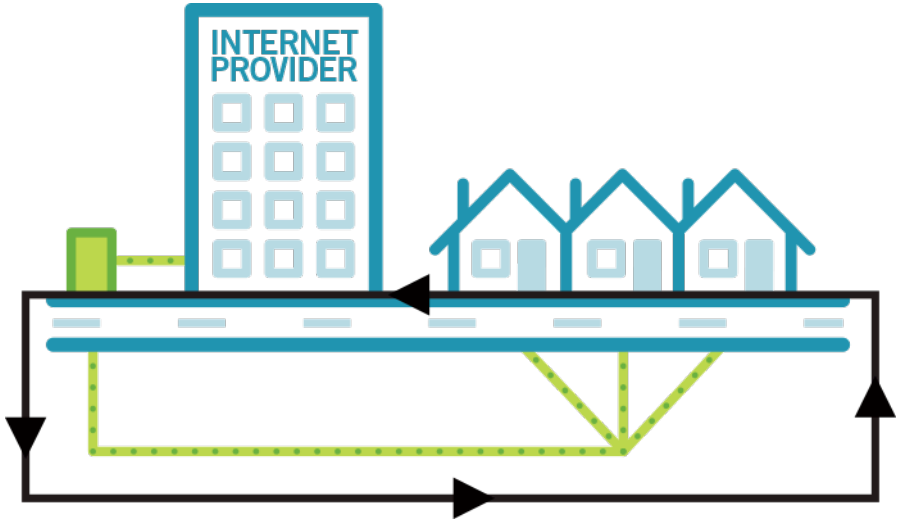
- City does not play a role
- No guarantees on level of service
- Price is market driven

Franchise Model



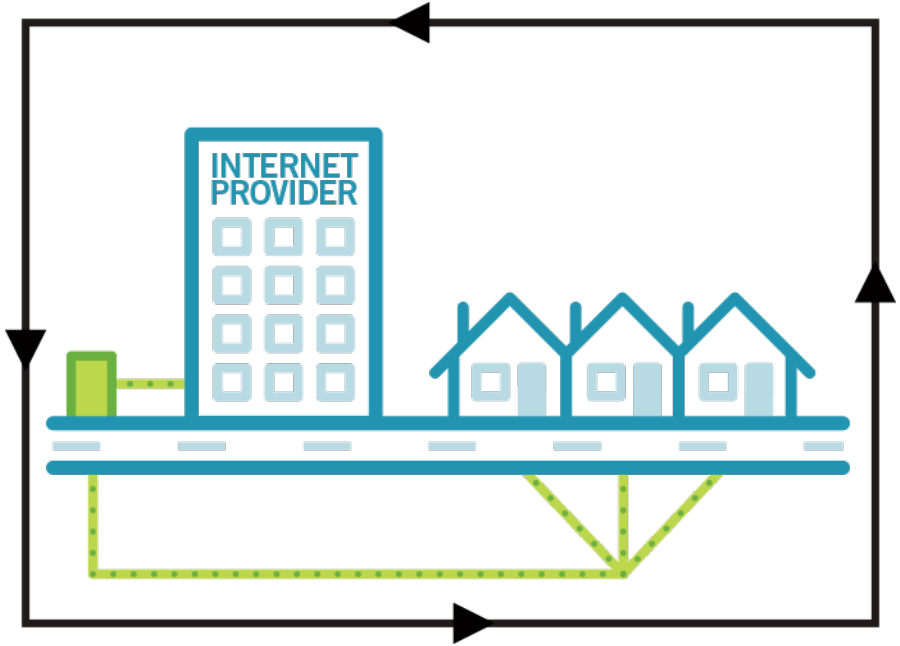
- City not involved in network build out or operation
- City works to incentivize operators through permitting and operational agreements
- Success dependent on interested operators
- Pricing and service level market driven

Wholesale Model



- City builds and owns the fiber network
- City leases the network to any interested provider
- Costly-$88M
- Success dependent on interested operators
- Pricing and service level market driven

Retail Model



- City is the provider
- City builds and operates the network
- GMA build out
- Most costly-$125M
- Need 30% subscribership to pay off debt within 15 years
- Rate payers responsible for debt if not successful