

# AGENDA ITEM SUMMARY

April 5, 2016

City Council

## STAFF

Lindsay Ex, Environmental Program Manager  
 Jeff Mihelich, Deputy City Manager  
 Jackie Kozak-Thiel, Chief Sustainability Officer  
 Mike Beckstead, Chief Financial Officer  
 Kevin Gertig, Utilities Executive Director  
 Lucinda Smith, Environmental Sustainability Director

## SUBJECT

First Reading of Ordinance No, 046, 2016, Appropriating Prior Year Reserves in the General Fund and the Light and Power Fund and Transferring Appropriations from the Light and Power Fund to the General Fund for 2016 Projects Associated with the 2020 Climate Action Plan (CAP) Strategic Plan.

## EXECUTIVE SUMMARY

The purpose of this item is to appropriate \$230,510 from the General Fund and \$245,483 from the Light and Power Fund to initiate four projects in the CAP that have been identified for immediate action and investment based on guidance provided by the City Council.

## STAFF RECOMMENDATION

Staff recommends adoption of the Ordinance on First Reading.

## BACKGROUND / DISCUSSION

In 2015, City Council adopted updated community greenhouse gas goals:

- 20% below 2005 levels by 2020,
- 80% below 2005 by 2030, and
- Carbon neutrality by the year 2050

Staff has developed an implementation plan to include an internal CAP Executive Team, Core Team, and Strategic Initiative Teams as well as an external Community Advisory Committee, based on the accelerated goals of the CAP. During the March 10, 2016 Council Work Session, staff identified seven initiatives that could be invested in immediately; four of these seven are included within this agenda item. The remaining three are currently being vetted further and will be brought forward to Council within the next two months.

Item	Initiative (\$,000)	2016 Capital & O&M			Ongoing Annual Capital & O&M
		General Fund	Light and Power	Total	
1	Building Energy Disclosure and Scoring		\$51,388	\$51,388	\$89,066
2	CAP Program Support	\$55,510	\$129,095	\$184,605	\$333,153
3	CAP Pilot Projects/ Innovation Fund	\$125,000	\$65,000	\$190,000	N/A
4	Biomass Feasibility Study	\$50,000		\$50,000	N/A
<b>Totals</b>		<b>\$230,510</b>	<b>\$245,483</b>	<b>\$475,993</b>	<b>\$422,219</b>

Below is a summary of the four projects that were prioritized to receive funding in 2016 (see **Attachment 2** for full project descriptions):

**1. Building Energy Disclosure and Scoring: \$51K (\$89K Ongoing)**  
2020 Impact: 2,000 CO<sub>2</sub>e Tons (0.4%)

This initiative provides one staff position to lead the development of a building energy disclosure and scoring program for Fort Collins. Similar to the purchase of a new car and taking into account the miles per gallon (mpg) that a car is rated for, this initiative is designed to make energy efficiency part of the decision-making process in the purchase, rental, or lease of homes and commercial buildings. Benchmarking also helps building owners to monitor the performance of building systems over time and make prudent investment decisions in ongoing maintenance and upgrades. The program will entail energy benchmarking and disclosure for commercial buildings and energy scoring for homes. Though this initiative represents a small portion of the necessary impact toward the CAP 2020 goal (0.4%), it will be an important driver for significant emissions reductions by 2030. This position will create a pathway to the long-term impacts that building energy disclosure and scoring will have on Fort Collins' greenhouse gas (GHG) emissions. The initiative is especially impactful because it will eventually include most of the existing and future building stock due to the normal turnover in ownership. In addition, Fort Collins has been invited to apply to be one of the next 10 cities funded by the City Energy Project ([www.cityenergyproject.org](http://www.cityenergyproject.org) <<http://www.cityenergyproject.org>>), which is a privately-funded initiative that, if selected, would match the City's investment in this initiative by up to 2:1.

**2. CAP Program Support: \$185K (\$333K Ongoing)**  
2020 Impact: Enabling Initiatives

This package includes three positions critical to the success of the City's ability to achieve its Climate Action Plan goals. Each of these positions has been vetted by the CAP Executive Team (Deputy City Manager, Chief Financial Officer, Utilities Executive Director, Chief Sustainability Officer, and Planning, Development, and Transportation Director) and has been determined to be high priority.

The three positions are as follows:

- CAP Program Manager - Provides the long term planning and implementation of CAP, the accelerated pace to meet goals, and level of depth and breadth of technical information and public and private sector engagement demands a dedicated resource to coordinate. Coordination includes 70 staff members and 30 citizens engaged to achieve the near-term and long-range Climate Action Plan goals. Support of CAP Executive Team ensures high level engagement in the organization as well as vertical integration. Builds bridges with internal and community partners, raising awareness and increasing involvement in climate action, and proactively collaborates with the Community Advisory Committee and regional, state, and federal organizations to advance climate action.
- Sustainability Services Financial Analyst - Provides necessary skills to fully vet CAP and all SSA initiatives from a business planning perspective, including annual cash flow assumptions, levels of investments required from public and private sectors, ongoing costs, savings associated with the initiatives, and marketing plans. Key outcomes that will also take place as a result of this position will be the performance analysis of current and future programs and financial vetting of all initiatives. This position fills an important skills gap in Sustainability and in support of CAP.
- Smart Grid and Systems Operation Manager - The prime outcome is the integration of the renewable and distributed supply resources into the electric delivery system in a way that is both safe and reliable. This initiative positions the Utilities to operate a distribution system with large amounts of Distributed Energy Resources (DERs) such as solar PV. In addition, it provides strategic and tactical leadership will be achieved for the Fort Collins Energy's Smart Grid and System Operations to ensure the delivery system operates safely and reliably.

Finally, the initiative provides for the identification and evaluation of existing and emerging technologies in the areas of advanced metering, distribution automation, grid communication networks, and advanced control center functions.

**3. CAP Pilot Projects/Innovation Fund \$190K (Ongoing funding will be vetted through the 2017-2018 BFO Cycle)**

2020 Impact: Enabling Initiatives

The purpose of the Climate Action Plan Innovation/Pilot Projects Fund is to foster locally innovative and relevant approaches to objectives outlined in the City's CAP goals. The aim of the program is to lower barriers to funding important projects not accounted for in a department's annual budget, to allow the City to act nimbly when presented with CAP-related opportunities (i.e., cash match for grants), and to test focused concepts in the community that might later be replicated throughout the city. Initially, this fund would be open to projects developed within City departments and through collaborations with other agencies. In the future, it could be extended to projects from residents and the local business community.

In 2016, four initiatives have been prioritized to date to be included within the Pilot Projects/Innovation Fund:

- HEAL (\$60K): A 2016 pilot of the HEAL (Home Energy Affordability Loan) program initiated by the Clinton Climate Initiative and Vermont Energy Investment Corporation, in advance of a full launch in 2017-2018.
- Carbon Sequestration Analysis (\$75K): An analysis to better understand the impact that sequestering carbon on a local basis can have on the City's greenhouse gas emission reduction goals. Land and urban forest management can offset GHG emissions by increasing capacity for carbon uptake and storage in biomass, wood products, and soils. This plan would entail an interdisciplinary feasibility study, in conjunction with CSU, to set goals around carbon sequestration within the current GMA boundary of the City of Fort Collins. It could be expanded in the future to study the Fort Collins watershed and collaborate with regional partners.
- CAP Innovation Summit (\$25K): A summit that will target technical experts and engage other jurisdictions to identify private sector and partnership innovation opportunities for CAP and exchange municipal best practices on reaching shared goals. Funding could also be used to design a competition to incent the private sector to develop solutions to the outcomes we want to achieve, as discussed during the Council Work Session.
- Electrify Commercial Lawn and Garden Equipment (\$30K): This seed funding will accelerate the purchase and use of alternative fuel (i.e., electric or propane) commercial lawn and garden equipment by the City (e.g., Parks, Forestry, and Cemetery) to determine which are the best products to incorporate into the City's fleet in advance of a full budget offer in the 2017-2018 budget process. This funding will also lay the groundwork for adding requirements or incentives for the use of alternative fuel commercial lawn and garden equipment for work contracted by the City. This initiative has significant co-benefits, e.g., ozone reduction potential.

**4. Biomass Burner Feasibility Study: \$50K (One-time funding)**

2020 Impact: Enabling Initiative for Biomass Burner - 2,000 CO<sub>2</sub>e Tons (0.4%)

Biomass burners provide both energy from a renewable source (wood) and a means for disposing of a high-volume, organic material that should be diverted from landfills to reduce greenhouse gas emissions associated with these materials. Being a relatively simple and proven waste-to-energy technology, several biomass burners are currently producing energy around our region and, on average, have an ROI (return on investment) of approximately 10 years.

This study sets the stage to determine if a biomass burner is appropriate for our community, where it would be most useful, and at what scale. The project is a collaboration between Sustainability

Services, Parks, and Operation Services, with the assistance of the US Forest Service and Colorado State Forest Service. The Forest Service will very likely be able to provide matching or grant funding for a portion of the study costs, which would lower this request, which also includes the cost of an engineering, design, and operations plan for a resulting facility. Opportunities to partner with a nearby business or institution in need of steady heat or hot water will be pursued.

A key driver of this study is the recognition that the inevitable Emerald Ash Borer (EAB) beetle infestation will likely lead to the death of the vast majority of Fort Collins' 70,000+ ash trees which may end up flooding landfills without a strategic disposal management plan, and if determined to be feasible, this technology could also be utilized after the EAB die-off for much of the urban wood debris in the community. If deemed feasible, a biomass burner could reduce up to 2,000 tons of greenhouse gas emissions in 2020.

### **CITY FINANCIAL IMPACTS**

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Investing in these initiatives has a bottom line impact of \$475,993 in 2016, with an ongoing commitment of \$422,219 to the City budget. \$245,483 of this increase is funded through the Light and Power Fund, whereas \$230,510 is funded through the General Fund. Note that \$77,210 of the Light and Power Fund appropriation will be transferred to the General Fund, as indicated in Section 4 of the Ordinance, for those projects that will be administered from the General Fund, i.e., CAP Program Manager, SSA Financial Analyst, and the CAP Pilot Projects/Innovation Fund.

**General Fund.** The General Fund on-going expenses can be covered through additional revenue in 2017, while the current estimate of unassigned Fund Balance in the General Fund can support the one-time requests in 2016.

**Light and Power Fund.** This Ordinance appropriates \$245,483 from the Light & Power Enterprise Fund reserves. This reserve had an unappropriated balance of \$18.4M as stated in the last published Comprehensive Annual Financial Report for 2014. It is anticipated that this amount will increase in 2015 as operating income was positive for this Enterprise Fund. The ongoing annual costs for these initiatives of \$324,222 per year represents less than 0.25% of this fund's 2015 operating revenue.

The projects funded through Light and Power Funding (Building Energy Disclosure and Scoring, CAP Program Support, and the CAP Pilot Projects/Innovation Fund) are all intended to manage or reduce, at least in part, peak demand and overall electric energy use through the implementation of the Climate Action Plan and supporting policies, e.g., the Energy Policy. Funding of a portion of the total cost of these initiatives with Light and Power Fund Reserves serves electric utility purposes and reflects a proportionate benefit expected to accrue to Light and Power ratepayers through the acquisition of cost effective demand side resources and by seeking to manage and minimize overall future capital needs, and resulting rate impacts, that would otherwise be required to support increasing peak demand and overall electric service loads.

### **BOARD / COMMISSION RECOMMENDATION**

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Staff will present this appropriation request to the Energy Board at the next Board meeting on April 7, 2016. Based on the feedback from the discussion with this Board at the March 3, 2016 Board meeting, staff anticipates that the Board will be supportive of this request. The Board will be informed of the City Council's action on this request and will have an opportunity to communicate any concerns to City Council before Second Reading of these Ordinances.

In addition to specific outreach with the Energy Board, staff has also reached out to the following Boards on the Climate Action Plan more generally: Energy Board, Natural Resources Advisory Board, and the Air Quality Advisory Board.

### **PUBLIC OUTREACH**

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Staff has reviewed all of the initiatives associated with the 2020 CAP Strategic Plan with the Climate Action Plan's Community Advisory Committee. Ongoing public engagement related to the 31 initiatives currently being evaluated is planned, including a spring open house and workshop with the business community.

### **ATTACHMENTS**

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1. Work Session Summary, March 10, 2016 (PDF)
2. Initiative and Project Descriptions (DOCX)
3. Powerpoint presentation (PPTX)



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 PO Box 580  
 Fort Collins, CO 80522

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 970.224-6177 - fax  
 fcgov.com

## MEMORANDUM

DATE: March 15, 2016  
 TO: Mayor Troxell and City Councilmembers  
 THRU: Darin Atteberry, City Manager  
 Jeff Mihelich, Deputy City Manager *J.M.*  
 Jackie Kozak Thiel, Chief Sustainability Officer *JKT*  
 Lucinda Smith, Environmental Services Director *LRS*  
 FROM: Lindsay Ex, Environmental Program Manager *LEX*  
 RE: **March 10, 2016 Work Session Summary – Climate Action Plan Implementation**

### Attendees:

Jeff Mihelich, Jackie Kozak Thiel, Mike Beckstead, Lucinda Smith, and Lindsay Ex participated in the Work Session, along with several staff members who responded to questions. All Councilmembers were present. Staff presented the draft Roadmap to the 2020 Climate Action Plan goals, including the initial cost estimates, high priority projects, and initiatives that Council could invest in immediately.

### Discussion Summary:

- Council expressed that staff is on the right track with the development of initiatives designed to achieve the 2020 CAP Goals of a 20% reduction below 2005 levels by 2020.
- Councilmembers discussed that it is imperative to also illustrate pathways that include the savings associated with the various initiatives, e.g., 2020 and 2050 cost effectiveness pathways based on the net costs associated with the initiatives.
- Councilmembers highlighted how the data presented needs to be tailored to allow residents to connect with these initiatives, e.g., how does it impact them and more relatable cost data.
- Councilmembers also expressed support for the investments that could be made immediately, including a request to Platte River to analyze a separate rate structure for Fort Collins.

### Follow-up Items:

- Staff will develop additional pathways to achieve the 2020 goals based on net costs.
- Staff will work with our partners and staff teams to refine the messaging around the CAP, e.g., communicating about costs and benefits at the individual level, as well as communicating more clearly about the potential savings, e.g., insurance rates, energy bills, etc.
- Staff will continue to work with the Community Advisory Committee and explore additional community engagement, e.g., leveraging existing partnerships to launch DIY (Do It Yourself) workshops and a potential private sector competition to develop solutions around the outcomes we are seeking to achieve.
- Staff will continue to vet the 31 initiatives and the overall model. Staff will develop a one-pager on how the model works and the assumptions made overall and with each initiative.
- Staff will also explore the initiatives that allow the municipal organization to achieve its 2020 goals (which mirror the community goals), including those that have air quality co-benefits, e.g., alternative fuels for lawn and garden equipment (for the organization and its contracts) as well as energy efficiency, clean energy, etc. initiatives. Staff will continue to ensure that the City organization leads by example and is a platform for testing initiatives.
- Staff will bring an Appropriation Ordinance to the April 5 Regular Meeting to allow Council to act immediately on the four initiatives discussed at the Work Session, including:



- Building Energy Disclosure and Scoring
- CAP Program Support
- CAP Pilot Projects/Innovation Fund
- Biomass Feasibility Study
- Staff will continue to vet the additional three initiatives discussed during the Work Session and will plan to bring an Ordinance forward on those initiatives within the next two months, including the following:
  - Energy Efficiency Programs
  - Solar Incentives and Rebates
  - Municipal Green Waste Sites
- Finally, additional initiatives will be prioritized through the 2017-2018 BFO process.

CC: Kevin Gertig, Utilities Executive Director  
Mike Beckstead, Chief Financial Officer  
Laurie Kadrach, Director of Planning, Development, and Transportation

## 2016 CLIMATE ACTION PLAN INITIATIVES

**Title:** Building Energy Disclosure and Scoring  
2020 Impact: 2,000 CO<sub>2</sub>e Tons (0.4%)

<b>Fund:</b>	501 – Light and Power Fund	<b>Total Amount (2016):</b>	\$51,388
		<b>Total Amount (Ongoing):</b>	\$89,066

<b>Outcome:</b>	Environmental Health	<b>Contact:</b>	John Phelan Tony Raeker
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**FTE Requested:** 1.0 FTE

**Description:** This request is among four offers responding to City Council and City Manager requests for Climate Action Plan (CAP) initiatives that could be funded in the immediate term. This initiative is in response to the significance of energy efficiency to meet CAP Goals and direction from Council.

### Key Outcomes:

- 1. Development of short, medium, and long term plans for a building energy disclosure and scoring program.** This initiative entails the development of a building energy scoring and disclosure program. Similar to the purchase of a new car and taking into account the miles per gallon that a car is rated for, this initiative will be designed to make energy efficiency part of the decision-making process in the purchase, rental, or lease of homes and commercial buildings. Benchmarking helps building owners to monitor the performance of building systems over time and make prudent investment decisions in ongoing maintenance and upgrades. The program will provide the tools, structure and process for collecting and disseminating energy performance scores for different building types. The scores will be based on utility usage data and/or building energy audits or assessments. Audits will be coordinated with those provided by Utilities and improvements in building scores will be supported by Utilities efficiency programs. An interdepartmental team will be convened for program design, implementation, and stakeholder engagement. In addition, active research will be conducted to stay on top of best practices in this rapidly evolving field.
- 2. Laying the groundwork for key emissions reductions needed to meet the 2030 target.** Though this initiative represents a small portion of the necessary impact toward the CAP 2020 goal (0.4%), it will be an important driver for significant emissions reductions by 2030 and 2050. A pathway will be developed to reach the long-term impacts that building energy disclosure and scoring will have on Fort Collins' greenhouse gas (GHG) emissions. The initiative is especially impactful because it will include most of the existing and future building stock due to the normal turnover in ownership. Over a time of years to decades, the building energy disclosure and scoring practices would proceed from voluntary to mandatory, depending on stakeholder and community engagement on this issue. Incentives for improvements to energy efficiency and education about it are essential elements to success. The anticipated public benefits are to provide information to incentivize customers to strive for a higher score that results in efficiency and demand improvements and to document the value of high performing buildings in the marketplace.

In addition, investing in building energy disclosure supports the City Energy Project, a privately-funded initiative for which Fort Collins is in the running to be selected. If selected, this initiative would match the City's investments up to 2:1 in 2017-2018.

### Impact if Position Not Funded:

- The strategy would be delayed until resources become available, or
- Delay the implementation of the Green Building Roadmap (funded in the 2015-2016 BFO process) to shift those resources to this initiative, including delay of green building incentive programs and resource website, as well as strategies for low carbon/green neighborhoods.
- Utilities would scale back existing efficiency programs and the development of new programs, such as the post pilot implementation of Efficiency Works Neighborhoods. This would reduce key initiatives essential to achieve savings in the residential sector for the 2020 CAP goals.

## 2016 CLIMATE ACTION PLAN INITIATIVES

**Title:** CAP Program Support  
2020 Impact: Enabling Initiatives

<b>Fund:</b>	100 – General Fund	<b>Total Amount (2016):</b>	\$184,605
	501 – Light and Power Fund	<b>Total Amount (Ongoing):</b>	\$333,153

<b>Outcome:</b>	Environmental Health	<b>Contact:</b>	Lindsay Ex Andres Gavaldon Tim McCollough
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**FTE Requested:** 3.0 FTE

**Description:** This request is among four offers responding to City Council and City Manager requests for Climate Action Plan (CAP) initiatives that could be funded in the immediate term. In response to the significance that Fort Collins and City Council has placed on the CAP and the amount of time and resources needed to accomplish the City's greenhouse gas (GHG) emissions reduction goals, this offer includes funding for three support positions for the Climate Action Plan.

### 1. CAP Program Manager.

#### Key Outcomes:

- The long term planning and implementation of CAP, the accelerated pace to meet goals, and level of depth and breadth of technical information and public and private sector engagement demands a dedicated resource to coordinate.
- Coordination includes bringing together and directing 70 staff members and 30 citizens engaged on the Strategic Initiative Teams to achieve the near-term and long-range Climate Action Plan goals. Support of CAP Executive Team ensures high level engagement in the organization as well as vertical integration.
- Supports deeper integration of climate mitigation and adaptation, and municipal and community climate action planning.
- Builds bridges with internal and community partners, raising awareness and increasing involvement in climate action, and proactively collaborates with the Community Advisory Committee and regional, state, and federal organizations to advance climate action.
- Allows the Environmental Services Department to have a dedicated division for Climate Action and for Air Quality. Currently, the Environmental Program Manager splits her time 50/50 between air quality and climate action initiatives. This funding provides resources to allow dedicated staff leadership for both divisions.

#### Impact if Position is Not Funded:

- Delayed pace/progress of CAP planning and implementation (scale back community engagement, expand timeline for modeling and vetting initiatives, push back creation and implementation of a 2020 CAP Strategic Plan initiatives); overall reduced focus on CAP progress and coordination support for internal and external participation.
- Reduced time spent on Air Quality programs (fugitive dust, systematically addressing critical air quality issues including radon, ozone, oil and gas, etc.), and delayed work on policy issues such as woodsmoke and Air Quality Plan update.

## 2. SSA Financial Analyst.

### Key Outcomes:

- Full vetting of CAP initiatives from a business planning perspective, including annual cash flow assumptions, level of investments required from public and private sectors, ongoing costs, savings associated with the initiatives, and marketing plans.
- Performance analysis of current and future programs.
- Fills an important skills gap in Sustainability Services Area and in support of CAP.

### Impact if Position is Not Funded:

- In-depth (Higher level) financial analysis is already limited due to lack of bandwidth. Without a dedicated analyst capable of higher level analysis, CAP and SSA projects must rely on the limited extra capacity available from organizational wide resources. Higher level financial analysis for CAP and SSA is currently being filled in by Financial Services and has been limited due to other organizational priorities
- More comprehensive understanding and transparency of triple bottom line impacts will not occur.

## 3. Smart Grid and System Operation Manager.

### Key Outcomes:

- Positions the Utilities to operate a distribution system with large amounts of Distributed Energy Resources (DERs) such as solar PV.
- Strategic and tactical leadership will be achieved for the Fort Collins Energy's Smart Grid and System Operations to ensure the delivery system operates safely and reliably.
- Identification and evaluation of existing and emerging technologies in the areas of advanced metering, distribution automation, grid communication networks, and advanced control center functions.

### Impact if Position is Not Funded:

- A significant portion of our anticipated CO<sub>2</sub>e reductions come from clean energy connected at the distribution level. Light & Power is not resourced to plan for that level of distribution level connected solar PV generation. Without such planning and operational oversight we run the risk of having load imbalances and overloads throughout the distribution system.
- Utilities could outsource this evaluation to outside consultants at a cost factor of 2-4x the FTE resource requested. However, this position represents a long-term need that will be ongoing over the next 35 years as the City continually adapts and manages the increased load of DERs.

## 2016 CLIMATE ACTION PLAN INITIATIVES

**Title:** CAP Pilot Program and Innovation Fund  
2020 Impact: Enabling Initiatives

<b>Fund:</b>	100 – General Fund 501 – Light and Power Fund	<b>Total Amount (2016):</b> <b>Total Amount (Ongoing ):</b>	\$190,000 N/A
<b>Outcome:</b>	Environmental Health	<b>Contact:</b>	Lindsay Ex Josh Weinberg

**FTE Requested:** N/A

**Description:**

The purpose of the Climate Action Plan Innovation/Pilot Projects Fund is to foster locally innovative and relevant approaches to objectives outlined in the City’s CAP goals. The aim of the program is to lower barriers to funding important projects not accounted for in a department’s annual budget, to allow the City to act nimbly when presented with CAP-related opportunities (i.e., cash match for grants), and to test focused concepts in the community that might later be replicated throughout the city. Initially, this fund would be open to projects developed within City departments and through collaborations with other agencies. In the future, it could be extended to projects from residents and the local business community.

Examples of projects the fund could support include:

- **HEAL (\$60K):** A 2016 pilot of the HEAL (Home Energy Affordability Loan) program initiated by the Clinton Climate Initiative and Vermont Energy Investment Corporation, in advance of a full launch in 2017-2018 (if funded in the BFO process).
- **Carbon Sequestration Analysis (\$75K):** An analysis to better understand the impact that sequestering carbon on a local basis can have on the City’s greenhouse gas emission reduction goals. Land and urban forest management can offset GHG emissions by increasing capacity for carbon uptake and storage in biomass, wood products, and soils. This plan would entail an interdisciplinary feasibility study, in conjunction with CSU, to set goals around carbon sequestration within the current GMA boundary of the City of Fort Collins. It could be expanded in the future to study the Fort Collins watershed and collaborate with regional partners.
- **CAP Innovation Summit (\$25K):** A summit that will target technical experts and engage other jurisdictions to identify private sector and partnership innovation opportunities for CAP and exchange municipal best practices on reaching shared goals.
- **Electrify Commercial Lawn and Garden Equipment (\$30K):** This seed funding will accelerate the purchase and use of alternative fuel (i.e., electric or propane) commercial lawn and garden equipment by the City (e.g., Parks, Forestry, and Cemetery) to determine which are the best products to incorporate into the City’s fleet in advance of a full budget offer in the 2017-2018 budget process. This funding will also lay the groundwork for adding requirements or incentives for the use of alternative fuel commercial lawn and garden equipment for work contracted by the City. This initiative has significant co-benefits, e.g., ozone reduction potential.

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. Additionally, Minneapolis, MN offers a Community Innovation Fund available to neighborhood organizations for innovative and scalable projects.

## 2016 CLIMATE ACTION PLAN INITIATIVES

**Title: Biomass Burner Feasibility Study**

2020 Impact: Enabling Initiative for Biomass Burner - 2,000 CO<sub>2</sub>e Tons (0.4%)

**Fund:** 100 – General Fund

**Total Amount (2016):** \$50,000

**Total Amount (Ongoing):** N/A

**Outcome:** Environmental Health

**Contact:**

Honore Depew

Delbert Bernhardt

**FTE Requested:** N/A

**Description:**

Biomass burners provide both energy from a renewable source (wood) and a means for disposing of a high-volume, organic material that should be diverted from landfills. Being a relatively simple and proven waste-to-energy technology, several biomass burners are currently producing energy around our region and even in the city. The costs of capital construction and ongoing O & M are knowable with a payback rate relative to savings from offset fuel costs. For example, Boulder County has realized \$20,000 per year in savings from each of its systems, with an ROI of ten years.

This study sets the stage to determine if a biomass burner is appropriate for our community, where it would be most useful, and at what scale. The project is a collaboration between Sustainability Services, Parks, and Operation Services, with the assistance of the US Forest Service and Colorado State Forest Service. The Forest Service will very likely be able to provide matching or grant funding for a portion of the study costs, which would lower this request, which also includes the cost of an engineering, design, and operations plan for a resulting facility. Opportunities to partner with a nearby business or institution in need of steady heat or hot water will be pursued.

A key driver of this study is the recognition that the inevitable Emerald Ash Borer (EAB) beetle infestation will likely lead to the death of the vast majority of Fort Collins' 70,000+ ash trees which may end up flooding landfills without a strategic disposal management plan, and if determined to be feasible, this technology could also be utilized after the EAB die-off for much of the urban wood debris in the community.

Therefore the primary desired result of this project is to conduct feasibility research that will lead to a recommendation for or against pursuing biomass conversion technology as a means for EAB wood disposal, long-term wood waste management, and renewable energy generation. If deemed feasible, a biomass burner could reduce up to 2,000 tons of greenhouse gas emissions in 2020.



April 5, 2016

# Climate Action PLAN

## **CAP – Appropriation for Immediate Actions**

Jeff Mihelich, Kevin Gertig, Jackie Kozak Thiel, Mike Beckstead, Lucinda Smith, Lindsay Ex

## **WHAT:**

Appropriate \$230,510 – General Fund

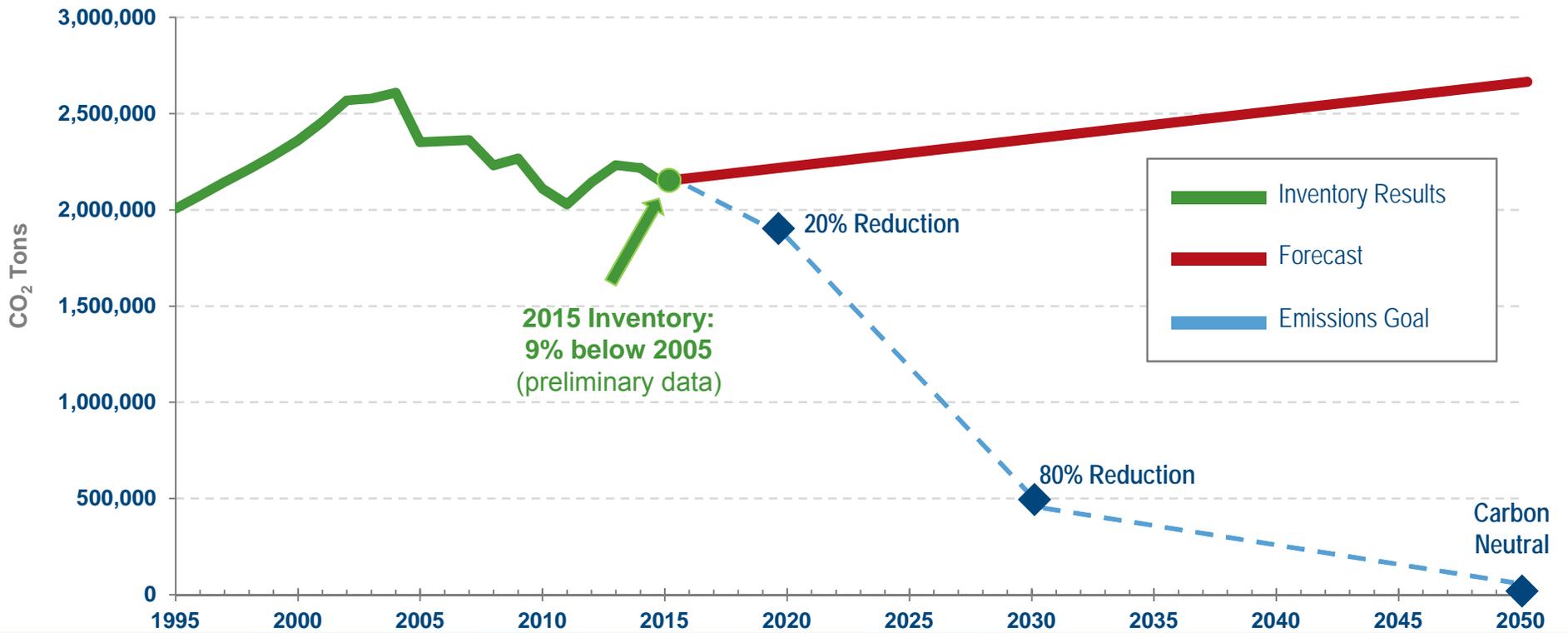
Appropriate \$245,483 – Light and Power Fund

## **WHY:**

Four projects for the Climate Action Plan:

- Building and Energy Disclosure and Scoring
- CAP Program Support
- CAP Pilot Projects/Innovation Fund
- Biomass Feasibility Study

# CAP Journey: Progress



- Short-term investments yield significant long-term savings
- Paybacks vary – short to long
- Overall benefit/cost = 2.5
  - § For every \$1 invested, the community saves \$2.50



**LED LIGHT BULB:**  
Investment: \$6  
Annual Savings: \$5  
Impact: 58 kWh  
0.05 tons



**SOLAR PANELS:**  
Investment: \$8400  
Annual Savings: \$500  
Impact: 5500 kWh  
4.47 tons

## Initiatives Summary & 2016 Appropriation Request

Item	Initiative (\$,000)	2016 Capital & O&M			Ongoing Annual Capital & O&M
		General Fund	Light and Power	Total	
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4	Biomass Feasibility Study	\$50,000		\$50,000	N/A
<b>Totals</b>		<b>\$230,510</b>	<b>\$245,483</b>	<b>\$475,993</b>	<b>\$422,219</b>

\*2016 General Fund (\$256,204) - covered by current estimate of unassigned fund balance

\*\*2016 Light and Power Enterprise Fund (\$219,789) - covered from fund reserves

## Building Energy Disclosure and Scoring



**\$51,388 (\$89,066 Ongoing)**

**2020 Impact: 2,000 CO<sub>2</sub>e Tons (0.4%)**

- Energy efficiency as part of the decision-making process
- Purchase, rental, or lease of homes and commercial buildings
- Significant reductions by 2030
- City Energy Project

**\$184,605 (\$333,153 Ongoing)**  
**2020 Impact: Enabling Initiative**

CAP Program Manager

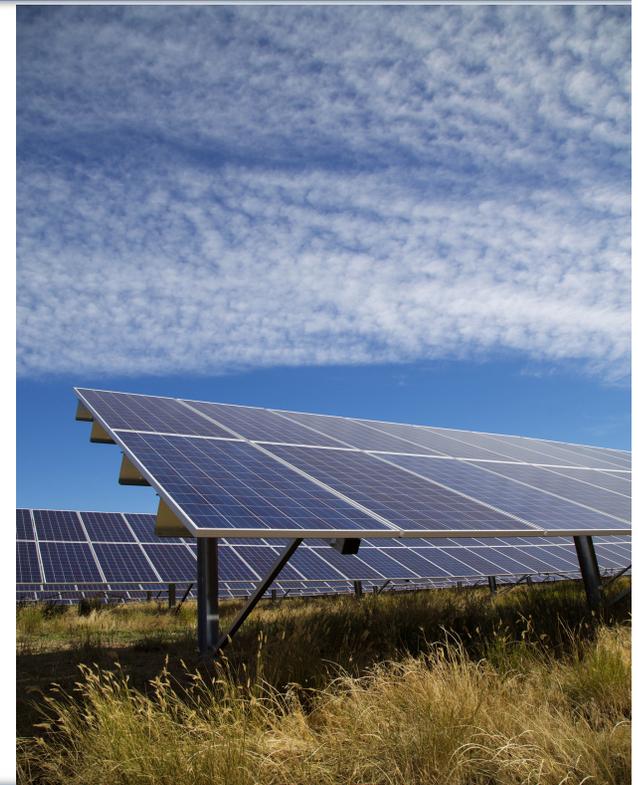
- Oversee, coordinate, and manage CAP implementation

Sustainability Services Area (SSA) Financial Analyst

- Enable SSA to develop business plans and financial analyses around CAP and SSA strategies

Smart Grid and Systems Operation Manager

- Integrate renewable and distributed supply resources into the electric delivery system in a way that is both safe and reliable



**\$190,000 (Ongoing funding vetted thru BFO)**  
**2020 Impact: Varies**

- Foster innovative approaches to CAP goals
- Test and learn from scalable concepts
- Prioritized Initiatives:
  - HEAL (\$60K)
  - Carbon Sequestration Analysis (\$75K)
  - CAP Innovation Summit (\$25K)
  - Electrify Commercial Lawn & Garden Equipment (\$30K)



**\$50,000 (One-time funding)**

**2020 Impact: 2,000 CO<sub>2</sub>e Tons (0.4%)**

- Explore logistics and opportunities surrounding a biomass burner in Fort Collins
- Source of renewable energy and means for reducing methane emissions from organic material
- Preparation and mitigation for Emerald Ash Borer beetle infestation and other urban wood debris



## Next Steps



- Vet 3 initiatives to bring to Council in the 1-2 months
- Continue vetting and prioritizing all 31 initiatives
- Prepare offers for the '17-18 BFO
- Continue to work with CAC and the community
- Refine messaging



April 5, 2016

# Climate Action PLAN

## **CAP – Appropriation for Immediate Actions**

Jeff Mihelich, Kevin Gertig, Jackie Kozak Thiel, Mike Beckstead, Lucinda Smith, Lindsay Ex

ORDINANCE NO. 046, 2016  
OF THE COUNCIL OF THE CITY OF FORT COLLINS  
APPROPRIATING PRIOR YEAR RESERVES IN THE GENERAL FUND AND THE LIGHT  
AND POWER FUND AND TRANSFERRING APPROPRIATIONS FROM THE LIGHT AND  
POWER FUND TO THE GENERAL FUND FOR 2016 PROJECTS ASSOCIATED WITH  
THE 2020 CLIMATE ACTION PLAN (CAP) STRATEGIC PLAN

WHEREAS, in 2015, City Council adopted updated community greenhouse gas goals and targets to be achieved by 2020; and

WHEREAS, staff has developed an implementation plan based on the accelerated goals of the Climate Action Plan (CAP) and has identified several initiatives for immediate action and investment based on guidance provided by the City Council; and

WHEREAS, four projects have been identified for immediate action and investment: (1) Building Energy Disclosure and Scoring, (2) CAP Program Support, (3) CAP Pilot Projects/Innovation Fund, and (4) Biomass Burner Feasibility Study (collectively, the “Projects”); and

WHEREAS, staff is requesting \$230,510 from General Fund Reserves and \$245,483 from Light and Power Fund Reserves to fund these four Projects in 2016; and

WHEREAS, investing in these Projects has a total budget impact of \$475,993 in 2016, with an ongoing commitment of \$422,219; and

WHEREAS, the Building Energy Disclosure and Scoring, CAP Program Support and Projects/Innovation Fund projects are intended to manage or reduce, at least in part, peak demand and overall electric service loads; and

WHEREAS, consistent with Article XII, Section 6 of the Fort Collins City Charter, funding of a portion of the total cost of these initiatives with Light and Power Fund Reserves serves electric utility purposes and reflects a proportionate benefit expected to accrue to Light and Power ratepayers by seeking to manage and minimize overall future capital needs, and resulting rate impacts, that would otherwise be required to support increasing peak demand and overall electric service loads; and

WHEREAS, Article V, Section 9 of the City Charter permits the City Council to appropriate by ordinance at any time during the fiscal year such funds for expenditure as may be available from reserves accumulated in prior years, notwithstanding that such reserves were not previously appropriated; and

WHEREAS, Article V, Section 10, of the City Charter authorizes the City Council to transfer by ordinance any unexpended and unencumbered appropriated amount or portion thereof from one fund (project) to another fund (project), provided that the purpose for which the transferred funds are to be expended remains unchanged.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FORT COLLINS as follows:

Section 1. That the City Council hereby makes and adopts the determinations and findings contained in the recitals set forth above.

Section 2. That there is hereby appropriated from prior year reserves in the General Fund the sum of TWO HUNDRED THIRTY THOUSAND FIVE HUNDRED TEN DOLLARS (\$230,510) for expenditure in the General Fund for the City of Fort Collins for the four Projects.

Section 3. That there is hereby appropriated from prior year reserves in the Light and Power Fund the sum of TWO HUNDRED FORTY-FIVE THOUSAND FOUR HUNDRED EIGHTY-THREE DOLLARS (\$245,483) for expenditure in the Light and Power Fund for the City of Fort Collins for the four Projects.

Section 4. That the unexpended appropriated amount of SEVENTY-SEVEN THOUSAND TWO HUNDRED AND TEN DOLLARS (\$77,210) in the Light and Power Fund is authorized for transfer to the General Fund and appropriated therein for the City of Fort Collins for the four Projects.

Introduced, considered favorably on first reading, and ordered published this 5th day of April, A.D. 2016, and to be presented for final passage on the 19th day of April, A.D. 2016.

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

Passed and adopted on final reading on the 19th day of April, A.D. 2016.

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk