

Response to the City of Ashland Climate and Energy Action Plan (CEAP) RFP

December 15, 2015

Prepared for
Dave Kanner, City Administrator
City of Ashland

Submitted by
Jeffery Sharpe, Principal
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December 15, 2015

City of Ashland
Dave Kanner, City Administrator
90 N. Mountain Avenue
Ashland, OR 97520

Dear Dave Kanner, City Administrator:

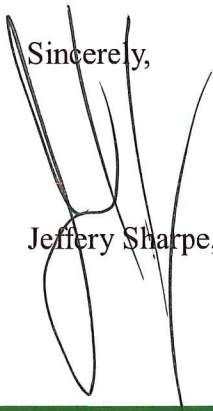
This packet, plus the accompanying Cost Proposal, constitute our response to the City of Ashland Climate and Energy Action Plan (CEAP) RFP due December 15, 2015.

We are excited that our city is taking these steps to do its part in mitigating increasing global temperatures and unsustainable energy use practices, and believe that healthy economic and community benefits will accompany the development and implementation of an effective, community-focused CEAP.

There are several items concerning this RFP's publication and methodology we would like to discuss with you at some future date, with a goal of helping optimize city expenditures and RFP deliverables.

We hope that you find this response complete and to your liking. Please do not hesitate to contact us with any questions or requests for additional information.

Sincerely,



Jeffery Sharpe, PE

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1. Proposal Submission Form

Exhibit A

Request for Proposals

CLIMATE AND ENERGY ACTION PLAN

Plan Development and Public Engagement

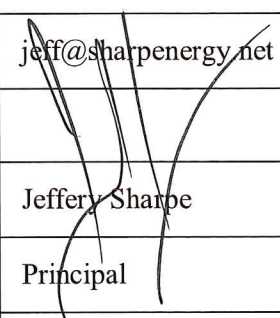
Proposals are due prior to 2:00PM (PST), Tuesday, December 15, 2015

Proposal Submission Form

The undersigned proposer submits this proposal in response to the City's Request for Proposals (RFP) for the **Climate and Energy Action Plan, Plan Development and Public Engagement**, released on **November 4, 2015**. The proposer warrants that proposer has carefully reviewed the RFP and that this proposal represents proposer's full response to the requirements described in the RFP. The proposer further warrants that if this proposal is accepted, the proposer will contract with the City, agrees to the terms and conditions found in the attached contract and RFP or has submitted terms and conditions acceptable to the City, and will provide all necessary labor, materials, equipment, and other means required to complete the work in accordance with the requirements of the RFP and contract documents.

The proposer hereby acknowledges the requirement to carry or indicates the ability to obtain the insurance required in the contract. Indicate in the affirmative by initialing here: _____

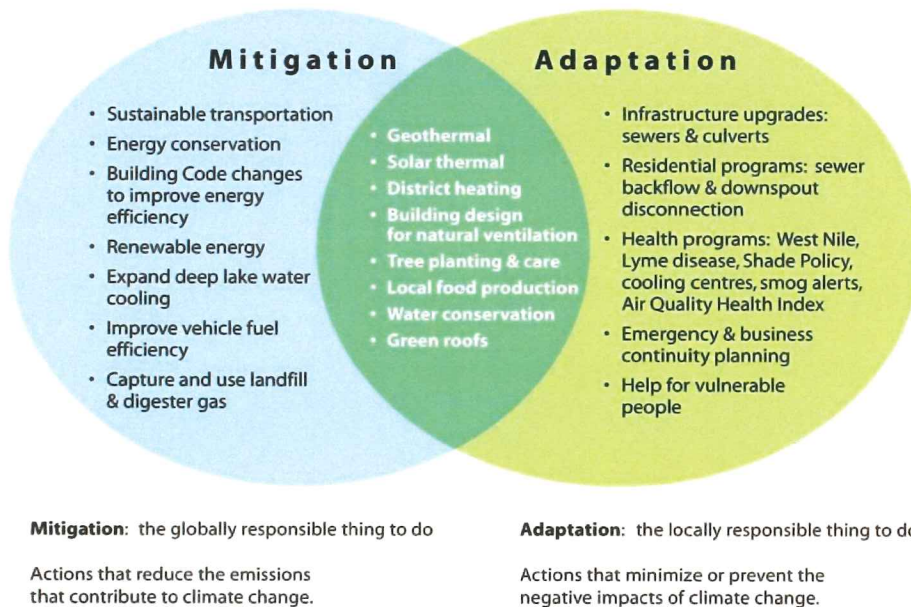
The proposer hereby acknowledges receipt of Addendum Nos. 1, 2, 3, 4, 5, 6 to this RFP.

Name of Proposer:	Sharpe Energy Solutions
Business Address:	553 Fordyce Street
	Ashland, OR 97520
Telephone Number:	(541) 531-3436
Fax Number:	1 (866) 692-5539
Email Address:	jeff@sharpenenergy.net
Authorized Signature:	
Printed/Typed Name:	Jeffery Sharpe
Title:	Principal
Date:	12.15.2015

2. Understanding of Requested Services

Climate & Energy Action Plan Goals

The stated goals for the Climate & Energy Action Plan (CEAP, the Plan), developed by the city’s Conservation Commission, include identifying vulnerabilities and protecting people and resources from the ongoing impacts of climate change. The Plan endeavors to identify targets & strategies, and then implement them to reduce our regional greenhouse gas (GHG) emissions. This process will identify both mitigation and adaptation strategies and actions appropriate for our community in this era of rising global temperatures.



Source: [Natural Resources Canada’s Climate Change Adaptation Initiatives.](#)

The CEAP should identify short, midterm, and long-term strategies to reduce the city’s greenhouse gas emissions. Each of the potential strategies will be explored in terms of costs, benefits, feasibility, community acceptance and likelihood of success. Potential voluntary measures and support policies are to be identified across the many differing community sectors.

The Plan will explore and suggest specific measurable actions across sectors and emission categories for both immediate and staged implementation, and include methodologies to help decision-makers assess the environmental, economic and social impacts of each measure. Public engagement is recognized as a vital component of the process, and will need to be developed to include participation, input and buy-in from all segments of the community, with the goal of creating a sustained movement toward community and energy sustainability while reducing our GHG emissions. These reductions will be quantified and targeted to be in line with, or in excess of, emerging city, regional, state & federal goals and targets.

Approaches to Plan Development & Implementation

The CEAP goals listed above are well thought out and broad in scope. The purpose of this RFP appears to be to find consultants, project managers and community members capable and available to develop and implement a Plan for achieving those goals in the next year. The scope and cost of the endeavor appears to be limited to the \$60,000 budget believed remaining of the \$120,000 originally authorized for this project by city council. Our approach to Plan development and implementation seeks to work within that budget. For efficiency, expediency and ease of use, the CEAP should utilize the same data and protocols currently being used by the firm (Good Company of Eugene) preparing the GHG Inventory. Their proprietary G3C Carbon Calculator, which is to be provided for city use, will be especially valuable for Plan development, updating and performance tracking as it is being used to develop the baseline inventory. It is recommended that Good remain teamed with the city at least through Plan development as they are the portal to easy inventory data, formula, and graphing model access.

Our experience monitoring, modeling and analyzing Ashland school facilities suggests great potential (on the order of 30%) for local public facility energy savings that will typically pay for themselves by energy cost savings alone. Data-logging and energy-use trending of city-owned buildings may be warranted where specific savings potentials are wanted. Transportation investigations into Ashland school and shuttle bus systems have also revealed promising savings opportunities by reducing parent drop-offs, increasing bicycling, and developing efficient parking plans. Photometric analysis of actual city traffic patterns may be in order where more specific analyses are warranted. Several available city infrastructure development and optimization projects have been identified that are expected to yield healthy economic and community development benefits in addition to significant energy-use and GHG emission reductions. The planting of trees, living roofs and green storm water catchments can offset carbon emissions by providing CO₂ sequestration. City and citizen buying practices, food sources and waste reduction can all provide significant low- to no-cost emission impacts. Together, these items show that there are a wide range of possible measures immediately available for our community. The Measure Matrix in the appendix lists many fundamental measures worthy of consideration.

At the fine CEAP kickoff event last month, the keynote speaker emphasized that a complete revamping of our energy production and distribution systems *will* be required for any significant climate impact, and he likened the effort to the effort that was necessary to transform our streets and homes for indoor plumbing. This opinion is widely adopted by climate experts around the globe. With this in mind, we expect the CEAP will provide guidance for the required shift towards local renewable energy production. The city of Ashland is in an exceptional position for capitalizing on this with several utility-scale renewable generation possibilities and a city-owned electrical utility. The State has set requirements for all larger utilities to generate at least 20% of their electricity from new, clean renewable sources by 2025; and despite our small utility exemptions for, we have the ability, and arguably the responsibility, to significantly increase our self-generated renewable percentage to above the current, meager 3%.

Community Engagement

In order to develop and implement a Plan with serious and lasting impact, early community and stakeholder buy-in and commitment will be vital. Goal setting, measure implementation, and progress tracking are all part of an interconnected process. Discussions with well-respected and effective Community Engagement firms (Cogan, Owens & Greene, Walt Roberts and Keri Green) suggest that two levels of public participation are typically seen in the development of action plans like this one. The first is a more traditional, less intensive set of meetings, often set in fun venues, which usually accomplish little more than cursory public education and a list of project check-off items. This approach typically runs in *parallel* with plan development. The second approach effectively secures public involvement as an integral part of plan development and honors stakeholder engagement from the very beginning, building excitement and public buy-in across sectors. Some of the most effective techniques utilize remote keypad polling technology for community meetings and climate summits to optimize audience participation and enable real-time data capture. Cost quotes from these firms to develop and manage this second type of community engagement process ranged from \$60,000 to \$100,000. Considering the budget constraints noted above, our lean CEAP approach will depend heavily on interested and committed groups of citizens and civic partners willing and able to jump on board to build excitement and efficacy in the public engagement process.

One Budgeted Approach

In this section we propose a \$60,000 budget project which includes at least the following basic components. Other approaches utilizing a successful public engagement firm can be proposed if a larger budget becomes available.

Planning, tool and presentation formatting

1a. In the first weeks of the Plan development, formats for data, graphs and maps will be established for carrying through the entire planning and implementation process. These will need to be consistent and easily understood, and provide agreed-upon visualization of the GHG Inventory baseline data, as well as changes afforded by implemented measures. A variety of formats will be presented to the city Conservation Commission, staff and interested public for feedback on preferences. SES will work with Good Co. to develop graphical techniques deemed most desirable if not already within the firm's current offerings. \$5,000 is being allocated for this purpose and to help optimize data transfer, graphics manipulation, and modification of their tools for optimal reporting & visualization of energy and emission trends and measures. Several available graphing options are presented in the appendix.

Graphs of historical and predicted emissions and ambient temperature trends will be developed at various geographic boundaries for projecting trends under a range of pessimistic to optimistic emission conditions (RCP 2.6, 4.5, 6, 8.5). These graphs will be able to be overlaid onto the Inventory data and manipulated to document agreement with chosen CEAP goals for GHG reductions and energy-use curtailment.

1b. Building of a new, or modification of the G3C Carbon Tool per the protocols, calibrated to the baseline data, for use in quantifying possible CEAP measure and strategy impacts. The interactive analysis tool will have the capability to display colorful graphics of the city's current energy use and GHG emission profiles, as well as predict future consumption and emissions profiles for comparison with unmitigated trends. It will be designed to model the cumulative effects of many measures, and display savings while altering GHG trending graphs. An open-source Internet interface platform will be provided to allow interactive trend visualizations and Plan development updates on any computer and lobby monitor with internet or server access.

1c. Current and emerging GHG Reduction and Renewable Energy goals will be documented at the federal, state and local levels. These will be presented as graphical overlays to the Plans trending graphs to compare current measure effectiveness of meeting or exceeding those goals. The goals established by other regional cities, as well as their reported successes, will be tabulated for guidance in setting reasonable Plan goals for each sector.

1d. Initial GHG reduction measures will be catalogued on a matrix chart (see the Measure Matrix in the appendix) and presented to staff and the Conservation Commission for initial feedback and adjustment. The matrix will be formatted to provide a common platform for strategy and measure development throughout the project, and will eventually list all of the measures selected for analysis, documentation and Plan inclusion. The preliminary measure matrix will be developed utilizing recommendations in the GHG inventory, ICLEI measure lists, and known city opportunities.

1e. Methodologies for Measure prioritization will establish environmental, economic, community development and social equity impacts to the community. Draft decision matrices will be developed for presentation to the Conservation Commission, city staff and interested partners for feedback and optimization. We have included an example prioritization scoring matrix in the appendix.

Early Public Engagement and Plan development

2a. This phase of the project will include public meeting, probably with seven of the city's commissions (Planning, Airport, Conservation, Housing and Human Services, Parks and Recreation, Forest Lands and Transportation) to introduce the process and procure their help in sponsoring public engagement and feedback forums (work-sessions) specific to their areas of purview. Tools for measure investigation and defined formats will be provided, along with community input forms, to garner ideas for the Plan development and document public input. SES will attend the workshops and provide effective data capture. The workshops will be used to educate the community in the process, further populate the measure matrix, evaluate agreement on attainable goals, and expand community buy-in. The Plan focus and format is expected to grow and evolve with synergistic public input and excitement.

2b. The information gathered at the work sessions will be tabulated and reported online for additional public input. The process from this point forward will be updated weekly and

made transparent to all interested community members throughout the Plan development. Publication of Plan progress and committee decisions will be kept current on the city's and other websites.

2c. Partnerships will be developed and lines of communication opened to integrate stakeholders across the community. Steps will be taken to encourage and enable their contributions. SOU, the Ashland School District, local businesses, city groups (such as local fire and rescue) and others are all expected to be motivated as Plan development partners. SOU's current CAP will be given consideration for CEAP development compatibility, as well as broadcasting techniques that will bolster enthusiasm for both plans.

Initial Strategy & Measure analysis, Report generation

3a. Desirable energy-efficiency, waste-reduction, sequestration and other GHG reduction measures will be catalogued, analyzed and graphed in colorful displays for presentation to the public and to city stakeholders. Measures will be prioritized, using the methodologies and scoring matrices developed, in consultation with the Conservation Commission and city staff.

3b. Schematic designs for obtainable renewable energy production facilities (including at least a 10MW solar park, a Mount Ashland wind installation and an upgrade of the existing Reeder Reservoir Hydro) will be developed and used to determine implementation costs, energy and GHG offsets, community development and economic benefits, and likelihood of buildability. See the appendix for more information on this item.

3c. Explored measure options will be documented in the Measure Matrix and a preliminary draft report will be developed and include at least the following items:

1. The city's current energy use and GHG emission inventories, graphs and trends, utilizing the same protocols and boundary conditions as the GHG Inventory. Graphs of historical and projected emissions at city, region, country and global levels.
2. An explanation of impact categories to be used in Plan, including renewable energy production, transportation, energy efficiency, waste reduction, purchasing and cultural effects. Explanations of the Scope 1, 2 and 3 categories, and boundary conditions, established in the GHG Inventory. Explanation of the current protocols and specific metrics to be used in the Plan's development.
3. Current and emerging policies, plans, and reduction targets at the global, federal, regional and state levels. A compilation of expert opinions as to the urgency of the problem and expected global impacts of respective action and inaction.
4. A review of likely local climate impacts along with adaptation strategies available to the city across a variety of possible global climate change scenarios.
5. Identification of city stakeholder groups including at least the residential, commercial, governmental, transportation and school sectors.
6. Presentation of the preliminary community-developed reduction Measure Matrix, along with explanations of each measure, its costs, benefits and energy and climate impacts. Expert and community opinions will be presented about measure

attainability, challenges, and opportunities, as well as potential community development and economic impacts.

7. Best measure practices will be documented along with analyses of how they advance existing city and State policies and goals. Known successes in other communities will be documented, as well as the expected impacts on specific stakeholder sectors.

Climate Summit and additional community engagement

4. A large public meeting called a Climate Summit, similar to the recent Kick-off event and possibly at the same venue, will be held for additional community inputs on the analyses, Measure Matrix and preliminary report. The event is intended to continue building momentum and excitement for the Plan and its implementation. This event will be facilitated in large part by community donations and volunteer time. Feedback from OSF actors, school staff, residents, SOU academics and business owners gives us a high level of confidence that the community will step up and pitch in to make the Summit a success. A budget allotment has been made for keypad technology to enable optimal audience participation with live data capture and immediate screen tabulation. Robust public engagement will drive momentum for an effective Plan completion, and provide vital citizen buy-in as well as excitement and drive for its effective implementation. This Summit event will also serve as a venue for broadcasting and starting implementation of voluntary immediate-action measures.

Preparation of the Draft Plan

5a. After the Summit and documentation of its community inputs, a consensus will be reached with staff, the Conservation Commission, and other stakeholders as to which measures and strategies will be included in the CEAP. These measures and strategies will be cataloged in the Draft Report's Measure Matrix.

5b. The Draft Plan will then be documented and distributed to the city commissions, staff and other interested stakeholders for review, QC and feedback. Additional study sessions and consultations will be performed as required to finalize and codify a final Plan.

Plan finalization, City Council approval

6. Feedback from the commissions, community stakeholders, city staff and general public will be incorporated into the Plan document, and a thorough Quality Control process carried out. When all of the revisions have been incorporated, the Plan will be presented to the City Council for approval.

Implementation

7. Once approved, implementation will begin and the Plan's measures, strategies and timeframes will be broadcast to the public. Weekly updates of the Plan and its implementation will be made available to the public via the city and other websites. Opportunities for sharing

successes and collateral community development will be capitalized on to continue building momentum for successful and impacting execution of the Plan.

Tracking and Verification

8. The tools, maps, interactive graphs and reports will all be provided to the city and interested stakeholders for easy interactive updating, monitoring and verification of Plan progress into the future. It is expected that the recommendations in Section 12 “Managing Inventory Quality and Verification” of the ICLEI protocols will be implemented as part of the tracking and verification process. Monthly Plan updates and broadcasting to the public are both recommended to help maintain citizen enthusiasm and effective Plan implementation.

Possible Report Table of Contents

Subject to Commission, staff and public review and feedback

Introduction

- 1.1 Purpose of the Climate and Energy Action Plan
- 1.2 Relationship to City Policies and Goals
- 1.3 Climate Change Background
- 1.4 Climate Change Mitigation Activities for Ashland
- 1.5 Regulation of Climate Change
- 1.6 Federal, State and Regional Goals for Emission Reductions

Ashland’s Greenhouse Gas Emissions

- 2.1 Ashland Profile
- 2.2 2015 Greenhouse Gas Emissions Inventory
- 2.3 Forecast for 2020, 2025 & 2030 Emissions
- 2.4 Greenhouse Gas Emissions Reduction Targets

Climate and Energy Action Plan

- 3.1 Summary of Energy & Emissions Reduction Strategies
- 3.2 Natural Systems, Sequestration and Carbon Offsets
- 3.3 Land Use and Transportation
- 3.4 Green Building & Building Energy Efficiency
- 3.5 Renewable Energy Production Systems
- 3.6 Green Purchasing
- 3.7 Waste Reduction, Recycling and Zero Waste
- 3.7 Water and Wastewater
- 3.8 Adaptation to the Changing Climate
- 3.9 Community Outreach and Empowerment
- 3.10 Implementation, Monitoring and Reporting

Appendices

- A. Summary of Recommended Actions
- B. Measure Matrix
- C. Decision Matrices
- D. Data Sources, Assumptions and Calculations
- E. Action Partner Summary
- F. Citizens Personal Action Plan
- F. Ashland City Council Resolution
- G. Glossary

3. Project Team and Qualifications

Key Personnel

Jeffery Sharpe

Senior Engineer, Sharpe Energy Solutions

Jeffery Sharpe is the founder and Senior Energy of SES. His educational background includes Bachelor of Science degrees in both Physics and Mechanical Engineering. He is a registered Professional Engineer in over 30 states & provinces, a Licensed CCB general contractor, and AEE certified building analyst and commissioning agent. Over the past 30 years, he has developed several successful engineering & construction businesses, and implemented numerous school community energy efficiency & HVAC retrofit programs across the region. Jeff will provide professional project oversight and be the principal contact for this project.

Taylor Sharpe

Senior Modeler, Sharpe Energy Solutions

Taylor Sharpe has also been with SES since 2009 telecommuting while obtaining combined Bachelor of Science & Masters of Science degrees in Mechanical Engineering at PSU. Taylor has developed numerous data analysis tools for school facility and community analysis of energy-use, GHG emissions and energy project management. He leads a team of Ashland and PSU programmers & modelers versed in providing accurate energy analyses & graphics. Taylor & his team will be responsible for project modeling, analyses, visuals & web interfaces.

Zack Hartman

Associate, Sharpe Energy Solutions

Zack Hartman is a recent graduate with a BS in Civil Engineering from the University of Portland, with work experience as an operator at the Grants Pass Water Filtration Plant and an Engineering Intern at the Lake Oswego Treatment Plant expansion.

Zack's tasks will include report generation, analyses, QC, meeting data capture and tabulation.

Ashland-Based Staff

The home office staff will be tasked with information gathering including document acquisition & potential facility data-logging. They will also be key with community interaction and broadcasting through social media, citizen enthusiasm building, & volunteer subcontractor procurement. Other tasks will include Excel tool development, report generation and QC.

Subcontractors

In this budgeted proposal we expect to engage volunteer community outreach coordinators, facilitators, marketers and media facilitators to assist with workshops and Plan broadcasting. The proposal also includes stipends to SOU professors for academic research, local firms providing other proposals for this RFP for public engagement and climate analyses, and Ashland residents working at ODOT and the Council of Governments for assistance with transportation, housing and land use measures.

Relevant Project Samples

2015 Facility Energy Use, Carbon Footprint, and Benchmark Analyses (SchoolTool) Ashland School District

This report documents our ongoing pro bono monitoring and documentation of Ashland School District facilities energy use and GHG emissions. The reporting systems are a prototype of a replicable program we are developing for school facilities across the region. It is one in a line of projects we've provided to the Ashland school community to minimize facility and transportation energy costs & emissions and aid infrastructure planning & prioritization.

Google Drive Link: https://drive.google.com/file/d/0B67_a81_lpvCv0Q2T2JhNG53ZVE/view?usp=sharing

2015 Oregon Schools HVAC Initiative State of Oregon Legislation

SES developed and promoted this \$30M school facility initiative which was carried into Oregon legislature's Ways & Means by Representatives Buckley, Komp & Read. The Initiative was pulled at the last minute in favor of stronger seismic rehabilitation legislation. The measure will be updated and carried in again for the next legislative session.

Google Drive Link: [12.15.15 Init Details 4.10.15.docx](https://drive.google.com/file/d/12.15.15_Init_Details_4.10.15.docx)

2015 Oregon Department of Energy School Facility Report Grants Pass High School

This sample is representative of ongoing reports we produce under contract with ODOE. It is one of a six school energy audit performed this year for the GPSD. The reports focus on facility energy use, GHG emissions, benchmarking, utility services, specific energy efficiency measures (EEM) impacts, energy-cost & GHG reductions via better facility maintenance & cultural changes, and the unlocking of SB1149 funds for facility energy upgrades.

Google Drive Link: https://drive.google.com/file/d/0B67_a81_lpvCZW55c2RQNHpHVVv/view?usp=sharing

2014-15 Hammer Dam Removal and Energy Infrastructure Replacement Project US Fish & Wildlife, Northwest Hydraulic Consultants

Energy efficiency & Solar PV production feasibility study, system design, project and construction management for a dam removal project west of Red Bluff CA. The project provided power and water to maintain conditions at the Hammer Camp facility after removal of its long-time dam & hydroelectric generating facility. HVAC efficiency upgrades, large PV arrays, battery storage, remote PV pumping stations, water and electric infrastructures.

Google Drive Link: https://drive.google.com/file/d/0B67_a81_lpvCTEhZZUk3SS03YU0/view?usp=sharing

2013 Facilities Energy Reduction and Production Feasibility Study Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians

The report presents investigations into five buildings at three facilities owned and operated by the tribes. The study documented facility & building energy systems & trends, energy savings by implementation of energy efficiency measures (EEMs), evaluation of buildable renewable energy production systems, & plans for across-the-board facility energy reductions of 25%.

Google Drive Link: https://drive.google.com/file/d/0B67_a81_lpvCbnhHOXVLb3daN3M/view?usp=sharing

4. Capabilities and Responsibilities

Sharpe Energy Solutions (SES) is an Ashland-based Professional Engineering firm offering technical energy services, facility & community assessments, feasibility studies, and other engineering and project management services. Our client base includes a healthy mix of school districts, tribes, government agencies, and commercial businesses. We are lead contractors for the Oregon Department of Energy (ODOE) SB1149 program for schools and other public buildings, and are developing assessment tools to aid in Oregon inventories and analysis of facilities statewide for the recently legislated SB540 and SB447 school programs. We are currently working with Jim Hartman's AHS class to develop and implement a student-driven CAP for the Ashland School District.

SES is well versed in the development and implementation data gathering, graphical and modeling tools needed for projects like the CEAP proposed. We continue to develop and freely distribute software tools to the conservation and modeling communities, and are actively involved in ongoing community service projects for the Ashland Community and other Oregon schools.

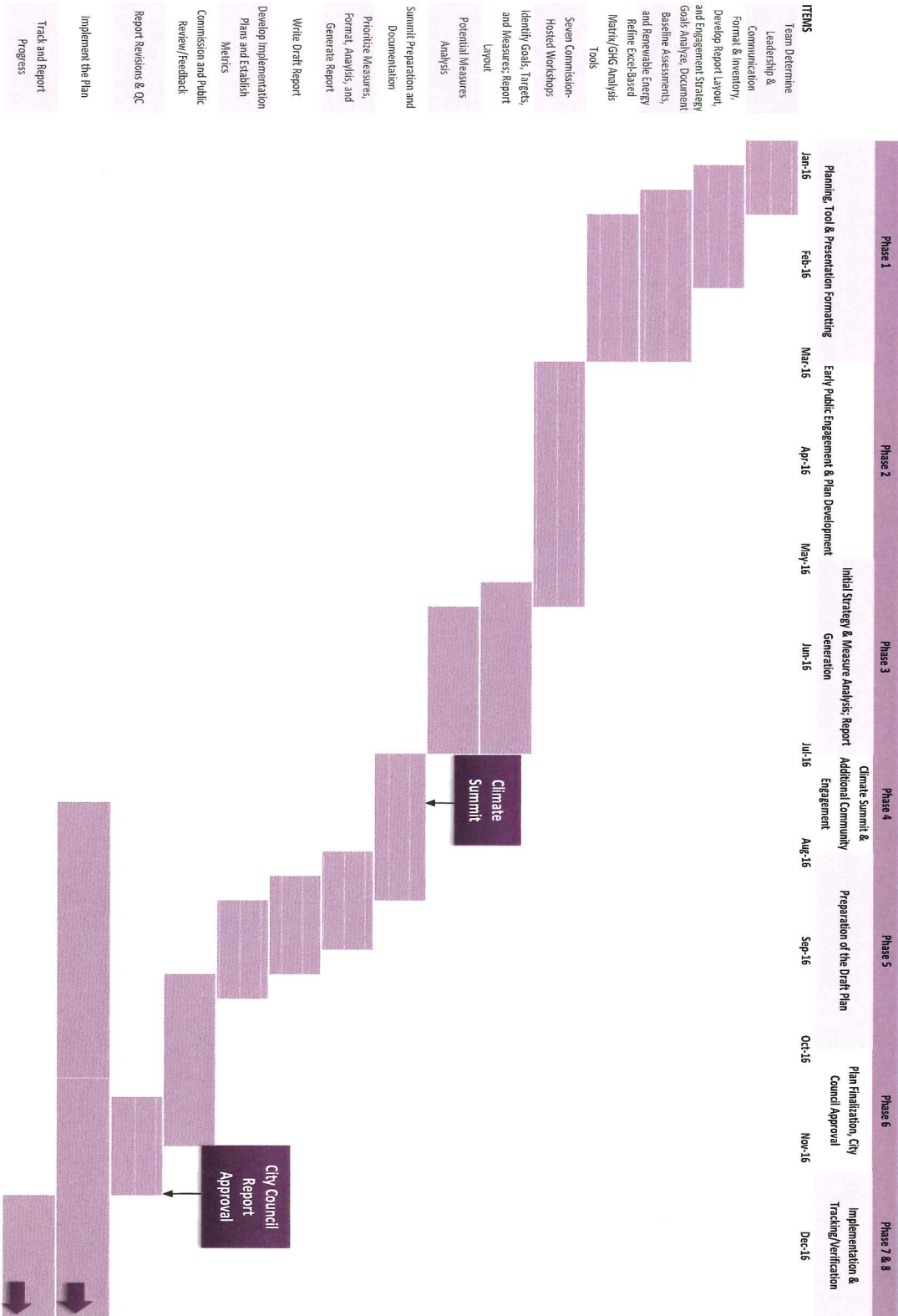
All inventory, analysis, documentation, QC and reporting for this project will be overseen by SES's senior engineer, Jeffery Sharpe PE. He has a wealth of energy, infrastructure and project management experience, and is a NCEES model-law Professional Engineer (PE) licensed in over 30 states and provinces.

Data collection, city communications, inventory manipulation, analyses, and site work will be performed primarily by SES's four Ashland-based employees. All of our field employees maintain CRC clearances for work in the schools.

Tool development, systems programming, modeling and quality control (QC) will include SES's PSU-based engineering team, consisting of mechanical Engineering Graduate student Taylor Sharpe and two other fourth-year Mechanical Engineering students.

Our Ashland location assures the GHG emissions associated with Plan preparation will be kept to a minimum with no need for intercity travel, and in-city staff transportation performed primarily by bicycle or foot. We will also remain available for immediate local assistance long beyond the completion of the CEAP. We are in a prime position for provide rapid and economical plan updating and savings verification in the years to come.

Investing in local businesses that help train new generations of workers helps expand and maintain a skilled workforce of trained professionals within the city. This increase in "human capital" means more trained professionals, who can attract more business for the city as a whole. By providing intelligent work, the city empowers its citizens to effectively develop the community we choose. Hiring locally provides maximum community impact for community dollars spent, stimulates valuable enthusiasm and comradery, and fosters wider interest in important community projects. Local workers will help maximize community excitement and buy-in by sharing with friends and family to build excitement and ownership of the City's CEAP as it is developed.



6. References

Reference #1

Company Name Ashland School District
Contact Name Gary Sisk
Telephone Number (541) 482-1626
Email Address Gary.Sisk@ashland.k12.or.us

Reference #2

Company Name Cascade Stream Solutions, LLC
Contact Name Joey Howard
Telephone Number (541) 864-0492
Email Address joey@cascadestreamsolutions.com

Reference #3

Company Name Ashland School District
Contact Name Jim Hartman
Telephone Number (541) 482-4293
Email Address jimhartmancc@gmail.com

Reference #4

Company Name Confederated Tribes of Coos, Lower Umpqua & Siuslaw
Contact Name Margaret Corvi
Telephone Number (541) 888-1304
Email Address mcorvi@ctclusi.org

Reference #5

Company Name Northwest Hydraulic Consultants
Contact Name Brent Wolfe
Telephone Number (916) 371-7400
Email Address bwolfe@nhcweb.com

Reference #6

Company Name Phoenix-Talent School District
Contact Name David Marshall
Telephone Number (541) 535-1517
Email Address david.marshall@phoenix.k12.or.us

Reference #7

Company Name Grants Pass School District
Contact Name Sherry Ely
Telephone Number (541) 474-5703
Email Address sely@grantspass.k12.or.us

Many more available on request

7. Contractual Terms and Conditions

Acceptance of City's Contract Provisions

SES accepts all of the City's contract provisions found in the sample contract attached to the RFP.

Eligibility Statement

Sharpe Energy Solutions is eligible to participate in public procurement activities, and has never been debarred, suspended, disqualified or otherwise lawfully precluded from participating in any public procurement activity.

Proof of Insurance

saifcorporation

Information Page

Carrier No: 20001

Policy No: 760538

Employer Identification No: 26-4660326

NCCI Risk ID No:

Item 1. **The Insured:**

SHARPE ENERGY SOLUTIONS INC

Entity Type:

CORPORATION

Mailing address:

SHARPE ENERGY SOLUTIONS INC
553 FORDYCE ST
ASHLAND, OR 97520-1303

Agency:

TOM KALDUNSKI
HART INSURANCE AGENCY
PO BOX 1240
GRANTS PASS, OR 97528

Other workplaces not shown above:

NONE

Item 2. **The policy period** is from 05-01-2015, 12:01 A.M. to 05-01-2016, 12:01 A.M. at the insured's mailing address

Item 3. **A. Workers Compensation Insurance: Part One** of the policy applies to the Workers Compensation Law of the states listed here: OREGON

B. Employers Liability Insurance: Part Two of the policy applies to work in each state listed in item 3.A. The limits of our liability under Part Two are:

Bodily Injury by Accident \$500,000 each accident
Bodily Injury by Disease \$500,000 each employee
Bodily Injury by Disease \$500,000 policy limit

C. Other States Insurance: Part Three of the policy applies to the states, if any, listed here:
NONE

D. This policy includes these endorsements and schedules:

WC360601E Oregon Cancellation Endorsement
WC000421D Catastrophe (other than Certified Acts of Terrorism) Premium End
WC000422B Terrorism Risk Insurance Prog Reauthorization Act Disclosure End
WC000414 Notification of Change in Ownership Endorsement
WC000406A Premium Discount Endorsement
WC990402D Claim Rating Plan Endorsement
WC360406 Premium Due Date Endorsement
WC990309C SAIFPlus Endorsement
WC990602 Subject Officer Payroll Requirement - Corporation
WC360301 Oregon Unsafe Equipment Exclusion Endorsement
WC990616 Confidentiality Endorsement

Item 4. **The premium** for this policy will be determined by our Manuals of Rules, Classifications, Rates and Rating Plans. The premium and rates and the experience rating modification factor, if any, may change on your anniversary rating date of 05-01-2016. All information required below is subject to verification and change by audit.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
04/27/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	Choices Insurance Agency / Jordan Walt 617 High St. Suite 205 Oregon City, OR 97045	CONTACT NAME: Jordan Walt	PHONE (A/C, No, Ext): 503-653-8287	FAX (A/C, No): 503-653-7869
		E-MAIL ADDRESS: jwalt@choicesins.com		
INSURED	Sharpe Energy Solutions, Inc. DBA Jeffery Sharpe, PE 553 Fordyce Ashland, OR 97520	INSURER(S) AFFORDING COVERAGE		NAIC #
		INSURER A: Wesco Insurance Co.		
		INSURER B:		
		INSURER C:		
		INSURER D:		
		INSURER E:		

COVERAGES **CERTIFICATE NUMBER: 00000000-200810** **REVISION NUMBER: 5**

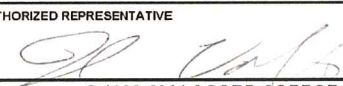
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COM/OP AGG \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N/A			<input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	Errors and Omissions			ARA1119994-01	05/19/2015	05/19/2016	Per Claim/Agg \$1M/\$2M Retro: 5/19/8

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CANCELLATION

Oregon Department of Energy 625 Marion St. NE Salem, OR 97301	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE  (JWW)

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ACORD 25 (2014/01)

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SUMMARY OF INSURANCE

Prepared: 10/15/2015

Page 2

For **Sharpe Energy Solutions Inc**
553 Fordyce
Ashland, OR
97520 541-531-3436

Coverage	Amount	Company	Policy No	Eff	Exp	Premium
Business Owners Policy (Continued)						
Valuable Papers Ded	250					
Valuable Papers Endorsement #s SS8401 0907						
Accounts Receivable Limit	25,000					
Accounts Receivable Ded	250					
Accounts Receivable Endorsement #s SS8401 0907						
Money & Securities In Limit	10,000					
Money & Securities In Ded	250					
Money & Securities Out Limit	5,000					
Money & Securities Out Ded	250					
PROP OFF P Limit	15,000					
PROP OFF P Ded	250					
Umbrella		The Hartford	52SBATM2087	01/15/15	01/15/16	
Liability Limit Each Occurrence	1,000,000					
Aggregate	1,000,000					
Retained Limit	10,000					
Underlying Insurance						
Automotive Liability		The Hartford	52UECKB422	04/23/13	04/23/14	
Combined Single Limit	1,000,000					
General Liability		Sentinal Ins Co	52SBMJZ1585	01/04/15	01/04/15	
Each Occurrence	1,000,000					
General Aggregate	2,000,000					
Products & Comp Ops	2,000,000					
Personal & Adv Injury	1,000,000					
Employer Liability		SAIF	760538	05/01/14	05/01/15	
Each Accident	500,000					
Disease Policy Limit	500,000					
Disease Each Employee	500,000					

Certificate of Compliance

Exhibit B

Compliance with Oregon Tax Laws:

In compliance with OAR 137-047-0260(2)(e), I hereby attest or affirm under penalty of perjury: That I am authorized to act on behalf of the proposer in this matter, that I have authority and knowledge regarding the payment of taxes, and that contractor is, to the best of my knowledge, not in violation of any Oregon Tax Laws, as defined in ORS 305.380.

Compliance with Nondiscrimination Laws:

In compliance with ORS 279A.110(4), OAR 137-046-0210(2) and OAR 137-047-0260(2)(a)(E), I hereby attest or affirm under penalty of perjury that I am authorized to act on behalf of proposer in this matter, and to the best of my knowledge the proposer has not discriminated and will not discriminate, in violation of ORS 279A.110(1), against a minority, women or emerging small business enterprise certified under ORS 200.055 or against a business enterprise that is owned or controlled by or that employs a disabled veteran as defined in ORS 408.225 in obtaining a required subcontract.

Corporate Officer:

By: _____

Signature

Jeffery Sharpe

Print Name

Title: _____ Principal _____

Date: _____ 12/15/15 _____

8. Appendix

Example of a Possible CEAP Measure Matrix

Category 1. Community Infrastructure						Goals			Commission Scoring	Public Scoring	Collateral Benefits*
Measure	Cost (\$1,000)	Annual Energy Savings (\$1,000)	GHG Reduction (metric tons)	Sector	Short Term	Medium Term	Long Term				
1.1A	Install 10 MW Utility Solar	\$30,000	\$3,000	30,000	G	...	X	...	10	10	A,B,D
1.1B	Upgrade Reeder Hydro	\$50	\$5	57	G	X	...	...	10	10	F,G
1.2A	District Heating Loop from WWTP	\$6,000	\$8	1,800	G	...	...	X	6	7	A,F,G
1.2B	WWTP Anaerobic Digestion	\$12,000	\$16	2,400	G	...	X	...	4	3	...
1.2C	WWTP Heat Recovery	...	...	...	...	...	...	...	...	...	...
1.3	Greywater System	...	...	...	...	...	...	...	...	...	...
1.4	Upgrade Streetlights to LED	...	...	...	...	...	...	...	...	...	...
1.5	Incentivize SOU Waste Facility Equipment Upgrades	...	...	...	...	...	...	...	...	...	...
1.6	Additional Measure	...	...	...	...	...	...	...	...	...	...
1.7	Additional Measure	...	...	...	...	...	...	...	...	...	...
Category 2. Buildings and Facilities						Goals			Commission Scoring	Public Scoring	Collateral Benefits*
Measure	Cost (\$1,000)	Annual Energy Savings (\$1,000)	GHG Reduction (metric tons)	Sector	Short Term	Medium Term	Long Term				
2.1A	Retrocommission (RCx) School Facilities HVAC	...	...	...	...	...	...	...	...	...	...
2.1A	RCx City Buildings HVAC	...	...	...	...	...	...	...	...	...	...
2.2	Require All New Construction to be Net-Zero	...	...	...	...	...	...	...	...	...	...
2.3A	Upgrade School Facility Lighting to LED	...	...	...	...	...	...	...	...	...	...
2.3B	Upgrade City Facility Lighting to LED	...	...	...	...	...	...	...	...	...	...
2.4A	Incentivize Residential Buildings to Reduce EUIs to Below 50 kBtu/sf	...	...	...	...	...	...	...	...	...	...
2.4B	Incentivize School Buildings to Reduce EUIs to Below 50 kBtu/sf	...	...	...	...	...	...	...	...	...	...
2.4C	Retrofit City Buildings to Reduce EUIs to Below 50 kBtu/sf	...	...	...	...	...	...	...	...	...	...
2.5A	Increase Rooftop Solar by 80% in Public Buildings	...	...	...	...	...	...	...	...	...	...
2.5B	Increase Rooftop Solar by 80% in School Buildings	...	...	...	...	...	...	...	...	...	...
2.5C	Increase Rooftop Solar by 50% in Residential Buildings	...	...	...	...	...	...	...	...	...	...
2.6A	Upgrade Public Facility Computers and Appliances to Energy Star	...	...	...	...	...	...	...	...	...	...
2.6B	Upgrade School Facility Computers and Appliances to Energy Star	...	...	...	...	...	...	...	...	...	...
2.7	Reduce Hot Water Use 20% for Residential, City, and Commercial	...	...	...	...	...	...	...	...	...	...
2.8	Require Submetering of Individual Buildings in a Facility	...	...	...	...	...	...	...	...	...	...
2.9A	Codify Temperature Settings and Setbacks in City Buildings	...	...	...	...	...	...	...	...	...	...
2.9B	Codify Temperature Settings and Setback in City Buildings	...	...	...	...	...	...	...	...	...	...
2.10	Additional Measure	...	...	...	...	...	...	...	...	...	...
2.11	Additional Measure	...	...	...	...	...	...	...	...	...	...
Category 3. Transportation Systems						Goals			Commission Scoring	Public Scoring	Collateral Benefits*
Measure	Cost (\$1,000)	Annual Energy Savings (\$1,000)	GHG Reduction (metric tons)	Sector	Short Term	Medium Term	Long Term				
3.1	Implement New Visitor Parking Strategies	...	...	...	...	...	...	...	...	...	...
3.2A	Upgrade School Buses to Electric and Provide Charging Stations	...	...	...	...	...	...	...	...	...	...
3.2B	Incentivize Student Drop-Off Reduction	...	...	...	...	...	...	...	...	...	...
3.3A	Provide Public Transportation via Electric Bus	...	...	...	...	...	...	...	...	...	...
3.3B	Provide Public Transportation via Covered Rickshaws for Visitors	...	...	...	...	...	...	...	...	...	...
3.3C	Incentivize Car Pooling for Local Work Force	...	...	...	...	...	...	...	...	...	...
3.3D	Develop Uber-Based Electric Care Ride Sharing Programs	...	...	...	...	...	...	...	...	...	...
3.4	Switch City Vehicles to Hybrid or Electric	...	...	...	...	...	...	...	...	...	...
3.5	Incentivize City Employees to Bike, Walk, or Use Public Transportation	...	...	...	...	...	...	...	...	...	...
3.6	Additional Measure	...	...	...	...	...	...	...	...	...	...
3.7	Additional Measure	...	...	...	...	...	...	...	...	...	...
Category 4. Purchasing and Cultural						Goals			Commission Scoring	Public Scoring	Collateral Benefits*
Measure	Cost (\$1,000)	Annual Energy Savings (\$1,000)	GHG Reduction (metric tons)	Sector	Short Term	Medium Term	Long Term				
4.1	Provide Optional Self-Insurance Program for All Cityzentry	...	...	...	...	...	...	...	...	...	...
4.2A	Require Smart-Purchasing Program for City	...	...	...	...	...	...	...	...	...	...
4.2B	Incentivize Smart-Purchasing Program for Schools	...	...	...	...	...	...	...	...	...	...
4.2C	Incentivize Smart-Purchasing Program for Residents	...	...	...	...	...	...	...	...	...	...
4.3A	Require 50% Waste Reduction By City	...	...	...	...	...	...	...	...	...	...
4.3B	Incentivize 50% Waste Reduction By School	...	...	...	...	...	...	...	...	...	...
4.3C	Incentivize 50% Waste Reduction By Resident	...	...	...	...	...	...	...	...	...	...
4.4	Public Education on Food Sources and Climate Impacts	...	...	...	...	...	...	...	...	...	...
4.5	Develop School Competition for Energy and GHG Reduction Projects	...	...	...	...	...	...	...	...	...	...
4.6A	City Purchase 50% Recycled Paper	...	...	...	...	...	...	...	...	...	...
4.6B	Schools Purchase 50% Recycled Paper	...	...	...	...	...	...	...	...	...	...
4.6C	Businesses Purchase 50% Recycled Paper	...	...	...	...	...	...	...	...	...	...
4.7	Divert All Food Waste From Landfill	...	...	...	...	...	...	...	...	...	...
4.8	Reduce All Other Waste to Landfill by 50%	...	...	...	...	...	...	...	...	...	...
4.9	Additional Measure	...	...	...	...	...	...	...	...	...	...
4.10	Additional Measure	...	...	...	...	...	...	...	...	...	...
Category 5. Natural Systems and CO ₂ Sequestration						Goals			Commission Scoring	Public Scoring	Collateral Benefits*
Measure	Cost (\$1,000)	Annual Energy Savings (\$1,000)	GHG Reduction (metric tons)	Sector	Short Term	Medium Term	Long Term				
5.1	Develop Program to Plant 20 New Trees per Year	...	...	...	...	...	...	...	...	...	...
5.2	Plant Unused Lots and Fields with High CO ₂ Uptake Vegetation	...	...	...	...	...	...	...	...	...	...
5.3	Incentivize Community Gardens and Training	...	...	...	...	...	...	...	...	...	...
5.4	Adopt a Green Infrastructure Storm Water Collection Plan	...	...	...	...	...	...	...	...	...	...
5.5	Additional Measure	...	...	...	...	...	...	...	...	...	...
5.6	Additional Measure	...	...	...	...	...	...	...	...	...	...
Category 6. Additional Category						Goals			Commission Scoring	Public Scoring	Collateral Benefits*
Measure	Cost (\$1,000)	Annual Energy Savings (\$1,000)	GHG Reduction (metric tons)	Sector	Short Term	Medium Term	Long Term				
6.1	Additional Measure	...	...	...	...	...	...	...	...	...	...
6.2	Additional Measure	...	...	...	...	...	...	...	...	...	...

*Potential collateral benefits will include items such as: direct economic development, strong social equity, improved comfort, safety, and reliability items.

Example of a Possible Measure Scoring Matrix

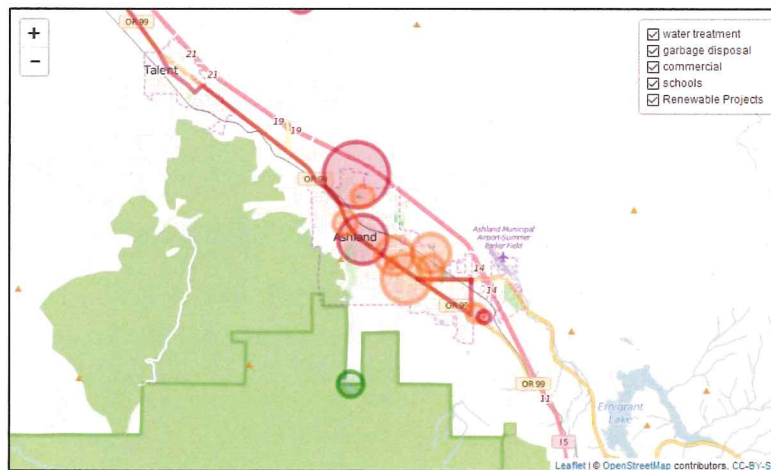
Measure scoring and evaluation criteria will be established early on.

Scoring Criteria Name	Criteria Description	Rating Description		
		High (5 Points)	Medium (3 Points)	Low (1 Point)
Benefits multiple communities	Initiative benefits, either directly or indirectly, multiple communities within the Capital Region.	Benefits 10 or more communities in the region and does not adversely impact any communities	Benefits 3-10 communities in the region and does not adversely impact any communities	Benefits fewer than 3 communities OR benefits more but has an adverse impact on one or more communities
Implementation Feasibility	Initiative is both financially and logistically feasible.	Initiative has examples of successful implementation that can be applied to implementing within the Capital Region and/or there is a clearly detailed implementation plan in place	Some examples exist for general implementation framework, but with some areas of uncertainty for implementing within the Capital Region	Vague or non-existent understanding of how strategy can be implemented in the Capital Region
Co-benefits	Initiative benefits other Regional Sustainability Plan focus areas by supporting achievement of the goals outlined in that focus area.	Benefits more than 2 other focus areas	Benefits 1 or 2 other focus areas	Does not benefit other focus areas
Leverage Resources	Initiative demonstrates the ability to utilize additional funds and resources for its completion.	Specific non-NYSERDA funding sources are available to cover costs of implementation and any funding necessary to sustain the initiative (if applicable)	Non- NYSERDA funds have been identified to temporarily or partially fund the initiative	Unlikely to leverage additional non-NYSERDA funding sources
GHG Emissions Reduction Potential	Initiative is evaluated based on its GHG emissions reduction potential.	Strategy will result in a direct, quantifiable reduction in GHG emissions	Some GHG emissions reduction may occur but it cannot be quantified	GHG reduction is very indirect, unlikely to occur, or unknown
Timeframe	The timeframe for implementation of the initiative is short, medium, or long-term.	Short-term (less than one year)	Medium term (1-5 years)	Long-term (more than 5 years)
Replicability	Initiative can be immediately implemented throughout region or can serve as a model for other communities to take similar action.	Project could easily be replicated across the region or state	Project is only replicable in certain portions of state or region	Project is unique or would not be replicable in any other areas
Duration of Benefits	The length of time over which the benefits of implementation continue to be realized	The direct benefit(s) of this initiative will persist beyond the next three years	The initiative will have direct benefit(s) that are likely to last throughout the three years of Phase II of the Cleaner Greener Communities Program	The direct benefit(s) of this initiative can only be sustained with continued investment or may have counter-benefits over the long term

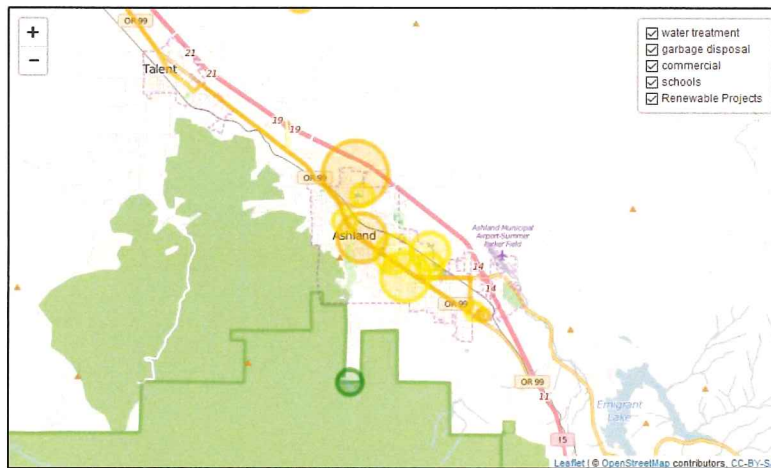
Source: *Cleaner, Greener Communities: Capital Region Sustainability Plan*

Example of Possible Interactive Mapping Options

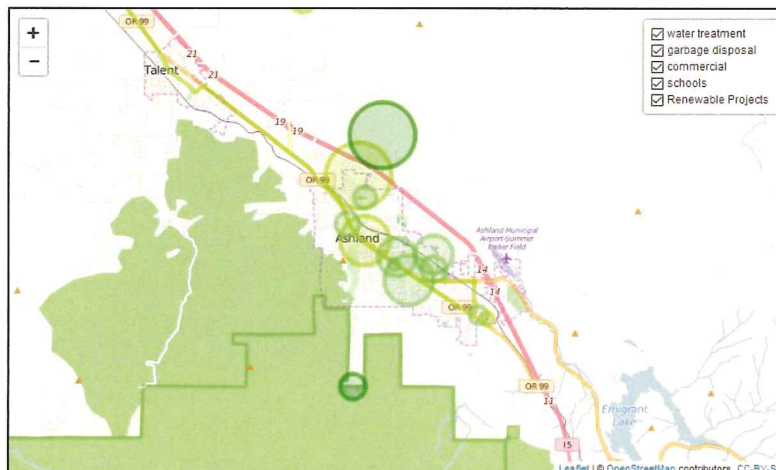
All Interactive mapping and graphing will be directly accessible via the internet



2015 Energy/GHG footprint



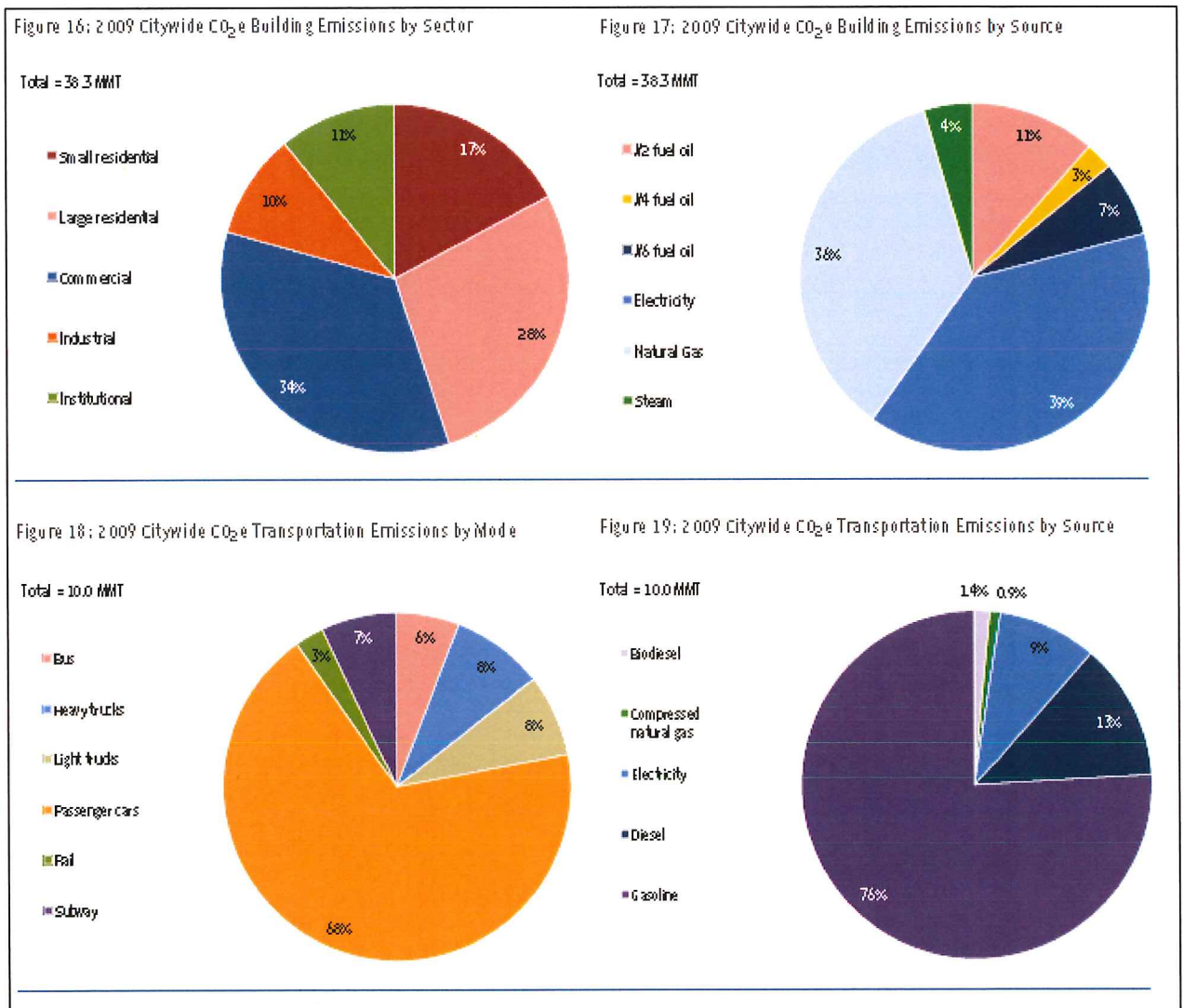
2020 CEAP Impacts



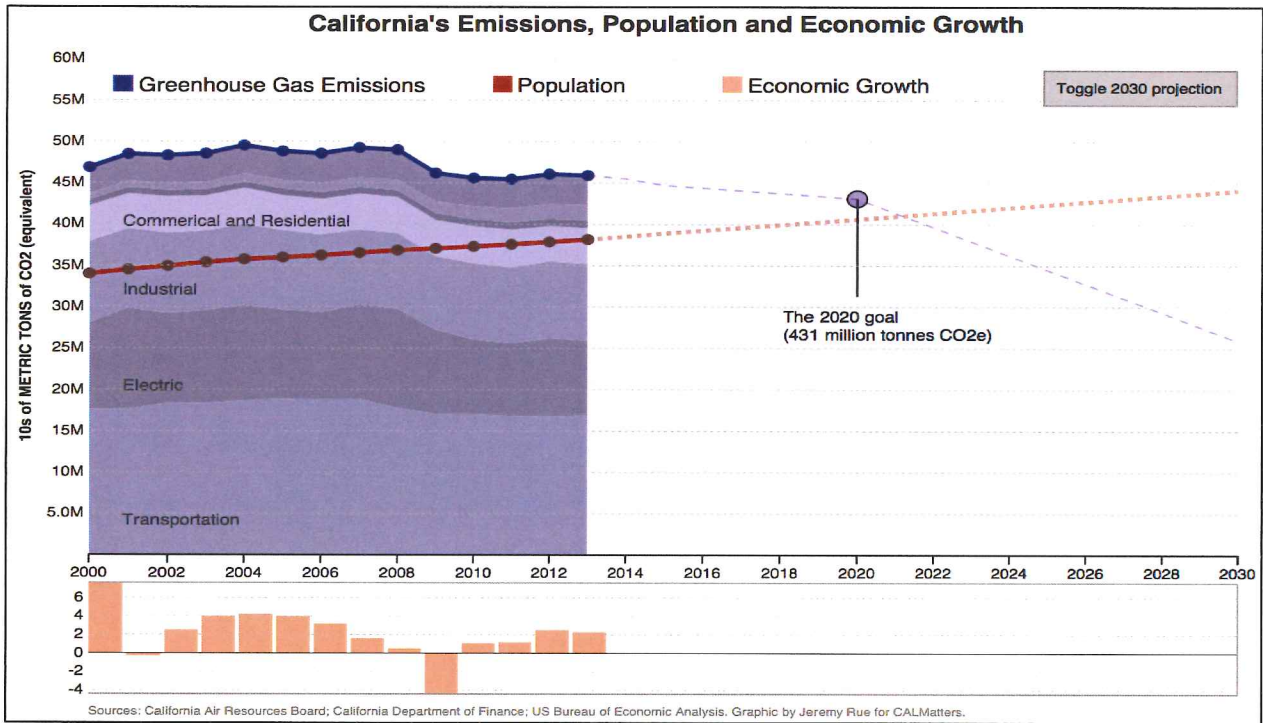
2025 CEAP Impacts

Examples of Possible Baseline and Measure Impact Graphic Options

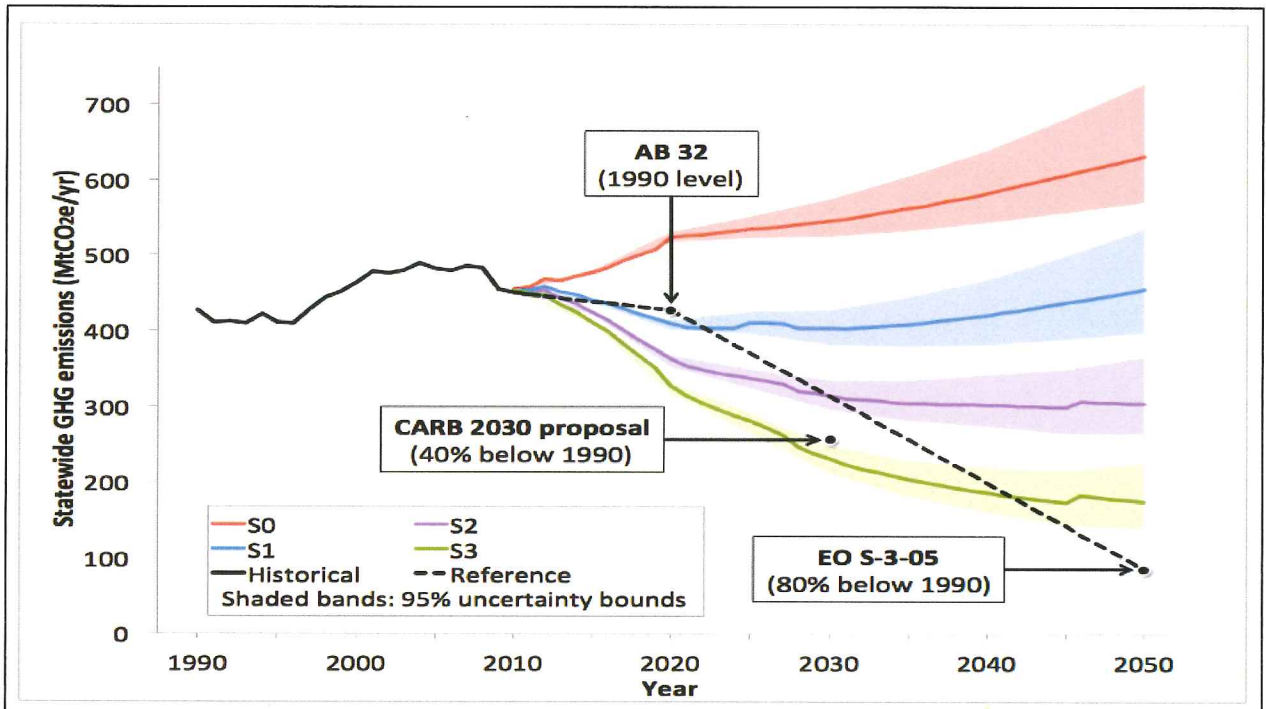
Community Agreement on what graphics format to use for the best understanding of Baseline conditions and visualization of Measures to be evaluated will be determined at the outset of the project to ensure clarity and consistency. It is expected that the firm supplying the GHG Inventory will be able to offer an array of reporting and graphing options for the Baseline Inventory that can be carried through Plan development, reporting, updating and verification.



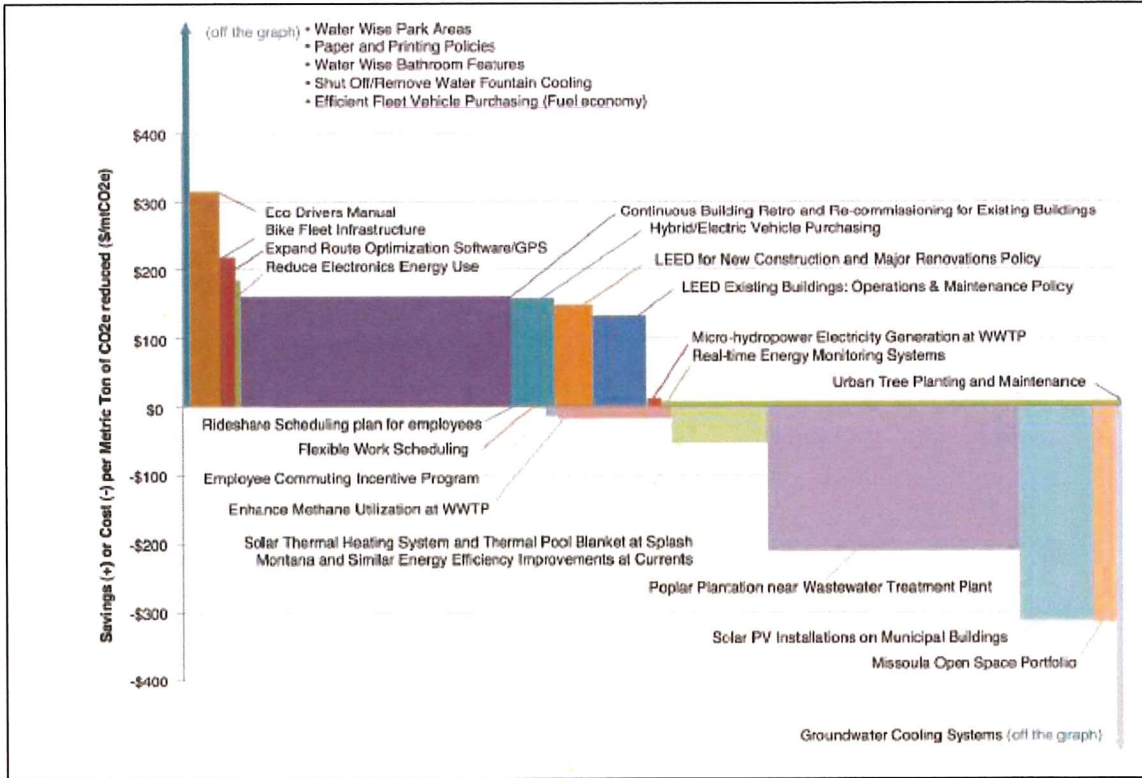
Typical Sector, Mode and Source Pie-graphs (source: NYC GHG Inventory 2015 update)



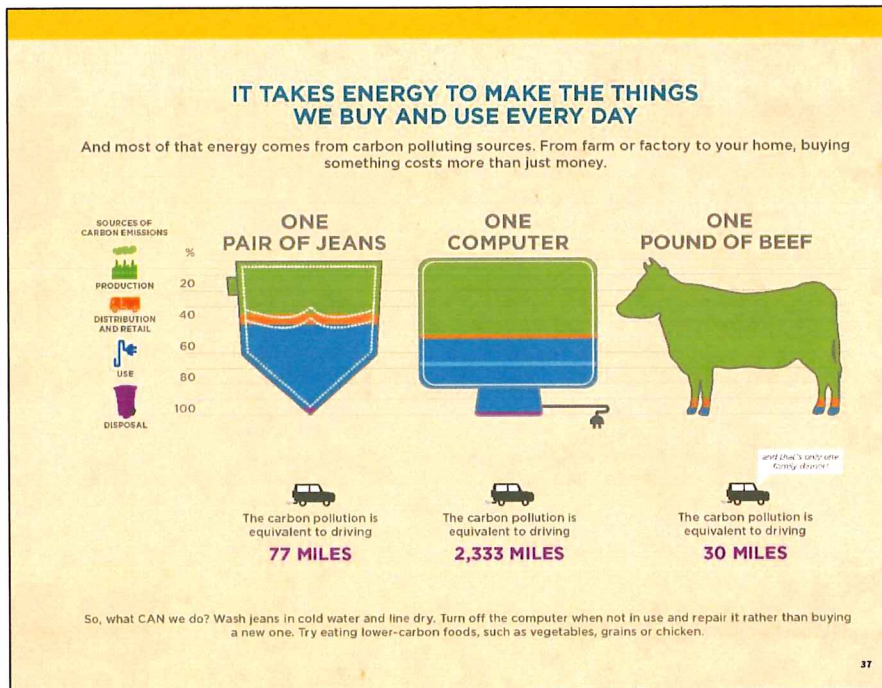
A running line graph with population and economic growth overlays



Emission projections under varying Sx conditions and Goal Points



Action Measure Strategy & Cost-balancing offset bar graph (source: NYC GHG Inventory 2015 update)



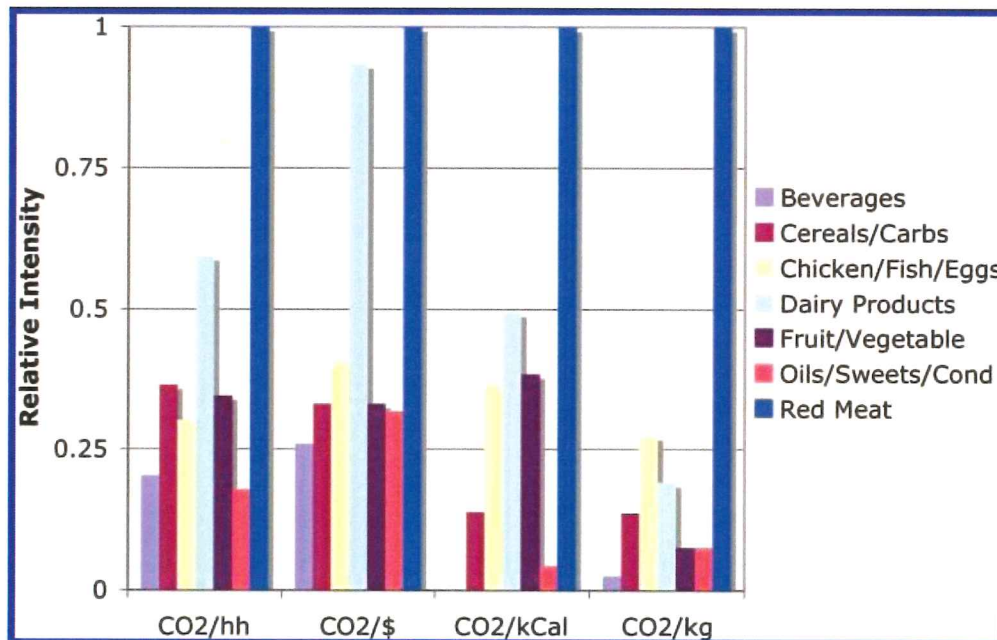
A typical Picture graph (source: Portland 2015 CAP update)

Example of Using Studies in Measure Development (Food Example)

Thorough review of academics resources, as well as teaming with SOU professors, will early performed early in the process.

Relevance of Results. The production and distribution of food has long been known to be a major source of GHG and other environmental emissions, and, for many reasons, it is seen by many environmental advocates as one of the major ways concerned consumers can reduce their “carbon footprints”. Proponents of localization, animal welfare, organic food, and many other interest groups have made claims on the best way for concerned consumers to reduce the impacts of their food consumption. The results of this analysis show that for the average American household, “buying local” could achieve, at maximum, around a 4–5% reduction in GHG emissions due to large sources of both CO₂ and non-CO₂ emissions in the production of food. Shifting less than 1 day per week’s (i.e., 1/7 of total calories) consumption of red meat and/or dairy to other protein sources or a vegetable-based diet could have the same climate impact as buying all household food from local providers.

It is clear that even with the unrealistic assumption of zero food-miles, only relatively small shifts in the average household diet could achieve GHG reductions similar to that of localization. For instance, only 21–24% reduction in red meat consumption, shifted to chicken, fish, or an average vegetarian diet lacking dairy, would achieve the same reduction as total localization. Large reductions are more difficult in shifting away from only dairy products (at least on a calorie basis) but making some shifts in both red meat and dairy, on the order of 13–15% of expenditure or 11–19% of calories, would achieve the same GHG reduction as total localization.



Source: Weber, L and Matthews, H. (2008) *Food-Miles and the Relative Climate Impacts of Food Choices in the United States*. Dept of Civil & Environmental Engineering and Dept of Engineering & Public Policy, Carnegie

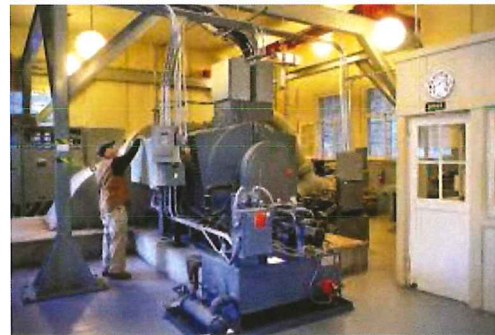
Possible Renewable Power Production Options

Ashland already owns, operates and maintains its own electrical distribution system including poles, lines and the Reeder Reservoir Hydro generating facility. Training our people to operate state-of-the-art renewable facilities would be an investment in our city personnel and power infrastructure, and would provide numerous additional benefits for the community including:

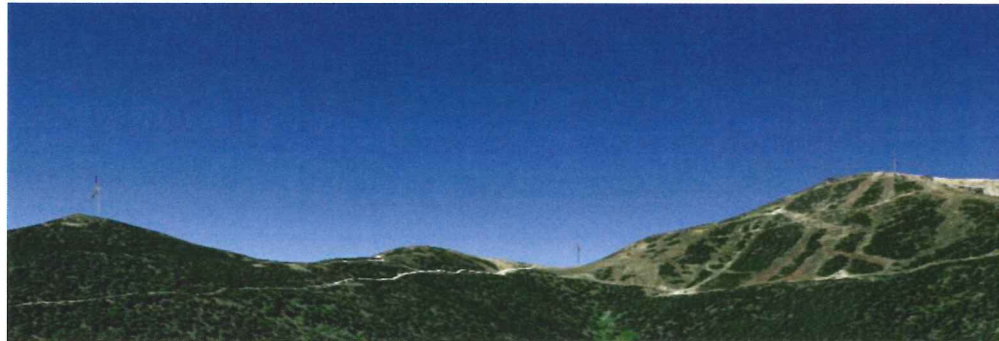
- Direct connect to the city electrical provides city energy security while adding power & resiliency to the Grid.
- Increases our utility renewable portfolio to exceed the State's 2025 new clean renewable (RPS) 10% target for small utilities.
- Provides work in the emerging technologies, will give robust community & economic development in building & operating a clean, sustainable electric utility.
- Gives Significant Regional GHG emissions reductions by reducing our region's need to import fossil-fuel created electricity.
- Advances social equity by including all electric-using citizens regardless of income or home ownership.
- Provides Economic development for our citizens via local jobs and training for construction, maintenance and operation of powerful solar energy technologies.

SES has analyzed several emission-free electricity producing options readily available to the city. Reports on these analyses are available on our website at www.sharpenenergy.net

1) Upgrading the existing Reeder Gulch hydro-electric plant penstock piping. Beautifully renovated, the now 850kW plant is a reminder of Ashland's electric history, and an enduring symbol of our renewable energy potential. The plant provides about 2% of Ashland's 20MW average electric demand.



2) Installing wind generators on Mount Ashland. Wind generation is the fastest growing sector of the renewable energy production market. Our non-profit Mt. Ashland ski area, located in Windy Gap, is well positioned for utilizing this powerful renewable energy resource.



3) Building a utility-scale PV solar farm on the city's Imperatrice property. Utilizing this property for a state-of-the-art renewable energy facility could provide electricity to the city at a fixed levelized cost (LCOE) under \$.10/kwh for 25yrs.



Initial Analyses:

