



# Memorandum

**TO:** TRANSPORTATION AND ENVIRONMENT COMMITTEE

**FROM:** John Stufflebean

**SUBJECT:** SEE BELOW

**DATE:** 11-20-07

Approved

Date

11/21/07

**SUBJECT: STATUS REPORT ON THE ACTIVITIES RELATED TO THE MUNICIPAL CLIMATE ACTION PLAN**

## RECOMMENDATION

1. Accept this update on the City's greenhouse gas emissions inventory from 1990 and Municipal Climate Action Plan.
2. Forward recommendation to the City Council for adoption of the existing Sustainable Silicon Valley regional greenhouse gas emission goal for 2010 (20% below 1990 levels by 2010) as the City's community greenhouse gas emission goal.

## CONNECTION TO THE CITY'S GREEN VISION

This issue relates to and supports all of the goals of the Green Vision.

## OUTCOME

Approval of the recommendations contained in this memorandum will provide the necessary direction to staff to proceed with program implementation and future policy and program development.

## BACKGROUND

On June 5, 2007, Council adopted municipal greenhouse gas (ghg) reduction goals for City activities. Council directed staff to return in the fall of 2007 with a status report on:

- The City's greenhouse gas emissions inventory from 1990.
- The development of a Municipal Climate Action Plan scheduled for presentation to Council in the spring of 2008.

- The results of a dialog with stakeholders on determining a “community” greenhouse gas reduction goal, and to take part in the formation of a regional climate action plan with a community-wide goal.

The City has been involved in many complementary, collaborative climate and energy-related organizations and programs, including: California Climate Action Registry (CCAR), International Council for Local Environmental Initiatives (ICLEI), Sustainable Silicon Valley (SSV), and Joint Venture Silicon Valley’s Climate Protection Task Force. Each of these associations has moved the City forward on inventory calculations, data and reporting, identification and implementation of best practices, and community outreach and communications.

## **ANALYSIS**

### **Municipal Emissions Inventory**

The year 1990 was chosen as the municipal baseline year to align the City’s baseline with the State’s green house gas reduction initiatives, the Kyoto Protocol and other regional green house gas reporting initiatives. However, collection of comprehensive data has been more challenging than anticipated. As have many Bay Area cities, we utilized the ICLEI software, information from PG&E, and other cross-referenced documents from the City, to extrapolate the 1990 baseline emissions figures.

The City became a member of ICLEI and the CCAR in September 2007. Both of these organizations provide data management tools they have developed to identify emissions sources, record data and emissions factors according to certified standards and protocols and chart emissions trends over time. ESD has used the ICLEI “Clean Air and Climate Protection” software for data analysis. The major sources for the municipal contribution of green house gases include City buildings and traffic lights, the Water Pollution Control Plant, and the City vehicle fleet. All City departments, excluding the Airport, are included as municipal activities. The Airport was excluded because it is considered a ‘regional’ source for the purposes of emissions tracking and reporting. The preliminary estimate for total municipal equivalent CO<sub>2</sub> emissions for 1990 is 168,000 tons.

More information on the process and assumptions undertaken for this research is detailed in Attachment 1.

The year 2005 is currently being evaluated as a milestone year. Preliminary data indicate that because of steady improvements in building energy efficiency and improvements in fleet fuel efficiency, very significant progress toward the City’s emissions reduction goals has been made. (City goals are: 2012: 25% below 1990, 2015: 30% below 1990, 2020: 35% below 1990, 2030: 50% below 1990, and 2045: 80% below 1990). Details of that progress will be provided once the energy use and baseline emissions data have been certified.

### **Municipal Climate Action Plan**

A Municipal Climate Action Plan is being developed to address the City's largest sources of emissions, and taking into account the implementation of the ten goals of the Green Vision and Urban Environmental Accords.

Next steps include:

- Evaluation of emission reduction potential of current programs and policies
- Identification of data collection gaps
- Collaborative development of City-wide reporting methodologies and strategies
- Identification of other potential emissions reducing activities, policies, or programs for possible adoption
- Documentation and coordination of linkages to Green Vision, Envision 2040, and other ongoing programs and projects
- Participation in regional organizations and projects that support greenhouse gas emissions reductions

### **Development of a Community Greenhouse Gas Reduction Goal**

One of the recommendations adopted by Council in June 2007 was to "...take part in the formation of a regional climate action plan for the purposes of establishing a community-wide goal for greenhouse gas emissions reductions."

ESD staff reached out to community stakeholders; including a variety of environmental, business and academic representatives regarding the practical and philosophical considerations for establishing a "community" greenhouse gas reduction goal. These discussions resulted in the feedback that there are already a wide variety of 'goals' in place: Kyoto, AB32, the Mayor's Climate Protection Agreement, Sustainable Silicon Valley (SSV), etc. Therefore, their advice was that a City-specific goal would add complexity, but not necessarily momentum to the issue.

The stakeholders queried consistently encouraged the implementation of a thoughtful and effective community engagement program to enable and empower citizen involvement on the issue of climate change, and related environmental, social and economic issues. Additionally, recent adoption of the Green Vision provides further impetus to create a more coordinated engagement strategy to involve San José's citizens in reaching the goals of the Green Vision, Urban Environmental Accords, and AB32 (The Global Warming Solutions Act).

Because of the organization's established goals, reporting mechanisms, and Silicon Valley regional focus, ESD recommends that the City actively participate in SSV and through that

participation enable action toward the regional emissions reduction goals.

SSV has a well-established, well-respected presence in the area, and a stakeholder process through which it will be updating its current goal in the near future. SSV utilizes a large regional network of community contacts to provide initial feedback through a web-based survey. The survey results are summarized and vetted through a community of stakeholder representatives in order to establish consensus-based recommendations. These recommendations are then vetted with a group of issue experts to 'ground-truth' and finalize recommendations.

Recommendations are implemented through education, outreach, reporting and acknowledgement of achievement. Through involvement in SSV, the City can leverage the existing community and business involvement of this organization rather than expend limited staff time and resources to accomplish a similar outcome. ESD staff can continue to participate in SSV meetings and workshops and can encourage alignment between SSV and City efforts.

### **EVALUATION AND FOLLOW-UP**

ESD Staff is evaluating options for third party certification of emissions inventory data. A status report on the status of the City's emissions reductions can be made definitively once these data are validated.

A report on the status of the Municipal Climate Action Plan, which includes a review of current programs and policies, identification of any data or reporting methodology gaps, recommendations for improvements, and additional coordination within and outside the City, can be made concurrently with the annual Sustainable Energy Policy annual report and action plan report to Council. This is presently scheduled for March 2008.

At that time, ESD will provide a progress update on coordination with regional organizations to move the City and the region forward on community-wide emissions reductions and energy efficiency. This update will include the status of an updated SSV regional emissions reduction goal, specific activities underway, and an overview of any emerging issues or opportunities. This is a rapidly evolving issue area and with the connections to energy and fuel use, there may be many interconnections with other programs and organizations, such as the Sierra Club's "Cool Cities" Campaign, and expanded coordination with PG&E.

### **POLICY ALTERNATIVES**

**Alternative 1:** Direct staff resources toward the development of a unique emissions reduction goal for the City.

**Pros:** Could be tied to the Green Vision or other Council policies.

**Cons:** Time and resource intensive effort to establish the methodology, gather input from the community and reach consensus.

**Reason for not recommending:** A regional goal and process for establishing successive goals has already been established by another organization with which the City has a long-standing relationship. By engaging with other organizations in this way, the City can focus on creating results.

**Alternative 2:** Do not adopt a Greenhouse Gas emissions reduction goal.

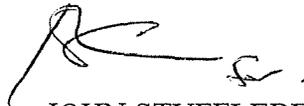
**Pros:** Does not add significantly to existing workloads. Emissions reductions will likely happen anyway because of City and State policies.

**Cons:** Relinquishes the City's opportunity to demonstrate leadership on this important issue and to share its successes with other regional organizations.

**Reason for not recommending:** Not engaging on this important issue would be inconsistent with on-going City policy direction and leadership on similar issues.

### COORDINATION

This memo was coordinated with the City Attorney's Office, the City Manager's Office, Office of Economic Development, and the Departments of General Services, Airport, and Transportation.



JOHN STUFFLEBEAN  
Director, Environmental Services

For questions please contact Kerrie Romanow, Chief Deputy Director, Environmental Services Department, at (408) 535-8552.

Attachment: 1990 Baseline Fact Sheet and Assumptions

## ATTACHMENT

### 1990 BASELINE FACT SHEET AND ASSUMPTIONS

The year 1990 is used as a common baseline by the State, the Kyoto Protocol and other organizations. In most cases however, data from 1990 is not complete. Therefore, 1990 emissions are calculated using ICLEI Clean Air and Climate Protection Software©, which utilize original source data where possible, and extrapolated data as necessary to calculate the estimated six green house gas components; equivalent CO<sub>2</sub> emissions being the indicator presented here. The year 2005 is presented only as a milestone year. The City's data has not yet been certified. However, data for this year provided by PG&E is independently verified through their participation in the California Climate Action Registry.

#### **Building Energy Use and Emissions**

This category includes all City buildings and traffic lights, except the San José/Santa Clara Water Pollution Control Plant and the Airport.

##### Assumptions:

- 1990 baseline year electrical energy use, associated emissions and cost were based on historical data from PG&E. The City paid an estimated average cost per kilowatt-hour of \$0.10. The City is charged a range of electricity rates depending on the rate structure, type and time of use, peak demand charges and facility type.
- For 1990 energy use data, the City Financial Management System database was the source of information on all expenditures under electricity and natural gas visual codes for applicable City departments. Energy payments not under these designated code numbers would not be captured. Total identified Energy Expenditures (electricity and natural gas) in 1990 was \$12,729,810.
- City electrical energy use data is available from PG&E for 2005.

#### **Municipal Vehicle Fleet**

##### Assumptions:

- General Services estimates that in 1990 the City owned and operated approximately 2,000 vehicles.
- According to General Services, the classes of vehicles have remained consistent through 2005.
- Emissions calculated using fuel usage. General Services and ESD Fuel Purchasing Records indicated that 1,090,000 gallons of unleaded and 330,190 gallons of diesel fuel were purchased in 1990. General Services now purchases fuel for the entire City and has implemented the Green Fleet Policy.

- In the May 21, 2007, Transportation and Environment Committee memo from Peter Jensen and John Stufflebean regarding the *City of San José Green Vehicle Fleet Update and Plug-in Partners National Campaign*, 34 % (or 927) City vehicles/equipment types are considered “green”, using alternative fuels or energy sources that reduce emissions.
- The current City fleet is over 2,400 vehicles and fuel-burning pieces of equipment.

### **Employee Commute**

#### Assumptions:

- In 1990, approximately 2% of South Bay commuters used alternative forms of transportation or carpooling. Based on anecdotal information from Planning Department and General Services, in 2005, up to 10% of City employees may have used alternative transportation or alternative fuel vehicles.
- One-way vehicle mile trip for employee commute was assumed to be 6 miles based on information used by the Planning Department.
- Estimates are based on a 250 workday year.
- The City had 7,218 employees in 1990 and 8,369 employees in 2005 according to the Annual Finance Reports.

### **WATER POLLUTION CONTROL PLANT**

#### Assumptions:

- 1990 electrical usage was calculated the same way as the buildings category above. 1992 PG&E natural gas data was available for the Plant and used instead of the purchasing records since the cost per therm is not known for 1990.
- 2005 Plant energy data is robust and derived from meters and PG&E records.

### **SOLID WASTE**

- Municipal solid waste emissions were calculated to be less than 1 % of the total municipal emissions. They are considered insignificant and not included in the pie charts.
- Future vehicle emissions associated with municipal solid waste programs will be incorporated into community or regional emissions reduction reporting.
- Greenhouse gas emission reductions associated with advances in waste minimization, waste diversion and recycling may also be considered in the context of a community or regional emissions reduction framework.