

Energy Strategic Plan 2011-2013

Energy use in buildings is responsible for 49% of greenhouse gas emissions (GHG) in the U.S. Similarly, in San Francisco, we have approximately 195,000 buildings producing 49% of total annual GHG (2008): 3.76 million metric tons - 1.21 million metric tons in residential buildings, 1.40 million in the commercial sector, .40 million in industrial energy and .35 million in municipal facilities.

The Department's energy program is directed at energy use in private sector buildings, both commercial (25,000 buildings) and residential (170,000 buildings). The goal is to reduce energy use in these buildings through efficiency and conservation, and install renewable resources to achieve as close to zero net energy as possible and contribute towards achieving the City's Climate goals by reducing 330,000 metric tons over this three year period.

This effort is primarily focused on reducing energy use in buildings and secondarily on developing renewable resources. The Department has already made great strides establishing one of the largest city-run energy efficiency programs in California funded by PG&E ratepayers. Now the program is growing with Stimulus funds and adding a new component to address single-family homes (and 2-4 unit buildings). This is intended to build a new market in home performance retrofits that can serve as an entry point for graduates of TrainGreenSF. For emerging renewables, the largest opportunity is in wave energy where a preliminary study indicates over 30 megawatts of technical capacity.

To achieve more GHG reductions for the dollar and overall impact, the Energy program is shifting towards natural gas reductions with both efficiency measures and renewables. Last year, the multi-family program gained significant traction in heating controls and continues to grow in spite of the severe economic downturn. Stimulus funds are providing additional incentives needed to move the market for boiler retrofits. The home performance program will primarily generate natural gas savings. The solar program is focusing on solar water heating, kicked off last June with a fair at the Golden Gate Park.

The Energy program's planned efforts will address 83,000 metric tons, and coordinate with SFPUC and PG&E that have additional robust programs that may deliver as much as 100,000 tons. Additionally, there is some hope that the thwarted Property Assessed Clean Energy financing will be revived, that the federal HomeStar residential retrofit program will be funded, and that Community Choice Aggregation will enable even larger investments in energy measures. However, these may still leave the program short of its objective and more aggressive strategies are needed. The Department will continue to seek new technologies that provide greater savings as well as actively seek additional funding for strategies such as public information campaigns, innovative financing, and new legislation requiring high levels of residential and commercial efficiency.

GOAL #1

Reduce greenhouse gas emissions in buildings to 20% below 1990 levels by 2012 (330,000 metric tons from 2008 level).

OBJECTIVE A: Maximize the energy efficiency (EE) of commercial and residential buildings, reducing 300,000 metric tons of eCO₂ by 2012.

ACTIONS:

- 1. Implement Energy Watch to reduce 25,000 tons while integrating projects with demand response, boiler retrofits, co-generation, and renewables. (11-13)**
- 2. Implement the Commercial Lighting Efficiency Ordinance to reduce 10,000 tons. (11)**

