

# **State, Local Governments Leveraging ENERGY STAR**

## **Extended Abstract # 13**

**Kathy M. Diehl**

U.S. Environmental Protection Agency, 75 Hawthorne St., San Francisco, CA 94105

## **INTRODUCTION**

State and local governments throughout the United States are taking steps to protect the environment, save green house gas (GHG) emissions and lower energy costs by adopting policies that leverage EPA's ENERGY STAR tools to reduce energy use in commercial buildings. At least eight municipal entities and five states have adopted such policies. The policies were established between 2005 and 2011. The policies share many similarities but vary in detail. All of the policies require commercial buildings to benchmark their energy and to be scored, if possible, in comparison to their peers, through ENERGY STAR's on-line database, Portfolio Manager (PM) or a similar or equivalent tool. Buildings scoring in the upper 25<sup>th</sup> percentile are eligible for ENERGY STAR certification. The policies may address publicly and/or privately owned commercial buildings. They often include provisions to publicize the data obtained through the benchmarking process. The policies normally establish some minimum square footage above which buildings must comply. Compliance may take a phased approach based on square footage or some other characteristic. The policies may require utilities to support the benchmarking process. The specific goals the policies plan to achieve through compliance incorporate at least one of the following: saving energy, saving cost and/or saving GHG emissions. Portfolio Manager is employed by the policies because it supports the accomplishment of these goals. Buildings earning the ENERGY STAR certification, on average, use 35 percent less energy than typical buildings, and release 35 percent less carbon dioxide into the atmosphere.

The eight municipalities which have adopted such policies are the District of Columbia, the Borough of West Chester, Pennsylvania and the Cities of Denver, Colorado, Austin, Texas, Alpharetta, Georgia, New York, New York, Seattle, Washington, and San Francisco, California. The five states that have adopted such policies are Michigan, Ohio, California, Washington and Hawaii. This abstract provides a close examination of several of these policies and supports the author's goal as the ENERGY STAR Program Manager for EPA's San Francisco Office to promote and support building energy efficiency and GHG emission reductions.

# **EXAMINATION OF POLICIES**

## **Alpharetta, Georgia, Green Communities Ordinance**

In early 2009 the Alpharetta, Georgia City Council adopted the Alpharetta Green City Program for all the city's sustainable policies and practices. A variety of measures were incorporated into the Program including a Green Communities Ordinance. The "Green Building" section of this ordinance applies to all public buildings that are either new construction or renovation projects. All new buildings constructed and owned by the City having 5000 ft<sup>2</sup> or greater of occupied space which are not LEED certified are to be ENERGY STAR certified based on their PM score or EarthCraft Light Commercial construction. The City Council must approve achievement of these certification levels if they add cost exceeding \$25,000.

All new buildings renovated by the City are to be ENERGY STAR certified or follow LEED guidelines. The City offers expedited plan review and processing, permitting and building and site inspections for private LEED, EarthCraft and ENERGY STAR certified projects.<sup>1</sup>

## **Seattle, Washington, Council Bill 116731, Ordinance Number 123226**

The City of Seattle has an established a goal to improve energy performance for existing buildings by 20 per cent by 2020 compared to 2005 levels. On January 25, 2010 the City Council of Seattle passed, and on February 4, 2010 the Mayor signed Council Bill 116731, Ordinance Number 123226. This bill requires owners of all nonresidential buildings greater than 10,000 ft<sup>2</sup> and multi-family buildings with five plus units to provide the Director of the City's Department of Planning and Development, using EPA's PM or a similar tool, an initial energy benchmarking report and, where available, an energy performance score. This was effective April 2011 for non-residential buildings larger than 50,000ft<sup>2</sup> having an initial occupancy date before January 2010, April 2012 for non-residential buildings larger than 10,000 ft<sup>2</sup> having an initial occupancy date before January 2011, and one year after the initial occupancy date for all other buildings having an initial occupancy date of January 2011 or later. The reporting requirement is effective April 2012 for multi-family buildings having an initial occupancy date before January 2011 and one year after the initial occupancy for all other multi-family buildings having an initial occupancy date of January 2011 or later.

Utilities providing energy service to a nonresidential or multi-family benchmark building are required to maintain energy consumption data for each building for at least the most recent 12 months capable of upload to PM. Upon authorization by a building owner representative, the utility is required to upload the data to PM. Upon

request, building owners subject to the bill must provide the most current energy benchmarking report and, if available, an energy performance score, to current and prospective tenants, and potential buyers and lenders.<sup>2</sup>

### **San Francisco, California, Existing Commercial Buildings Energy Performance Ordinance**

On February 18, 2011 San Francisco's (SF) Mayor signed the city's "green building" ordinance. The ordinance amends the SF Environment Code by adding Chapter 20, Sections 2000 through 2009, to adopt the San Francisco Existing Commercial Buildings Energy Performance Ordinance. The ordinance is expected to lead to investments in energy efficiency anticipated to reduce citywide carbon dioxide emissions by more than 70,800 tons over the first five years after adoption, with a net present value in savings to the private sector exceeding \$600 million dollars.

Building owners are required to use PM to track the total energy use of each non-residential building and obtain an ENERGY STAR Performance score for each applicable residential building. Non-residential buildings with gross area greater than 50,000 ft<sup>2</sup> must complete a report and submit it to the SF Department of the Environment on or before October 1, 2011 and annually no later than April 1. Non-residential buildings with gross area greater than 25,000 ft<sup>2</sup> but less than or equal to 49,999 ft<sup>2</sup> and those with gross area greater than 10,000 ft<sup>2</sup> but less than 24,999 ft<sup>2</sup> must complete and submit reports in subsequent staggered years and thence annually.

The Department is required to make an annual report available to the public which includes, for each covered building, annual summary statistics for the whole building including annual average energy use intensity, the PM score, where available, and annual carbon dioxide emissions attributable to the building's energy use.

The ordinance set a date of July 1, 2011 by which the General Manager of the SF Public Utilities Commission may elect to develop a compliance plan for municipal buildings greater than 10,000 ft<sup>2</sup>. The plan's goal is to include application of benchmarking to prioritize the implementation of energy efficiency upgrades in municipal buildings and to maximize energy savings.<sup>3</sup>

### **State of Washington, Senate Bill 5854**

The earliest of the state policies to be examined is Washington State's Senate Bill (SB) 5854, passed by the State's legislature in April of 2009. The bill requires residential and nonresidential construction permitted under the 2031 state energy code to achieve a 70 percent reduction in annual net energy consumption using the 2006 energy code as a baseline. Qualifying utilities have to maintain energy consumption data for all nonresidential and qualifying public agency buildings to which they provide service by

January 2010. The data must be maintained for at least the most recent 12 months in a format compatible with PM or equivalent tool. Upon authorization by a building owner or operator the utility is required to upload the specified data into PM. Property owners or operators are required to disclose energy performance data from PM to prospective buyers, lessees, or lenders by January 2011 for a building greater than 50,000 square feet and by January 2012 for a building greater than 10,000 ft<sup>2</sup>. By July 2010, each qualifying public agency is required to create an energy performance benchmark for each reporting public facility using PM or equivalent. The State Department of General Administration is to prepare a biennial report summarizing the statewide master account beginning December 2012.

The bill requires that State agencies not enter into a new lease or lease renewal for a building with an energy performance score below 75 unless a preliminary audit has been conducted within the last two years, and the owner agreed to perform an investment grade audit and implement cost-effective conservation measures within the first two years of the lease agreement.<sup>4</sup>

#### **State of Hawaii, House Bill 1464**

Hawaii's House Bill 1464 was enacted by the State Legislature in 2009 with an effective date of July 1. Part VI of this bill addresses energy efficiency, considered critical in meeting the State's target to supply 70 percent of its energy needs using clean energy by 2030 while reducing GHG emissions and strengthening its economy.

As of December 31, 2010, each state department with design and construction responsibilities for public buildings and facilities is required to benchmark every building that is either larger than 5000 ft<sup>2</sup> or uses more than 8000 kilowatt-hours of energy per year. These departments are required to use this benchmark as a basis for determining the State's investment in improving the efficiency of its own building stock. Benchmarking is to be conducted using PM or an equivalent tool.<sup>5</sup>

## **SUMMARY**

Altogether 13 municipal and state governments have created policies which incorporate ENERGY STAR tools to support reduction of energy use in commercial buildings for the purpose of saving costs and GHG emissions. The five examples provided above are some of the more recent of these policies. This paper makes them available to State and local agencies considering the development of their own building energy use policies.

As mentioned above, all of the policies incorporate benchmarking using PM or a similar or equivalent tool into their requirements. Seattle's, San Francisco's and Washington's policies require disclosure of their benchmarking data. Seattle's policy

is unique. It applies only to private buildings, both residential and commercial. The other two apply to private and public commercial buildings. All three policies phase in their disclosure requirements for commercial buildings based on square footage from greater than 50,000 ft<sup>2</sup> and to greater than 10,000 ft<sup>2</sup>. Seattle also looks at occupancy dates in regard to disclosure.

Seattle and San Francisco require building owners to report their benchmarking data to the City. San Francisco requires the City to report this benchmarking data in an annual report to the public. Seattle and Washington building owners are required to report to current and/or prospective tenants and prospective buyers and lenders. Both Seattle and Washington require utilities to maintain energy consumption data compatible with PM for each covered building for the most recent 12 months. The utilities are required to upload this data into PM upon owner authorization.

These three government agencies have set high goals or have high expectations in part for their policies. Seattle established a goal of improving the energy performance of its existing buildings by 20 per cent by 2020. Washington has set a goal to reduce its net annual energy consumption by 70 per cent under its 2031 energy code. San Francisco expects to reduce carbon dioxide emissions by 70,800 tons over the first five years after their policy's adoption with a net present value to the private sector exceeding \$600 million dollars. The Federal Government set similar goals through its Federal Energy Management Program requiring all federal agencies to lease ENERGY STAR certified space by 2010, reduce energy use intensity by 30 per cent by 2015 and, starting in 2020, design all new buildings to achieve net zero energy by 2030.<sup>6</sup>

## REFERENCES

1. Alpharetta Green City Program, Alpharetta, Georgia City Council, p. 1, 2009
2. City of Seattle Council Bill Number: 116731, Ordinance Number: 123226, pp. 1-6, Signed by Mayor Michael McGinn February 4, 2010.
3. San Francisco Existing Commercial Buildings Energy Performance Ordinance, pp. 1-18, Signed by Mayor Edwin Lee February 18, 2011.
4. State of Washington ENGROSSED SECOND SUBSTITUTE SENATE BILL 5854, State of Washington Legislature, pp. 1-13, April 2009.
5. State of Hawaii House Bill 1464, State of Hawaii Legislature, pp. 3-18, 2009.
6. Federal Energy Requirements, <http://epa.gov/greeningepa/energy/fedreq.htm>



