



Climate Smart Communities – Capital Region
Schenectady County
MEMORANDUM
April 2013

TO: Jaclyn Agostino, County Manager's Assistant
Jeff Edwards, Environmental Planner

RE: Benchmarking Schenectady County's Municipal Energy Performance in Portfolio Manager

FROM: Kari Hewitt, VHB
Todd Fabozzi, CDRPC

CLIMATE SMART COMMUNITIES OVERVIEW

The Climate Smart Communities (CSC) program is a New York State initiative to help local communities reduce greenhouse gas (GHG) emissions, prepare for the effects of climate change and save taxpayers money. The CSC program is designed to address 10 focus areas, or "pledge elements," outlined in the CSC Pledge. To support communities that have taken the pledge, the New York State Energy Research and Development Authority (NYSERDA) is offering technical assistance through the CSC Regional Coordinator Pilot Program, which, in the Capital Region, has been awarded to the Capital District Regional Planning Commission (CDRPC). Schenectady County adopted the CSC Pledge in 2009 and held an in-person technical assistance consultation with CDRPC and its consultant, VHB, on October 10, 2012.

STRATEGY OVERVIEW

During its in-person consultation with Schenectady County staff, one of the priorities identified for technical assistance was to update the County's Energy Star Portfolio Manager database and establish a more formal process to update it in the future.

Energy Star's Portfolio Manager is a free web-based energy benchmarking program hosted by the U.S. Environmental Protection Agency. It allows building owners to enter information about their buildings, including building characteristics, as well as energy consumption data, in order to benchmark energy consumption and track building performance over time. When the information is complete and up to date¹, the building will receive an efficiency rating, based on typical performance of buildings of similar type and characteristics. If a building receives a rating of 75 or higher, it becomes eligible for an Energy Star rating, meaning that it is performing in the top 25 percent of buildings of that type. The County can then apply for the Energy Star label and, once performance and building details are confirmed, receive an Energy Star plaque to display to building occupants and visitors. In addition to the benefit of recognition made possible through utilization of Portfolio Manager, this tool also provides one central database in which to track all of the County's buildings, energy use, and associated greenhouse gas emissions.

VHB worked with the County in 2012 to update its Portfolio Manager account by creating building profiles and collecting baseline data while the County's greenhouse gas (GHG) emissions inventory was

¹ Data is current within 120 days.



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being completed. Due to insufficient data for several departments, the building profiles were not completed and the energy data was outdated shortly after the project was completed. Under the CSC program, this project aimed to update and complete the database and provide the guidance necessary for the County to continually update the database moving forward.

UPDATE OF PORTFOLIO MANAGER

Buildings Data

VHB worked with Schenectady County staff to finalize the list of buildings that are owned and operated by the County, map utility accounts to each building, and identify specific building characteristics for each. This information was entered into the County's Portfolio Manager account. Building characteristics included space type, square footage, hours of operation, number of employees, percentage of conditioned space, and number of computers. These factors all influence the average energy performance of a building and are incorporated into the energy rating calculation.

Currently the County has 33 buildings in Portfolio Manager. Only eight of these buildings are receiving an energy rating at this time. A few of the remaining buildings are not receiving a rating because the fuel oil or propane data is not up to date. For others, it is because the building type is not one of the space types benchmarked in Portfolio Manager. That does not mean that the County shouldn't use the tool for tracking building energy performance, but those facilities cannot receive an energy rating or achieve the Energy Star designation. Buildings must also be larger than 5,000 square feet to receive a rating. For further information on the space type requirements for receiving a rating, visit:

http://www.energystar.gov/index.cfm?c=eligibility.bus_portfoliomanager_eligibility

It will be decision for the County to decide whether to continue to track those ineligible buildings in Portfolio Manager, though VHB recommends continued tracking as it will keep all County building data centrally located and also because other building types may become eligible for ratings in the future. Portfolio Manager has added new building types throughout the years that the program has been available.

Energy Data

Simultaneously, VHB worked with the County to collect energy consumption data for each building included in Portfolio Manager. During VHB's work with the County in 2012, data was collected for all fuel types for the year 2010 and part of 2011. For this update, VHB requested an update of data for all fuel types, but was only provided electricity and natural gas data. This was provided to VHB in a spreadsheet from the Finance Department via Jeff Edwards, Environmental Planner for the County. VHB synthesized this data and entered it into the County's Portfolio Manager for this project. Electricity and natural gas data is now current in Portfolio Manager through the end of 2012.

NEXT STEP RECOMMENDATIONS



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In order to maintain Portfolio Manager and continue to reap its benefits, the County must put in place a process for maintenance of data. Portfolio Manager is a benchmarking tool and is not beneficial as a snapshot in time. It is as dynamic as the buildings it's tracking and the County will need have a system in place for collection of data and updating of the tool, preferably with redundancies in staff training so that it can be maintained in the case of staff turnover, vacation time, or long-term leaves of absence.

Step 1: Assign a Staff Liaison to Maintain and Update Portfolio Manager

The Portfolio Manager tool is only beneficial if it is regularly maintained and updated. The County should assign a dedicated staff member to manage the collection and update of data in Portfolio Manager no less frequently than quarterly, but preferably on a monthly basis. This regular maintenance would include electricity and natural gas data collection and/or coordination with National Grid for data as well as collection of heating oil and propane consumption. It would also include making changes, as relevant, to building details and addition or subtraction of buildings from the County's overall portfolio.

Step 2: Institute a Process for Regular Data Collection and Updates

The County will need to institute a process through which data is regularly updated. In order to be eligible for a performance rating, energy data must be current within the last 120 days (4 months). Given that data is currently only entered through 2012, Portfolio Manager will need to be updated again with data from January through March 2013 as soon as possible because as of May 1, the accounts for which data ends December 2012 will be considered out of date. It is recommended that the staff liaison work with the County Finance Department to directly pull energy consumption, by account, before it is put into the Finance Department's standard spreadsheet. While that spreadsheet has been helpful for compiling data, it is inherently a cost tracking tool and is challenging to manipulate to pull total building energy usage. It will simplify things greatly for the designated Portfolio Manager updater to be forwarded utility bills monthly or quarterly to enter into the system or to establish a data transfer process with National Grid directly as discussed in Step 3.

In addition, heating oil and propane consumption were not provided by the County for this update. For those buildings using heating oil or propane, the consumption data will need to be updated in Portfolio Manager before they can receive an energy rating. The accounts, however, are already set up in Portfolio Manager for each of those buildings. Those buildings are: Scotia Branch Library, Duanesburg Branch Library (propane), Soil and Water Office, Soil and Water Pole Barn, Soil and Water Greenhouse, and the Horticulture Education Center. The staff liaison will need to work with the County Finance Department to establish a schedule for regular hand-off of propane and heating oil data. If provided in the form of invoices or receipts, the staff liaison will need to pull the consumption totals from those bills.



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There are a few optional updates that the County may wish to consider in addition, though not required for an energy rating. This includes entering monthly cost data so that consumption and cost are tracked together as well as adding water accounts and consumption data for each building.

Finally, where space use details were not provided by the County, VHB has entered default values. The County will need to provide actual values in order to qualify for the Energy Star label, though not for the energy rating alone. Any changes to these details will need to be updated regularly. It is recommended that the staff liaison confirms building characteristics with the Facilities Manager once per year to ensure information is still accurate. The Finance Department and Facilities Manager should also notify the staff liaison whenever a new account or building comes online.

Step 3: Establish a Relationship with National Grid

The County may want to consider reaching out to its account manager at National Grid. Portfolio Manager has an option in which the County can authorize the utility to directly upload monthly energy data into the Portfolio Manager system. This will streamline the process for County staff, saving time and ensuring accuracy of the electricity and natural gas data. National Grid likely already has experience doing this for other customers. If the County is unsure of who its account manager is or does not have one, it is recommended that staff contact the number provided on monthly bills to inquire about the utility's capabilities for automatic upload of its data to Portfolio Manager.

Additional Resources:

Energy Star Portfolio Manager:

<http://www.energystar.gov/>

The login information is available from Jeff Edwards, Environmental Planner for the County.

Building List and National Grid Data for 2011-2012:

Attached separately