County of Monterey

Board of Supervisors
Chambers
168 W. Alisal St., 1st Floor
Salinas, CA 93901

Board Report

File #: 17-0291, **Version:** 1

    a.   Receive a status update on the Energy Efficiency Measure Database and Dashboard; and,

    b.   Provide direction to staff as appropriate.

RECOMMENDATION:

It is recommended that the Alternative Energy & Environment Committee:

    a.   Receive a status update on the Energy Efficiency Measure Database and Dashboard; and,

    b.   Provide direction to staff as appropriate.

SUMMARY:

On December 12, 2016, the Alternative Energy and Environment (AEE) Committee directed staff to return to the March 23, 2017 AEE Committee meeting to provide an update on the Energy Efficiency Measure (EEM) Database and EEM Dashboard. The EEM Tracking Database and Dashboard were created by the Go Green! Monterey County program as a tool to collect greenhouse gas (GHG) emissions data for the Phase II Municipal Climate Action Plan (MCAP) update, and to show the County's progress towards reaching the County's climate action goals.

The EEM Database was designed to allow County staff access to online forms to enter information on projects resulting in energy savings and GHG emissions reductions. This provides an easy procedure for staff to update the MCAP with energy efficiency measures implemented after the development of the initial MCAP. The EEM Tracking Database also allows for Go Green! Program staff to verify and report on completed measures already outlined in the MCAP. The features built into the EEM Database ensure all projects that generate GHG emissions reductions are verified and reported by the Go Green! Monterey County Program.

While the EEM Database is used to collect and analyze GHG emissions reduction data, the EEM Dashboard is designed to display data in a way anyone can understand. The EEM Dashboard is linked directly to the EEM database so that verified data from energy efficiency measures are automatically incorporated into the County's overall GHG emissions reductions.

DISCUSSION:

The Monterey County Municipal Climate Action Plan (MCAP) was adopted by the Board of Supervisors in 2013. The MCAP outlines the County's goal to reduce municipal greenhouse gas (GHG) emissions to 15% below 2005 levels by the year 2020. For staff to track and report on outcomes of the MCAP measures, as well as measures implemented after the development of the MCAP, the Go Green! Program developed the Energy Efficiency Measure Database (EEM Database) and online Dashboard (EEM Dashboard).

Reporting New Energy Efficiency Measures

With the introduction of the EEM Database, County staff involved in energy efficiency projects developed after the implementation of the MCAP (referred to as "New Measures") will have the ability to report on their project. Staff will be given access to two user-friendly online forms: The Energy Upgrade Tracking Form and the Lighting Upgrade Tracking Form. The Energy Upgrade Tracking Form can be used to report data on any energy efficiency measure, except for lighting upgrades. All measures that involve lighting upgrades will be reported through a separate Lighting Upgrade Tracking Form. Data collected from the online forms are

streamed directly into the EEM Database, where data will then be analyzed and verified by Go Green! Program staff. For an illustration of this process, please see Attachment A.

Reporting MCAP Measures
Energy efficiency measures outlined in the MCAP (Attachment B) are pre-programmed in the EEM Tracking Database with estimated energy and GHG reduction data. Upon the completion of a MCAP measure, Go Green! Program staff verifies that the project was completed and analyzes the results of the measure. After verification, the measure is "switched on", meaning the pre-programmed and verified data is then included in the database as a completed measure. For an illustration of the process to report on MCAP measures, please see Attachment C.

Visualizing Outcomes
Data from verified projects in the EEM Database are programmed to stream directly into the EEM Dashboard, which is visualized as a "stacked line graph". The purpose of the EEM dashboard is to show the County's annual progress towards reaching the MCAP's goal of reducing GHG emissions to 15% below 2005 levels. The "live-streaming" EEM Dashboard is embedded directly in the Go Green! Monterey County website, allowing for quick updates without having to reconstruct and repost the dashboard.

Next Steps
The creation of the MCAP Database and Dashboard allows the Go Green! Program to collect and analyze data to be used for the Phase II (years 2013 - 2016) update of the MCAP. The EEM Database and Dashboard will also be used to track GHG emissions reductions for ongoing updates of the MCAP and to track cost avoidance resulting from all energy efficiency measures. This will require participation from various County staff to report ongoing projects that yield energy savings. Go Green! Program staff will provide training to selected staff on how to properly report measures using the Energy Upgrade Tracking Form and the Lighting Upgrade Tracking Form.

Next steps to complete the update of the MCAP are as follows:
- **May 1, 2017** - All energy efficiency measures from years 2013 - 2016 are verified and included in the EEM Database
- **June 22, 2017** - Go Green! Program to provide AEE with Phase II update of MCAP
- **July 2017** - Go Green! Program will begin training selected Monterey County staff for future energy efficiency measure reporting

OTHER AGENCY INVOLVEMENT:
The Municipal Climate Action Plan was prepared by the Resource Management Agency-Planning Department with contribution from various Monterey County departments. Staff from various County Agencies will be selected for training on the EEM Database.

FINANCING:
The Energy Efficiency Measure Tracking Database and Dashboard were creating using free online software. Approval of this recommendation will not result in additional general fund contributions.

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Approved by: Nicholas E. Chiulos, Assistant County Administrative Officer

Attachments:
    a. New Measure Data Flow Chart
    b. MCAP Measure Measures Pool (2013)
    c. MCAP Measure Data Flow Chart