

MCE Clean Energy: GHG's for Local Governments – City of Albany

The City of Albany Climate Action Plan considers Community Choice Aggregation as a possible measure for GHG reductions. The Climate Action Plan raises the following points for further consideration:

- 1) What percent of Carbon-Free electricity will the CCA provide immediately?
- 2) What percent of Carbon-Free electricity will the CCA provide in the future?
- 3) Will an increased Carbon-Free electricity product reduce the GHG-savings from Energy Efficiency measures?

MCE Clean Energy's program addresses all three of these considerations by providing choice in electric product as well as energy and water end-use efficiency programs.

Energy Supply Choices

MCE Clean Energy delivered a 60% Carbon-Free electricity product and a 100% Carbon-Free product since inception, without nuclear purchases. The direct emissions benefits are as follows:

Emission Factor 2010-2011	MCE Clean Energy* Light Green	MCE Clean Energy * Deep Green	PG&E
Pounds CO2_eq	343 pounds per MWh	0 pounds per MWh	419 pounds per MWh

**No nuclear purchases*

As the default service provider, MCE provides residents and business the Light Green cost-neutral solution for an immediate 20% reduction in GHG emissions and the Deep Green solution for a 100% in GHG emissions.

Emissions – Metric Tons	2004 Baseload	2020 Projection	2020 with MCE¹ Light Green	2020 with MCE Deep Green
Residential	5,929	6,487	5,190	0
Commercial/Industrial	8,641	9,651	7,739	0

MCE Clean Energy provides the option of 100% Renewable-Energy through our Deep Green program. Deep Green customers see immediate and significant emissions benefits. Future power supply depends on Deep Green participation. MCE's Integrated Resource Plan anticipates potential for an overall supply of over 90% Renewable Energy by 2020.

¹ MCE projections assume a 20% reduction in GHG-emissions from City of Albany future business-as-usual projections, consistent with the MCE's demonstrated performance. MCE's actual 2020 portfolio may have a greater GHG-free supply than indicated in this conservative projection.

Deep Green provides the City of Albany government buildings an immediate pathway zero-carbon buildings leading to 373 Metric Tons of Co2e reductions over the 2004 baseline. The estimated cost for this measure is \$10,000 per 1,000,000 kWh of renewable energy.

Assuming city buildings use 750,000 Kwh per year, the cost of this measure is \$7,500 for 373 metric tons, or \$20 per Metric Ton. Compare this to the proposed estimated cost of \$71,000 for city building data-monitoring equipment alone (Measure BE-1.1 B).

Further, MCE's Deep Green is anticipating a change to supply direct revenue to local solar project development, contributing to local resource capacity as well as an increased renewable supply.

Energy Efficiency Programs

MCE Clean Energy offers energy and water efficiency programs to all customers in our service territory, including those who do not choose MCE electric service. These efforts provide additional emission reduction benefits that complement our 100% renewable supply option.

Energy efficiency measures represent real-time demand reductions. Each and every energy efficiency measure, including solar energy deployment, reduces the real-time demand the City of Albany places on the larger electric grid. When real-time demand is reduced, fewer electricity resources are needed for reliability purposes in the electric grid. For this reason, MCE supplying the City of Albany with 100% renewable energy on a yearly supply-and-demand basis does not negate the statewide emission benefits of real-time demand reduction. Demand reduction measures should be tracked on the basis of City peak demand reductions (MW), applying a statewide peak-energy emission factor, rather than on the basis of end-use energy totals (MWh's).

Further, the local structure of CCA programs provides numerous other benefits related to City of Albany's long-term sustainability goals. For example,

Measure BE-1.1 A: Renewable Energy Systems

-MCE's Feed-In Tariff program offers an opportunity for large-scale solar development. A Feed-In tariff project is similar to having a small renewable power plant located within the City, increasing reliability and local self-sufficiency. Net-export renewable development at the 1 MW scale is not possible without MCE's Feed-In Tariff.

-MCE's Net Energy Metering program offers increased return on home solar investments by valuing all excess generation as renewable energy. MCE's program is the only one in the state to offer full and unaltered payout of generation credits. In some cases, this results in over \$1,000 of additional yearly revenue to solar systems under MCE's program.

Measure BE-1.1 B and 4.1: Building Performance Data Analysis

-MCE has access to Smart Meter data and provides free analytical tools through Planet Ecosystems as well as custom data analysis reports for large customers. A unique focus of our

Energy Efficiency program is behavior modification through data access and information sharing.

Measure BE-2.1: Energy Efficiency and Renewable Energy Investments in Community

-MCE's program is a full-service, comprehensive approach to Community-wide sustainability efforts. MCE provides marketing and outreach in addition to direct install, rebates, and financing.

Measure BE-2.2 A & B: On-Bill Financing and Low-Interest Loans for Upgrades

-MCE is developing the first-in-state On-Bill Repayment program for our 2013-2014 Energy Efficiency program. MCE is in negotiations with local banks to secure the low-interest finance offering for customers. Managing this process at the Utility level provides simplified program administration and billing procedures, allows customers to avoid the up-front cost of energy efficiency investments, and creates financial risk to the City.

Measure GI-1.1: Urban Forestry

- MCE is pursuing EnerTrees Urban Forestry program

Measure WC-1.1: EBMUD Water Conservation

- Planet Ecosystems Software Tool includes EBMUD water programs and rates in their analysis software and recommended measures.

Measure TL-4.3A: Electric Vehicle Charging Station Infrastructure

-MCE has contributed funds to deployment of charging station infrastructure in our service area.

In closing, the ability to partner with other local governments through a self-financed energy-focused Joint Powers Authority provides numerous supplemental benefits for the development and deployment of community sustainability efforts. Proper consideration of the long-term benefits of Community Choice Aggregation must include the avenues for reinvestment of electric revenue into local community programs.