

## **Attachment 1: Description of Emission Reduction Measure Form**

Please fill out one form for each emission reduction measure. See instructions in Attachment 2.

**Title: Accelerated Zero-Carbon Energy Procurement - Competitive Renewable Energy Zones**

**Type of Measure (check all that apply):**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Direct Regulation             | <input type="checkbox"/> Market-Based Compliance          |
| <input type="checkbox"/> Monetary Incentive                       | <input type="checkbox"/> Non-Monetary Incentive           |
| <input type="checkbox"/> Voluntary                                | <input type="checkbox"/> Alternative Compliance Mechanism |
| <input type="checkbox"/> Other Describe: <b>Planning Function</b> |   |

**Responsible Agency: CEC, CPUC and ISO**

**Sector:**

- |   |  |
|---|--|
| <input type="checkbox"/> Transportation   | <input checked="" type="checkbox"/> Electricity Generation |
| <input type="checkbox"/> Other Industrial | <input type="checkbox"/> Refineries                        |
| <input type="checkbox"/> Agriculture      | <input type="checkbox"/> Cement                            |
| <input type="checkbox"/> Sequestration    | <input type="checkbox"/> Other Describe:                   |

**2020 Baseline Emissions Assumed (MMT CO<sub>2</sub>E): 100.095 MMT CO<sub>2</sub>e**

**Percent Reduction in 2020: 14.2% (based on 33% RPS)**

**Cost-Effectiveness (\$/metric ton CO<sub>2</sub>E) in 2020: \$7.04/MMT CO<sub>2</sub>e**

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**Description:** The two policies that have the greatest impact on renewable energy procurement now and into the future are the current RPS policy of 33% renewables by 2020 and legal requirement pursuant to AB 32, to reduce overall GHG emissions to 1990 levels by 2020, and the Governor's Executive Order S-3-05 to reduce GHGs to 80% below 1990 levels by 2050. The long-term goal of 80% reductions in GHG emissions below 1990 levels by 2050 requires that the 2020 renewable targets be achieved, and that the target be increased incrementally thereafter to meet 80% reductions below 1990 levels. By increasing the required amount over time, a renewables purchasing requirement can put the electricity industry on a path toward increasing sustainability, and yield substantial economic and public health benefits, protection against the price volatility and environmental risk associated with fossil fuels, and an increase in in-state skilled jobs.

California has more than enough renewable potential within and near its borders to provide all of our electric energy needs, far greater than 33% renewables. Renewable

development is often slowed by such issues as multiple levels of siting jurisdiction, years-long siting processes, clogged transmission queue, and other snags. California must alleviate these barriers and set clear goals for renewable development. The establishment of competitive renewable energy zones (CREZs) with a coordinated “master” siting documents, transmission planning and resource development process are crucial to making a fundamental shift away from ongoing dependence on fossil electric energy resources.

The infrastructure additions needed to deliver energy from renewable resource areas to load centers will be around for a long time, and planning for that infrastructure must be with an eye to 2050, as the design life of transmission infrastructure will extend beyond 2050. Policy makers must set clear targets for renewable energy for how much renewable power will be needed in the years between 2020 and 2050.

Competitive renewable energy zones are regions that contain renewable resources of significance. Colorado and Texas each passed laws in 2007 to spur in-state renewable development which require: 1) the designation of CREZs and transmission development plans to access the energy in those zones, and 2) transmission development to bring the electricity from the CREZs to load centers. The process of identifying and assessing CREZs in California is underway. The California Energy Commission (CEC) and the California Public Utilities Commission (CPUC) recently began an initiative called the Renewable Energy Transmission Initiative (RETI). It is important that agencies and LSEs not delay their existing transmission development plans to wait for the outputs of the RETI planning process.

The RETI will identify and assess renewable resource zones in the state, and develop coordinated, cost-effective resource development and conceptual transmission plans that could provide enough renewable electricity to consumers by 2020 to meet AB 32 targets. The work of the RETI will take place over two years in three phases. The agencies could use the outputs of the RETI as a tool in executing a plan to achieve 33% renewables and 2020 and 2050 greenhouse gas reduction targets.

The California Air Resources Board, in collaboration with the state’s energy agencies, should, therefore, do all of the following:

- 1) Set clear targets for the amount of renewable power that the state will need to support both a) its greenhouse gas reduction requirements for 2020 and goals for 2050 and b) furtherance and acceleration of policies to develop renewables for all of their recognized benefits;
- 2) Set priorities for resources and regions to be developed first and the associated timetable to achieve 2020 and 2050 goals, in consideration of the outputs of the RETI process and local economic challenges and opportunities; and,
- 3) Examine permitting and siting hurdles and develop a coordinated “master” siting process and certification for each CREZ.

**Emission Reduction Calculations and Assumptions:** Total emission reductions are based on a 33% RPS, and are assumed to be 11 MMT CO<sub>2</sub>E for the IOUs, and 3.2 additional MMT CO<sub>2</sub>E from municipal utilities.

**Cost-Effectiveness Calculation and Assumptions:** The Updated Macroeconomic Analysis provides \$100 million in 2020 for the cost of a 33% RPS for just the IOUs. This Analysis assumes that a similar RPS requirement for municipal utilities will not result in increased costs.

**Implementation Barriers and Ways to Overcome Them:** We do not anticipate substantial implementation barriers beyond adopting the policy itself. Such issues as agreeing upon priority zones, and transmission and development plans will likely require negotiation between parties, as with all new policies.

**Potential Impact on Criteria and Toxic Pollutants:** Renewable energy is zero or near-zero emissions. Displacing natural gas burning generation with renewable energy resources will result in substantial reductions in all criteria air pollutants, especially nitrogen dioxide (NO<sub>x</sub>).

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