



MCE 2022 Emission Factor Certification Template, as provided by The Climate Registry:

[Customer] may use Marin Clean Energy's (MCE) 2022 emission factor in their voluntary greenhouse gas report submitted to The Climate Registry. Please note that during the 2022 calendar year MCE, the first operating Community Choice Aggregation program in California, offered three distinct retail supply options: 1) Light Green, which is the default retail supply option (MCE has committed to delivering Light Green customers a minimum 60% renewable energy supply); 2) Deep Green, a voluntary retail supply option that procures 100% renewable energy for participating MCE customers; 3) Local Sol, a voluntary retail supply options that sources 100% of participating customer energy requirements from photovoltaic solar generators located within MCE's service territory; and 4) Green Access.

With respect to the Light Green retail supply option, the 2022 emission factor attributed to this offering was determined to be 44 pounds of carbon dioxide equivalent per megawatt hour (lbs. CO₂e/MWh¹). For the Deep Green, Local Sol and Green Access retail supply options, the 2022 emission factor attributed to each service option was determined to be zero lbs. CO₂e/MWh, as a result of MCE delivering 100% carbon-free renewable energy to participating customers. When considered in aggregate, the emission factor attributed to MCE's total portfolio, which reflects the procurement of resources sufficient to supply all MCE customers (Light Green, Deep Green, Local Sol and Green Access), was determined to be 42 lbs. CO₂e/MWh for the 2022 calendar year - this statistic has been calculated for informational purposes only. In reporting to The Climate Registry, [Customer] has selected the appropriate emissions factor corresponding with the retail supply option(s) under which [Customer] received electric service during the 2022 calendar year. Note that all 2022 emission factors compiled by MCE reflect applicable regulations related to California's Power Source Disclosure (PSD) Program.

MCE has calculated its 2022 emission factor of 44 lbs. CO₂e/MWh for the Light Green product and zero lbs. CO₂e/MWh for the Deep Green, Local Sol and Green Access products based on the aforementioned PSD-prescribed methodology:

1. Light Green retail electricity product: MCE diligently plans for and procures electricity to provide clean power supply for Light Green customers. During the 2022 calendar year, MCE delivered a total of 5,307,105 MWh to Light Green customers of which 3,187,702 MWh (60.1% of total) were supplied from California Renewables Portfolio Standard (RPS) eligible sources, such as landfill gas, geothermal, small hydroelectric, solar and wind - these RPS-eligible renewable energy volumes were used to demonstrate compliance with California's RPS and were retired through the Western Renewable Energy Generation Information System (WREGIS) consistent with applicable regulatory guidelines. MCE also delivered 2,118,850 MWh (39.9% of total) from ultra-low carbon Asset Controlling Supply² and non-polluting hydroelectric generators. The aforementioned resources, which comprised nearly 100% of MCE's Light Green supply portfolio, resulted in a supply portfolio that was substantially carbon-free based on PSD emission accounting regulations related to the various energy products procured by MCE. A very small portion of MCE's Light Green portfolio was

¹ Based on available emission factors for the carbon-emitting power sources included in MCE's 2022 supply portfolio, MCE has utilized CO₂e, or carbon dioxide equivalent, when expressing the emissions intensity of its power supply portfolio to retail customers, which reflects the impacts of multiple greenhouse gasses, such as carbon dioxide, nitrous oxide and methane, in a single unit of measurement.

² Asset Controlling Supply, or ACS, is a clean-energy product that is assigned an emission factor by the California Air Resources Board (CARB). Such emission factors are near-zero, reflecting the predominant use of hydroelectricity within ACS supply portfolios. In 2022, there were two ACS entities registered with CARB: Bonneville Power Administration and Tacoma Power. MCE procures energy from ACS suppliers, as needed, to complement its purchases of renewable energy and hydroelectricity to serve Light Green customers. When calculating its Light Green emissions factor, MCE applies CARB's assigned emissions metrics to any/all ACS volumes. For additional information regarding ACS, please visit: <https://ww2.arb.ca.gov/mrr-acs>.

supplied from residual natural gas volumes included in Asset Controlling Supply or unspecified power sources, or “system power”. For MCE’s system power purchases, which totaled 26,064 MWh, or less than 1% of total Light Green purchases, the California Air Resources Board (CARB) has assigned an emission rate approximating 943.58 lbs. CO₂e/MWh – MCE applied this emission factor to all system power volumes when compiling its Light Green emissions statistic for 2022. For purposes of determining MCE’s Light Green emission factor for the 2022 calendar year, total portfolio emissions were determined to be approximately 232 million pounds. The total of 232 million pounds of CO₂ equivalent was divided by the total delivered Light Green electricity volume of 5,307,105 MWh, resulting in a 2022 Light Green emission factor of 44 lbs. CO₂e/MWh.

2. Deep Green retail electricity product: MCE offers the Deep Green, 100% renewable energy retail supply option on a voluntary basis. During the 2022 calendar year, MCE supplied a total of 216,508 MWh to Deep Green customers, all of which was supplied by RPS-eligible generators; associated renewable energy certificates were retired through WREGIS consistent with applicable regulatory guidelines. As a result of the 100% renewable energy supply that was delivered to Deep Green customers, the attributed emission factor was determined to be zero lbs. CO₂e/MWh.

3. Local Sol retail electricity product: MCE’s Local Sol service option provided participating customers with 100% renewable energy produced by a photovoltaic solar generator located within MCE’s service territory. During the 2022 calendar year, MCE supplied a total of 1,365 MWh to Local Sol customers, all of which was supplied by an RPS-eligible solar generator; associated renewable energy certificates were retired through WREGIS consistent with applicable regulatory guidelines. As a result of the 100% renewable energy supply that was delivered to Local Sol customers, the attributed emission factor was determined to be zero lbs. CO₂e/MWh.

4. Green Access retail electricity product: MCE’s Green Access service option provided participating customers with 100% renewable energy produced by a California-sited photovoltaic solar generator. During the 2022 calendar year, MCE supplied a total of 10,984 MWh to Green Access customers, all of which was supplied by an RPS-eligible solar generator; associated renewable energy certificates were retired through WREGIS consistent with applicable regulatory guidelines. As a result of the 100% renewable energy supply that was delivered to Green Access customers, the attributed emission factor was determined to be zero lbs. CO₂e/MWh.

MCE’s Total Attributed Portfolio Emission Factor (2022): to determine MCE’s total attributed portfolio emission factor for the 2022 calendar year, which reflects the procurement of resources sufficient to supply Light Green, Deep Green, Local Sol and Green Access customers, MCE’s total portfolio emissions of 232 million pounds of CO₂ was divided by total retail sales to all MCE customers (Light Green, Deep Green, Local Sol and Green Access), which equaled 5,535,963 MWhs.³ The resultant attributed emission factor for MCE’s total supply portfolio was determined to be 42 lbs. CO₂e/MWh.

With respect to the noted renewable energy and hydroelectric purchases included within MCE’s Light Green, Deep Green, Local Sol and Green Access energy supply portfolios, MCE has retained all pertinent transaction records, including evidence of applicable renewable energy certificate retirements (within WREGIS), to substantiate its procurement activities and emission factor calculations. When determining the aforementioned attributed emission factors, MCE has only reflected the impacts of renewable and carbon-neutral/carbon-free resources for which it owns and possesses applicable renewable energy certificates and/or transaction records. All applicable renewable energy certificates are held in MCE’s WREGIS account until such time that certain certificates must be “retired” to demonstrate mandatory and/or voluntary compliance.

³ The sum of MCE’s Light Green, Deep Green, Local Sol and Green Access energy sales may not equal total reported MCE retail sales due to numeric rounding.

Any questions regarding the previously noted emission factors and/or related calculations should be directed to the following point of contact:

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