



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

March 21, 2012

Mr. Ken Alex, Director
Office of Planning and Research
Office of Governor Edmund G. Brown Jr.
State Capitol, First Floor
Sacramento, California 95814

Dear Mr. Alex:

Pursuant to Assembly Bill 900, the Governor may certify certain projects for streamlining under the California Environmental Quality Act (CEQA) if certain conditions are met. One condition for the Governor's certification is that a project does not result in any net additional emission of greenhouse gases (GHG), including GHG emissions from employee transportation, as determined by the Air Resources Board (ARB).

On January 12, 2012, in accordance with the Governor's Guidelines for applications for the CEQA streamlining, McCoy Solar, LLC submitted to ARB an Air Quality and Greenhouse Gas Technical Report (Report) for its proposed McCoy Solar Energy Project (Project). The Report included a proposed methodology for quantifying the net additional GHG emissions from the Project and documentation that the Project does not result in any net additional GHG emissions. After evaluating the Report in consultation with the lead agency, ARB found that it provided an adequate technical basis for estimating the total GHG emissions and required mitigation for the Project. Based on the information submitted, ARB staff has determined that McCoy Solar Energy Project will not result in any net additional GHG emissions.

I have enclosed ARB's Executive Order noting our determination. ARB staff's evaluation of the Air Quality and Greenhouse Gas Technical Report submitted by McCoy Solar, LLC is included in Attachment A and the Report is included in Attachment B.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

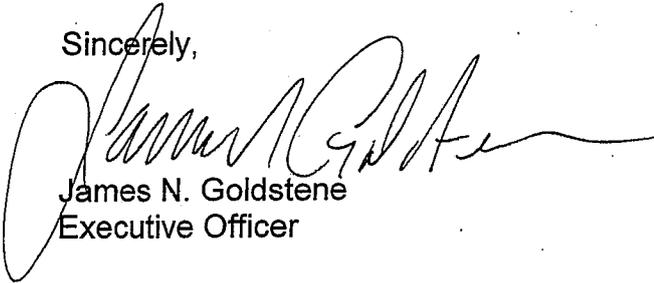
California Environmental Protection Agency

Mr. Ken Alex, Director

March 21, 2012

If you have questions regarding ARB's evaluation or determination, please contact Mr. Richard Corey, Deputy Executive Officer, at (916) 322-2890 or by e-mail at rcorey@arb.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "James N. Goldstene". The signature is fluid and cursive, with a long horizontal stroke at the end.

James N. Goldstene
Executive Officer

Enclosure(s)

cc: Richard Corey
Deputy Executive Officer

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER LP-12-001

**Relating to Determination of Any Net Additional Greenhouse Gas Emissions
Pursuant to Public Resources Code section 21183(c)**

For McCoy Solar Energy Project, McCoy Solar, LLC

WHEREAS, in September 2011, Governor Brown signed Assembly Bill 900, "Jobs and Economic Improvement through Environmental Leadership Act" (AB 900);

WHEREAS, in accordance with AB 900, the Governor may certify certain projects for streamlining under the California Environmental Quality Act (CEQA) if certain conditions are met;

WHEREAS, in accordance with California Public Resources Code section 21183, subdivision (c), one condition for the Governor's certification is that the project does not result in any net additional emission of greenhouse gases (GHGs), including GHG emissions from employee transportation, as determined by the Air Resources Board (ARB);

WHEREAS, the Governor's Guidelines for applications for the CEQA streamlining require, for purposes of ARB's determination on GHGs, that an applicant submit electronically to ARB a proposed methodology for quantifying a project's net additional GHGs and documentation that the project does not result in any net additional GHGs;

WHEREAS, in accordance with the Governor's Guidelines, McCoy Solar, LLC submitted its GHG methodologies and documentation to ARB on the proposed McCoy Solar Energy Project (Project) on January 12, 2012;

WHEREAS, the Air Quality and Greenhouse Gas Technical Report (Report) submitted for the McCoy Solar Energy Project states that the Project's estimated GHG emissions are as follows:

1. Construction GHG Emissions: 12,672 metric tons of carbon dioxide equivalent (MTCO_{2e}) generated by the equipment used for construction activities and from both on-site and off-site motor vehicles;
2. Direct Operation-Related GHG Emissions: 3,360 MTCO_{2e} from fossil fuel combustion used to support operation of the facility, including employee transportation;
3. Indirect Operation GHG Emissions: 3,120 MTCO_{2e} emissions from electricity use and sulfur hexafluoride usage associated with electrical switchgear;

4. Total Project Lifetime GHG Emissions: 19,152 MTCO₂e from construction and operation of the Project during a projected 30-year operational lifetime;

WHEREAS, in the Report submitted, McCoy Solar, LLC proposes to secure 19,152 MTCO₂e carbon credits through a voluntary carbon credits market such as the New York Stock Exchange Blue Registry, or from a similar type of voluntary carbon credit registry, to mitigate the total identified construction and operational GHG emissions prior to the commencement of the Project;

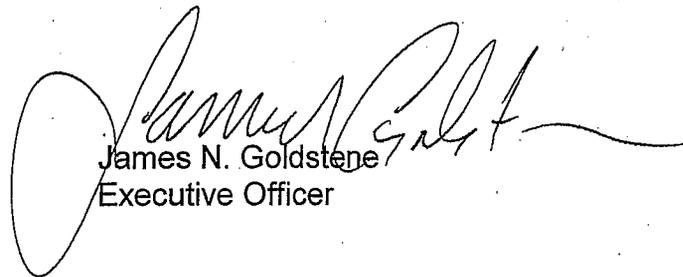
WHEREAS, ARB staff has reviewed and evaluated the submitted Report in consultation with the lead agency; prior to finalizing its determination, staff shared a draft of its evaluation with the lead agency;

WHEREAS, staff's evaluation of the Report found that it provides an adequate technical basis for estimating the total GHG emissions and required mitigation for the Project; and

WHEREAS, ARB's review and evaluation of the Project's GHG emissions is for the limited purpose of the Governor's findings and certification under AB 900; ARB's determination is not in lieu of any findings or determination required to be made by the lead agency or a responsible agency pursuant to any other requirement under state or federal law, including CEQA; the lead agency remains responsible for full compliance with CEQA for this project.

NOW, THEREFORE, based on ARB staff's evaluation (Attachment A) of the Air Quality and Greenhouse Gas Technical Report submitted by McCoy Solar, LLC (Attachment B), I determine that McCoy Solar Energy Project will not result in any net additional greenhouse gas emissions pursuant to Public Resources Code section 21183(c).

Executed at Sacramento, California this 21 day of March 2012.


James N. Goldstone
Executive Officer

Attachment(s)

Attachment A

Air Resources Board
Staff Evaluation

This page intentionally left blank

Air Resources Board Evaluation
of Greenhouse Gas Emission Methodologies and Documentation
Pursuant to Public Resources Code Section 21183, subdivision (c)

Project Information

Project Name: McCoy Solar Energy Project

Project Applicant: McCoy Solar, LLC

Project Location: Unincorporated portion of Riverside County near the city of Blythe

Project Description: The proposed McCoy Solar Energy Project (MSEP or Project) would be an up to 750 megawatt (MW) net alternating current solar power generating installation. The Project would utilize photovoltaic (PV) technology for the generation of electricity. The entire 750 MW Project would be comprised of two power units—Unit 1 would have a capacity of 250 MW and Unit 2 would have a capacity of up to 500 MW. The Project would be developed over an area of approximately 4,315 acres of federal land managed by the Bureau of Land Management (BLM) and 477 acres of private land, plus an approximately 15.5-mile long transmission line right-of-way. The applicant expects the Project to have a 30-year operational life.

AB 900 Standards and Applicants Proposed Method of Compliance

The Governor may certify a project for streamlining pursuant to Assembly Bill 900 "Jobs and Economic Improvement through Environmental Leadership Act" if certain conditions are met. (Public Resources Code § 21178 et seq.) One such condition is that the "project does not result in any net additional emission of greenhouse gases, including greenhouse gas emissions from employee transportation, as determined by the Air Resources Board pursuant to Division 25.5. (commencing with Section 38500) of the Health and Safety Code." (Public Resources Code § 21183, subdivision (c).)

In accordance with the Guidelines established by the Governor for applying for the streamlining, McCoy Solar, LLC submitted an "Air Quality and Greenhouse Gas Technical Report" (Report) for the proposed Project to the Air Resources Board (ARB) for review and evaluation. The Report states that combining the total construction and operational GHG emissions, the proposed Project would emit an estimated 12,672 metric tons carbon dioxide equivalent (MTCO_{2e}) greenhouse gas (GHG) emissions during construction and 6,480 (216 x 30 years) MTCO_{2e} GHG emissions during operation, for a total of 19,152 MTCO_{2e} of GHG emissions.

The Report states that the proposed Project will result in the displacement of more GHG intensive forms of energy production, and therefore, would result in an overall net reduction in GHG emissions. However, the Report states that to ensure the proposed Project meets the requirements of Public Resources Code section 21183, subdivision (c), McCoy Solar, LLC has proposed to secure voluntary carbon credits equivalent to 19,152 MTCO_{2e} to mitigate the GHG emissions expected to be generated during construction and operation of the proposed Project. By mitigating the total projected

GHG emissions, the Report concludes that the proposed project will not result in any net additional GHG emissions.

The Report states that a joint Environmental Impact Study (EIS)/Environmental Impact Report (EIR) is being prepared for the proposed Project pursuant to the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). Prior to approval of the proposed Project, the EIS/EIR must be certified by the lead agency (Riverside County) and a mitigation monitoring and reporting plan must be adopted. The Report states that the applicant expects that all mitigation measures necessary to ensure compliance will be included in the mitigation monitoring and reporting plan, as conditions of project approval, or both. According to the Application for CEQA Streamlining Under the "Jobs and Economic Improvement through Environmental Leadership Act" submitted with the Report, the applicant will be required to implement all mitigation measures contained in the mitigation monitoring and reporting plan and adhere to all conditions of project approval set forth by Riverside County and the BLM.

GHG Emissions Calculation Methodology

The Report evaluated the emissions of six categories of GHGs: carbon dioxide, nitrous oxide, methane, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. Carbon dioxide (CO₂), nitrous oxide (N₂O), and methane (CH₄) are GHGs emitted by combustion sources and would be directly emitted by the equipment and vehicles used for constructing the Project. Sulfur hexafluoride (SF₆) may be emitted from some types of electrical switchgear associated with the Project. The Report states that the Project is not expected to result in any emissions of hydrofluorocarbons (HFCs) or perfluorocarbons (PFCs).

The Report states that although CO₂ is expected to be the primary GHG of concern for this project, emissions of CH₄, N₂O, and SF₆ were also estimated. ARB staff agrees that in most cases CO₂ drives the projected GHG emissions associated with fuel combustion. ARB staff expects that there may be SF₆ emissions associated with the Project due to gas-insulated switchgear being used in conjunction with the Project. ARB staff would not expect any HFC or PFC emissions associated with the Project because of the specialty nature of these compounds, one of the most common forms of usage is as a refrigerant.

The CO₂ emissions from construction equipment use were estimated in the Report using the same methodology used to estimate criteria pollutant emissions. This methodology employs the URBEMIS model to estimate CO₂ emissions. Emissions of N₂O and CH₄ were estimated using the CO₂ emissions calculated by URBEMIS and CO₂, N₂O, and CH₄ emission factors obtained from The Climate Registry Default Emission Factors (2011) for diesel fuel combustion. The URBEMIS default load factors were revised by the applicant to reflect the revised load factors proposed by the Air Resources Board (ARB) in *The Amendments to the Regulations for In-Use Off-Road*

Diesel-Fueled Fleets and Off-Road Large Spark Ignition Engine Fleet Requirements (2010).

The Report explains that URBEMIS is the model recommended by the Mojave Desert Air Quality Management District. ARB staff agrees that URBEMIS with revised load factors is an appropriate model for estimating CO₂ emissions from mobile equipment. Staff agrees that using CO₂ emissions from URBEMIS and back-calculating comparable N₂O and CH₄ emissions from Climate Registry emission factors is a reasonable way to estimate these emissions.

In the Report, GHG emissions from motor vehicles used during construction were estimated using the same methodology used to estimate criteria pollutants from construction vehicles by using ARB's EMFAC2007 model. Since the EMFAC2007 model provides emission factors for CO₂ emissions only, the Report used emission factors for N₂O and CH₄ for different vehicle types from ARB's Regulation for The Mandatory Reporting of Greenhouse Gas Emissions, Appendix A, Table 8 (ARB's mandatory reporting program).

ARB staff agrees with the use of EMFAC2007 for the estimation of emissions factors for motor vehicles. Staff agrees that using the CO₂ emissions from the model and back-calculating to obtain N₂O and CH₄ emissions from ARB's mandatory reporting program is a reasonable method to obtain those emission estimates.

The Report estimated GHG emissions during construction generated by motor vehicles within the Mojave Desert Air Basin (MDAB) (i.e., worker trips to and from site and deliveries of construction materials). The applicant has not decided at the time of submission where the PV panels will be obtained from for the Project. The Report states that, in order to provide a conservative estimate of GHG emissions from the delivery of the panels, GHG emissions were estimated based on an assumed round trip for delivery of panels from the Port of Long Beach. The Report split GHG emissions due to panel delivery trips into those emissions that would occur inside of and outside of the MDAB as provided in the table below.

Report's Construction GHG Emission Estimates (MTCO₂e)

Calendar Year	Within MDAB	Outside of MDAB	Total
2013	1,945	362	2,307
2014	2,500	627	3,127
2015	2,567	549	3,116
2016	3,197	925	4,122
Total	10,209	2,463	12,672

The Report states that the Project's operation would emit GHGs from the use of equipment and vehicles. It further states that GHGs could be emitted as fugitive emissions from electrical switchgear that contains SF₆ and indirect GHG emissions due to electricity use from off-site generators.

The Report estimated GHG emissions for on-site equipment based on anticipated fuel use and emission factors from The Climate Registry's Default Emission Factors (2011). The Report estimated vehicle emissions using the same methodology used to estimate vehicle emissions during construction. SF₆ emissions were assumed to be emitted at half the allowable level for calendar year 2020 under ARB's Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear (California Code of Regulations, title 17, sections 95350 – 95359).

ARB staff agrees that using projected fuel usage from equipment and vehicles is a valid basis for estimating GHG emissions from these devices. The Climate Registry is a reasonable source for emission factors from these devices. Staff agrees that this is an appropriate methodology for the same reasons as were detailed under the review of the applicant's estimation of GHG emissions from equipment used during construction.

ARB adopted a regulation pertaining to the maximum allowable SF₆ emission rate from gas insulated switchgear. The regulation starts at a ten percent leak rate allowed in 2011 and decrease one percent per year until it reaches a one percent allowable leak rate in 2020. The Report assumed that the switchgear used would emit at the rate of one-half of a percent, based on installed capacity, annually from the time of installation through the life of the project. Currently available new switchgear typically has a maximum leak rate of one-half percent or less. As such, ARB staff agrees that the applicant used a reasonable estimation of SF₆ emissions.

Report's Annual GHG Emission Estimates from Project Operation

	Annual Emissions (MTCO₂e/yr)
Fossil Fuel Combustion	112
Indirect Electricity Use	24
Fugitive Sulfur Hexafluoride	80
Total Annual Operations	216

The Report derived the Project's total GHG emissions by combining construction and operational GHG emission for a 30-year project life. This yields a total GHG estimate of 19,152 MTCO₂e. Based on the staff evaluation of the calculations for estimating emissions as described above, staff agrees that 19,152 MTCO₂e is a reasonable estimate of the Project's total GHG emissions over the lifetime of the Project.

Carbon Credits

McCoy Solar, LLC proposes to secure voluntary carbon credits from NextEra Energy Resources, LLC (the parent company of McCoy Solar, LLC) or from a similar type of voluntary credit generator. The applicant submitted the following information regarding the carbon credits that they are proposing to use to mitigate the GHG emissions from the Project. In 2010, NextEra Energy Resources submitted the Capricorn Ridge 4 wind project to the Voluntary Carbon Standard (VCS, now called the Verified Carbon

Standard) to generate carbon offset credits. The 112.5 MW project is located in Sterling and Coke counties in West Texas. First Environment, a "qualified third party," verified the creation of the Verified Carbon Units (VCUs) for the renewable generation from the project for periods from January 1, 2010 through September 30, 2010, accounting for over 100,000 metric tons of carbon credits. The majority of these VCUs have been sold in the voluntary carbon offset market, with the remaining VCUs still residing in NextEra Energy Resources' NYSE Blue (APX) registry account. The Report states that the applicant would secure 19,152 metric tons CO₂e of these remaining VCUs, or similar carbon credits, to mitigate the construction and operations of the Project. As McCoy Solar is a wholly owned subsidiary of NextEra Energy Resources, ARB staff believes that the potential for the Project to procure these credits is enhanced by this business relationship.

ARB staff reviewed the information available on the VCS website and found that the VCS registry is consistent with the registry required to be used for renewable energy projects to demonstrate compliance with the Renewable Portfolio Standard as amended by Senate Bill 2 of the first extraordinary session of 2011. VCS issues individual certificates with unique serial numbers. The unique serial numbers allows for the tracking of all transactions involving certificates and prevents multiple claims against the same credits. Credits can be tracked through the registry from issuance through retirement. According to VCS, its registry operators must meet strict capitalization, transparency, and other requirements. The VCS system currently has three international registries: NYSE Blue, Markit, and CDC Climat. After reviewing information about VCS, ARB staff believes that the credits the applicant is proposing to use would be acceptable for CEQA mitigation of the GHG emission impacts due to the Project.

Conclusions/Recommendations

The ARB staff reviewed the GHG emission estimates and the methodology provided by the applicant. During its review, ARB staff had numerous conversations with the CEQA lead agency, the County of Riverside, and consultants working on the CEQA evaluation for this Project. Based on these discussions with lead agency representatives, staff concluded that the emissions estimates and methodology submitted to ARB are generally consistent with how the lead agency is planning to evaluate the Project's GHG emissions. The lead agency's approach may evaluate the GHG emissions from a couple of potential sources (e.g. carbon embedded in water used for the project) that are not calculated in the Report submitted to ARB. However, there is a less than one percent difference in estimated GHG emissions between the two estimation approaches. Based on discussions with the lead agency's consultant, ARB staff and the consultant agree that the differences in calculations are negligible.

Based on the staff's evaluation of the documentation provided in the Report and the discussions with the lead agency's consultants, staff concludes that the project applicant has reasonably documented and estimated the Project's anticipated GHG

emissions. If McCoy Solar, LLC secures the proposed GHG emission credits described in the Report, then the Project's estimated GHG emissions would be fully mitigated.

Based on this evaluation, ARB staff recommends that a determination be made that the McCoy Solar Energy Project does not result in any net additional emission of greenhouse gases, including greenhouse gas emissions from employee transportation, pursuant to Public Resources Code section 21183, subdivision (c).