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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking To Continue Implementation and Administration, and Consider Further Development, of California Renewables Portfolio Standard Program.

Rulemaking 18-07-003

ADMINISTRATIVE LAW JUDGE'S RULING REQUESTING COMMENTS ON THE BIOENERGY MARKET ADJUSTING TARIFF STAFF PROPOSAL

This ruling requests comments on the Energy Division Staff Proposal on Bioenergy Market Adjusting Tariff (BioMAT). Responses to the questions on the BioMAT proposal are due no later than April 1, 2020; replies are due no later than April 15, 2020.

1. Background

The BioMAT is a feed-in-tariff program created by Senate Bill 1122 (Rubio), Stats. 2012, ch. 612. This legislation amended Public Utility (Pub. Util.) Code § 399.20 (the “feed-in tariff” provisions) of California’s renewables portfolio standard (RPS) program and established a 250 megawatts procurement program for small-scale bioenergy projects. The program was implemented in 2014 and uses a standard contract and a market-based mechanism to arrive at the offered program contract price.¹ Electricity generated as part of the BioMAT program must count towards the utilities’ RPS targets.

¹ See Decision 14-12-081.

On November 28, 2017, in accordance with the program rules established by the Commission in 2014, Energy Division initiated a BioMAT program review with the goal of assessing program performance and recommending programmatic and procedural changes.

On October 30, 2018, Energy Division issued a draft BioMAT Program Review and Staff Proposal. On July 19, 2019, the Energy Division staff held a public workshop to discuss potential program changes. The final staff proposal, listing recommended changes to the BioMAT program rules, contract terms, process, as well as recommended clarifications to the BioMAT program, is attached to this ruling.

2. Responses to Questions

Parties are directed to file responses to the questions set forth in Section VI of the BioMAT proposal. Comments and responses to the questions on the BioMAT proposal may be filed and served no later than April 1, 2020. Comments may not exceed 20 pages. Reply comments of not more than 15 pages may be filed and served no later than April 15, 2020.

Comments should be as specific and precise as possible. Legal arguments should be supported with specific citations. Where appropriate and useful, quantitative examples should be provided. For all information provided, parties should explicitly include all assumptions and data sources used, including links.

Comments should be complete in themselves and use publicly available materials or information.

IT IS RULED that:

1. Responses to the questions listed in the Bioenergy Market Adjusting Tariff proposal attached to this ruling may be filed and served in accordance with the instructions above no later than April 1, 2020. Comments may not exceed 20 pages.

2. Reply comments may be filed and served no later than April 15, 2020. Reply comments may not exceed 15 pages.

Dated March 10, 2020, at San Francisco, California.

/s/ NILGUN ATAMTURK

Nilgun Atamturk
Administrative Law Judge

ATTACHMENT A

Bioenergy Market Adjusting Tariff (BioMAT) Staff Proposal

March 5, 2020

I. Background

The Bioenergy Market Adjusting Tariff (BioMAT) is a Feed-in-Tariff program created by Senate Bill (SB) 1122 (Rubio, 2012), which ordered 250 MW of procurement for electricity from bioenergy projects. In November 2017, in accordance with the program rules established by the California Public Utilities Commission (Commission or CPUC) in 2014, Energy Division initiated a BioMAT program review. The goal of the program review was to assess program performance to date and recommend programmatic and procedural changes to:

- ▶ simplify the BioMAT procurement process;
- ▶ enable expanded program participation;
- ▶ reduce ratepayer expenditures; and
- ▶ help achieve statewide goals.

As such, in October 2018, Energy Division issued a draft BioMAT Program Review and Staff Proposal. That document described staff's key observations about program performance to-date, set a timeline for the program review, laid out Energy Division staff's straw proposal for program changes, and sought comment to inform the scope and content of future workshops and revisions to the straw proposal. On July 19, 2019, staff convened a public workshop to discuss potential BioMAT program changes raised in the straw staff proposal and comments.

Based on stakeholder feedback on the draft staff proposal and at the workshop, staff has drafted the revised set of program recommendations, detailed below and summarized in Table 1.

As staff observed in the draft staff proposal, the guiding statewide interest in the success of the BioMAT program is broader than simply meeting capacity targets set by SB 1122. Program changes stemming from this program review also seek to achieve statewide climate, waste diversion, and public safety goals within each category at the lowest cost to ratepayers.

II. BioMAT Program Rule Changes

1. Program End Date

- ▶ **Proposal:** Revise the BioMAT program end date to December 31, 2025.

- ▶ **Reason for Change:** When establishing the program, the Commission set the ending date for BioMAT at five years from the program starting date—February 2021. Extending the end date by five years will provide more time to fulfill the SB 1122 requirement of 250 MW of procurement from small bioenergy projects. Setting an ending date is important because, otherwise, the program could go on indefinitely with a minuscule amount of megawatts remaining in technology category queues as the Commission and ratepayers continue to incur administrative expenses. While that reasoning for establishing an end date still applies, price acceptances have been lower than expected. It is clear that more time is required to achieve the 250 MW of procurement required by SB 1122, even with prices now high enough to result in price acceptances. A five-year program extension should provide more long-term programmatic certainty and allow more time for additional project development, while maintaining the Commission’s direction to establish a clear program end date. The “program end date” means that participants may not accept the offered contract price after this date.

2. BioMAT Program Cost Allocation

- ▶ **Proposal:** Allocate BioMAT program costs through a non-bypassable charge to all customers in each IOU’s service territory.
- ▶ **Reason for change:** As with the other proposed changes, this recommendation is intended to help the BioMAT program meet statewide goals and recognize the program’s resulting benefits to the *entire* state for meeting these goals. It is also about ensuring equity among all California customers of electric retail sellers who benefit from a successful BioMAT program. BioMAT is one of several policy mechanisms geared toward achieving statewide air quality, climate, waste diversion, and public safety goals – goals that produce benefits that support the health and well-being of all Californians. The benefits of BioMAT procurement do not accrue solely to the IOUs’ bundled customers, but rather to bundled and unbundled IOU customers alike.

The non-bypassable charge would recover the net costs to the utilities of BioMAT energy procurement. Administration of the BioMAT non-bypassable charge should be modeled off the tree mortality non-bypassable charge, established in D.18-12-003, and be collected through each utility’s public purpose program charge.

Furthermore, because all load-serving entities (LSE) would pay for BioMAT procurement, staff recommends that all LSEs be able enter into BioMAT contracts at the BioMAT offer price. Procurement expenses incurred by any contracting LSE would be collectible through the non-bypassable charge if the LSE submits a Tier 2 Advice Letter to the Commission demonstrating that the contract is executed at no more than the current program category offer price at the time of contract execution and conforms to all BioMAT program rules and prior Commission decisions, including program end date. This recommendation only pertains to an LSE’s right to enter into contracts and allocate costs and does not seek to require that LSEs conform to other program administration rules such those pertaining the

BioMAT queue, program periods, and the online BioMAT platforms. If non-IOUs choose to enter into BioMAT contracts and pursue cost allocation, the amount of contracted capacity should count toward the IOU capacity allocations for the service territory in which the project is located.

3. Category 2 – Other Agriculture Definition

- ▶ **Proposal:** Category 2 – Other Agriculture fuel resources are defined as: biogas or biomass derived from a facility that utilizes the waste, residue or by-products of growing crops, raising livestock or growing horticultural products consistent with activities described as “crop production” and “animal production” in Titles 111 and 112 of the North American Industry Classification System (NAICS). Agricultural wastes include, but are not limited to, agricultural crop residues; fruits and vegetables; orchard and vineyard removal; and crop tree and vineyard prunings. Agricultural waste also includes waste, residues and by-products from agricultural drying, hulling, shelling and ginning operations as well as fresh fruit and vegetable packing operations.²
- ▶ **Reason for change:** In Decision 19-12-004, the Commission removed the requirement that Category 2 – Other Agriculture projects be located on an agricultural premise. In absence of that requirement, the program loses a distinguishing factor between Category 1 and Category 2 Other Agriculture because some agricultural waste could also be potentially considered food processing waste or organic waste diversion. For instance, a vineyard that juices grapes and manufactures wine onsite could claim to be either Category 1 or Category 2 because the commercial entity supplying the feedstock is both a crop producer and food processor. This raises the need for clarification on how to distinguish between Category 1 “municipal organic waste diversion” and “food processing” feedstocks versus Category 2 “other agricultural” feedstocks to avoid confusion or ambiguity between BioMAT program participants and administrators on program and category eligibility moving forward.

Staff proposes that in instances of ambiguity between categories, a project’s category can be distinguished by the feedstock’s commercial source, as defined by the North American Industry Classification System (NAICS). For example, Category 1 – food processing is already classified as biogas derived from waste, residue or by-products of food processing or manufacturing facilities, consistent with activities described as “food manufacturing” in Title 311 of the NAICS. Similarly, the revised definition of Other Agriculture would use NAICS codes for “crop production” (Title 111) and “animal production” (Title 112) to classify the commercial operations that can supply Category 2 – Other Agriculture feedstocks. Those titles contain numerous types of agricultural production operations that align with the intent of Category 2. So, if a BioMAT project were to source its feedstock from a food

² NAICS definitions, including Title 111 “crop production” and Title 112 “animal production” can be found in the NAICS 2017 Definition manual:
<https://www.census.gov/eos/www/naics/2017NAICS/2017_Definition_File.pdf>

processing business that falls under Title 311 of the NAICS, but the business does not grow crops or otherwise meet the criteria of NAICS codes 111 or 112, that project would be classified as Category 1, even if the food processor sources its feedstock from an agricultural operation. A project would only be classified as Category 2 if it sources its feedstock directly from an agricultural operation, as defined under NAICS codes 111 or 112.

For rare instances in which a facility derives at least 80% of its feedstock from businesses that meet the criteria of NAICS codes 111 or 112 and 311, such as a vineyard that produces wine for sale onsite, that project could be eligible for Category 1 or Category 2 and the developer would be free to choose either category for BioMAT classification. Thus, staff's proposal would allow the NAICS code to be used as an objective measure to distinguish between Category 1 and Category 2 when there is ambiguity about the proper category classification of a potential BioMAT project, and help to clarify when a project legitimately meets the standard for both categories.

4. Directed Biogas Reporting³

- ▶ **Proposal:** BioMAT projects using “directed biogas” must submit their annual Common Carrier Pipeline report submitted to the CEC to the Buyer as part of their Annual Fuel Attestation.⁴
- ▶ **Reason for change:** The use of directed biogas is allowable under BioMAT contracts provided that the directed biogas feedstock meets BioMAT fuel resource category requirements, and the project also meets CEC RPS eligibility guidebook standards for biomethane delivered through a common carrier pipeline. In contrast to projects that use

³ A Petition for Modification (PFM) related to “directed biogas” was filed by FuelCell Energy and Toyota Motor North America in R.15-02-020 (also served to R.18-07-003) on November 4, 2019. The PFM requests the CPUC to affirm the status of directed biogas as an eligible renewable energy resource within the BioMAT program. The CPUC granted the PFM in Decision 20-02-004. Staff's proposal recommends changes dealing specifically with reporting requirements for BioMAT projects that use directed biogas, provided the project meets all applicable requirements and standards. Staff's proposed reporting requirements would apply to any directed biogas projects in the BioMAT program.

⁴ “Directed biogas” refers to biomethane delivered through a common carrier pipeline. Common carrier pipelines are those pipelines that are part of the state's existing natural gas pipeline system and are defined in the CEC's RPS Eligibility Guidebook. When using directed biogas, the power producer does not withdraw the identical biomethane injected into the pipeline but instead withdraws common carrier pipeline gas (probably natural gas) that matches on a therm-for-therm basis what the biomethane seller injected into the pipeline.

on-site biogas or biogas delivered through a dedicated pipeline, however, directed biogas requires more complex accounting to ensure that facilities are utilizing directed biogas rather than fossil natural gas. The CEC has developed facility annual Common Carrier Pipeline reports that directed biogas systems must submit to maintain their RPS eligibility status.⁵ It is reasonable to require facilities to also submit these annual reports to the Buyer as part of their Annual Fuel Attestations so that Buyers can confirm project fuel use and PPA fuel use compliance by matching reported directed biogas usage with biomethane injection data. The IOUs should amend their Annual Fuel Attestation forms to require facilities utilizing directed biogas to submit their CEC-required annual Common Carrier Pipeline report. Due dates for those reports should align with when they are submitted to the CEC.

5. **Guaranteed Commercial Operation Date**

- ▶ **Proposal:** Amend the BioMAT Contract and Tariff so that the Guaranteed Commercial Operation Date (GCOD) is 36 months from the Contract Execution Date with the potential for a 6-month extension.

- ▶ **Reason for the change:** Some BioMAT projects require interconnection upgrades with substantial completion timelines that inhibit the ability of a facility to begin operation within the two-year GCOD deadline required in current PPAs, even with an allowable six-month extension. Interconnection delays may cause the facility owner/developer to be in breach of the PPA, resulting in PPA termination. The risk of an interconnection timeline extending beyond a project's GCOD is heightened by program changes stemming from SB 840 (2016) that allow a Category 3 project to temporarily abandon its interconnection queue position while maintaining its place in the BioMAT queue. This termination risk may deter participation in BioMAT and make it more expensive for those who do participate to obtain financing. By extending the GCOD from 24 months to 36 months, this proposal seeks to better align actual interconnection timelines with a PPA's GCOD. This proposal also aligns with the Renewable Auction Mechanism tool.

⁵ The CEC requires directed biogas projects to submit annual reports using the RPS Online System that contain monthly meter data for the injection point of biomethane and the generating facility, monthly pipeline nomination reports, monthly invoices for procurement of biomethane, a summary statement of all directed biogas use, biomethane procurement and transportation contracts, and any additional data requested by the CEC. The CEC may request that the facility applicant submit payment statements or other documentation supporting the biomethane claims. Failure to provide adequate supporting documentation will result in the associated RECs being deemed ineligible. <<https://efiling.energy.ca.gov/getdocument.aspx?tn=217317>>

III. BioMAT Contract Term Changes⁶

6. Guaranteed Energy Production and Contract Quantity Adjustments

- ▶ **Proposal:** Revise Guaranteed Energy Production (GEP) and Contract Quantity requirements of the BioMAT PPA so that:
 - i. 120% of the Contract Quantity must be delivered over two consecutive years for the first two years of the contract;
 - ii. 180% of the Contract Quantity must be delivered over two consecutive years for all remaining years of the contract;
 - iii. The Seller may decrease their Contract Quantity for any or all Contract Years in the Delivery Term Contract Quantity Schedule on an annual basis provided that adjustments are submitted to the Buyer no later than 60 days before the end of the Contract Year; and
 - iv. The Seller may increase their Contract Quantity once for any or all Contract Years in the Delivery Term Contract Quantity Schedule during the first two years of the contract provided that the adjustment is submitted to the Buyer no later than 60 days before the end of the first or second Contract Year.
 - v. All subscribed BioMAT capacity shall continue to count towards IOU capacity allocations even if a Seller adjusted their contract quantity throughout the delivery term.

- ▶ **Reason for change:** Currently, BioMAT PPAs require that 180% of the contracted energy be delivered over two consecutive years for all years of the contract. If the facility has a GEP failure, they must pay the IOU GEP Damages. Sellers are also allowed a one-time decrease in Contract Quantity during the first two years of the contract. While these terms promote energy supply forecasting certainty for the IOUs and PPA accountability, they reduce the ability of BioMAT projects to co-locate with other operations such as upgrading biogas into biomethane for pipeline injection for heating or transportation or generating electricity for electric vehicle fueling in accordance with the LCFS. Allowing more flexibility for this type of operational co-location would be desirable because it could result in greater utilization of SB 1122-eligible feedstock.

Lowering the GEP requirements for the first two years of the contract will provide more operational flexibility to Sellers who are still fine-tuning the electric generation capabilities of their systems—capabilities that may differ from initial forecasts. During that two-year period, Sellers would have the option to decrease or make a one-time increase to their

⁶ Current contract terms, as approved by the Commission in D.15-09-004 and amended in D.16-10-025, D.17-08-021, and D.18-11-004, can be found in PG&E's PPA here: https://pgebiomat.accionpower.com/biomat/doccheck.asp?doc_link=biomat/docs/FIT/2015/documents/a.%20BioMAT%20Tariff%20and%20Power%20Purchase%20Agreement/2.%20PPA/BioMAT_PPA_April2019.pdf Similar language appears in SCE's and SDG&E's BioMAT PPAs.

Contract Quantity to more closely align with expected energy production moving forward. After the initial two years, contracts will have the current GEP requirements.

Additionally, allowing projects to increase and more frequently decrease Contract Quantity is a reasonable way to account for bioenergy forecasting uncertainty and to facilitate project co-location, giving projects the flexibility to pursue the highest and best economic use of feedstock as other revenue opportunities become available. In making these changes it is reasonable to require that Sellers submit any Contract Quantity adjustments by a date-certain, set here as 60 days before the end of the Contract year, and to ensure that all subscribed BioMAT capacity continue to count towards IOU BioMAT capacity allocations.

7. Performance Tolerance Band Forecasting Penalty

- ▶ **Proposal:** Waive the Performance Tolerance Band Forecasting Penalty for the first year of a BioMAT facility's operation.
- ▶ **Reason for change:** Section 14.2 of BioMAT PPAs sets a "Performance Tolerance Band," in MWh, that is equal to +/- 3% of the Contract Capacity (e.g. +/- 90kW for 3 MW project). If the Seller deviates from the Performance Tolerance Band in any hour of any month in the Delivery Term, it must pay a Forecasting Penalty set at 150% of the Contract Price for each MWh of deviation. This requirement is important for the utilities who, as scheduling coordinator, must bid resources into the CAISO market. However, staff also recognizes that the small bioenergy market is nascent and that some BioMAT projects may have little prior electrical generation experience. It may take some amount of time to improve energy forecasting capabilities, particularly for small projects with inconsistent feedstock inputs that utilize a biological energy conversion process. Waiving the Forecasting Penalty for the first year can help to alleviate start-up costs for small projects, while continuing to provide a long-term financial incentive to improve energy forecasting over the life of the project.

8. Station Service Load

- ▶ **Proposal:** Allow projects to utilize non-BioMAT fuel to supply the station service, or parasitic load, of their systems if such fuel use conforms with the Station Service rules established in the CEC's RPS Eligibility Guidelines.⁷
- ▶ **Reason for Change:** It may be necessary in some circumstances for a project to access back-up fuel to supply the parasitic load of their system during an unplanned fuel outage event. For example, a facility may have high parasitic load requirements stemming from power functions like pumps, electric heaters for maintaining operating temperatures, and other equipment. Without back-up fuel, the entire system must ramp down and then restart once the fuel is restored, which can threaten system integrity. Section 4.4.1 of the current

⁷ CEC RPS Eligibility Guidebook, Ninth Edition Revised, page 28.
<<https://efiling.energy.ca.gov/getdocument.aspx?tn=217317>>

BioMAT PPA states that the fuel used to generate electricity and useful thermal output used for station use/parasitic load must conform with the fuel resource category of the BioMAT project. By contrast, the CEC's RPS Eligibility Guidebook states only that the energy used for parasitic load is not RPS-eligible and may not generate RECs, but otherwise does not restrict the fuel source that may be used to generate electricity for parasitic load. BioMAT's prohibition against the use of non-BioMAT fuel to service parasitic load is stricter than the rest of the RPS program and can add cost and complexity to system integrity operations. The PPA should be revised so that Sellers no longer have to represent, warrant, and covenant that their electricity Useful Thermal Energy Output to serve Station Use conforms to the BioMAT project's Fuel Resource Category. Furthermore, generating electricity to serve Station Use from a fuel source that does not conform to the project's Fuel Resource Category should not be an event of default. This change will make the BioMAT program more consistent with the overall RPS program. And because electricity used for parasitic load is not exported and is not purchased by the Buyer, this change will not result in any ratepayer funds being used for non-BioMAT fuel.

9. Telemetry

- ▶ **Proposal:** Revise Appendix E of the BioMAT PPA so that the Seller must follow all relevant telemetry requirements set by their interconnection tariff.
- ▶ **Reason for change:** Appendix E of BioMAT PPAs require that all projects sized 0.5 MW and larger must install and maintain a Telemetering System at the Facility in accordance with the CAISO's Business Practice Manual for direct telemetry. However, CAISO's telemetry rules are only applicable to facilities that interconnect at the transmission level, which is not the case for most BioMAT facilities. Instead, Rule 21 is the applicable interconnection standard for facilities interconnecting at the distribution level, which has its own standards for telemetering equipment.⁸ Similarly, when interconnecting through at the transmission level through the CAISO tariff or at the distribution level through the Wholesale Distribution Access Tariff (WDAT), there are relevant interconnection standards that may or may not require telemetering. Therefore, to be consistent with relevant interconnection standards—Rule 21, the CAISO tariff, or WDAT—the PPA should be revised so that telemetry requirements are not prescriptive, but rather set through the interconnection process.

10. Metering Requirements

- ▶ **Proposal:** Revise BioMAT PPA Metering Requirements to allow projects to install CAISO revenue meters on the low-voltage or high-voltage side of the final step-up transformer if

⁸ PG&E Rule 21 tariff at 217.

<https://www.pge.com/tariffs/tm2/pdf/ELEC_RULES_21.pdf>

the meter can be programmed to account for the transformer losses when installed on the low-voltage side.

- ▶ **Reason for change:** BioMAT PPAs require that generators be metered through a single CAISO revenue meter located on the high-voltage side of a Project's final step-up transformer nearest to the Interconnection Point. This requirement protects ratepayers from paying for losses associated with the project transformer, however it can also increase interconnection costs for ratepayers and projects that might otherwise be able to interconnect on the low-voltage side of the Project's final step-up transformer. Allowing projects to install meters on the low-voltage or high-voltage side of the final step-up transformer could lower the cost of interconnection. Furthermore, requiring CAISO revenue meters to be programmed to account for upstream transformer losses would protect ratepayers from paying for energy that is lost in the step-up transformer. While interconnecting to the low-voltage side of the final step-up transformer may reduce a project's revenue after accounting for losses, staff believes that some projects may sufficiently lower their interconnection costs to more than compensate for lost revenue by obviating the need for additional transformers, switchgears, splicing equipment, switches, and larger concrete pads to accommodate the larger equipment. By allowing for lowest-cost interconnection, the goal of this recommendation is to reduce ratepayer costs as projects can accept lower contract offer prices. The PPA should be revised so that all output from the project may be delivered through a single CAISO revenue meter located on the high-voltage or the low-voltage side of a Project's final step-up transformer nearest to the Interconnection Point if the meter can be programmed to account for transformer losses.

IV. BioMAT Process Changes

11. Greenhouse Gas Modeling

- ▶ **Proposal:** Form a technical working group to develop a project-specific lifecycle greenhouse gas (GHG) emissions reduction model to quantify the net GHG impacts of BioMAT project operations.
- ▶ **Reason for change:** One of the foundational goals of the BioMAT program is to promote the development of small bioenergy systems that help to advance the state's GHG reduction goals. BioMAT projects can make important contributions to the state's efforts to reduce emissions in the waste, agriculture, and forestry sectors, but those contributions are not being fully quantified today. The extent to which any individual project reduces net lifecycle emissions depends on project-specific factors related to: technology type, fuel transportation, storage, processing, by-product fates, the displacement of other emissions, and the timescale over which emissions reductions are assessed and realized. Energy Division has developed a draft lifecycle assessment (LCA) calculator that applies a consequential LCA approach to BioMAT project operations. A consequential LCA can analyze the impacts of BioMAT project emissions relative to an assumed counterfactual baseline scenario by using a combination of project-specific inputs, industry and literature supported

emission factors and resource characterizations, and carbon balancing.⁹ For example, results from the draft calculator indicate that a Category 1 - Municipal Organic Waste Diversion project may reduce net emissions by 45,000 to 105,000 metric tonnes of CO₂-equivalent annually compared to a landfill.¹⁰ A Category 3 project utilizing a combustion boiler may increase net emissions by 32,000 metric tonnes in year 1 of the project compared to if that woody residue were left to decay, but then “pay back” those emissions through avoided wood decay within 8 to 11 years—effectively becoming “carbon neutral” or “carbon negative” annually thereafter. If that same project were to utilize gasification rather than a combustion boiler, it could increase net emissions by only 200 to 2,000 metric tonnes in year 1 of the project compared to decay, and then pay back those emissions through avoided wood decay within one year.¹¹ A technical working group can build on staff’s model and provide the necessary vetting and input to develop a lifecycle emissions calculator to quantify the emissions impacts of individual BioMAT projects. While GHG emissions should be the primary focus of the technical working group, the model should also be able to quantify criteria pollutant emissions, which may increase even as a project decreases GHGs. The final tool should be a publicly available model that informs the public about how bioenergy projects can reduce emissions in California and the key drivers of those emissions and emissions reductions. In the future, use of the tool may also become a program requirement for informational purposes whereby projects seeking to enter the BioMAT

⁹ Energy Division's Draft BioMAT Emissions Life Cycle Assessment Calculator. <<ftp://ftp.cpuc.ca.gov/energy/BioMAT/Brief%20-%20Draft%20LCA%20Calculator.zip>>

¹⁰ This assumes that the facility utilizes a reciprocating engine, utilizes 130,000 BDT of municipal organic waste, and that the electricity output offsets California average grid emissions. The range of emissions reductions depends on whether the avoided methane emissions from a landfill are measured using a 100-year or 20-year “global warming potential” (GWP). Using a 20-year GWP generally increases the net GHG emissions benefit of BioMAT projects because of methane’s higher warming impact over 20 years, which results in higher alternate scenario emissions.

¹¹ The Category 3 projects in this example assumes that the project is in El Dorado county, utilizes 23,000 BDT of woody biomass, 1% of the total decay emissions is methane, and that the electricity output offsets California average grid emissions. The range of emissions reductions depends on whether the avoided methane emissions from decay are measured using a 100-year or 20-year “global warming potential.” Using a 20-year GWP generally increases the net GHG emissions benefit of BioMAT projects because of methane’s higher warming impact over 20 years, which results in higher alternate scenario emissions.

queue would have to use the tool to submit emissions data to enable the Commission to track program emissions information.

12. Contract Execution

- ▶ **Proposal:** Apply the following deadlines once a BioMAT program participant declares price acceptance:
 - i. The IOU has 20 days from the start of the program period to determine if the application has any deficiencies requiring a cure, and request the necessary information to cure the deficiency;
 - 1. After receiving the additional information from the applicant, the IOU must determine if the application has any deficiencies requiring a cure within 10 days of receiving information from the applicant; and
 - 2. The IOU will continue to notify the applicant if the application has any deficiencies requiring a cure within 10 days of receiving additional information from the applicant until the IOU determines that there are no deficiencies, at which point the IOU must immediately notify the applicant that there are no deficiencies and BioMAT contracts must be executed within 20 days of the date that the IOU notified the applicant that there are no deficiencies.
 - ii. If there are no deficiencies, the IOU must inform the applicant that there were no deficiencies within 20 days from the start of the program period and BioMAT contracts must be executed within 20 days of the date that the IOU notifies the applicant; and

- ▶ **Reason for change:** One of the purposes of the BioMAT program and the BioMAT contract is to simplify the procurement process. In practice, several contract executions have been subject to delays—taking four months or longer in some instances. Deadline requirements will provide consistency to the program, timely execution of contracts, and ensure that projects are moved out of the queue after price acceptance, which would also ensure that the price adjustments properly represent project development within the BioMAT categories.

13. Program Queue Procedures

- ▶ **Proposal:** Revise queue management procedures so that:
 - i. Applicants must attest at the start of each program period that they still meet the project's eligibility criteria;
 - ii. Applicants must immediately notify the program administrator in the event of a change in eligibility; and
 - iii. If an Applicant does not attest at the start of each program period that it still meets the project's eligibility criteria, or if an Applicant notifies the program administrator that it no longer meets the eligibility criteria, the program administrator may remove the Applicant's project from the program queue.

- iv. If an Applicant no longer meets the eligibility criteria but fails to report that change to the program administrator, the program administrator will remove the Applicant's project from the program queue and any program participation request associated with the Applicant or the Project will be rejected and the Applicant will be prohibited from reapplying for a new BioMAT program participation request for six months from the day that the project was removed from the queue.

- ▶ **Reason for change:** Applying additional queue management procedures will help to ensure the proper functioning of BioMAT's market-based pricing mechanism by protecting against overpayments in the case of incorrect price increases or a market participation decrease in the case of incorrect price decreases. The presence of an ineligible project in the BioMAT queue can trigger incorrect price adjustments if the project is not identified and removed from the queue at the time that the project becomes ineligible. For example, if an ineligible project is one of five projects in a category queue, then that project will be contributing to the achievement of market depth that that can trigger a price adjustment. Additionally, the presence of any ineligible projects in the first-come, first-served program queues could delay eligible projects from being awarded contracts in a Program Period. Price adjustments and the awarding of contracts should be based on the market activity of projects that are actively pursuing PPAs.

V. BioMAT Program Clarifications

14. BioMAT RPS Eligibility

- ▶ **Clarification:** Eligibility for BioMAT is consistent with the RPS program as defined in the RPS Eligibility Guidebook.

- ▶ **Reason for clarification:** BioMAT program rules and the CEC RPS Eligibility Guidebook may be causing confusion within the bioenergy market, creating the potential for program and contract disputes. The CEC RPS Eligibility Guidebook describes eligibility and compliance rules that apply to all RPS-eligible projects, including BioMAT projects. The BioMAT tariff and PPA contain separate and additional rules and requirements that apply to BioMAT projects. BioMAT and RPS rules should be read as complementary and binding for program participants. For example, the California Energy Commission's RPS Eligibility Guidebook¹² defines biomethane as landfill gas or digester gas.¹³ Landfill gas, though eligible within the RPS Guidebook, is not an eligible resource within the BioMAT program. In this way, RPS

¹²"Renewables Portfolio Standard – Certification." California Energy Commission. <https://www.energy.ca.gov/programs-and-topics/programs/renewables-portfolio-standard/renewables-portfolio-standard-0>

¹³ The CEC Guidebook also defines other categories of potentially RPS-eligible electricity generated using "biomass" fuel -- which includes fuel that results from "biomass conversion" -- or "biodiesel" (see RPS Eligibility Guidebook 9th Edition at p.5).

eligibility is a necessary condition for BioMAT eligibility, but not necessarily sufficient for BioMAT eligibility.

15. Strategic Location

- ▶ **Clarification:** The “strategically located” eligibility requirement of BioMAT, which sets a \$300,000 cost threshold for transmission upgrades, does not provide for or limit transmission upgrade cost reimbursement.
- ▶ **Reason for clarification:** BioMAT projects must be “strategically located” to qualify for the program. D.14-12-081 defines a project as strategically located if the cost of network transmission upgrades when the project interconnects to the distribution system does not exceed \$300,000. That cost cap is a proxy for requiring projects to be sited close to load, and it is used to determine program eligibility. It is not intended to provide a reimbursement amount for projects. That distinction has caused some confusion, as some parties have incorrectly interpreted this eligibility requirement as a requirement that the IOUs provide \$300,000 interconnection reimbursements. For BioMAT projects that interconnect through the distribution system, their relevant interconnection costs are set through Rule 21, the CAISO tariff, or WDAT. Table E.3 of Rule 21 states that Transmission Network Upgrade Costs are set by the applicable CAISO Tariff at signing of the Interconnection Agreement.¹⁴ Network transmission upgrade costs are distinct from distribution upgrade costs because they are under the jurisdiction of CAISO rather than the CPUC. The CPUC neither authorizes nor controls network transmission upgrade costs or reimbursement amounts. Rather, those are set through the CAISO tariff.¹⁵ The purpose of \$300,000 cost threshold is to set an objective standard for determining the strategic location of a project. The threshold is not intended to set reimbursement limits or amounts for network transmission upgrade costs.

Staff’s BioMAT program recommendations are summarized in Table 1.

¹⁴ PG&E Rule 21 Table E.3 at Sheet 65.

<http://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_21.pdf>

¹⁵ Section 14.3.2.1 of Appendix DD of CAISO Fifth Replacement Tariff.

<<http://www.caiso.com/Documents/AppendixDD-GeneratorInterconnection-DeliverabilityAllocationProcedures-asof-Apr1-2019.pdf>>

Table 1. BioMAT Program Recommendations

Issue	Current Rule	Proposed Rule
BioMAT Program Rule Changes		
Program End Date	The program sunsets in February 2021.	The program sunsets in December 2025.
Cost Allocation	Bundled electricity customers and customers who depart bundled service after PPA execution pay for BioMAT.	Allocate BioMAT procurement costs through a non-bypassable charge to all customers in each IOU's service territory and authorize LSEs to enter into BioMAT contracts.
Agricultural Premises	Eligible BioMAT Category 2 – Other Agriculture projects must utilize waste, residue, or by-products of growing crops, raising livestock or growing horticultural products.	Eligible BioMAT Category 2 – Other Agriculture projects must utilize the waste, residue or by-products of growing crops, raising livestock or growing horticultural products consistent with activities described as “crop production” and “animal production” in Titles 111 and 112 of the North American Industry Classification System (NAICS).
Directed Biogas Reporting	No additional reporting requirements for projects utilizing directed biogas.	Projects utilizing directed biogas must submit their annual Common Carrier Pipeline report submitted to the CEC to the Buyer as part of their Annual Fuel Attestation.
Guaranteed Commercial Operation Date	A project's GCOD is 24 months from the contract execution date with the possibility of a 6-month extension.	A project's GCOD is 36 months from the contract execution date with the possibility of a 6-month extension.
BioMAT Contract Term Changes		
Guaranteed Contract Quantity	180% of contracted energy must be delivered over two consecutive years for all years of the contract.	120% of contracted energy must be delivered over two consecutive years for first two years, and 180% of contracted energy must be delivered every two years for remaining years. Projects may increase contract quantity once in first two years of the contract and decrease contract quantity annually throughout the contract.
Performance Tolerance Band Forecasting Penalty	A project pays a forecasting penalty if it delivers +/- 3% of contract capacity in any hour of any month.	A project pays a forecasting penalty if it delivers +/- 3% of contract capacity in any hour of any month, except for the first year when the penalty is waived.
Station Service Load	Fuel used by a facility to generate station service load electricity must conform with the BioMAT fuel resource category.	Projects may utilize non-BioMAT fuel that complies with the RPS Eligibility Guidelines to supply the station service load.
Telemetry	All projects >0.5 MW must install and maintain a Telemetry System at the facility.	Telemetry requirements are set through the interconnection process.
Metering	Projects must be metered through a CAISO revenue meter on the high-voltage side of the final step-up transformer.	Projects must be metered through a CAISO revenue meter on the high-or-low-voltage side of a Project's final step-up transformer.

BioMAT Process Changes		
Greenhouse Gas Modeling	No GHG accounting	Establish technical workgroup to develop a project-specific lifecycle GHG model to quantify program emissions impacts.
Contract Execution Deadlines	No deadline for contract execution after an Applicant accepts offer price.	Set deadlines for the IOU to review applications and execute contracts.
Program Queue Management	The requirements for an Applicant to report to the IOU when a project's eligibility status changes differ by IOU.	All applicants must attest at the start of each program period that they meet program eligibility criteria and face a penalty if they fail to report a change in eligibility status.
BioMAT Program Clarifications		
RPS Eligibility Guidebook	RPS Eligibility Guidebook rules and requirements apply to BioMAT.	No change. Simply affirm the current rules.
Strategic Location	There is a \$300,000 cost cap in BioMAT to determine strategic location—not to provide interconnection reimbursements.	No change. Simply affirm the current rules.

VI. Questions

This proposal represents Energy Division staff recommendations based on analysis of historical BioMAT program performance, party comments on the draft staff proposal, input received at the July 2019 workshop, and publicly available information on bioenergy technologies.

The recommendations are intended to support the Commission's decision-making process and do not represent the final word of the Commission. Staff anticipates and welcomes productive feedback and input from parties on the recommendations contained in this document.

Specifically, parties are invited to comment on whether:

- (1) They agree with staff's recommendations, and why or why not;
- (2) They would recommend any specific modifications to staff's recommendations, with a detailed explanation and rationale for any proposed modifications;
- (3) Any additional changes are needed as a result of the staff proposal;
- (4) There are additional actions that the Commission should take to address program cost, program barriers, expanding program participation, safety, and/or equity. Please include a detailed explanation and rationale for any proposed new actions;
- (5) Program or contract modifications would be needed to enable BioMAT projects to improve grid resiliency, such as participating in microgrid applications or other grid services, and if so, what specific modifications would be needed;
- (6) Program or contract modifications would be needed to streamline BioMAT with other agency programs or processes, and if so, what specific modifications would be needed;
- (7) In contracts involving directed biogas, any program or contract modifications would be needed in addition to the California Energy Commission RPS eligibility requirements to sufficiently

ensure that such projects will advance California's progress towards our climate goals and the BioMAT program goals;

- (8) Contract modifications would be needed regarding Buyer's Audit Rights in the standard BioMAT PPA to include other items in the interest of providing oversight and ensuring project operations are consistent with BioMAT and State goals? Added items may include: annual feedstock amount and fuel energy input; types of technical equipment and technical specifications; amounts and type of secondary energy source(s), as applicable; and station service energy use and fuel type.

The name and number of the specific proposal(s) should be included when commenting on a specific proposal.