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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 11-05-005  
(Filed May 1, 2011)

**MOTION OF PACIFIC GAS AND ELECTRIC COMPANY (U 39-E)  
TO SUSPEND BIOMAT PROGRAM PROCUREMENT**

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**I. INTRODUCTION AND REQUESTED RELIEF**

Pursuant to Rule 11 of the California Public Utilities Commission's ("Commission") Rules of Practice and Procedure and E-BIOMAT, 37742-E, Section 12.3, Pacific Gas and Electric Company ("PG&E") moves to suspend procurement under the Bioenergy Market Adjusting Tariff ("BioMAT") program and requests that the Commission open a new phase of this proceeding. The new phase will allow the Commission to comprehensively consider the broad market issues and malfunctions in the BioMAT program that have arisen since the creation and implementation of the program.

The BioMAT Program is currently experiencing both market malfunction and a high risk of manipulation due to flaws with the pricing rules and structure of the BioMAT Tariff. These flaws have potentially inflated prices, which in at least one category, has exceeded the price trigger for which the Commission is required to investigate the BioMAT Program. The current status of California's energy market makes the impact of these high prices on PG&E's customers even more significant, and the need to suspend and reexamine the BioMAT Program quickly even more critical. BioMAT-eligible resources have substantial above market costs at a time when PG&E's customers have no need for Renewable Portfolio Standard ("RPS") resources, capacity or energy due to declining bundled customer retail sales.

As an administrator of BioMAT, PG&E has authority under the BioMAT Tariff to suspend the program when evidence of market manipulation or malfunction exists. Structural

flaws in the pricing mechanism and cost allocation support suspending the program, which will allow the Commission (with input from all stakeholders) time to consider and resolve the current market malfunctions.

PG&E will be suspending procurement in all BioMAT Fuel Resource Categories (“Categories”) effective December 31, 2017. By this Motion, PG&E requests that the Commission:

1. Uphold PG&E’s motion to suspend the BioMAT program to allow the Commission time to address the market malfunctions and risk of manipulation while avoiding potentially harmful effects on PG&E customers.
2. Open a new phase of the RPS proceeding to consider and resolve the issues raised in this Motion, as well as issues raised by other stakeholders.
3. Allow PG&E to establish a memorandum account to record payments made to BioMAT sellers in the program to be applied in a manner as directed at the conclusion of the new phase of this proceeding.
4. If the Commission directs PG&E to continue procurement in the program without interruption, PG&E asks that the Commission still open a new proceeding phase to consider these issues and allow PG&E to establish a memorandum account in the interim.

## **II. AUTHORITY TO SUSPEND**

In establishing the structure for the Renewable Market Adjusting Tariff (“ReMAT”) Program, the Commission recognized that there would be potential program issues that could only be addressed by allowing the IOUs to suspend the program when there is evidence of market malfunction or manipulation. In contrast to a solicitation or bilateral negotiation where the utility has discretion, a Feed-in-Tariff, by its nature, is mechanistic. Thus, when errors or issues arise, the only way to address them is to change the program requirements themselves. Likewise, the Commission allowed the IOUs to suspend the BioMAT program.

Authority to suspend the program is set forth in the Special Conditions enumerated in the BioMAT Tariff, which provide, in pertinent part:

PG&E may file a motion with the CPUC to suspend BioMAT when evidence of market manipulation or malfunction exists. The motion must be filed on the applicable service list. The motion shall identify the portion of the program suspended, the specific behavior and reasons for the suspension, and PG&E's proposal for resolving the problem. Any requested suspension will be implemented by PG&E immediately upon filing and shall not be modified or changed unless directed by the CPUC.<sup>1/</sup>

As allowed by the BioMAT Tariff, PG&E will suspend BioMAT program procurement as of the date mentioned above and not hold another Program Period (or "auction"), due to both market malfunction and the high risk of manipulation given currently participating projects. Existing applicants will maintain their queue position, projects that have already accepted the BioMAT price will be awarded a power purchase agreement ("PPA"), and there will be no impact on executed PPAs.

In addition to PG&E's authority to suspend the program, the Director of Energy Division is required to begin an investigation of the BioMAT program at any time the price for any Category has met or exceeded the price trigger of \$197/megawatt-hour (MWh) for two consecutive auctions.<sup>2/</sup> This "soft cap" on pricing recognizes that there must be a reasonable limit to the cost burden on IOU customers under existing program rules.

The available Category 3 price for the October 2017 auction was \$199.72 and remained at \$199.72 in November 2017, thereby meeting the requirement for the Director of Energy Division to investigate.<sup>3/</sup> On November 28, 2017, the Director of Energy Division exercised this authority by initiating a review of the BioMAT program and limiting Category 3 contract prices to \$199.72/MWh for the duration of the review process, except for projects attesting to use at

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<sup>1/</sup> E-BIOMAT, Cal. P.U.C. Sheet No. 37759-E, Section 12, part 3.

<sup>2/</sup> See D. 14-12-081, Ordering Paragraph 8.

<sup>3/</sup> Also addressed in the CPUC 2017 Annual Report, Renewable Portfolio Standard, p. 56.

least 60 percent High Hazard Zone (HHZ) fuel. PG&E appreciates the Energy Division Director's timely action and welcomes a broad program review.

PG&E files this motion due to the fundamentally different issues and, as described above, under different authority. The partial cap on the Category 3 program price does not address the evidence of market malfunction and the risk of manipulation detailed in this Motion, which applies to Categories 1 and 2 as well. Even though prices are not expected to adjust for Category 3 in the near future due to the lack of market depth (as described below), Category 2 (dairy) prices may increase above \$197/MWh as soon as April 2018. While market malfunction and manipulation have clear and substantial cost implications, they are unique and not addressed by the Energy Division Director's action.

Similarly, while the Energy Division Director contemplates a yet-to-be-scoped review of the BioMAT program, the actions outlined in the letter would allow systemic program issues, along with their consequences, to persist for an unspecified period of time and provide no clear procedural venue. Additionally, nothing in this Motion would stop the Energy Division Director from conducting this helpful review and this Motion would provide a clear venue of the resulting recommendations.

Therefore, PG&E urges the Commission to consider the broad range of issues with the BioMAT program in a new phase of this proceeding and authorize a memorandum account to record the above-market costs of BioMAT PPAs.

### **III. THE BIOMAT PRICING MECHANISM IS CRITICALLY FLAWED**

At its heart, a market adjusting tariff is a mechanism for finding the avoided cost<sup>4/</sup> of a resource type through a series of reverse auctions (i.e., where the sellers [the projects] compete for a buyer [the utility]). It attempts to ensure that projects receive enough revenue to be viable and that ratepayers are protected from overcharging by revealing competitive prices. This

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<sup>4/</sup> Note that "avoided cost" is different than a true market price. The cost of energy, capacity, renewable credits, and etc. will likely be many times less the cost of these contracts.

framework contains certain fundamental elements that must work in concert in BioMAT, including but not limited to: a cadence for auctions (i.e., every two months for Categories 1 and 2, and monthly for Category 3); a starting price for the first auctions (\$127.72/MWh); the number of MWs available at each auction (9-15 MW statewide); and, most importantly, rules for how the price increases and decreases before and after a price is accepted.

The pricing mechanism of the BioMAT program is not working. Market Depth and Affiliated Applicant rules have allowed prices to climb, but will not allow for similar price reductions despite continual subscription in the program.

#### **A. Market Depth**

The rules governing how prices adjust have locked in high prices, to the detriment of customers. To understand why this has happened and will likely persist, one must understand how the “market depth” requirement of this program at first accelerates and then limits price changes.

The BioMAT program allows price increases or decreases based on previous program period subscription levels (“price acceptance”) and only when there is “market depth.”<sup>5/</sup> Market depth is defined, at first, as three unaffiliated applicants, and then as five unaffiliated applicants after the first price acceptance in a category.<sup>6/</sup> This was meant to prevent “gaming” and to mitigate “an incentive for generators to purposefully withhold executing a contract in order to force a price increase.”<sup>7/</sup>

It is the initial acceleration of price increases (from +\$4 to +\$8 to +\$12) and the increase in a market depth requirement from three to five unaffiliated applicants that create the detrimental “lock in” effect on such high prices. Despite the best intent of its proponents, the BioMAT program has experienced a low amount of diversity in terms of project ownership and investment. Category 1 has failed to secure the current required market depth of five unaffiliated

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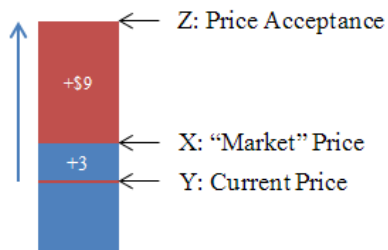
<sup>5/</sup> D. 12-05-035, p. 45.

<sup>6/</sup> BioMAT Tariff, Section 8.

<sup>7/</sup> D. 12-05-035 at pp. 44-45.

applicants and the other categories have barely met or exceeded that amount. Additionally, the program separates bioenergy projects into narrow fuel categories, which further limits competing forces among developers. All of this is of particular concern because when the first project accepts a price, the market depth requirement increases from three to five at the exact moment the number of unaffiliated applicants in the queue has decreased due to the awarding of PPAs in the previous auction.

For example, imagine a queue with four projects (all unaffiliated according to current program rules) that would all readily accept  $\$X/\text{MWh}$  ( $X$ ), but the current available price ( $Y$ ), is  $\$3/\text{MWh}$  less than  $X$ . Applicants wait until the next auction priced at ( $Z$ ), which is  $Y + \$12/\text{MWh}$  and all projects accept  $Z$  (i.e. 100% statewide subscription rate), resulting in a windfall of  $\$9/\text{MWh}$  to developers.



This is inherent in the price adjustment mechanism, but made worse by the fact that all subsequent projects that join the queue are likely to continue to receive the new higher price ( $Z$ ) because it is unlikely that at least five unaffiliated applicants (or even three for that matter) will be present in the queue during a single auction to allow for price decreases. Conversely, if the market depth requirement was removed for price decreases, the price for the next auction would be allowed to adjust downward by  $\$4/\text{MWh}$ .

To continue with this example, let's now suppose that the price is at  $Z$  and subsequent projects are able to take advantage of new rules allowing projects to be developed at a lower cost than previous projects. These subsequent projects, for example, could be able to make their projects cash flow for a price of  $Z - \$20/\text{MWh}$ . However, with prices stuck at  $Z$  and no

mechanism for the price to reasonably decrease; these projects reap a windfall of \$20/MWh, and the purported savings to customers would not be realized.

## **B. Affiliated Applicants**

The BioMAT Tariff dictates that a project will be attributed to the applicant if an applicant or its affiliates have any ownership interest in the project (i.e. the applicants are affiliated).<sup>8/</sup> The intention of the affiliate rules is to ensure that no single person or entity can exercise market power and drive up prices. Currently, three of the four pricing category queues in the BioMAT program include several projects that share family members and/or common developers and yet, per the BioMAT Tariff, are counted as unaffiliated projects because the applicant entity does not have any direct ownership interest in the other projects. In the case of family members, separate limited liability corporations (“LLCs”) are set up for each project with an individual family member wholly owning the LLC, which becomes the applicant/seller entity. In the case of common developers, developers are paid to develop the project for the applicant entity and do not have ownership interest in the LLC. PG&E is concerned that current BioMAT Tariff rules maintain a significant opportunity for projects to decide together to hold out for higher than necessary prices (or, when high prices are locked in, slowly add projects to the queue, and accepting the current price, to avoid hitting the market depth threshold and triggering price decreases) at the expense of IOU customers.

Finally, Assembly Bill (“AB”) 1923 significantly changed the project eligibility rules for participation in BioMAT. The bill allows for significant overbuilding of facilities to 5 MW nameplates and also allows transmission-interconnected projects. Both changes may allow for a \$/MW cost reduction because overbuilt projects can take advantage of economies of scale to the extent they are utilizing the excess 2 MWs to offset significant onsite loads, while transmission-interconnected projects may take advantage of existing interconnections and avoid costly interconnection upgrades.

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<sup>8/</sup> BioMAT Tariff Sections 8(4)(a) and (b).



Unfortunately, given the fact that prices have been climbing without participation by these soon-to-be eligible projects, prices are unlikely to decrease given the market depth requirement for price decreases. This means that PG&E's customers are unlikely to realize any purported cost savings under the current pricing mechanism without an alternative approach to establishing a price for such newly eligible projects.

### **C. Price Adjustment Rules Changes**

If procurement in BioMAT is to continue, the Commission must adjust the rules for price reductions. This can be accomplished by either eliminating a market depth requirement for price decreases altogether or by allowing prices to be adjusted downward if more than one project is awarded a PPA at that price. The Commission could also require that projects have no business or family relationships with each other in order to be counted as unaffiliated. Finally, the Commission could reset the price for newly qualified projects when significant changes to program eligibility are implemented that are presumed to lower the costs of projects.

## **IV. THE COMMISSION SHOULD REVIEW THE IMPACTS THE BIOMAT PROGRAM HAS ON PG&E CUSTOMERS**

The Legislature and Commission contemplated BioMAT under a radically different procurement paradigm than the one California faces today. The concept of a small-scale, renewable Feed-in-Tariff program was first added to the IOU's Renewable Portfolio Standard programs in 2006. This developed into the ReMAT program in 2009 and then, through Senate Bill 1122, into the BioMAT program in 2012. These programs were designed to develop a market for small-scale renewable generation, which could not effectively compete in large-scale solicitations, and, in the case of BioMAT, to develop a specific market for renewable generators using various waste streams. Prior to the launch of these programs, the IOUs served the vast majority of customers in California and had not yet experienced the rapid load loss of today. Additionally, since then the focus and purpose of policy discussions for BioMAT has shifted from developing a bioenergy market towards waste management, forest management, short-lived climate pollutant reductions and other societal benefits. There is not a guarantee that the program,

as designed today, will achieve these societal goals; even at increasingly high costs to PG&E's shrinking customer base.

#### **A. Load Loss**

In 2012, the IOU customer base and California's society at large significantly overlapped. This is no longer the case. Over the past several years, PG&E's bundled customer retail sales have declined dramatically, primarily from the influx of customer-sited distributed generation and the rapid expansion of community choice aggregators ("CCAs"). Both of these trends are expected to continue and accelerate in the future, resulting in the IOUs serving substantially less load than they do today. The CPUC estimated that up to 85% of the IOUs' current retail load may be served by sources other than the IOUs by the middle of the next decade.<sup>9/</sup>

Additionally, PG&E's forecasts show no need for incremental energy, capacity, or RPS compliance for its bundled customers until at least 2030.<sup>10/</sup> PG&E's lack of need is supported by substantial evidence in the record of the Commission's RPS proceeding. The Office of Ratepayer Advocates concurs, stating, "[t]here is currently no short-term need to be met by additional RPS procurement; thus, the continuation of such mandates results in costs borne by ratepayers without any associated benefits."<sup>11/</sup>

These transformative changes to the energy market are likely to continue for the foreseeable future, resulting in a dramatic restructuring of the procurement landscape.

#### **B. Integrated Resource Plan**

Additionally, the Integrated Resource Plan (IRP) proceeding, as enacted by Senate Bill (SB) 350, is intended to implement a transparent process to develop the optimal, least-cost portfolio that achieves the state's greenhouse gas emissions reduction goals. The IRP will evaluate the cost-effectiveness of resources (supply and demand side), to ensure that clean

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<sup>9/</sup> CPUC, Staff White Paper, "Consumer and Retail Choice, the Role of the Utility, and an Evolving Regulatory Framework," (May 2017) at p. 1.

<sup>10/</sup> PG&E, Draft 2017 Renewable Energy Procurement Plan (July 21, 2017) at p. 1.

<sup>11/</sup> Opening Comments of Office of Ratepayer Advocates in 2017 RPS Plan proceeding, R.15-02-020, p. 6.

energy goals are met while minimizing impacts on customers' bills. Part of the Commission Staff's vision for the IRP is that "this 'integrated' approach to resource planning will help California transition away from its history of resource-specific procurement requirements and mandates."<sup>12/</sup>

Given its relatively high cost and resource-specific nature, the BioMAT program runs contrary to the goals of the IRP, which is designed to meet the state's RPS and GHG goals in a cost-effective manner. More specifically, the Commission's proposed IRP Reference System Plan did not *identify any need* for biomass resources through 2030.<sup>13/</sup>

As the state moves toward a holistic solution to reaching the GHG reduction targets, there is no room for programs such as BioMAT that are not cost-effective. Suspending the BioMAT program and initiating a subsequent proceeding will allow the Commission (with input from all parties) to review this program after allowing the IRP proceeding to identify cost-effective resources needed to meet the electric sector GHG reduction target.

### C. Significant Above-Market Costs

Unnecessary procurement costs are of particular concern for the BioMAT program, which has a significant impact on above-market costs for PG&E's customers. The cost for the BioMAT program for PG&E could reach nearly \$3 billion, with an above-market cost of over \$2 billion.<sup>14/</sup> Given the high above-market costs, purchases under BioMAT will disproportionately impact the costs borne by PG&E's dwindling customer base. When compared against a current approximation of the "renewable market" price at \$40/MWh,<sup>15/</sup> the current Category 3 price of \$199.72 is nearly five times that of the renewable market.

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<sup>12/</sup> Energy Division, "May 2017 IRP Staff Proposal," p. 10.

<sup>13/</sup> Administrative Law Judge's Ruling Seeking Comment on Proposed Reference System Plan and Related Commission Policy Actions, filed Sept. 19, 2017 in R.16-02-007, Attachment A, p. 141.

<sup>14/</sup> Assumes full procurement of 111 MW at an 80% capacity factor with the following \$/MWh prices resulting in a total cost of \$2.88 billion: Category 1 at \$127.72, Category 2 (both dairy and other agriculture feedstocks) at \$199.72 and Category 3 at \$199.72.

<sup>15/</sup> Assumes the CAISO's estimate of \$30.72/MWh for the average wholesale day-ahead energy costs provided in Table 2.1 of the CAISO's 2016 Annual Report on Market Issues and Performance (at p.

To put this in perspective, if PG&E were to spend \$3 billion on market-priced renewables, like solar, it would translate into ~1,350 MW of procurement.<sup>16/</sup> PG&E does not consider that volume a small procurement program.

To put this in further perspective, the notional cost of one 3 MW contract at \$199.72/MWh is \$84 million.<sup>17/</sup> If PG&E is required to purchase all 47 MW allocated to it at the current price of \$199.72/MWh, the total notional cost of just Category 3 is \$1.3 billion. In addition, AB 1923 will allow for significant overbuilding of BioMAT facilities to 5 MW, allowing for higher capacity factors to be achieved under a 3 MW PPA, which will counter any potential cost savings from economies of scale.

In fact, these cost projections could be even higher since the BioMAT PPA *does not* include a critical cost containment provision that caps the annual time of delivery (“TOD”) payments to 105% of the Contract Price. Such contract language was rejected in Commission Decision 15-09-004,<sup>18/</sup> despite being approved by the Commission for baseload facilities in PG&E’s 2012 RPS Plan and pro forma RPS PPA. Its purpose is to limit the amount by which sellers can shift their deliveries to maximize payments above the contract price, resulting in an anticipated post-TOD price of 15-20% higher than the contract price. For example, a project that accepts \$199.72/MWh can receive \$234/MWh or more on average over the delivery term. Generation profiles recently provided by a number of BioMAT applicants currently in the queue make it clear that developers intend to shift deliveries in response to PG&E’s TOD factors.

#### **D. Cost Allocation**

Given extremely high above-market costs, coupled with a lack of need for such resources, and an inadequate cost allocation mechanism, PG&E urges the Commission to allow PG&E to

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61) and a \$10/MWh REC value as adopted by the Commission in the Green Tariff Shared Renewables proceeding via Commission Decision 16-05-006.

<sup>16/</sup> This assumes a 20-year term, a capacity factor of 33%, and a price of \$40/MWh.

<sup>17/</sup> This assumes a 20-year term, a flat delivery profile, and a capacity factor of 80%.

<sup>18/</sup> CPUC Decision 15-09-004, pp. 26-27.

set up a memorandum account for PPA costs while the Commission addresses these significant cost burdens on PG&E's bundled customers.

The current method of cost allocation for the BioMAT program is the Power Charge Indifference Adjustment ("PCIA"). PG&E currently forecasts an annual bundled load of roughly 32,000 GWh in 2020 compared to actual sales of approximately 68,000 GWh in 2016.<sup>19/</sup> Because of this significant load departure, the PCIA, which is applied to procurement costs at the time of PPA execution, may not be applied to a significant portion of PG&E's current bundled customers. PPAs under the BioMAT program may be awarded up to February 2021, when PG&E is projected to have lost additional customers to CCAs on top of those that have already departed bundled service. Further, as the IOUs described in its application for the approval of a new methodology for allocating costs earlier this year, the PCIA itself is of concern to the IOUs in large part due to the proxy values that are established for renewable energy credits ("RECs") and resource adequacy, which are much higher than actual realized market prices.<sup>20/</sup>

Despite aforementioned concerns, advocates for the continuation of BioMAT point to the Governor's Emergency Proclamation from October 2015 and the societal need for better forest management to protect life and property. However, any societal benefits attributed to the BioMAT program should not be solely borne by PG&E's remaining bundled customers. PG&E's bundled customers should not be the only ratepayers required to procure additional and costly renewable resources. Through the passage of SB 859 and Commission Resolution E-4834, both the Legislature and the Commission acknowledged that the growing number of non-IOU customers, as beneficiaries of these societal benefits, should pay their fair share of the premium paid to biomass facilities that burn a substantial amount of fuel from HHZs.<sup>21/</sup>

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<sup>19/</sup> PG&E internal forecast approved September 2017.

<sup>20/</sup> Joint Utilities' Direct Testimony in Support of the Application for Approval of the Portfolio Allocation Methodology for All Customers, April 25, 2017.

<sup>21/</sup> Senate Bill 859 directed both the IOUs and publicly-owned utilities to enter into contracts for HHZ fuel from biomass facilities and established a non-bypassable charge for departed customers.

### **E. BioMAT Project Limitations**

Industry advocates argue that unlike solar, BioMAT facilities offer much-needed flexible power and storage capacity for grid optimization.<sup>22/</sup> Unlike PG&E's storage programs or other CAISO-driven market initiatives, the BioMAT program is not designed to procure flexible and dispatchable resources. There are no contractual obligations or pricing terms to incentivize sellers to respond to CAISO market conditions other than fixed time of delivery factors over the entire delivery term (10 to 20 years). Instead, BioMAT PPAs are "put options" to PG&E, meaning that the only market or grid conditions that BioMAT sellers are required to respond to are those pertaining to system or economic curtailment orders and those requirements are weakened due to the fact that the PPA does not require the installation of equipment to respond to such orders in a meaningful way. Further, BioMAT applicants participating in the queue propose significant limitations on their ability to respond to curtailment orders citing air permit restrictions, onsite load requirements, and other operational limitations that combine to make bioenergy facilities relatively inflexible.

In addition, PG&E notes that several larger existing biomass facilities that secured PPAs from the IOUs' solicitations in response to the 2015 Proclamation expect to encounter significant issues with obtaining the minimum amounts of forest fuel from HHZ areas as required under the PPAs.<sup>23/</sup> Prices accepted in BioMAT are not likely to factor in any incremental cost for securing HHZ fuel that they are not obligated to use. So, while BioMAT generators can utilize HHZ fuel to meet their forest feedstock requirements, without a requirement to do so, PG&E does not expect BioMAT facilities to source a substantial amount of HHZ fuel.

To the extent the Commission considers any additional program modifications to the benefit of Category 3 resources, PG&E also requests the Commission to allow PG&E to incorporate language into the BioMAT PPA (similar to language the Commission approved in

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<sup>22/</sup> Bioenergy Association of California's Petition to Modify Decision 14-12-081 Implementing Senate Bill 1122, October 4, 2017, p. 8.

<sup>23/</sup> Simet, A. (2017, September/October). From High Hazard to Bioenergy Boost. Biomass Magazine, pp. 20-22.



**VERIFICATION**

I, Chris DiGiovanni, am an employee of PACIFIC GAS AND ELECTRIC COMPANY, a corporation, and am authorized to make this verification on its behalf. I have read the foregoing **MOTION OF PACIFIC GAS AND ELECTRIC COMPANY (U 39-E) TO SUSPEND BIOMAT PROGRAM PROCUREMENT** in CPUC Docket **R.11-05-005**.

The statements in the foregoing document are true of my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters I believe them to be true. I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 1<sup>st</sup> day of December, 2017 at San Francisco, California.

*/s/Chris DiGiovanni*  
Chris DiGiovanni  
Manager, Renewable Energy  
Pacific Gas and Electric Company