

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue Implementation and Administration of California Renewable Portfolio Standard Program. ) Rulemaking 11-05-005  
) (Filed May 5, 2011)  
)  
)  

---

RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN OF  
GLACIAL ENERGY OF CALIFORNIA, INC.

July 10, 2013

Andrew Luszcz  
Glacial Energy of California, Inc.  
5326 Yacht Haven Grande  
Box 36  
St. Thomas, VI 00802  
Telephone: (340)715-7065  
Facsimile: (888)721-5019  
Email:  
[andrew.luszcz@glacialenergy.com](mailto:andrew.luszcz@glacialenergy.com)

## **6.1. Assessment of RPS Portfolio Supplies and Demand - § 399.13(a)(5)(A)**

Provide a written description assessing annual and multi-year portfolio supplies and demand in relation to RPS requirements, the RPS program, and the RPS program's overall goals to determine the retail seller's optimal mix of eligible renewable energy resources.

The assessment should consider, at a minimum, a 20-year time frame with a detailed 10-year planning horizon that takes into account both portfolio supplies and demand. This written description must include the retail seller's need for RPS resources with specific deliverability characteristics, such as, peaking, dispatchable, baseload, firm, and as-available capacity as well as any additional factors, such as ability and/or willingness to be curtailed, operational flexibility, etc.

This written description must also explain how the proposed renewable energy portfolio will align with expected load curves and durations. Where applicable, assessment should also identify and incorporate impacts of overall energy portfolio requirements (not just RPS portfolio requirements), recent legislation, other Commission proceedings (e.g. Long-Term Procurement Plans Proceeding), other agencies requirements, and other policies or issues that would impact RPS demand and procurement.

Additionally, the assessment should address the retail seller's need for and plan for procuring resources that satisfy the three portfolio content categories of RPS procurement.<sup>17</sup> Lastly, it must also explain how the quantitative analysis provided in response to section 6.5 supports the assessment.

### **Response of Glacial Energy of California:**

Glacial Energy of California, Inc. (GECA) neither owns, nor is building any generation, renewable or otherwise.

GECA's long-term forecast incorporates a top-down forecasting methodology based on settled monthly shape multiplied by customer HUD. Short-term forecasting adjusts for trending forecast error and weather. Because many of GECA's customers are on month-to-month contracts, it is difficult to forecast existing customer retention. Furthermore, forecasting new customer acquisition is problematic for two reasons: the staggered opening of the market tranches, and the near impossibility of forecasting the percent of pending customers that will be awarded to an individual competitive supplier. Therefore, with an inability to accurately forecast both customer addition and attrition, generating a 10 and 20 year forecast is extremely problematic.

In the absence of a better process, GECA intends to use the load data for the 3 years the GECA has been in California as a proxy for the 10 and 20 year forecast and procure the minimum percent of long-term contracts. The balance will be procured with the short-term contracting of the qualified renewable generation, trued-up to realized settled load.

Non-renewable Resource Adequacy is procured bilaterally from existing generation. Energy and ancillaries are procured from the CAISO.

## **6.2. Project Development Status Update - § 399.13(a)(5)(D)**

Provide a written status update on the development schedule of all eligible renewable energy resources currently under contract but not yet delivering generation. This written status update may rely upon the most recent filed Project Development Status Reports<sup>18</sup> but must elaborate upon these reports and should differentiate status updates based on whether projects are pre-construction, in construction, or post-construction. Providing a copy of the Project Development Status Report will not be a sufficient response. The status updates provided in the written description must be reflected in the quantitative

analysis provided in response to section 6.5, below. Given this analysis, discuss how the status updates will impact the retail seller's net short and its procurement decisions for a 10-year planning horizon.

**Response of GECA:**

GECA has not yet contracted any long-term renewable procurement. Thus GECA has no status updates to report.

**6.3. Potential Compliance Delays - § 399.13(a)(5)(B)**

Describe in writing any potential issues that could delay RPS compliance, including, but not limited to inadequate transmission capacity, delayed substation construction, financing, permitting, and the relationship, if any, to deliveries and project development delays. Describe the steps taken to account for and minimize these potential compliance delays. The potential compliance delays included in the written description must be reflected in the quantitative analysis provided in response to section 6.5. Given this analysis, discuss how the potential compliance delays will impact the retail seller's RPS net short and its procurement decisions.

**Response of GECA:**

Glacial Energy neither owns, nor is developing any generation, renewable or otherwise, and is thus, unaffected by transmission issues.

Short-term contracts have delivery threshold covenants or are for firm power.

Long-term contracts will require the counterparty to provide replacement power of the bucket-type contracted.

**6.4. Risk Assessment - § 399.13(a)(5)(F)**

Provide a written assessment of the risk in the RPS portfolio in relation to RPS compliance requirements. Risk assessment should describe risk factors such as those described above regarding compliance delays, as well as the following: lower than expected generation, variable generation, resource availability (e.g., biofuel supply, water, etc.) and impacts to eligible renewable energy resource projects currently under contract. The risk assessment provided in the written description must be reflected in the quantitative analysis provided in response to section 6.5 and section 6.6. Given this analysis, discuss how the risk projected initial operation date. Section 6.3 is a new requirement for RPS Procurement assessment will impact the retail seller's net short and its procurement decisions. The written assessment must explain how quantitative analysis provided in response to section 6.5 supports this response.

**Response of GECA:**

GECA currently has no long-term renewable contracts: see response 6.2, above.

**6.5. Quantitative Information - §§ 399.13(a)(5)(A), (B), (D) and (F)**

In addition to the written descriptive responses to section 6.1 through 6.4, provide quantitative data, methodologies, and calculations relied upon to assess the retail seller's RPS portfolio needs and RPS procurement net short. This quantitative analysis must take into account, where appropriate, the

quantitative discussion requirement by sections 6.1-6.4, above. As stated above, the portfolio assessment should be for a minimum of 20 years in the future. The responses must be clear regarding the quantitative progress made towards RPS requirements and the specific risks to the electrical corporation's RPS procurement portfolio. Risks may include, but are not limited to, project development, regulatory, and market risks. The quantitative response must be provided in an Excel spreadsheet based on the most recently directed renewable net short methodology.<sup>19</sup>

**Response of GECA:**

Due to the long-term load forecasting difficulties outlined above, the requested long-term quantitative analysis is difficult and problematic. However, in accordance with the Assigned Commission's Ruling, GECA provides the net short calculation below:

Year	Annual RPS Risk-adjusted Net Short Calculation (MWh) (Bundled Retail Sales Forecast * RPS Procurement Quantity Requirement + Voluntary Margin of Over-Procurement) – Online Generation + Risk adjusted Forecast Generation + Pre-approved Generic Generation
2011	$(62940.207 \times .20 + 0) - (0 + 0 + 0) = 12588.04$
2012	$(71566.33 \times .20 + 0) - (24,000 + 0 + 0) = -9686.73$
2013	$(51064.35 \times .20 + 0) - (9,844 + 0 + 0) = 368.87$
2014	$(51064.35 \times 0.217 + 0) - (0 + 0 + 0) = 11080.96$
2015	$(51064.35 \times 0.233 + 0) - (0 + 0 + 0) = 11897.99$
2016	$(51064.35 \times 0.25 + 0) - (0 + 0 + 0) = 12766.09$
2017	$(51064.35 \times 0.27 + 0) - (0 + 0 + 0) = 13787.37$
2018	$(51064.35 \times 0.29 + 0) - (0 + 0 + 0) = 14808.66$
2019	$(51064.35 \times 0.31 + 0) - (0 + 0 + 0) = 15829.95$
2020	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2021	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2022	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2023	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2024	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2025	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2026	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2027	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2028	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2029	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$
2030	$(51064.35 \times 0.33 + 0) - (0 + 0 + 0) = 16851.24$

**Total RPS Risk-adjusted Net Short Calculation**

Total RPS Risk adjusted Net Short: 268,804.84 MWh

**6.6. Portfolio Optimization Strategy**

Based on the above assessment provided in response to sections 6.1 – 6.5, include an RPS Portfolio optimization strategy for the next ten years. The scope of the optimization strategy should cover how ratepayer costs are minimized, portfolio value is maximized, RPS compliance is met and maintained, and risk<sub>20</sub> is managed. Specifically, a response should include:

- a) Specification of objectives of portfolio optimization strategy;

**Response of GECA:**

GECA will quarterly procure RPS target volumes at market-based rates.

- b) Description of methodology or model used to define portfolio optimization strategy;

**Response of GECA:**

See response 6.1 and 6.1A. Using short-term adjusted forecasting and load settlement, GECA will procure to the best of its ability RPS requirements quarterly at market-based rates.

- c) Identification of metrics (e.g. PPA costs, energy value, capacity value, interest costs, carrying costs, transaction costs, etc.) within methodology or model;
  - i. Description of how metrics are measured or valued (e.g. PPA costs in \$ per megawatt-hour (MWh) based on executed contracts or forward REC prices in \$/MWh based on internal forecasts);
  - ii. Description of how metrics are maximized/minimized in optimization strategy and quantification of metric based on optimization strategy (e.g. x million in ratepayer costs avoided by selling y gigawatt-hours (GWh) or x reduction in rates by contracting for y number of curtailment hours);

**Response of GECA:**

See responses 6.1 and 6.6.B above. GECA procures non-renewable RA through bilateral capacity and ancillaries through CAISO. When procuring renewables, GECA will, to the best of its ability, procure in-line with RPS, attempt to avoid over procurement and true-up any shortfalls resulting from under-forecasting, within the compliance period.

- d) Identification of risks (e.g. non-compliance with RPS requirements, regulatory risk, overprocurement of non-bankable RPS-eligible products, etc.) and constraints included in optimization strategy;
  - i. Description of metrics used to measure risk (e.g. value-at-risk, likelihood of non-compliance);
  - ii. Identification of appropriate ranges of risks identified;

**Response of GECA:**

As detailed in response 6, long-term forecasting of GECA's load is extremely problematic. Thus, overprocurement is the biggest risk. For this reason, GECA procures the minimum of the long-term requirement and satisfies the balance of its requirement, quarterly.

- e) Description of activities and overall range of transactions planned to optimize portfolio; and

**Response of GECA:**

GECA will continue to minimize the RPS liability of existing customers by passing through market-based rates and hedge any risks depending customer and product need, accordingly.

- f) Identification and quantification of likely impacts of optimization strategy on ratepayers, shareholders, and market.

**Response of GECA:**

GECA will strive to maintain the lowest RPS procurement cost possible for its customers based on market rates. However, due to the increase in the percentage requirement, particularly of Bucket 1, the limitation on backing and the onerous contracting of bundled power, increased RPS costs seem unavoidable.

**VII. Conclusion**

In accordance with the Assigned Commissioner's Ruling, GECA provides this RPS procurement plan. As described above, it is the intention of GECA to comply fully with the RPS requirement in a manner that minimizes both risks to the company and costs to the customer.

**VERIFICATION**

I am an officer Glacial Energy of California, Inc. and am authorized to make this verification on its behalf. 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 July 9, 2013  
St. Thomas, Virgin Islands



Andrew Luszcz  
VP of Electric Supply