BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans	Rulemaking R-12-03-014

COMMENTS OF THE GREEN POWER INSTITUTE ON THE PLANNING SCENARIOS FOR THE 2012 LTPPS

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Introduction

Pursuant to the *Revised Assigned Commissioner's Ruling Setting Forth Standardized Planning Scenarios for Comment*, dated September 25, 2012, the Green Power Institute (GPI) respectfully submits this *Comments of the Green Power Institute on the Planning Scenarios for the 2012 LTPPs*, in R.12-03-014, the **Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans**. Our *Comments* are focused on the renewables supply portfolios that have been developed for the various planning scenarios that will be studied in conjunction with the 2012 LTPPs.

Selection of Scenarios for Analysis

The Attachment to the *Ruling*, **Revised Scenarios for use in Rulemaking 12-03-014**, September 2012, identifies four scenarios as high priority, and two additional scenarios as second-tier priority. We support the selection of the four high-priority scenarios, which will provide the core of the analysis for the 2012 LTPPs. The four high-priority scenarios are:

- Base Scenario
- Mimic TPP Scenario
- Early SONGs Retirement
- High DG, High DSM

The two second-tier scenarios include:

- Stress Peak Case Scenario
- High DG, High DSM, 40% RPS x 2030

The GPI is certainly supportive of the use of a high-RPS stretch scenario (40% RPS x 2030), but we have to question the decision to tie it to a particular variation of the RPS scenario (High DG, High DSM), instead of allowing it to be based on whatever RPS portfolio provides the optimal outcome, whether that be the Base Scenario, the High DG / High DSM sensitivity, or some other RPS portfolio. The forty-percent RPS level, which is the main point of this second-tier scenario, is an ambitious goal, and it is self-defeating to limit the scope of how it could be achieved in the absence of some kind of compelling reason to do so. No such reason is provided in the Attachment. The 40% RPS x 2030 scenario should not be tied to any particular 33% RPS x 2020 scenario, but should be allowed to be optimized over the entire renewable spectrum.

We also believe that one additional scenario should be included in the set of planning scenarios for the 2012 LTPPs, if resources permit. The demand scenarios that are being used for the 2012 LTPPs are based on the latest projections of the IEPR, and these projections were produced in 2011 and early 2012, a period that follows an extended and deep recession. Current statewide electricity demand in California is down more than eight percent from 2008, the last year before the full effect of the recession was felt. As far as we can tell, none of the current IEPR projections, including the high-demand-growth scenario, account for the possibility that the state will recover vigorously from the recession, and achieve robust levels of economic activity. Should this desirable outcome be achieved, even assuming significant future success with efficiency and DSM efforts, it is highly likely the amount of RPS energy that would be needed will be considerably greater than anything that is covered by the six planning scenarios included in the Attachment. We believe that the robust-economic growth scenario should be a second-tier scenario.

RPS Portfolios for the Various Scenarios

The Attachment to the *Ruling* laments, on page 11, that despite multiple efforts to collaborate, staff and parties have been unable to come to agreement about how to determine future RPS portfolios for the LTPP planning scenarios. The text concludes:

"Given this impasse, the only option is to use simple, public milestones as a yes/no test to include resources in planning studies and return to using the 33% RPS Calculator" (Attachment, pg. 11). We disagree with the conclusion that this is the only option available, but a more fundamental concern is that it is not at all clear that this is what is being done in the application of the 33% RPS Calculator to the construction of RPS portfolios for the 2012 LTPP planning scenarios.

The RNS calculations that have been worked on collaboratively in Commission workshops in the LTPP and RPS proceedings have been geared to the calculation of the RNS for each of the state's three large IOUs. Indeed, the IOUs have been encouraged to apply confidential information to the problem, in order to determine an expected core of successful projects from their portfolios of projects-in-development. Aggregate information on these confidential datasets is subsequently made available to the public.

The RPS Calculator deals with statewide demand and statewide renewable-procurement data, and therefore its determination of a discounted core of new renewables must be different than the discounted core that has previously been under consideration in this proceeding, which is based solely on the portfolios of projects-under-development to the three IOUs. Of course, the portfolios of the three large IOUs contribute the majority of the content of the statewide discounted core. Nevertheless, the statewide discounted core presumably must be bigger than the just contributions of projects under contract to the three IOUs.

As discussed below, the data for the existing and expected renewable generation that is anticipated for 2022 in the 33% RPS model, which we interpret to mean the renewable energy that will be procured from existing generators (2012), and generators that are included in the model's discounted core of projects-under-development, is hardwired into the model, making it difficult to know where it comes from.

Definition of the Renewable Net Short

The Commission has made significant efforts to harmonize the determination of the renewable net short (RNS), a quantity that is needed in a variety of applications, including in particular in this proceeding, R.12-03-014, and in the RPS proceeding, R.11-05-005. One of the problems hindering these efforts is the fact that the RNS can be defined in a variety of ways, geared towards a variety of purposes. For example, the RNS can be defined on the basis of resources-under-contract, or physical resources interconnected to the grid, depending on the information needs of the party that is requesting the calculation. The two are not at all the same.

Most of California's renewable electricity supply comes from generators that were operating long before the creation of the state's RPS program in 2002. Many of these generators are operating under power contracts that will expire between now and 2022. When the IOUs look at their contracting needs for RPS power in 2022, they consider existing generators that are under contract today, but whose contracts will expire before 2022, to be **not** under contract in 2022, and therefore not part of the supply that is assumed to be already procured for that timeframe.

This view of the RNS tells the IOUs how much additional energy they will need to contract with in order to meet their future RPS obligations, but it does not tell us how much new generating capacity will have to be built in order to serve that demand. The IOUs know that the RNS determined in this way will be served by a combination of the existing renewable generators that will no longer be under contract and may be seeking new opportunities to market their products, and new capacity that has yet to be developed.

The RNS that is determined for and used in the scenario-generating model (33% RPS Calculator) appears to be calculated based on the physical resources that are expected to be interconnected to the grid in 2022 (existing plus discounted core), and is blind to the current contract terms and future contract status of the existing fleet of generators. This is a very different RNS than what the IOUs have determined for their own situations.

Apparent Double Counting of the Discounted Core

Although it is difficult to fully follow the flow of data and analysis that is employed in the large, highly complex, and minimally-documented 33% RPS calculator, we believe that the discounted core of RPS projects-in-development is being counted twice in the determination of the RPS portfolios for the various LTPP study scenarios. This does not mean that the amount of renewables in the various portfolios is wrong, on the contrary, but it causes distorted perceptions about the portfolios, and incorrectly narrows the degree of perceived flexibility with which the state's future renewable generating infrastructure can develop.

The Need for RPS energy in 2020 or 2022 is determined as 33% of the projected applicable load. Statewide applicable load for that timeframe is variously projected to be in the range of 240,000 – 300,000 GWh, putting future statewide RPS needs in the range of 80,000 – 100,000 GWh per year. The statewide RPS procurement in 2011 is estimated to have been approximately 44,000 GWh, and there are more than 37,500 GWh/yr of new renewable generating projects in various stages of development around the state, as well as additional capacity across the West. Of course, only a fraction of this capacity, probably less than 60% based on past experience, will ultimately come online.

As far as we can tell, the RPS calculator determines the 2022 RNS for each scenario in the tab: ff – CA_RPSNetShortCalc. The first several rows of the table determine the RPS procurement requirement for 2022 based on statewide applicable load for the various scenarios. Total RPS requirements vary among the various scenarios in the range of 81,626 – 95,322 GWh. The following rows in the table show the "Existing and Expected Renewable Generation" for 2022, which is disaggregated into in-state, out-of-state, and procured DG (not handled in Calculator) components. The values for these data points are hardwired into the model and sum to 55,364 GWh, producing a residual 2022 RNS of 26,262 – 39,957 GWh for the 2022 scenarios shown.

Based on the numbers and the words used in the 33% RPS Calculator, we interpret the 55,364 GWh of existing and expected supply to include both currently operating resources, and the discounted core of resources from the portfolios of projects-under-development held by the various retail suppliers in the state. The number is certainly too large to represent only currently operating projects (as of 2012), which we estimate can be counted on for no more than 40,000 GWh of deliveries in 2022, allowing for some amount of closures or de-rating of aging infrastructure and the startup of RPS programs in a number of neighboring states that will compete for RECs currently being sold into California. Unfortunately, because the numbers are hardwired into the model, there is no way to know where they come from or what their basis is.

The small Portfolio Model takes the calculated RNSs described above (in this model the tab is titled "net shorts," but it is identical to the "ff – CA_RPSNetShortCalc" tab in the 33% RPS calculator), and uses it in the "MW_Summary_Tech&Transmission" tab to show how the RNS for each scenario is satisfied, broken down by renewables category. Most of the energy needed to satisfy the computed RNSs, approximately 10,500 MW of capacity, comes from the discounted core, leaving, for example, approximately 1,650 MW of capacity to be specified by the model for the Base Scenario.

The problem comes from the fact that the discounted core has already been accounted for in the determination of the RNS in the "net shorts" tab, so applying it a second time in the "MW_Summary_Tech&Transmission" tab is double counting. In fact, using the models' own approach, as best we can decipher it, all of the RNS calculated in the "net shorts" tab should be available for allocation among the various renewables by the model without reference to the composition of the already-included discounted core. In other words, a third or more of the RPS supply in 2022 is so far unidentified, and, contrary to the conclusion in the Attachment that California's 2020 RPS supply composition has already been largely predetermined, policy choices that are made over the next ten years can have a considerable influence on the future mix of renewables serving California's energy needs.

Dated October 5, 2012, at Berkeley, California.
Respectfully Submitted,

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