Workshop Agenda and Staff Proposal
Subject: RPS Renewable Net Short (RNS) Methodology

June 12, 2012, 12PM-4PM
California Public Utilities Commission
Auditorium
505 Van Ness Avenue
San Francisco, CA. 94102

Note: A dial-in number is not available for this workshop due to technical issues

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Background:

On April 5, 2012 Commissioner Ferron issued an Assigned Commissioner Ruling[1] (ACR) in R.11-05-005 identifying issues and a schedule of review for the 2012 Renewables Portfolio Standard Procurement Plans. These RPS Plans were submitted to the Commission on May 23, 2012. Retail sellers are also permitted to provide changes to the plans by August 1, 2012.[2] Specifically, the ACR requires that the large IOUs and ESPs (LSEs) provide a quantitative assessment in their RPS Plans that forecasts the additional renewable generation required (i.e. net short) to comply with RPS procurement quantity requirements recently adopted by the Commission in D.11-12-020.[3] The renewable net short (RNS) is defined as the amount of new renewable generation necessary for LSEs to meet or exceed the renewable target.[4] The process for calculating the net short includes forecasting the renewable target and then subtracting the renewable supply forecast. The renewable supply forecast is defined as the forecasted amount of renewable generation from contracted facilities both online and under development.

The April 5, 2012 ACR also directs Energy Division Staff to hold a workshop for LSEs and all interested parties to develop a methodology, inputs, and format, as needed, for reporting RPS portfolio needs and procurement net short. Given that the workshop will be after the May 23, 2012 filing of the draft procurement plans, the April 5, 2012 ACR requires the LSEs to submit an updated net short calculation by August 1, 2012 for each compliance year from 2011 to at least 2020 using the new standardized Commission adopted net short methodology.

Purpose of the workshop:

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[1] *See* http://docs.cpuc.ca.gov/efile/RULINGS/163513.pdf
[2] Updates are not intended to the form and format of the plan but may be appropriate for limited elements based on changed circumstances or recent information (i.e. new legislation, recent Commission decision, etc.).
[3] D.11-12-020 establishes the annual compliance targets necessary to achieve 33% of renewable generation as a percentage of bundled retail sales by 2020 (Average of 20% from 2011-2013, 25% by the end of period 2014-2016, 33% by the end of period 2017-2020, and 33% for every year beyond 2020).
[4] The renewable target is currently 33% of bundled retail sales by 2020.

Energy Division Staff's objective is to develop a standardized net short methodology and corresponding set of assumptions to inform and guide the State's RPS procurement process, which includes:

1) the evaluation and approval of renewable projects based on portfolio need
2) 2) the coordination of annual renewable procurement with CAISO's transmission planning process
3) 3) to inform the broader resource planning initiative in the Commission's Long-term Procurement Plan (LTPP) process for determining total long-term system needs.[5]

Based on party responses to Energy Division's June 1, 2012 RNS questions[6], Energy Division Staff developed a proposal for standardizing the renewable net short methodology. The proposal is outlined on pages 4 – 6 of this workshop agenda.

This proposal will be vetted by parties at the Energy Division workshop scheduled for June 12, 2012 in the CPUC Auditorium at 505 Van Ness Ave., San Francisco, CA. Due to technical difficulties, a dial-in number will not be provided for participants that cannot attend the workshop.

Workshop Agenda

I. Overview - CPUC Staff **12:00 – 1:00**

- Introductions and agenda overview
- Workshop objectives and scope
    ii. Overview of the CPUC's three objectives - bridging the requirements of RPS, LTPP and TPP
        a. Inform RPS procurement decisions
        b. Inform LTPP system planning
        c. Inform CAISO transmission planning (TPP)
    - Different data inputs and outputs required for RPS, LTPP and TPP
    1. Overview of RNS guiding principles
        - RNS methodology that is transparent and standardized
        - Flexibility to procure based on changing portfolio needs
        - Facilitates RPS, LTPP, and TPP coordination on RNS determination
        - Adequately address concerns regarding the use of confidential data but doesn't reduce the required accuracy and granularity of the forecast

[5] Currently the 2012 LTPP, R.12-03-014.
[6] Five parties commented on June 1, 2012. The comments can be found at the following link on the CPUC's RPS website: http://www.cpuc.ca.gov/PUC/energy/Renewables/index.htm

II. Investor-owned Utilities (IOU) Present Methodologies **1:00 – 2:30**

Each IOU will have 20 minutes to present its respective RNS methodology.

- PG&E: Redacted Manager of Renewable and Clean Energy Strategy
- SDG&E: Juancho Eekhout, Director of Origination and Portfolio Design
- SCE: Bill Walsh, Manager of Renewable and Alternative Power Contract Origination

Q&A - Topics of discussion will include the following:

1) Bundled retail sales forecasts to be used to calculate the renewable target
2) Accounting for a minimum margin of procurement
3) Assumptions for re-contracting and end-of-life assets
4) Validity and limitations of using a probabilistic model for TPP planning and proper viability metrics (i.e. site control, permitting, interconnection) to reflect the likelihood of project success
5) Validity and limitations of using a standard failure rate (i.e. 40%) based on an LSE's internal assessment of project risk for RPS procurement decisions
6) Assumptions for pre-approved generic generation (i.e. RAM, Re-MAT)

BREAK **2:30 – 2:45**

III. Presentation of Energy Division's Proposed Net Short Methodology **2:45 - 3:15**

- Proposal is outlined on pages 4 – 6 of this workshop agenda.
- Identify strengths and weaknesses of proposed methodology
- Discuss ESP, small utility (SU), and CCA applicability

IV. Reconciling Stakeholder Differences and Identifying Areas of Consensus **3:15 - 3:50**

- Identify and reconcile stakeholder-specific issues and concerns
- Find consensus and recommend options to incorporate into Energy Division's RNS proposal

V. Conclusion **3:50 - 4:00**

- Wrap-up
- Next steps

Energy Division Staff Proposal

Energy Division staff proposes two methods for determining the renewable net short and supply stack. Method 1 would be used to inform RPS procurement and Method 2 would be used to inform LTPP and TPP planning. The data inputs and outputs, advantages and disadvantages, and frequency of reporting for each method are discussed below. Each method is designed to address a specific purpose and accordingly each have their own needs regarding granularity, confidentiality, and accuracy. While Method 1 clearly can and will utilize confidential data, Method 2 must balance a need for transparency in planning efforts at the Commission and California ISO with a need for accurate information.

Common Assumptions:

1. Apply 100% success to generic pre-approved generation before contracts are signed. After contracts are signed, risk-adjust the generation using either Method 1 or Method 2.

2. Include all projects that have executed contracts in the calculation.

1) Method 1: RNS to Inform RPS Procurement

The first approach places the responsibility on the LSE to calculate the RNS based on internal and confidential LSE analysis that takes into account both quantitative and qualitative parameters in determining project-specific risk. This deterministic method will also allow LSEs to frequently refine the risk-adjusted RPS supply stack based on confidential and project-specific viability assessments, thus allowing LSEs to adjust the amount and timing of procurement based on changing portfolio needs. The assumptions and inputs for Method 1 are outlined below in Table 1.

Assumptions:

1. LSE's bundled retail sales forecasts should utilize the same methodology as determined in the 2010 LTPP bundled plans when calculating the renewable target.[7] Specifically, the decision stated that for bundled procurement, the utilities can utilize their own forecasts for bundled retail sales for the first five years and use the LTPP standardized planning assumptions thereafter.

2. Do not assume any generation from re-contracting or take into consideration a facility's useful life.

3. Include the voluntary margin of over-procurement because it is designed to address external factors that present forecast risk other than project delay or failure.

4. Account for excess bucket 2 and 3 volumes (i.e. volumes that exceed the product content category amount for a given year, and as such cannot be counted towards compliance in that given year). Their exclusion could result in a larger compliance shortfall.

Table 1: RNS for RPS Procurement

[7] D.12-01-033 at pages 15-17 and Ordering Paragraphs at 3, 8, and 9.

	Method 1: RNS for RPS Procurement
Preferred Methodology	LSE's own internal net short analysis (deterministic)
Benefits	1) More accurate than a probabilistic model, i.e. minimizes ratepayer costs and risk of an LSE not achieving RPS targets; 2) LSE's held accountable and penalized based on own internal analysis
Disadvantages	Less transparent by LSE must use assumptions determined by the CPUC for calculating the RNS
Outputs:	1) GWh Gross Surplus/Deficit by year and by Compliance Period (CP); 2) GWh Banked/Used by year and by CP; 3) Net Surplus/Deficit after bank is applied; 4) Net RPS Position (%) by CP and yearly after 2020 5) Aggregated GWh data that is probability-weighted annually and by CP (highly viable, viable, high risk) 6) Forecast failure rate (%) by year and by CP for new projects not online; 7) Forecast variability/failure rate (%) by year and by CP for existing generation; 8) Minimum margin of procurement (GWh) by year and by CP to mitigate forecast risk.
Inputs:	The CPUC is not required to see the inputs that are used in calculating the output values. The LSE is required to use the standard RNS assumptions determined by the CPUC.
Frequency	Update once per month and one week before mailing an advice letter or application.

2) Method 2: RNS to Inform LTPP and TPP Planning

The second approach requires the LSE to use CPUC-identified project viability metrics to determine the likelihood that RPS-eligible projects will deliver energy and/or capacity as stipulated within the PPAs. This method is not preferred by staff because it is less accurate than utilizing a deterministic model. However, IOUs have expressed serious concern with respect to the Commission sharing confidential project information with the CAISO and other parties because a project-specific risk assessment might undermine a project's ability to be successfully developed and might increase the IOU's exposure to project developer litigation.

This method completely eliminates any subjectivity by the LSE in determining project-specific viability when developing a risk-adjusted RPS supply stack for system/transmission planning purposes. Therefore, this method mitigates shareholder risk due to potential litigation. This method will also be constrained by the same basic assumptions agreed upon by parties to meet the guiding principle of standardization in order to increase transparency and simplify implementation.

Assumptions:

1. Account for a project's useful life when forecasting for system need. Useful life is defined in the LTPP planning standards retirements.

2. Project milestones are: a) Site Control, 2) Interconnection Progress, 3) Transmission Requirements, 4) Permitting Status, and 5) Project Financing Status. The weighting of these milestones will be deliberated at the workshop.

Table 2: Renewable Supply Stac for LTPP, TPP, & TPP-GIP/GIDAP Planning

	Method 2: RNS for LTPP, TPP & TPP-GIP/GIDAP Planning
Preferred Methodology	Probabilistic model based on the achievement of project milestones determined by the CPUC
Benefits	Limits shareholder costs by decreasing risk of litigation
Disadvantages	Less accurate but it could be adequate enough for planning purposes
Outputs:	LTTP: Aggregate nameplate capacity by Zonal (e.g. NP26) + Local area[8] and by technology TPP: Aggregate nameplate capacity by transmission zones (e.g. CREZs)[9] and by technology
Inputs:	Portfolio of projects based on project viability metrics to be determined by the CPUC. The CPUC will use the standard assumptions used in determining the RPS net short with modifications based on the needs of LTPP/TPP.
Frequency	Update two times per year to coincide with mailing of PDSR.

3) Calculating the RNS

The primary difference between Method 1 and Method 2 is the way in which the risk-adjusted RPS supply stack is determined. The RNS calculations and all other assumptions that are utilized to calculate the RNS should be consistent across the two Methods and across LSEs. The standard calculations for calculating the RNS are provided below.

Annual RPS Risk-adjusted Net Short Calculation

Annual RPS Risk-adjusted Net Short = (Bundled Retail Sales Forecast x RPS Compliance Target) – (Online Generation + Risk-adjusted Forecast Generation +

[8] Even though some uses (e.g. LTPP) may not require detailed location information, the transmission implications of the portfolios should possibly be considered in developing the list of anticipated RPS supply resources. Whether or not each project should be considered as deliverable may be an important component of the transmission implications.

[9] Some additional work will likely be needed to define these transmission zones. In the 2012-13 TPP portfolios, 4 new zones (Merced, Central Valley North, Los Banos, and El Dorado) were created to reduce the amount of "NonCREZ" resources. However significant amounts of NonCREZ resources, including Discounted Core resources (i.e. those with approved PPAs and approved permits) were still included in the portfolios.

Pre-approved Generic Generation + Voluntary Minimum Margin of Procurement for Existing Generation)

Total RPS Risk-adjusted Net Short Calculation

Total RPS Risk-adjusted Net Short = $\sum_{2011\text{-}2020 + 10\ years}$ *Annual RPS Risk-adjusted Net Short - Bankable RPS Eligible Generation*