

**Comments of the Natural Resources Defense Council (NRDC) on the
Key Technical Questions of Energy Division Proposed Scenarios**

In response to the workshop on August 24, 2012, R.12-03-014

Submitted by: Sierra Martinez, September 7, 2012

Natural Resource Defense Council

All the following recommendations are in response to Energy Division's Key Technical Question #6.

1. We encourage CPUC to run separate scenarios for high distributed generation (DG), high energy efficiency (EE), and high preferred resources to reduce the issue of confounding factors inhibiting ability to understand different resources' impacts on procurement planning and grid operability.

We are concerned that the intent of evaluating Scenario 3 is not aligned with its design. At the workshop it was discussed that Scenario 3 was included to evaluate the impacts of attaining high amounts of distributed generation, and to some extent "preferred resources". We believe that these are valuable considerations, but that each variable should be tested in different scenarios, holding all variables constant, except for the one being evaluated. This will remove the challenges associated with correctly interpreting results in the presence of confounding variables. We propose that CPUC evaluate Scenarios 2-2D in table 1 at the end of this document.

2. We strongly recommend that the Commission label Scenario 2 as a scenario on which procurement decisions cannot be based, and labeled as a "null case." Additionally, to economize staff resources, and because Scenario 2a is already studied at CAISO, we recommend that Scenario 2a be the lowest priority.

We are highly concerned that Scenario 2 will be perceived as an endorsed scenario by CPUC for the basis of LTPP. Therefore, Scenario 2 should explicitly state that it will not be used as a basis for procurement decisions. We do not support analyzing the Scenario 2 until it is explicitly stated that such a case will not be used for resource procurement, and that its inclusion is intended to illustrate the extent to which DSM contributes to load reduction. Based on discussions held at the workshop on 8/24/2012, our understanding is that this scenario is intended to demonstrate the significant supply side resources that DSM programs avoid. To this point, we believe it is more appropriate to rename Scenario 2 to "null case."

3. We urge the CPUC to conduct a scenario in which California greatly exceeds the 33% Renewable Portfolio Standards (RPS).

The CPUC should study a scenario beyond 33% RPS because achieving higher levels of renewable procurement is essential to meeting our long term climate goals and because the Governor's intent in signing the 33% RPS was to exceed 33%. The Governor stated clearly: "While reaching a 33% renewables portfolio standard will be an important milestone, it is really just a starting point - a floor, not a ceiling. . . . I would like to see us pursue even more far-reaching targets. . . . I think 40%, at reasonable

cost, is well within our grasp in the near future.”¹ Given that these studies are beyond that near future, a scenario above 40% is appropriate. Furthermore, state analyses show that to meet our long term climate goals (80% GHG reductions) California needs to fully decarbonize our electricity supply,² while a RAP study of achieving similar climate goals in the EU show the need to achieve 50% renewables by 2030.³ Therefore, we recommend that CPUC develop a high RPS scenario to evaluate grid operability in the inevitable scenario in which California exceeds the 33% RPS, such as Sierra Club’s previous recommendation for 55%. See proposed Scenario 1A in Table 1 at the end of this document.

4. We strongly recommend that CPUC include naturally occurring market adoption (NOMAD) from EE resources in all scenarios.

We are highly concerned that CPUC is under-representing EE resource contribution to load reduction by excluding load reduction from NOMAD. We think that using total *incremental* savings, regardless of whether they are deemed “naturally occurring” or due to utility programs, provides the actual amount of EE savings that are incremental to load forecasts and thus, reduce load. We recommend that CPUC include savings from *incremental* NOMAD in all scenarios where EE resources are utilized. See “Additional Notes” column in Table 1 at the end of this document.

5. We recommend that sensitivity analyses be conducted on variables such as natural gas prices and hydro levels, since procurement is likely to be impacted by these.

Scenario and sensitivity analyses are critical tools to enable the Commission to understand how robust potential future resource portfolios are in meeting the CPUC’s key evaluation criteria. For example, one portfolio might appear to be the least cost under base case assumptions, but perform poorly if key assumptions (e.g. natural gas prices) vary significantly from the base case, while another portfolio might appear somewhat more costly under base case assumptions but perform well when key assumptions change. Specifically, we recommend that at a minimum, CPUC conduct sensitivity analyses on natural gas prices and hydro-levels for each scenario, since these may be subject to high variability given economic, regulatory, and weather conditions.

6. We recommend the following rank order for scenario development and testing.

In order to maximize the value of the LTPP, we propose the rank order in the attached Table 1.

In conclusion, we would like to reiterate our support of the CPUC’s efforts in the long-term procurement plan proceeding. We applaud the progress that the CPUC has made thus far, and look forward to future collaborative work towards developing realistic scenarios that will aid LTPP.

Respectfully submitted,

Sierra Martinez

¹ Governor Brown, *Signing Statement re: SBX2* (April 12, 2011). Available at: http://gov.ca.gov/docs/SBX1_0002_Signing_Message.pdf.

² California Council on Science and Technology, *California’s Energy Future: The View to 2050*, p. 35 (May, 20 11).

³ ECF, McKinsey, KEMA, Imperial College London, RAP and E3G, *Power Perspectives 2030, On The Road To A Decarbonized Power Sector*, p. 3 (November 2011). Available at: http://www.roadmap2050.eu/attachments/files/PowerPerspectives2030_ExecutiveSummary.pdf.

Table 1. Proposed Rank Order of Scenarios for Further Consideration

Rank Order	Proposed Scenario Name	Original Scenario proposed in Scenario Matrix	Sensitivity to be conducted	Additional Notes
1	Base Case	Base Case	NG & hydro	Savings from NOMAD to be included
2	Scenario 1 (environmental)	Scenario 1A		Savings from NOMAD to be included (for all Scenarios)
3	1A (High RPS)	New	NG & hydro	55% RPS, as proposed by Sierra Club previously
4	1B (Early Songs Retirement)	Scenario 1B	NG & hydro	Original Scenario 1C is duplicative and unrealistic, and should be considered lowest priority
5	1C (Low Load)	Scenario 1D	NG & hydro	
6	1D (High Load)	Scenario 1E	NG & hydro	
7	Scenario 2 (High Loading Order)	~Scenario 3	NG & hydro	High DG, EE, DR, Small PV, and CHP, incremental NOMAD to be included
8	2A (High DG)	~Scenario 3	NG & hydro	High DG, holding other factors constant (including incremental NOMAD)
9	2B (High EE)	~Scenario 3	NG & hydro	High EE, holding other factors constant; (including incremental NOMAD)
10	2C (High DR)	~Scenario 3		High DR, holding other factors constant; (including incremental NOMAD)
11	2D (High small PV & CHP)	~Scenario 3		High PV & CHP, holding other factors constant; (including incremental NOMAD)
12	Null Case	Scenario 2 (no new DSM)	NG & hydro	Inclusion for analysis only if accompanying text states its inapplicability for use in authorizing procurement