Coast Economic Consulting

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Alternate Proposal

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Mandated Studies

- A Renewables Study
- A Transmission Study
- A Renewables Integration Study
- A Deliverability Risk Assessment
- The Identification of Avoided Resources and Need for New Local Resources
- Detailed Portfolio Analysis
- Increased Scenario Analysis
- Environmental Assessment
- Technology Transformation Assessment
- Distribution Cost Analysis
How much will it cost?

The Energy Division has not provided cost estimates for these additional studies. Some of these studies may in fact be useful. However, the Commission should not approve additional IOU studies until it knows the expected cost of these studies. Once the cost of these studies is estimated, the Commission and parties can determine whether or not the benefits of a given study justify the cost of the study.

Therefore, I recommend that the Commission order each IOU to provide incremental cost estimates of all of the requirements which would be mandated by the Staff Report.

Incremental cost estimates should include employee salaries, overhead and benefit costs, administrative costs, consultant fees, and all other incremental costs which would be paid by ratepayers if the Staff Report is adopted by the Commission.
**Recommended Scenarios**

**Base Scenario:** Build a portfolio that meets forecast demand using the IOU’s existing resource percentages (e.g., 80% natural gas, 5% wind, 5% solar, etc.) The base scenario will use a weighted average of the forward curve for electricity and natural gas over the next ten years.

Forward curves shall be collected 30 days prior to the LTPP filing deadline. If forward curves are not available for the full 10-year period, the IOUs will extend the forward curve using a linear growth method. For example, if natural gas forward prices increase by 5% annually in the first five years, the IOUs will assume that this growth rate will continue for years 6-10.

**IOU Preferred Scenario:** Each IOU builds a portfolio that represents their preferred resource mix given the state and federal mandates which exist no more than 90 days prior to the IOU’s LTPP filing deadline.
Scenarios (continued)

- **Gas Price Scenarios:** Seven gas price scenarios shall be performed ranging from $2/mmbtu below the forward curve to $5/mmbtu above the forward curve in $1/mmbtu increments. (e.g., $2 below curve, $1 below curve, at curve, etc.)

- **CO2 Scenarios:** Three CO2 scenarios shall be performed using low, medium, and high CO2 values taken from studies published by Synapse Energy Economics Inc. or other qualified vendors. Synapse Energy Economics Inc. produces estimates of the short and long-term CO2 costs in $/ton. Typically, different assumptions are used and three separate cost estimates are provided for each year: high, medium, and low.
Proposed IOU Metrics

- **Cost:** Cost shall be analyzed on a net present value (NPV) and total resource cost (TRC) basis. NPV shall be calculated using two methods (1) the IOUs authorized rate of return; and (2) the yield of the 30-year treasury bond. The 30-year treasury bond yield shall be collected 30 days before the LTPP filing deadline.

- **Risk:** The 95th percentile of Time to Expiration Value at Risk (TeVaR) shall be used to quantify risk.
Sensitivity Analyses

- **Gas Price:** Seven gas price scenarios shall be performed ranging from $2/mmbtu below the forward curve to $5/mmbtu above the forward curve in $1/mmbtu increments. (e.g., $2 below curve, $1 below curve, at curve, etc.)

- **Need Level:** Both the System and Bundled Plans should include “High-Need” and “Low-Need” sensitivities, corresponding to the uncertainty bands required around net short calculations, as described in Section 3.8.1 of the Staff Report.