

DOCKETED

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RETI 2.0 Plenary Work Plan Comments - Black & Veatch

Additional submitted attachment is included below.

07 January 2016

California Energy Commission
RETI 2.0 E-Comments

**Subject: Black & Veatch Comments, Renewable Energy Transmission Initiative 2.0
Plenary Group Preliminary Work Plan**

Black & Veatch is pleased to submit comments to the proposed Renewable Energy Transmission Initiative (RETI) 2.0 Plenary Group Work Plan. This set of comments both answers the questions posed to stakeholders in the 18 December 2015 meeting and outlines a process which we feel will help meet the objectives of RETI 2.0.

As a technical consultant to the original RETI process, we are excited to see how California has progressed since 2008 in renewable energy planning. While achieving 33 percent renewables seemed daunting at that time, processes like RETI were instrumental in helping the state meet these goals. A number of new issues are now present as California looks to meet a 50 percent renewable energy goal; we hope the RETI 2.0 process can contribute to solutions in a fashion similar to what the original RETI process was able to accomplish.

We appreciate the opportunity to participate in RETI 2.0 and we look forward to working with stakeholders on this important project. If you have any questions or require any additional information, please contact me (Tel: 913.458.9868 x14, e-mail: pletkarj@bv.com).

Very truly yours,

BLACK & VEATCH CORPORATION



Ryan Pletka
Director, Renewable Strategic Planning Services

SJO
Enclosure[s]
RETI 2.0 Work Plan Comments

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7 January 2016

RETI 2.0

PLENARY GROUP WORK PLAN COMMENTS



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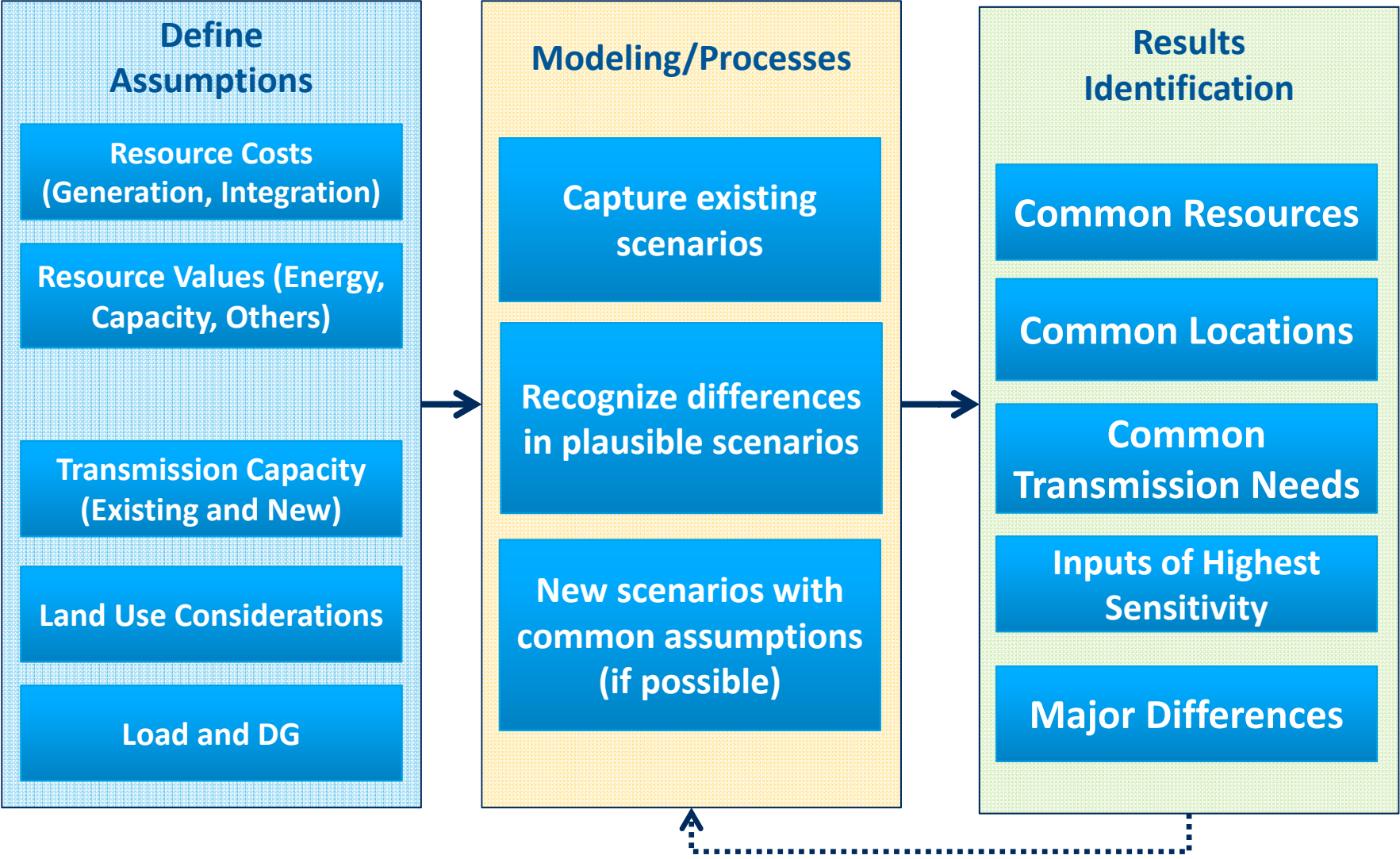
INTRODUCTION

- **This set of comments covers two areas:**
 - Initially, detail on a process approach to accomplish the RETI 2.0 goals, with information on key assumptions and models/processes that should be part of the analysis.
 - Following the process approach outline, comments on the specific questions posed in the 18 December Work Plan document are presented.

PROCESS

- **Given the range of models and assumptions for long term California renewable energy planning, a structured process could be used to identify the common resource and transmission elements present in 50 percent RPS cases**
- **Steps**
 1. Define Assumptions for Review
 2. Synthesize Model/Process Results
 3. Compare Results and Identify Commonalities
 4. Rerun Cases to Test Major Sensitivities

RECOMMENDED PROCESS



Rerun models as time available to test major sensitivities and impacts

STEPS

- **Define Assumptions**

- List major items that need to be compared – understand the differences, confirm they are plausible scenarios, and ignore minor considerations
- Assumptions include resource costs, resource values, load, customer side resources, transmission capacity, and land use considerations
- Document assumptions in models/processes which project resource needs for 50 percent RPS compliance (RPS Calculator, CEERT, TNC ORB, WECC TEPPC, LTPP, IEPR, others)

- **Modeling and Scenario Review**

- Understand differences in model approaches to each major assumption and 50 percent RPS portfolio selection
- Modify inputs (as needed, if significantly different to fit within boundaries of scenarios) to see results on as common a basis as possible

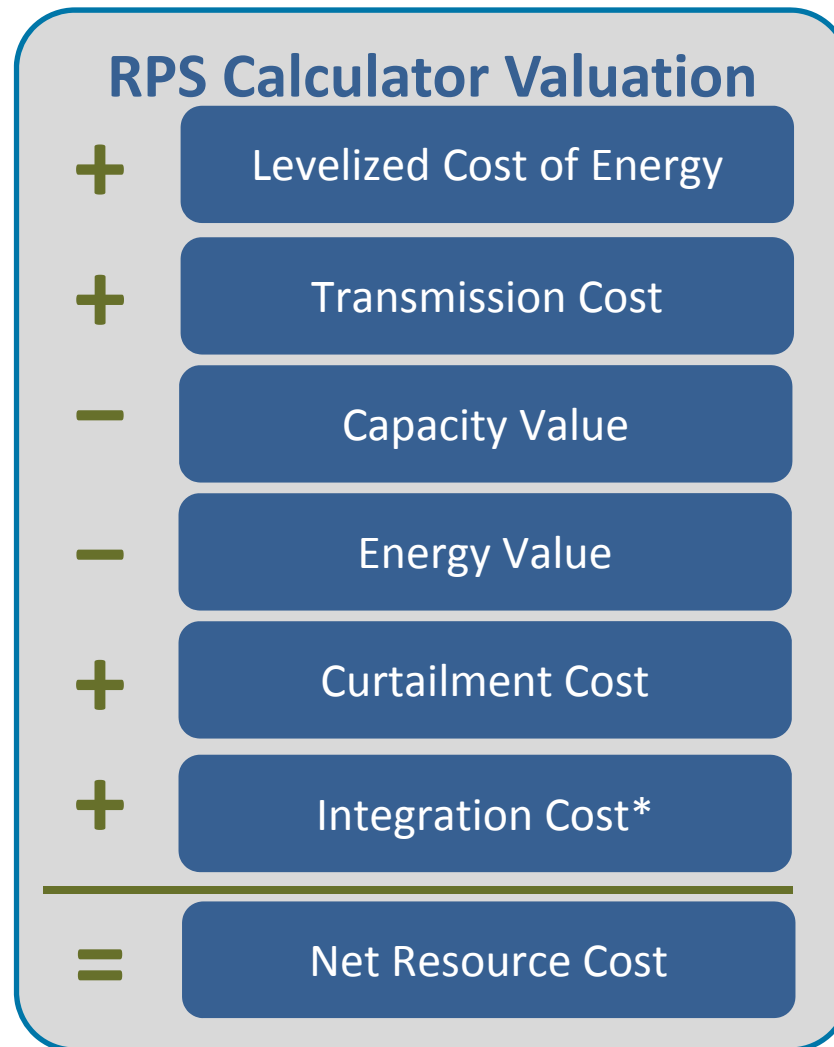
STEPS

- **Compare Results and Identify Common Elements**
 - Determine which technologies, project zones, and transmission solutions are common across studies and models
 - Determine where the areas of greatest difference are and if the reasons for the differences can be understood
- **Rerun Analysis**
 - As time allows, test major sensitivities and differences
 - Should be possible with many of the models

PLANNING QUESTIONS

- What are the right resource metrics and quantities for RETI 2.0 to plan toward?
 - **Lowest cost and environmental impact. Identifying resource and transmission commonalities that meet these metrics will assist in long term planning.**
- What are the rest-of-the-system parameters that make a meaningful difference on these metrics?
 - **The RPS Calculator valuation on the next slide shows the major items to assess for specific resources. Other items include land use screens, load projections, and customer resources (such as distributed generation).**
- What data sources or analyses should we include?
 - **Results from CA and WECC planning models with granularity for specific resource selections are most relevant for this analysis. These include the RETI 1.0 work, RPS Calculator, CEERT, TNC ORB, WECC TEPPC, LTPP, and IEPR models, and regional plans (DRECP).**

COSTS AND VALUES IN RPS CALCULATOR



From E3 RPS Calculator Documentation



RESOURCE VALUE QUESTIONS

- How should we measure the system value and costs of individual resources?
- How should we measure the system value of resource combinations?
- How can we assemble conceptual resource combinations?
- What are the best examples of assembling resource combinations?
 - The approach outlined in earlier slides represents a methodology that should be able to synthesize the best current thinking on long term renewable energy planning, with identification of the common resources and transmission areas that should be focused on by the state.
 - The RPS Calculator represents an approach that addresses all of these questions and would be one of the reasonable starting points for this analysis.

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