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*Comment Received From: TransCanyon*

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**TransCanyon Comments on RETI 2.0 Plenary Report**

*Additional submitted attachment is included below.*



January 10, 2017

RETI 2.0 Plenary Group  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814-5512

Re: Renewable Energy Transmission Initiative (“RETI”) 2.0

RETI 2.0 Plenary Group:

TransCanyon, LLC (“TransCanyon”) appreciates the opportunity to provide comments on the RETI 2.0 Plenary Report.

In general, TransCanyon supports the conclusions and recommendations developed by the Plenary Group and urges the California planning agencies, in particular the CPUC through the IRP Proceeding and the CAISO through the Transmission Planning Process, to study the recommended scenarios in the RETI 2.0 Plenary Report. Further analysis of these scenarios would provide California policy makers, energy planners and decision-makers with critical, comprehensive information to understand future paths toward achieving California’s energy and environmental policy goals. As an alternative to the recommended Multi-LSE RFI, TransCanyon recommends that LSEs conduct a common-date RFO for renewable resources.

TransCanyon also provides specific responses to questions posed as part of the RETI 2.0 process below.

## **Part 1: California’s climate and renewable energy goals**

### **Renewable Energy Needs**

- 1. The Plenary Report presents a range of renewable need based on meeting 50% RPS under IEPR- and PATHWAYS-based demand projections. Are there other demand projections outside this range that should be cited?**

The demand projections presented in the Plenary Report provide a reasonable range of realistic outcomes.

**2. Is there a time dimension to when additional renewables are needed (e.g. existing contracts to mid-2020s) that should be noted?**

Near-term renewable procurement may make economic sense for utilities and their customers to fully benefit from the ITC which is set to expire at the end of 2021 and the PTC which is phasing down 20%, 40% and 60% in 2017, 2018 and 2019, respectively.

**Renewable Resource Potential**

**3. Broad conclusions regarding the cost and value of renewable resources are noted. Are the conclusions accurate? Are more specific conclusions warranted? Are important renewable resource conclusions missing?**

TransCanyon is supportive of these conclusions drawn regarding the cost and value of renewable resources and offers one additional point for consideration as marked below in bold italics:

- Low-cost, utility-scale solar photovoltaic (PV) is cost-competitive across much of California
- Many of the highest-quality wind resources in California have already been developed or are constrained by environmental and permitting barriers. However, wind turbine technology improvements allow for a greater range of wind resources to be developed cost-effectively
- ***Across the region, there are high-quality wind resources that when coupled with transmission are cost-competitive and provide important resource diversification benefits***
- Geothermal technologies have made important strides in development cost reduction and generation flexibility, and development in the Salton Sea area offers important co-benefits

**Diverse and Balanced Portfolio**

**4. The report describes recent studies of optimal portfolios. Does the report draw accurate conclusions from these reports? Are important reports missing?**

TransCanyon is supportive of these conclusions drawn regarding recent studies of optimal portfolios:

- Without integration solutions, continued growth in solar PV resources will lead to increased costs from a surplus of generation during periods of high solar generation, and a shortage of system and flexible capacity at other times
- Technology and geographic diversity of renewable resources can reduce these costs by decreasing curtailment and increasing system capacity and (potentially) flexible capacity
- Access to low-cost renewable resources both within California and out of state, especially wind and geothermal resources with generation profiles complementary to California solar generation, as well as access to energy markets outside California, can increase the diversity of renewable resources, provide markets for excess generation, and reduce ratepayer costs

- 5. The report discusses different metrics of portfolio balance. Are these accurate, and are important metrics missing?**

TransCanyon has no specific comments in response to this question. Please see opening comments.

- 6. Are the conclusions regarding different resources' effects on balanced portfolios accurate? Are other conclusions warranted? How should these conclusions affect RETI 2.0 recommendations?**

See TransCanyon's response to question 4.

## **Part 2: Transmission Assessment Focus Areas**

### **Input Group Reports**

- 7. Stakeholders are encouraged to examine the reports from TTIG, ELUTG, and WOPR. Is there a more effective way to summarize or refer to the reports in the Plenary Report than through the information in the TAFE summaries and Appendix A?**

TransCanyon has no specific comments in response to this question. Please see opening comments.

- 8. Are the conclusions drawn from the reports the right ones? Are there conclusions that are missing?**

TransCanyon has no specific comments in response to this question. Please see opening comments.

### **TAFE Conclusion Summaries**

- 9. Are the in-state TAFE data maps (located in Appendix A) useful and accurate?**

The TAFE maps provided in Appendix A are generally accurate and useful in supplementing the resource and transmission conclusions drawn in the Plenary Report.

- 10. Are the conclusion statements regarding resource potential and environmental, land-use, and transmission implications accurate? Are important conclusions missing?**

TransCanyon supports the conclusions drawn for each of the TAFAs in regards to resource potential, environmental, land-use and transmission implications.

### **Proposed Western Transmission Summary**

- 11. Are the conclusions regarding western renewable resources, resource changes, export opportunities, and existing transmission accurate and useful? Are there important conclusions missing?**

TransCanyon supports these conclusions drawn, with a few proposed changes for consideration marked below in bold italics:

- Renewable Resources
  - WOPR generally confirmed western TAFAs. Thousands of MWs of geothermal, wind, and solar in development
- Resource Changes
  - Changing hydroelectric operations due to new environmental regulations and impacts of climate change
  - Potential of coal unit retirement to a) make available formerly subscribed transmission capacity b) affect capacity and reliability of transmission system-wide, and c) create new markets for California oversupply
- Export Market Opportunities
  - ***Export generally to markets outside of California may be hindered by the capability of those markets to absorb solar oversupply***
  - Export to the Southwest, ***in particular***, may be hindered by growth of solar supply ***outside of California*** during most of the same hours
  - Northwest export markets may be more complementary during much of the year, except spring
  - Potential for intra-day power-exchange between California and Northwest utilities
- Existing Transmission
  - Some capability for firm delivery to COI; very limited capability for new firm deliver to southern California
  - Conditional firm transmission service from most areas is more available, but rarely used
  - Limited capacity east of Phoenix for export of California oversupply to the Southwest
  - Roughly 3,000 MW of long-term export capacity to Northwest markets available
- Proposed Transmission
  - WOPR described 12 transmission projects that propose to help deliver renewable energy to California
  - Several projects propose to deliver power directly from high-quality wind resource areas to a California interconnection using high-voltage direct current technology
  - Several projects connect one or more renewable resource-rich areas to the existing transmission network ***using high-voltage alternating current technology***
  - Each project or combinations has implications for renewable resources, export markets, and regional capacity

**12. Are the metrics for comparing projects or combinations (MW capacity, cost per MW of capacity, contingent on existing system, import/export opportunities) useful? What other metrics from the WOPR report are most useful for high-level comparison?**

TransCanyon recommends a delivered cost metric (\$/MWh) as opposed to Capital Cost per MW of transmission (\$mm/MW). The Capital Cost per MW of transmission metric makes simplifying assumptions regarding the achievability of estimated capacity to California and availability of capacity on the existing transmission system. Additionally, utilizing a Capital Cost per MW of transmission metric does not take into account important distinctions in resource cost, resource diversity, capacity factor, capacity value, existing transmission cost and curtailment considerations.

### **Part 3: Conclusions and Recommendations**

#### **Potential Constraints and Conceptual Mitigations**

##### **13. Are the summary descriptions of potential transmission constraints accurate?**

The summary descriptions of potential transmission constraints are accurate.

##### **14. Are the conceptual mitigation options described accurately? What land use or environmental planning data (or data gaps) are relevant to the potential transmission mitigations?**

The conceptual mitigation options are described accurately.

##### **15. Are there additional transmission mitigation options that should be referenced?**

TransCanyon has not identified additional transmission mitigation options at this time that should be referenced.

#### **Scenarios to Inform Resource and Transmission Planning**

##### **16. Are the proposed conceptual scenarios tractable and would they be useful to study? What other conceptual scenarios (within RETI scope) would be useful to study? Which portfolio elements within scenarios would be most useful?**

TransCanyon supports the recommended scenarios (Existing Capacity/Business-as-Usual; Desert Area Constraint; and Out-of-State Transmission Configurations) and urges California planning agencies, in particular the CPUC through the IRP Proceeding and the CAISO through the Transmission Planning Process, to assess these portfolios.

##### **17. Would the Multi-LSE RFI proposal be a useful and productive exercise?**

TransCanyon recommends that the CPUC and CEC develop guidance for Out-of-State procurement and instruct LSEs to conduct a common-date RFO for renewable resources as an alternative to the recommended Multi-LSE RFI.

TransCanyon has two concerns in response to the Multi-LSE RFI recommendation: confidentiality and commercial transaction certainty. TransCanyon recognizes that the recommendation considers potential strategies to allow RFI information to remain confidential, but without developers knowing exactly how and which information would be kept confidential in the RFI, TransCanyon expects developers would not put forward their most aggressive bid for fear of establishing a market benchmark that competitors would then target. Accordingly, the

information gathered in response to the RFI would be of similar value and resolution to information already available regarding Out-of-State resources and transmission. Additionally, TransCanyon is uncertain how the Multi-LSE RFI recommendation would explicitly tie into or ideally accelerate individual LSE's procurement decisions. In the absence of a specific tie to a commercial outcome with LSEs, the RFI would not address interim steps to determine the framework and venue for procurement decisions. Further, this sequenced approach would delay procurement, limit the ability of LSE customers to realize the benefits of expiring tax incentives and put timely completion of benefit-rich and cost-competitive resource projects and interstate transmission lines at risk.

As an alternative to first gathering Out-of-State resource and transmission information and second allowing for procurement decisions, TransCanyon recommends that the two steps are combined into a multi-LSE common-date RFO for renewable resources driven by guidance developed by the CPUC and CEC. TransCanyon observes the following benefits of this approach:

- Provides LSE procurement groups with binding, commercial grade and best cost pricing information from resource and transmission developers
- Provides more commercial certainty for developers proposing such projects. Utilities always have the right to not procure from an RFO if proposals received are not competitive, but at least provides the outcome that a procurement decision may be made
- Drives near-term decision making, allowing for appropriate lead-time to develop and build large resource and transmission projects to the benefit of California ratepayers
- Maximizes economies of scale efficiencies from larger resource and transmission projects by enabling large tranches of resource procurement on a common timeline for all LSEs

### **Environmental, Cultural, and Land-Use Recommendations**

#### **18. Are the environmental recommendations regarding data sets, logic models, and reporting complete and appropriate?**

The environmental recommendations regarding data sets, logic models and reporting are appropriate. In particular, the development of a landscape-scale logic model would provide a useful high-level screening tool for the benefit of California energy planners and project developers.

#### **19. Are the recommendations regarding tribal consultation and cultural resources complete and appropriate?**

The recommendations regarding tribal consultation and cultural resources are appropriate.

#### **20. Are the recommendations regarding local land-use planning complete and appropriate?**

The recommendations regarding local land-use planning are appropriate.



TransCanyon appreciates the opportunity to submit these comments and applauds the efforts of RETI 2.0 in the development of the Plenary Report, TTIG Report, ELUTG Report and WOPR Report. TransCanyon reiterates its recommendation that the CPUC and CAISO study the recommended scenarios in the IRP Proceeding and Transmission Planning Process, respectively, and looks forward to participating in the potential advancement of this effort through those venues. Additionally, TransCanyon looks forward to participating in a potential common-date RFO for renewable resources as an alternative to the recommended Multi-LSE RFI.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Smith", is positioned above the printed name.

Jason Smith