

**Stakeholder Comments Template**

<b>Submitted by</b>	<b>Company</b>	<b>Date Submitted</b>
Christopher T. Ellison Email: cte@eslawfirm.com	Ellison Schneider & Harris  <i>Attorneys for Duke American Transmission Company and Path 15, LLC.</i>	December 4, 2014

**INTRODUCTION**

Duke American Transmission Company<sup>1</sup> (“DATC”) provides the following comments on the California Independent System Operator’s (“CAISO”) November 19<sup>th</sup> – 20<sup>th</sup>, 2014 Stakeholder Meeting. DATC appreciates the opportunity to participate in the Transmission Planning Process (“TPP”) and believes wholeheartedly that an open, transparent, and flexible process is essential to properly plan for the needs of the electricity system. A significant part of conducting an open planning process is sharing information and gathering input from stakeholders. In past meetings, study models and detailed results were posted prior to the meeting for review. DATC still has not seen such information related to the material presented at the November 2014 meeting. In addition, DATC was disappointed in the lack of study results provided during this most recent TPP Stakeholder Meeting. DATC is looking forward to the follow-up meeting on reliability in the Peninsula that is to be scheduled for December 2014, and hopes that detailed information will be provided in advance of the meeting.

The purpose of these comments is to request that the CAISO do the following as part of the TPP: (1) include off-peak system studies when determining whether or not reliability needs exist on the system; (2) consider projects, like the 500 kV option of the San Luis Transmission Project, that would help reduce the renewable energy curtailments being seen in current studies; and (3) recognize a broader set of policies that can support policy driven upgrades.

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<sup>1</sup> DATC and its two parent entities, Duke Energy and American Transmission Company, have substantial experience and expertise in electric transmission from their many decades of ownership and operation of major transmission facilities in multiple states. In California, DATC Path 15 LLC, a subsidiary of DATC, owns 72 percent of the transmission service rights to the Path 15 Upgrade transmission project, an 84 mile, 500 kV transmission line in Central California.

## DISCUSSION

### 1. The CAISO Should Include Off-Peak System Studies

As the electric system undergoes significant change to meet renewable and clean energy goals, the approach to system planning and development used in the past must also change. The need to alter established paradigms related to the electric system is a frequent topic of discussion and study. Specifically, CAISO has noted the risk of having too much generation at times of low demand. Addressing reliability impacts of over generation is the first priority to maintain a reliable electric system. However, it is also important to address the policy and economic implications of certain approaches to manage the reliability of the electric system within the context of over generation caused by significant penetration of renewable resources. For example, one way to mitigate over generation is to curtail renewable generation when demand is low and transmission is not available to deliver the generation to where demand exists. While this approach will ensure system reliability, it is contrary to the clean energy and renewable policy goals of the state. By only planning for peak periods, CAISO ignores system limitations that result in curtailing renewable generation. Further, by assuming at the outset that off-peak periods do not present a reliability issue (because generation can always be curtailed), CAISO forgoes the opportunity to assess whether viable, cost effective solutions that allow for less curtailments of renewable generation exist. Further, such solutions likely would have the added benefit of enabling incremental renewable generation development with less total transmission development.

Therefore, DATC encourages CAISO to include off-peak scenario studies in the 2014-2015 TPP when assessing the reliability needs of the system. The North American Reliability Council's ("NERC") 2014 Long-Term Reliability Assessment was issued on November 12, 2014 ("Assessment"). One of NERC's three key findings in the Assessment is that "a changing resource mix requires new approaches for assessing reliability."<sup>2</sup> More specifically, the report concludes that a changing resource mix, including the increased reliance on renewable generation, will require a more flexible transmission grid and that the traditional peak load reserve margin analysis may no longer be sufficient for assessing reliability. The Assessment recommends that system planners consider impacts beyond simply those in the peak hours:

*System planners should ensure System Operators have the tools and resources needed to maintain reliability in the midst of this transformation. For example, typical planning approaches focus on ensuring capacity is procured and available to meet the hour of peak demand for each season, perceived as the highest stress on the system. However, stresses during shoulder periods or off-peak hours can introduce a different set of challenges, such as the management of over generation periods when generation exceeds*

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<sup>2</sup> North American Reliability Council, *2014 Long-Term Reliability Assessment*, p. 1 (Nov. 12, 2014).

*demand; this is generally introduced by an excess of less flexible resources. Additionally, gas generation and other flexible resources need further study to ensure availability to balance load during off-peak and shoulder periods. (Assessment, p.1).*

This conclusion is certainly relevant to California, where the off-peak over generation issue has been the subject of considerable concern at CAISO and elsewhere. An analysis of system needs during shoulder periods and off-peak hours therefore makes sense for California. With this in mind, DATC encourages CAISO to consider this assessment in its review of DATC's proposal to include the 500kV option of the San Luis Transmission Project ("SLTP") in the 2014-2015 transmission plan. DATC is confident that such an analysis will confirm that the project offers substantial long-term reliability and system benefits.

## 2. The CAISO Should Consider Projects to Reduce the Curtailment of Renewable Generation

Studies performed during the 2014-2015 TPP clearly show that transmission constraints result in curtailments of renewable generation in CAISO. Specifically, slide 8 of the "Assessment of Frequency Response during Over Generation Conditions" presentation show that such curtailments occur in CAISO more than in other BAs. The assessment looked at the 11 AM hour on April 7, 2024. In the Pacific Gas and Electric area, 2,855 megawatts ("MW") of solar is dispatched out of 5,492 MW available with 2,637 MW of gas dispatched. Virtually all of the gas generation could be displaced by solar if proper transmission was built (respecting local voltage and reactive support requirements). This is the case in the Imperial Irrigation District, where 664 MW of solar is dispatched out of 792 MW available, versus 84 MW of gas, and also in Los Angeles Department of Water and Power where 600 MW of solar is dispatched out of 606 MW available versus 37 MW of gas.

In the Southern California Edison area, only 5,766 MW of solar is dispatched out of 10,790 MW available versus 3,538 MW of gas. In the San Diego Gas and Electric area, 0 MW of solar is dispatched out of 1,861 MW available, versus 739 MW of gas.

Curtailments that occur due to lack of transmission are clearly contrary to meeting California's clean energy goals, including both the use of renewable generation and the reduction of greenhouse gas ("GHG") emissions. Among its many benefits, the 500 kV option of the SLTP can help California to reduce these curtailments and to take advantage of new and existing renewable generation while decreasing reliance on gas generation during on-peak periods.

## 3. The CAISO Should Broaden Its List of Policy Objectives

Currently, only two policy objectives are identified by CAISO in the TPP: the 33% Renewable Portfolio Standard and Resource Adequacy. This narrow view of "public policy" requirements is not what was envisioned in FERC Order No. 1000, which requires transmission providers to

consider “Public Policy driven” projects.<sup>3</sup> In comments submitted on March 13, 2014 by DATC in response to the February 27, 2014 TPP Stakeholder meeting, DATC provided details on the directives of FERC in Order No. 1000 and how the CAISO responded by codifying Tariff Section 24.4.6.6, which requires the CAISO to evaluate transmission solutions needed to meet state, municipal, county or federal policy requirements or directives.<sup>4</sup> The tariff states that CAISO “will determine the need for, and identify such policy driven transmission solutions that efficiently and effectively meet policies under alternative resource location and integration assumptions and scenarios, while mitigating the risk of stranded investment.”

The process outlined in Section 24 of the CAISO Tariff is data-driven and analytical, but also allows the CAISO to exercise discretion in order to align its prioritization of policy-driven transmission projects with the resource planning processes of regulatory agencies, and to use its judgment and experience in making decisions about public policy-driven project priorities.<sup>5</sup> This flexibility and discretion is important for the reasons discussed above. Efficient and effective transmission planning requires both pragmatic consideration of a spectrum of planning assumptions *and* the ability to balance long and short term options and priorities.

In Section 3.1 of the Study Plan, the CAISO reiterates the Public Policy Objectives it relied on in previous TPP cycles: “the state’s mandate for 33% renewable energy by 2020” as the “overarching public policy objective” in the current planning cycle.<sup>6</sup> DATC believes there are multiple policy objectives that the CAISO must take into account during its planning process. Specifically, CAISO should specifically address two additional policy objectives: (a) federal and state policies calling for the efficient use of existing transmission rights of way (“ROW”) and (2) the State’s Greenhouse Gas policies.

A. The Efficient Use of Rights of Way Should Be An Explicit Policy That May Support The Selection of Policy-Driven Transmission Projects.

Both federal and California law clearly articulate policies supporting the most efficient use of transmission rights of way. FERC Order 1000 requires ISOs and RTOs to support “more efficient and cost effective transmission facilities.” Similarly, the Bureau of Land Management’s Corridor Policy states that “in order to minimize adverse environmental impacts and proliferation

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<sup>3</sup> FERC Order No. 1000 para. 207.

<sup>4</sup> See CAISO Tariff Section 24.4.6.6, available at:

[http://www.caiso.com/Documents/Section24\\_ComprehensiveTransmissionPlanningProcess\\_Oct1\\_2013.pdf](http://www.caiso.com/Documents/Section24_ComprehensiveTransmissionPlanningProcess_Oct1_2013.pdf)

<sup>5</sup> For example, CAISO uses scores and rankings in processes such as the California Renewable Energy Transmission Initiative (“RETI”) and the CPUC long-term procurement planning process, but “may also seek to modify such assessments for particular locations as appropriate.” (Transmission Planning BPM p. 38). Similarly, information “including but not limited to the estimated cost, permitting and construction time period, and need date” is considered in classifying a transmission solution as Category 1 or 2. (Id. p. 39).

<sup>6</sup> Draft Transmission Planning Process Study Plan for 2014-2015 (February 20, 2014)

of separate ROWs, the utilization of rights-of-way in common (corridors) shall be required to the extent practical . . .”<sup>7</sup>

At the state level, California Public Utilities Code section 399.26(b)(1) requires the CAISO to “work cooperatively to integrate and interconnect eligible renewable energy resources to the transmission grid *by the most efficient means possible with the goal of minimizing the impact and cost of new transmission needed* to meet both reliability needs and the renewables portfolio standard procurement requirements.” (emphasis added) In addition, when the California State Legislature adopted Senate Bill 1059, the legislature found and declared that “to promote the efficient use of the existing transmission system, the state should do both of the following: (1) encourage the use of existing rights of way, the expansion of existing rights of way, and the creation of new rights of way in that order [and] (2) promote the efficient use of new rights-of-way *when needed*, to improve system efficiency and the environmental performance of the transmission system.”

In sum, federal and state policies mandate the efficient use of transmission ROW. CAISO should explicitly recognize that these policies may support the selection of a policy driven transmission project where a planned transmission project can be expanded to more efficiently make use of limited ROW resources.

B. Long Term Greenhouse Gas Policies Should Also Be Explicitly Recognized in the List Of Policy Objectives.

CAISO does not address what is likely to be one of the key policy drivers for transmission development: California’s GHG reduction goals.<sup>8</sup> Assembly Bill 32 (or “The California Global Warming Solutions Act of 2006”) declared that global warming posed a serious threat to the economic well-being, public health, natural resources, and the environment of California. AB 32 set an initial target of reducing California’s GHG emissions to 1990 levels by 2020. It further tasked the California Air Resources Board (“CARB”) with “monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases.”<sup>9</sup> Pursuant to Executive Order S-3-05, California has a longer term GHG goal of 80% below 1990 levels by 2050. CARB is currently developing a broad framework for measures to meet this goal.<sup>10</sup> CARB calls for significant energy-related emission reductions, coupled with electrification of the transportation sector. Moreover, a recent study by Lawrence

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<sup>7</sup> Federal Land Policy and Management Act, Section 503

<sup>8</sup> Despite the requirements of Order 1000, the broad language contained in the CAISO’s August 20, 2013 compliance filing that would require consideration of “state, municipal county, or federal policy requirements or directives,” and the CAISO’s assurances in its Draft Final Proposal concerning its Order 1000 compliance that it would not limit public policy requirements to the 33% RPS, for the last three TPP cycles the CAISO has done exactly that.

<sup>9</sup> Health and Safety Code section 38510.

<sup>10</sup> See Draft AB 32 Scoping Plan Update, available at:

<http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm>

Berkeley National Laboratory (and supported by CARB’s Research Division) showed that in order to reach California’s 2050 GHG goal, the state would need to achieve greater than 40% renewable generation by 2020, or 51% by 2030.<sup>11</sup> Thus, rather than a singular focus on California’s 33% RPS, the CAISO should consider the policy-driven impacts of the much higher levels of renewable generation required to achieve California’s long term GHG goals.

### **CONCLUSION**

In order to plan for California’s changing energy landscape, DATC urges CAISO to include off-peak scenarios in its system studies. Such scenarios can reveal reliability issues that should be addressed in order to maintain a stable transmission system. DATC also asks that CAISO consider projects, like the 500 kV option of the San Luis Tracy Project, that help reduce the number of renewable energy curtailments being seen in current studies, which are clearly contrary to current California policies. Finally, as discussed above, specific enacted policies have been excluded from the study plan. The CAISO must include consideration of these policies in its planning process. Such consideration will result in the approval of additional facilities necessary to meet the policy goals.

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<sup>11</sup> Jeffery Greenblatt, “Policy-Driven Greenhouse Gas Emissions Trajectories in California: The California Greenhouse Gas Inventory Spreadsheet (GHGIS) Model,” at 25.