

DOCKETED

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**Comments of the Natural Resources Defense Council on the October 2017 Draft
Integrated Energy Policy Report CEC-100-2017-001-CMD**

Additional submitted attachment is included below.

To: California Energy Commission
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From: Carl Zichella, Helen O'Shea

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Subject: Comments of the Natural Resources Defense Council on the October 2017 Draft Integrated Energy Policy Report CEC-100-2017-001-CMD

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The Natural Resources Defense Council respectfully submits these comments on the October 2017 Draft Integrated Energy Policy Report (draft 2017 IEPR) to the California Energy Commission (CEC).

Comments

The Natural Resources Defense Council (NRDC) is a national non-profit organization of lawyers, scientists and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC serves more than a million members supporters and environmental activists with offices in New York, Washington, D.C, Los Angeles, San Francisco, Chicago and Beijing. More than 200,000 NRDC members reside in California.

NRDC is a national leader in pioneering the use of geospatial environmental, land use and cultural resources data for renewable energy and transmission planning purposes. We helped develop the methodologies for the pioneering California Renewable Energy Transmission Initiative (RETI), Western Governors Association's Western Renewable Energy Zone (WREZ) process, and the Western Electricity Coordinating Council's (WECC) Regional Transmission Expansion Project (RTEP). We developed, in association with the National Audubon Society, a Google Earth application to assist planners and renewable energy and transmission developers in identifying and avoiding environmental resource conflicts across the Western U.S.

We served as members of a task force convened by the Western Governors Association to improve state permitting and siting policies to help close the gap between renewable project development timelines and transmission availability. We have advised and worked with the Department of Energy on Power Marketing Administration transmission issues, and the White House- initiated Rapid Response Team for Transmission's pre-application development process. We have supported efforts to solve generation and transmission siting challenges related to the BLM Solar Programmatic Environmental Impact Statement and the Desert Renewable Energy Conservation Plan.

NRDC also has been in the forefront of advocacy for the better use of the electrical system including the establishment of West-wide electricity markets and rational transmission operation and the adoption of

advanced control system control and capacity expansion strategies to make better use of existing transmission assets and rights of way.

Comments on Chapter 3: Increasing the Resiliency of the Electricity Sector

NRDC supports the conclusions and recommendations of Chapter 3, especially regarding the adoption of regional markets to facilitate system reliability, resilience and renewable energy integration goals at least cost. Specific comments on individual recommendations follow.

- **Support regional coordination opportunities.** The Energy Commission should continue supporting potential new regional coordination opportunities. Of high importance are improved understanding and tracking of the environmental (greenhouse gas and other) impacts of dispatch of the system under different market arrangements, dispatch coordination, and generation mixes.

NRDC strongly supports.

- **Continue to support advancements in smart inverters.** The Energy Commission should continue participating in the Smart Inverter Working Group and funding research to test and verify the smart inverter functions for both behind-the-meter and utility-scale applications. The Energy Commission should also support the California Independent System Operator (California ISO) in developing a transmission-specific standard for transmission-interconnected, inverter-based generation at the North American Electricity Reliability Corporation.

NRDC strongly supports.

- **Continue to support research to improve forecasting capabilities.** The Energy Commission should continue to fund research that improves solar irradiance, photovoltaic production, and gross load forecasting models. Improvements in these areas will enable solar generators to bid more frequently into short-term markets and allow grid operators to more accurately predict the amount of generation that will be needed to meet the net load.

NRDC Strongly supports.

- **Establish mechanisms to retain power plants that increase the resiliency of the electricity system.** The Energy Commission, the California Public Utilities Commission (CPUC), and the California ISO should work together to develop a thoughtful and comprehensive plan to retain generation that is needed for reliability.

NRDC supports and adds that the abovementioned agencies should work together to identify and in an orderly way, develop a plan, with timelines, to retire natural gas plants creating air pollution impacts in disadvantaged communities already impacted by pollution. As markets expand and access to renewable energy resources from across the region that have variability uncorrelated with California renewables increases, these plants should be less needed for flexibility needs. NRDC believes we should evaluate them based on their flexibility attributes, grid support attributes, emissions rates, severity of impacts in the communities they are located, and GhG emissions in determining their priority for retirement.

- **Standardize electric vehicle charging equipment to enable resource dispatch.**

The Energy Commission should work with the CPUC, the California ISO, CARB, and interested stakeholders including charging equipment and vehicle manufacturers to help standardize charging equipment to better integrate electric vehicles with the grid.

NRDC supports.

- **Use excess renewable electricity productively.** California is likely to have significant and increasing amounts of renewable electricity. Along with development of increasing amounts of regional markets, flexible resources, storage, controlled and/or bidirectional charging, California should continue to explore means to exploit this excess electricity by desalination and/or conversion to hydrogen either to fuel stationary or mobile fuel cells or storage power.

NRDC questions the emphasis on desalination. Emphasis on desalination to absorb excess renewable generation capacity should be a very low priority. We believe that excess energy has greater value to the system offsetting fossil generation in neighboring states. This provides both financial, and GhG emissions reductions benefits. Approaches that make use of excess renewable generation by electrifying other parts of the economy, such as building energy use and transportation – which have measurable effects on reducing the emissions of both greenhouse gas and criteria pollution – should also take precedence over uses that simply consume energy.

Comments on Chapter 5: Strategic Transmission Plan and Landscape-Scale Planning

NRDC strongly supports the recommendations of Chapter 5. We also especially endorse specific strategies for more efficient use of existing Rights of Way (ROWs) including regional grid integration, adoption of advanced capacity expanding transmission and inverter-based renewable energy functionality; right-sizing new transmission to provide both present and future transmission capacity needs; continued reliance on land use planning to avoid potential conflicts in both generation and transmission siting.

When considering right sizing of lines, the old process of determining transmission need based solely on congestion is outdated. Congestion is an important component of determining need for new transmission, but so is meeting long-term state climate and renewable energy goals and avoiding the need for new ROWs to serve promising resource areas with large renewable generation potential, such as the San Joaquin Valley. Congestion should not be the only metric used to justify transmission expansion. As has been done by the Midcontinent Independent System Operator (MISO), transmission providing multiple values (meeting policy, economic and even social goals) should be prioritized too. Efforts to approve right-sized lines for present and future needs will be frustrated by either short term local load analyses (because generation may be developed for export to neighboring states) or limited congestion analysis, or both.

Specific comments on recommendations from Chapter 5:

Recommendations

The Energy Commission recommends continued collaborative local and statewide planning with stakeholders using interactive data platforms and online environmental data sets to support local

energy and land-use planning to help achieve the state’s greenhouse gas (GHG) emissions reduction goals.

• **Continue to support landscape scale planning.** It is important to note, and the 2017 IEPR should clarify, that the RETI 2.0 process was not a landscape-scale planning exercise – rather it identified types and sources of environmental data which might be used for landscape-scale planning. The Energy Commission should continue to explore landscape scale planning tools and techniques to explore transmission corridor designation or preservation in the following areas that would:

- **Interconnect in- and out-of-state transmission pathways identified in RETI 2.0 that would improve import and export of renewable resources.**
- **Help alleviate the Desert Area Constraint Issues Identified in RETI 2.0.**
- **Connect renewable resource areas.**
- **Connect federal Section 368 corridors.**

NRDC strongly supports these recommendations. We further urge the Commission to recommend that regional grid expansion, such as the creation of a regional ISO, be pursued as a strategy for strategic transmission development. We also urge that landscape level planning efforts, and the regional transmission enhancements identified in RETI 2.0, inform transmission need prioritization, allowing the grid operator to fully exploit the West’s geographical diversity in renewable generation to capture the benefits of their uncorrelated variability to reduce reliance on fossil generation for flexibility needs.

Respectfully submitted,



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