

DOCKETED

Docket Number:	17-IEPR-07
Project Title:	Integrated Resource Planning
TN #:	216684
Document Title:	Pathfinder CAES I LLC Comments on Proposed Guideline Topics for Publicly Owned Utilitiesâ€™™ Integrated Resource Plans
Description:	N/A
Filer:	System
Organization:	Pathfinder CAES I LLC/Molly Croll
Submitter Role:	Public
Submission Date:	3/23/2017 2:55:51 PM
Docketed Date:	3/23/2017

Comment Received From: Molly Croll

Submitted On: 3/23/2017

Docket Number: 17-IEPR-07

Pathfinder CAES I LLC Comments on Proposed Guideline Topics for Publicly Owned Utilitiesâ€™™ Integrated Resource Plans

Additional submitted attachment is included below.

March 23, 2017

California Energy Commission
1516 9th Street
Sacramento, CA 95814-5512

Docket # 17-IEPR-07



RE: Pathfinder CAES I LLC Comments on Draft Staff Paper: Proposed Guideline Topics for Publicly Owned Utilities' Integrated Resource Plans

Dear Commissioners:

Pathfinder CAES I, LLC ("Pathfinder") appreciates the opportunity to submit comments in response to the *Draft Staff Paper: Proposed Guideline Topics for Publicly Owned Utilities' Integrated Resource Plans* (Draft Staff Paper) issued on February 17, 2017.

Pathfinder proposes to develop a 320 MW compressed air energy storage (CAES) project located in Milford County, Utah. This project is the first of several phases ("Phase I") and is designed to support grid-level integration of California renewable energy generation. The Phase I CAES project will be constructed at the eastern terminus of the Southern Transmission System (STS) in Delta, Utah to serve as a partial replacement for the Intermountain Power Project (IPP), a 1,900 MW coal plant serving Utah and Southern California publicly owned utilities (POUs). Ultimately, Pathfinder's parent company proposes to develop a 2,100 MW wind farm in southeastern Wyoming, which will connect to California through a new HVDC transmission line ("Zephyr") proposed by Duke American Transmission Company (DATC).

Pathfinder offers the following comments on the Draft Staff Paper.

I. SB 350 gives the California Energy Commission new oversight responsibilities.

SB 350 (2015) authorizes the California Energy Commission (CEC or “Commission”) to adopt guidelines for publicly-owned utility (POU) integrated resource plans (IRPs) in accordance with the IRP requirements established in P.U.C. Section 9621. The statute also explicitly directs the CEC to review a POU’s IRP to determine if it satisfies the statutory requirements and to “provide recommendations to correct deficiencies.” Thus, while the CEC has had a long-standing role in ensuring POU compliance with the Renewable Portfolio Standard (RPS), energy storage, and other resource-specific mandates, SB 350 gives the CEC a new role. The CEC will oversee the overall resource planning activities of the POU’s to ensure compliance with specific statutory goals, including meeting GHG targets (PUC 454.42).

Further, the Integrated Resource Planning envisioned by SB 350 is designed to encourage a new, holistic approach to utility resource planning. When state agencies considered the concept of Integrated Resource Planning at the Energy Principals Symposium in July 2015, principals and presenters expressed concerns regarding the current resource procurement silos and the mismatch between disparate procurement proceedings and the state’s overarching GHG goals. Therefore, Pathfinder encourages the Commission to assume its new oversight role in managing POU IRPs with the same spirit and purpose – to ensure that POU’s are conducting resource planning in a manner specifically designed to achieve state GHG targets, reduce costs, and ensure reliability. The POU IRP process must not be relegated to a simple filing and reporting exercise. Instead, the CEC should serve as both a partner and a supervisor to encourage the POU’s to embrace this new approach to resource planning. This is because the CEC is in the best position to facilitate the alignment of long-term statewide GHG targets with individual POU resource planning objectives.

II. Bulk energy storage is a necessary and logical component of POU Integrated Resource Planning.

The Draft Staff Paper states the following:

Energy Commission staff expects that RPS-compliant 2030 portfolios will contain large amounts of utility solar energy, in addition to distributed solar generation. The resulting over-generation necessarily calls for a consideration of multi-hour storage as a resource to be added to the utility portfolio. Accordingly, staff proposes IRPs discuss the potential role and value of bulk energy storage in the POU resource portfolio through 2030. This value can stem from avoiding curtailment of renewable generation, meeting ramping needs with energy from lower-emitting resources, or otherwise reducing the dispatch of higher-emitting generation.

Pathfinder applauds staff for including this recommendation and offers the following supporting comments.

First, several studies have concluded that there is substantial value to including bulk storage as part of a 50% renewable portfolio. E3's California PATHWAYS (2015) found that energy storage, and especially deep-draw storage, would be a key integration solution in all 50% renewables scenarios it evaluated. Specifically, the study concluded that roughly 5,000 MW of long-duration energy storage would be needed at 50% renewables in 2030, without flexible hydrogen fuel production.¹ The Low Carbon Grid Study 2030 (2014 and 2015) concluded that additional bulk storage is important to minimizing curtailment and costs in a low carbon electric grid, especially when other methods of providing grid flexibility are limited (e.g., limitations on regional imports and exports).² E3's RESOLVE model analysis (2015) also indicates that some storage for long-duration services will be needed for a 55% RPS.³ In, 2015, the CAISO wrote a letter to the CPUC highlighting the need for fast-ramping, flexible resources to mitigate over-generation and the value of bulk storage, in particular, for meeting those needs.⁴ This led to the CAISO Bulk Energy Resource Case Study (2016), which examined a 500 MW PHS project and found substantial benefits from this investment at 40% and 50% RPS in terms of reduced production costs, renewable curtailment, and CO2 emissions.⁵

Second, including bulk storage in the POU IRP guidelines aligns with other efforts and directives to examine the role of bulk storage in California. The California Public Utilities Commission (CPUC) staff is in the process of designing a new process to fulfill SB 350's requirement for Load Serving Entity (LSE) IRPs. CPUC staff proposes to include as one of the four candidate portfolios, a portfolio with 500 MW of bulk storage in the assessment to develop a CPUC "Reference 2030 Plan." The candidate portfolios will inform the guidelines for the CPUC jurisdictional LSEs' IRPs. CPUC staff explains that this approach may "provide a more direct evaluation of the value of a particular resource of interest for the purpose of making near-term decisions" and "may expose a portfolio that is never the lowest cost in any future, but is lower risk across multiple future conditions."⁶ The CPUC's rationale for contemplating bulk storage in the LSE IRP process applies equally to the CEC in the development of POU IRP guidelines.

California municipalities have also asked their utilities to examine strategies for achieving substantial GHG reductions. In March 2016, the Los Angeles City Council passed a motion directing Los Angeles Department of Water and Power to study the potential to achieve a 100% renewable portfolio.⁷ The motion states, "[w]ith advances in energy storage technology and distribution grid resilience, adopting greater quantities of renewables has become ever more possible and, in some cases, significantly more

¹ http://www.ethree.com/wp-content/uploads/2017/02/E3_PATHWAYS_GHG_Scenarios_Updated_April2015.pdf

² <http://lowcarbongrid2030.org/>

³ E3 studied a 55% RPS in its preliminary RESOLVE model runs. http://docketpublic.energy.ca.gov/PublicDocuments/15-MISC-05/TN206710_20151120T084825_E3_Bulk_Storage_Presentation.pptx

⁴ <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M154/K734/154734265.PDF>

⁵ <https://www.caiso.com/Documents/BulkEnergyStorageResource-2015-2016SpecialStudyUpdatedfrom40to50Percent.pdf>

⁶ http://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Electric_Power_Procurement_and_Generation/LTPP/IRP_Workshop_2016-12-16_ScenDev_rev.pdf (slide 28)

⁷ http://clkrep.lacity.org/onlinedocs/2016/16-0243_mot_03-02-2016.pdf

desirable than new fossil fuel generating stations.” An examination of bulk storage as part of the IRP process would complement LA’s efforts to assess whether storage could substitute for new investments in fossil fuel generation.

Finally, the timing is urgent; POUs must include bulk storage in IRP planning *today* if these resources are to play an integral role in meeting the statewide 2030 GHG target. Each bulk storage resource requires a long lead time for planning, permitting, and construction. If the Commission were to defer meaningful consideration of bulk storage resources until the next IRP in 2023, then there would be insufficient time to undertake the proper studies to bring these types of resources online by 2030.

III. The CEC should provide specific direction on how it expects the POUs to evaluate and potentially procure bulk storage resources.

In the Draft Staff Paper, CEC staff acknowledges that in response to AB 2514 (2010) requirements, only a few POUs have elected to set energy storage procurement targets, while others have sited the unavailability of cost-effective storage or the absence of need. Therefore, it is reasonable to expect that the CEC may need to provide more specific guidance on what it expects from a POU with regard to the requirement that it “examine the potential role and value of bulk energy storage” in a 2030 portfolio. Further, Pathfinder notes that SB 350 explicitly bypasses the simple cost-effectiveness test for the purpose of IRPs. The statute states, “The governing board may authorize procurement of resource types that will reduce overall greenhouse gas emissions from the electricity sector and meet the other goals specified in subdivision (b), but due to the nature of the technology or fuel source may not compete favorably in price against other resources over the time period of the integrated resource plan” (Pub. Util Code Sec. 9621). The CEC should direct each POU subject to the IOU filing requirements to discuss which bulk storage technologies and proposals it has examined and its assessment of such proposals in the context of long-term system needs.

In addition to directing POUs to examine bulk storage, the CEC may also need to provide guidance to facilitate the procurement of bulk resources. At the November 2015 CEC and CPUC Workshop on Bulk Energy Storage, a number of bulk storage developers highlighted the barriers to bulk storage procurement. Bulk storage resources provide services that benefit the whole grid, not just the utilities invested in or paying for those services. Thus, bulk storage projects will likely require new forms of multi-party sales contracts that limit free-ridership. Further, the sheer size of bulk storage projects often makes single-party procurement infeasible, especially for small utilities. The CEC’s report from the Bulk Storage Workshop noted that “the complexity of bulk energy storage can be prohibitive for a single organization to develop a bulk energy storage project. Joint ventures between two or more entities may increase the likelihood of successful development of bulk storage projects. The Energy Commission

should investigate ways in which bulk energy storage joint ventures can be facilitated.”⁸ Fortunately, many POUs have experience with joint procurement through their joint powers authorities (JPA). The CEC should encourage the POUs to explore opportunities for joint procurement of bulk storage through these JPAs.

IV. The CEC should coordinate with the California Public Utilities Commission (CPUC) and the California Independent System Operator (CAISO) to encourage collaboration and joint-procurement between LSEs and POUs.

As described above, bulk storage resources will naturally require multi-party procurement, and this will likely entail collaboration between POUs and CPUC jurisdictional LSEs. The CPUC and the CEC should continue to examine opportunities for coordination of bulk storage procurement across jurisdictions. The Order Instituting Rulemaking for the CPUC IRP process raised the issue of “whether and how to coordinate IRP requirements for Commission-jurisdictional LSEs with the CEC’s similar responsibility to oversee a similar IRP process for publicly-owned utilities.” Pathfinder believes the authors of SB 350 intended to establish a pathway for coordination among the energy agencies by including similar IRP requirements for CPUC jurisdictional LSEs and the POUs.⁹ Although the CPUC and CEC IRP processes will be on different schedules, the agencies should work together to share information and findings on the value of bulk storage; discuss the characteristics, quantities, and timeframes for bulk storage investments; and explore opportunities for multi-party procurement.

In addition, as some POUs are members of the CAISO, the CEC should coordinate with the CAISO on public utility procurement of bulk storage. For example, CAISO procurement of bulk storage and financing through Transmission Access Charges (TACs) may be the appropriate procurement process to ensure equitable cost-sharing across CAISO-connected utilities. Alternatively, CAISO-connected POUs that procure a portion of a bulk storage resource independently should receive appropriate Resource Adequacy credit and/or discounts on CAISO fees as compensation for this investment.

V. The CEC should require utilities to address how they are planning for replacement of major fossil fuel plants.

In addition to the resources discussed in the Staff Paper, Pathfinder recommends that the CEC also include a requirement that the POUs discuss their plans for replacement of fossil fuel generation set for retirement or replacement due to Once-Through-Cooling and Emissions Performance Standards (SB

⁸ <http://www.energy.ca.gov/2016publications/CEC-200-2016-006/CEC-200-2016-006.pdf>

⁹ See P.U.C Section 9621 and P.U.C. Section 454.52

1368) requirements. Many CA POU's will need to replace large portions of their generation portfolios in the next decade due to these requirements. For example, the Intermountain Power Project, a 1900 MW coal facility serving five southern California municipal utilities, is set for retirement in 2025. POU's should include in their IRPs a discussion of how they will replace these large fossil fuel resources, as well as their process for determining the best replacement plan.

VI. Pathfinder supports staff's proposal that at least one scenario in an IRP must meet utility-specific GHG targets and the 2030 RPS.

The Staff Paper proposes that "the adopted IRP submitted to the Energy Commission must include at least one scenario that achieves a utility-specific target for GHG reductions by 2030, as well as the RPS targets and other legal and regulatory requirements." Pathfinder supports this proposed requirement but would emphasize that the *selected* scenario must achieve a utility-specific GHG target by 2030 as well as RPS targets. SB 350 explicitly requires that a POU IRP achieve the GHG and RPS targets for 2030. Any scenario included in a POU IRP that does not meet GHG and RPS requirements must necessarily be judged non-compliant and deficient.

Further, Pathfinder hopes that the CEC will encourage the POU's to explore multiple pathways to achieving utility-specific GHG targets.

VII. The CEC should provide opportunities for public stakeholder participation in the review and approval of POU IRPs.

Pathfinder understands that CEC staff expects to develop a separate staff paper to propose a process for CEC review and approval of POU IRPs, including opportunities for formal comment. Pathfinder looks forward to reviewing this proposal and hopes that the CEC will include opportunities for stakeholder review and participation as part of its review process. Presumably, the POU's will solicit stakeholder feedback in the development of their POU's prior to governing board approval. However, the CEC's review and approval process guidelines should encourage active stakeholder involvement in the POU IRP process, with feedback communicated to and from staff, the governing board, and the CEC.

Conclusion

Pathfinder appreciates the opportunity to submit these comments and looks forward to working with the CEC and its staff in the development of the POU IRP guidelines.

Pathfinder CAES I LLC Comments on Draft POU IRP Guidelines
March 23, 2017
Docket 17-IEPR-07

Dated: March 23, 2017

Respectfully submitted,

A handwritten signature in black ink that reads "Molly S Croll". The signature is written in a cursive style. Below the signature is a solid horizontal line.

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