

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue  
Electric Integrated Resource Planning and  
Related Procurement Processes.

Rulemaking 20-05-003  
(Filed May 7, 2020)

**CALIFORNIA WIND ENERGY ASSOCIATION  
COMMENTS ON ORDER INSTITUTING RULEMAKING  
TO CONTINUE ELECTRIC INTEGRATED RESOURCE PLANNING  
AND RELATED PROCUREMENT PROCESSES**

Nancy Rader  
Executive Director  
California Wind Energy Association  
1700 Shattuck Ave., #17  
Berkeley, CA 94709  
Telephone: 510-845-5077 x1  
E-mail: nrader@calwea.org

Dariush Shirmohammadi  
Technical Director  
California Wind Energy Association  
1700 Shattuck Ave., #17  
Berkeley, CA 94709  
Telephone: (310) 858-1174  
E-mail: dariush@gridbright.com

***On behalf of the California Wind  
Energy Association***

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## TABLE OF CONTENTS

I.	INTRODUCTION AND SUMMARY .....	1
II.	THE PLANNING TRACK SHOULD BE USED TO IDENTIFY GAS PLANT RETIREMENTS AND REPLACEMENTS ASSOCIATED WITH A 38-MMT TARGET AND PORTFOLIO, WHICH IS WITHIN THE SCOPE OF THIS OIR. THE COMMISSION SHOULD ALSO FURTHER EVALUATE THE OTHER MAJOR INFRASTRUCTURAL ELEMENTS OF ITS 38 MMT PORTFOLIO.....	3
A.	The Planning Track Should Be Used to Identify Gas Plant Retirements and Replacements Associated with a 38-MMT Target and Portfolio .....	3
B.	Planning for Gas Plant Retirements Is Within the Scope of This OIR.....	5
III.	THE COMMISSION SHOULD ADJUST THE SCHEDULE FOR THE PLANNING AND PROCUREMENT TRACKS TO CREATE THE RESOURCE BANDWIDTH TO PLAN FOR GAS-PLANT RETIREMENTS AND TO ADJUST THE 38 MMT PORTFOLIO.....	6
IV.	RECOMMENDED PROCESS AND TIMELINE FOR ADDRESSING GAS RETIREMENT AND REPLACEMENT DECISIONS.....	8
A.	A Record Should Be Developed to Enable the Commission to Determine the Local Capacity Resource Area(s) Where Retirements Should Occur and Where Replacement Resources Should Be Located.....	9
1.	Identify the LCRA(S) in which a specific amount of gas plant retirements should begin to occur; LA Basin is the obvious target .....	9
2.	Determine where the replacement resources should be located and which gas plants should be retired by 2030 -- within the LCRA, outside of the LCRA, or some combination .....	10
V.	THE PROCUREMENT TRACK SHOULD MARRY CONSIDERATION OF MEDIUM-TERM RELIABILITY ISSUES AND RESOURCE DIVERSITY.....	12
A.	“Near-Medium-Term” Reliability Issues Should Be Considered in Conjunction with Resource Diversity Considerations.....	12
B.	Diablo Canyon Should Be Repurposed to Realize SB 100 Goals .....	14
C.	The Procurement Track Should Consider Near-Medium-Term Procurement Needs Ahead of Cost Allocation and Backstop Procurement Issues and Long-Term Diversity Directives .....	16
D.	Cost-allocation Issues Must Consider LSE Contributions to the Need for Integration Resources, Broadly Construed .....	17

VI.	CONCLUSION.....	18
	APPENDIX.....	19

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**I. INTRODUCTION AND SUMMARY**

Pursuant to the Order Instituting Rulemaking to Continue Electric Integrated Resource Planning and Related Procurement Processes issued on May 14, 2020 (“OIR”), the California Wind Energy Association (“CalWEA”) submits these opening comments on the OIR and its proposed scope.

In summary, CalWEA urges major changes to the scope of the remainder of the current IRP cycle that will enable the Commission to make meaningful planning and procurement decisions in the next six to 12 months, rather than carry out the contemplated process which is unlikely to result in planning decisions necessary to make meaningful and efficient progress towards Integrated Resource Planning (“IRP”) goals. Such a process will put the Commission in the driver’s seat so that it can ensure timely achievement of an optimal portfolio rather than react to the sum of individual plans, a process that is likely to produce suboptimal results. Specifically, CalWEA recommends that the Commission:

- (1) Use the Planning Track to provide the planning direction needed to inform the development of individual LSEs’ 38 MMT plans, particularly the identification of the location(s) where the gas plant retirements associated with the Commission’s 38 MMT portfolio will occur and, at least to some extent, the areas where the replacement resources will be located. The Commission should also further evaluate the other major infrastructural elements of its 38 MMT portfolio. This will enable the California Independent System Operator (“CAISO”) to plan for any transmission upgrades that will be necessary before gas-plant retirements can occur, and will allow load-serving entities (“LSEs”) to plan their resource portfolios and procurement activities accordingly. Without

this planning direction, individual LSEs cannot effectively plan for a 38 MMT portfolio and, therefore, such planning will not provide the basis for a Commission decision on whether to adopt a 38 MMT Preferred System Plan (“PSP”). (CalWEA proposes a process that will enable the Commission to provide this planning direction.)

- (2) To create the staff-resource bandwidth to address the foregoing, the Commission should adjust the proposed schedule in both the Planning and Procurement Tracks:
  - a) In the Planning Track, the adoption of a 38 MMT PSP should be accelerated based on the Commission’s own planning, rather than the aggregation of individual LSE plans. The PSP is needed to inform the CPUC’s 2021-22 Transmission Planning Process (“TPP”) base case, which the CAISO will need by mid-spring 2021. The PSP should also inform the final individual IRPs.
  - b) In the Procurement Track, consideration of cost allocation and backstop procurement issues should be moved back to the summer and fall of 2021, and consideration of near-mid-term procurement should be informed by the aggregated individual IRPs and the adopted PSP.

While this would be a significant change from the process laid out in the OIR, the process as currently conceived is very unlikely to lead to the type of planning decisions that the IRP process is designed for. It would be far more productive to use the balance of this cycle to conduct meaningful planning, rather than to develop a PSP based on fragmented plans, a bottoms-up process that is unlikely to drive the change that is needed to most efficiently meet the state’s numerous greenhouse gas goals.

- (3) The Procurement Track should marry consideration of medium-term reliability issues (namely, the replacement of the Diablo Canyon nuclear units) with resource diversity considerations, including long-lead-time and/or large-scale resources, to culminate in a timely decision that ensures that procurement of replacement resources does not result in increased reliance on natural gas facilities and supports resource-diversity objectives. Overall, a greater focus on the value of resource diversity is called for. Finally, the Commission must consider each LSE’s contribution to the need for “integration resources” (which, as the Commission has previously found, includes a diversity of renewable and storage resources) in assigning procurement requirements and associated cost-allocation policies.

In an appendix to these comments, CalWEA outlines how the process and timeline could be revised to accomplish these ends.

**II. THE PLANNING TRACK SHOULD BE USED TO IDENTIFY GAS PLANT RETIREMENTS AND REPLACEMENTS ASSOCIATED WITH A 38-MMT TARGET AND PORTFOLIO, WHICH IS WITHIN THE SCOPE OF THIS OIR. THE COMMISSION SHOULD ALSO FURTHER EVALUATE THE OTHER MAJOR INFRASTRUCTURAL ELEMENTS OF ITS 38 MMT PORTFOLIO**

**A. The Planning Track Should Be Used to Identify Gas Plant Retirements and Replacements Associated with a 38-MMT Target and Portfolio**

The Commission is requiring all LSEs to submit, as part of their individual IRPs due this September, portfolios that will address their proportional share of both the 46 MMT emissions target tentatively adopted by the Commission and a potential 38 MMT GHG target “to show how they would accomplish their proportional share of both targets.”<sup>1</sup> The Commission “can then consider adopting a portfolio at the end of this cycle of the IRP process that goes further than the 46 MMT target, and also includes actual resources necessary to help with the annual transmission planning process ... conducted by the [CAISO].” To facilitate the individual IRP planning, the Commission provided the overall optimal portfolio identified by the RESOLVE model to meet the 38 MMT target.<sup>2</sup> That portfolio includes 2,046 megawatts (“MW”) of “natural gas capacity not retained”<sup>3</sup> out of 25,084 MW of total gas capacity that otherwise would be retained under the 46 MMT portfolio.<sup>4</sup>

Particularly given the large number of LSEs, however, each individual IRP – and the sum of those IRPs – is very unlikely to be meaningful unless the Commission first identifies where, at a minimum, that 2,046 MW of gas capacity will retire and what type(s) of resources will replace them in what locations. Those decisions will require system-level planning that is the very purpose of IRP. Taking a system-level view is necessary to identify the most cost-effective means of retiring gas plants, particularly in transmission-constrained areas. In transmission-constrained areas, replacement resources could be local, potentially with relatively limited transmission upgrades to ensure sufficient battery-charging capability, or non-local resources

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<sup>1</sup> D.20-03-028 (issued April 6, 2020) at p. 3.

<sup>2</sup> *Id.* at p. 46.

<sup>3</sup> *Id.* at Table 8.

<sup>4</sup> *Id.* at Table 6. SCE’s IRP showed a need to retire 3,500 MW of gas plants. See note 27 *infra*.

that would require more substantial transmission upgrades, primarily to address local capacity constraints.

Similarly, the Commission should further evaluate the resources in the 38 MMT plan that require major infrastructure. Specifically, it should evaluate whether offshore wind resources, Western-interior wind resources, or some combination, should be included in that plan, among other diverse resources.<sup>5</sup> The Commission may also need to further specify the characteristics of long-duration storage that are needed. In so doing, it is important that the Commission consider potential synergies between these infrastructure requirements and infrastructure solutions that will enable gas-plant retirements because holistic solutions are likely to be more effective and efficient in the long-run.<sup>6</sup>

The Commission's holistic planning guidance will, in turn, enable the CAISO to plan for any needed transmission and for LSEs to plan to procure the associated resources. Depending on the transmission solutions identified, those transmission solutions could provide procurement opportunities to LSEs that would not exist without system-level planning.<sup>7</sup>

While the Commission has yet to decide whether it will adopt a 38-MMT target and associated portfolio for 2030, it is still necessary to plan more specifically for that target and portfolio now, for at least three important reasons. First, the Commission has indicated that a subset of LSEs will be allowed to plan for lower GHG targets, but any such plans will be impeded, if not undermined, without Commission-level planning to guide and empower those efforts.<sup>8</sup> Second, the Commission must plan to meet a comprehensive 38-MMT target sooner or later; given long implementation lead-times that may be required for transmission upgrades, it

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<sup>5</sup> CalWEA explained in its March 12, 2020, comments in the preceding IRP docket, R.16-02-007, at p.7, that transmission for out-of-state wind should not be approved before offshore wind is analyzed.

<sup>6</sup> A holistic approach that CalWEA is particularly interested in is the ability of a proposed subsea cable between Diablo Canyon and the LA Basin to enable 2,000 MW of gas plant retirements while providing infrastructure that will be necessary to interconnect and deliver offshore wind resources from the Central Coast as well as the Central Valley. See *id.* at p. 8.

<sup>7</sup> For example, replacing a gas plant in the Los Angeles Basin without additional transmission would limit solutions to batteries installed in that LCRA, whereas a major-transmission solution could enable access to a variety of resources in Northern California, the Desert Southwest, or elsewhere, as discussed in Section IV below.

<sup>8</sup> For example, D.20-03-028 states, at Conclusion of Law 17, that each LSE should “detail in their individual IRPs their plans for procuring long-duration storage resources and out-of-state wind resources, as well as overall plans for a diverse portfolio.” But the Commission cannot expect individual LSEs to plan to procure these resources absent the system-level planning that is necessary to enable the possibility of such procurement, including building any necessary infrastructure.

must begin that planning now in order to ensure timely achievement of that goal. And, third, planning for a 38-MMT target involves a larger, more robust portfolio that provides a better opportunity to efficiently plan for long-term planning goals, including resource diversity and minimization of total ratepayer costs.<sup>9</sup>

The Commission has previously committed to develop the additional analysis necessary to address the potential retirement of natural gas generators, with a priority on disadvantaged communities and local air pollutant emissions, without any definite timeline.<sup>10</sup> It has also committed to further evaluate offshore wind resources.<sup>11</sup> For the above reasons, CalWEA believes that it is necessary not only to conduct this analysis now, but to make planning decisions based on that analysis. In sections III, IV and V, we explain how the balance of this IRP cycle can be revised to achieve these goals.

## **B. Planning for Gas Plant Retirements Is Within the Scope of This OIR**

The OIR sets standards for the type of issues that fall within the scope of this proceeding.<sup>12</sup> A focus on gas-plant retirements and replacement resources fits squarely within this scoping standard. Taking each standard in turn:

- First, the OIR states that the issue must “materially impact procurement policies, practices, and/or procedures.” As described in the preceding subsection, the Commission must provide further guidance on gas-plant retirements and replacement resources in order to provide LSEs with sufficient procurement guidance, as well as the opportunity to procure the optimal replacement resources
- Second, the OIR states that the issue must be narrowly defined. CalWEA has clearly defined the specific issues that must be addressed and a process for addressing them.
- And, third, the OIR states that the issue must have demonstrated consistency with one or more of the IRP proceeding goals. System-level planning for a 38 MMT target is clearly consistent with this proceeding, as the Commission has directed individual LSEs to prepare 38 MMT plans. In previous comments, many parties have asserted that an even more aggressive 30 MMT target for 2030 is necessary to meet SB 100 goals.<sup>13</sup> In any case, gas retirement and replacement decisions are warranted

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<sup>9</sup> Public Utilities Code Sections 454.51(a) and 454.52(a)(1)(D).

<sup>10</sup> Note 1, *supra*, at pp. 90-91.

<sup>11</sup> *Id.* at pp. 55 and 92 and Conclusion of Law 18.

<sup>12</sup> OIR at p. 11.

<sup>13</sup> *See, e.g., Ex Parte* letter from the American Wind Energy Association, California Environmental Justice Alliance, Center for Energy Efficiency and Renewable Technologies, Environmental Defense Fund, Large-scale Solar Association, Natural Resources Defense Council, The Nature Conservancy,



regardless of whether a GHG target of 38 MMT is reached in 2030 or the years preceding or following that date. In addition, in the course of evaluating gas-plant retirements, the Commission should consider other statutory goals, including resource diversity and prioritizing the reduction of local air pollutants in disadvantaged communities.<sup>14</sup>

### **III. THE COMMISSION SHOULD ADJUST THE SCHEDULE FOR THE PLANNING AND PROCUREMENT TRACKS TO CREATE THE RESOURCE BANDWIDTH TO PLAN FOR GAS-PLANT RETIREMENTS AND TO ADJUST THE 38 MMT PORTFOLIO**

Conducting the system-level planning that is required to enable gas-plant retirements, and to plan for other major elements of the 38 MMT portfolio, will require Commission resources (staff and consultant time). To create the bandwidth for that, the Commission should make changes to the schedules for both the Planning and Procurement Tracks.

In the Planning Track, there is simply no purpose in producing a PSP until more system-level planning is accomplished. As described above, a PSP that draws from fragmented LSE plans, developed in the absence of system-wide planning, is unlikely to properly inform any Commission planning decisions – i.e., the decisions that are necessary to enable the major electric system infrastructure that may be necessary to eliminate the need for gas plants and, potentially, to promote resource diversity and minimize ratepayer costs. Second, under the OIR’s proposed schedule, a procurement decision on near-medium-term procurement needs, if any, occurs at least several months ahead of the adoption of the PSP (spring 2021 and fall 2021, respectively<sup>15</sup>); therefore, while aggregating the individual plans may inform near-medium-term procurement decisions in the Procurement Track, the PSP as currently envisioned will not inform those procurement decisions.

The Preliminary Schedule for the Planning Track included in the OIR suggests that Commission staff will be focused on aggregating the individual IRPs between September 2, 2020

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Sierra Club California, Union of Concerned Scientists and Vote Solar regarding the Proposed Decision of the 2019-2020 Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission Planning which was issued in California Public Utilities Commission (Commission) Rulemaking (R.) 16-02-007 on February 21, 2020. The letter stated, in part, that “The 30MMT target will ensure California proceeds with timely and sustained procurement decisions now, thus avoiding a future of expensive and ill-planned ‘catch-up’ decisions; the consequences of which would inevitably fall on ratepayers.”

<sup>14</sup> Public Utilities Code Sections 454.51 and 454.52(a)(1)(I).

<sup>15</sup> OIR at pp. 12-13.

and February 2021, and spending at least another eight months preparing the PSP. Clearly, this is a demanding effort. The Commission must ask itself whether the effort to produce the PSP is warranted given that the individual IRPs will have been produced without system-level planning direction. Instead, the Commission should conduct that planning first, aimed at gas-plant retirement benefitting disadvantaged communities, resource diversity and cost minimization, and provide direction to the LSEs to finalize their individual IRPs accordingly.

In the Procurement Track, the Commission should move consideration of cost allocation and backstop procurement issues from summer and fall 2020 to the summer and fall of 2021. While cost allocation and backstop procurement issues are important to implement planning decisions, those planning decisions should be made first. In so doing, the cost allocation and backstop procurement decisions can be made in the context of those specific planning decisions, rather than in the abstract.

Such fundamental changes are contemplated under the OIR, which notes that “the two-year structure of the IRP planning process established in D.18-02-018 has proven to be a challenge to maintain, both for the Commission and for interested parties, because of the large amount of work associated with the development and adoption of both the RSP and the PSP.”<sup>16</sup> In the revised process, the Commission should use system-level planning to drive the PSP, rather than be driven by the haphazard planning of individual LSEs. The OIR also enables any needed revisions to the schedule.<sup>17</sup>

Indeed, the OIR laments that there will be insufficient time to aggregate and analyze the individual IRPs in time to inform the CAISO 2021-22 TPP cycle.<sup>18</sup> Therefore, it suggests that the tentatively adopted 46 MMT plan might be used as the base case for the next TPP cycle. Such a decision would miss a critical opportunity to make progress on gas plant retirements since the 46 MMT plan retires no gas, and long-lead-time transmission upgrades may be necessary to

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<sup>16</sup> OIR at p. 8.

<sup>17</sup> Ordering Paragraph 12 of the OIR states that “the assigned Commissioner or Administrative Law Judge may make any revisions to the scheduling and filing determinations made herein as necessary to facilitate the efficient management of the proceeding, including organization of issues into additional tracks of the proceeding.”

<sup>18</sup> OIR at p. 9.

accomplish such retirements. Further, studying the more aggressive 38 MMT plan may reveal economies of scale for resources that only begin to show themselves in the 46 MMT plan.<sup>19</sup>

The OIR seems to assume that, somehow, the two dozen 38-MMT IRPs to be filed can be stitched together to present a solution to the gas retirement planning need. This is a gamble at best because it would require many, if not all, LSEs to agree on a plan that would then need to be adopted wholesale by the Commission. This is the role of the Commission’s planning process – to make planning decisions after a public process, particularly where there is no consensus. Moreover, the Commission must then execute the plan and ensure that the associated procurement occurs as anticipated.

The OIR does usefully suggest that “additional information from the previous TPP may be used to develop an alternative portfolio recommendation” for the 2021-22 TPP cycle. CalWEA notes that there is a significant amount of useful information, not only in the previous TPP cycle but in the one prior, in which the CAISO has studied numerous solutions for gas-plant retirements. But these gas-plant replacement solutions have generally been found to be uneconomic due to the continued operation of the gas plants that they would replace. As CalWEA described in previous comments, this is the Catch-22 situation that the Commission must break by including gas-plant retirements in its TPP base case.<sup>20</sup>

In the Appendix, CalWEA provides a revised schedule that would enable the Commission to prioritize its own system-level planning that should guide the individual plans of the LSEs and any procurement decisions. We show the Planning and Procurement Tracks on the same page in order to illustrate how planning should precede procurement.

#### **IV. RECOMMENDED PROCESS AND TIMELINE FOR ADDRESSING GAS RETIREMENT AND REPLACEMENT DECISIONS**

CalWEA recommends the following process to determine one or more Local Capacity Resource Areas (“LCRAs”) in which gas plants should be retired and where resources should be

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<sup>19</sup> In the 46 MMT plan, 973 MW of long-duration storage is specified for 2030, whereas 1,605 MW are specified in the 38 MMT plan. Similarly, 606 MW of out-of-state wind-with-new-transmission are included in the 46 MMT plan, whereas 3 GW of such resources are included in the 38 MMT plan. (As noted above, offshore wind resources should be considered for the 2030 portfolio, either as a replacement of, or addition to, the out-of-state wind resources initially contemplated.)

<sup>20</sup> R.16-02-007, CalWEA Comments on Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission Planning (March 12, 2020) at pp. 3-4. (Available [here](#).)

planned to replace those resources – the two elements that must be included in the Commission’s 2021-22 TPP recommendations in order to make progress on this front.

**A. A Record Should Be Developed to Enable the Commission to Determine the Local Capacity Resource Area(s) Where Retirements Should Occur and Where Replacement Resources Should Be Located**

While the Commission must initially decide whether gas plants providing system or local reliability services should be retired, CalWEA recommends focusing on gas plants in LCRAs. LCRAs should be targeted because (a) air quality issues affecting disadvantaged communities (“DACs”), which the legislature has directed the Commission to prioritize in its IRP process,<sup>21</sup> are primarily in LCRAs,<sup>22</sup> (b) gas plants operate in LCRAs and provide critical reliability services whose replacements must be most carefully planned, as compared with retirement of gas plants meeting system RA needs; and (c) system RA requirements are unlikely to result in local capacity additions.<sup>23</sup> For these reasons, we assume that the focus will be on selecting gas plants within an LCRA.

**1. Identify the LCRA(s) in which a specific amount of gas plant retirements should begin to occur; LA Basin is the obvious target**

Among LCRAs, the LA Basin is the most obvious area to focus on, given the large concentration of gas plants, poor air quality, and DACs. The Los Angeles (“LA”) Basin and the Greater Fresno LCRAs have the worst air quality in the state, according to the U.S. EPA.<sup>24</sup>

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<sup>21</sup> Public Utilities Code 454.52(a)(1)(I).

<sup>22</sup> A recent report that analyzed peaker power plants in California (and other states) “that may be prime candidates for replacement based on operational and grid characteristics, and whose replacement may yield the greatest health, environment and equity co-benefits” shows that over 70% of peaker plants are within LCRAs and half of peakers are in DACs. See Physicians, Scientists, and Engineers for Healthy Energy, *Energy Storage Peaker Plant Replacement Project: Technical and Policy Documentation Background, Data Analysis Methods, and State-Level Policy and Regulatory Considerations* (California appendix, pp. 5-11 and Figure 3) (May 2020).

<sup>23</sup> None of the 770 MW of system RA capacity recently procured by SCE are in LCRAs (see <https://www.greentechmedia.com/articles/read/southern-california-edison-picks-770mw-of-energy-storage-projects-to-be-built-by-next-year>) and, of PG&E’s 423-MW procurement, less than half are located in an LCRA (see [https://www.pge.com/en/about/newsroom/newsdetails/index.page?title=20200519\\_pge\\_poised\\_to\\_expand\\_battery\\_energy\\_storage\\_capacity\\_by\\_more\\_than\\_420\\_megawatts](https://www.pge.com/en/about/newsroom/newsdetails/index.page?title=20200519_pge_poised_to_expand_battery_energy_storage_capacity_by_more_than_420_megawatts)).

<sup>24</sup> See U.S. EPA, “California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants” (Data as of May 31, 2020). [https://www3.epa.gov/airquality/greenbook/anayo\\_ca.html](https://www3.epa.gov/airquality/greenbook/anayo_ca.html).

These areas are also home to many of the most disadvantaged communities in the State, according to California's CalEnviroScreen data.<sup>25</sup>

The Commission should plan for at least 2,000 MW of gas retirements, since its own analysis shows that this amount of "gas not retained" will need to occur to achieve the 38 MMT target.<sup>26</sup> SCE's own modeling shows nearly 3,500 MW of retired gas in association with a 38 MMT target.<sup>27</sup>

For these reasons, it is logical for the Commission to target the LA Basin LCRA for at least 2,000 MW of gas-plant retirements. To ensure that gas plants can be timely retired, given the potential lead time required for any transmission upgrades required, the Commission should target gas plant retirements for 2030 regardless of whether the 38 MMT target is planned to be achieved in 2030 or in subsequent years.

**2. Determine where the replacement resources should be located and which gas plants should be retired by 2030 -- within the LCRA, outside of the LCRA, or some combination**

To make a determination regarding replacement resources, this element of the Planning Track should be focused on a RESOLVE study, to be conducted by the Commission, in which RESOLVE is used to evaluate resources on a zonal basis. The study would evaluate replacement resources for the retired gas plant capacity in four geographic areas:

- the LA basin (where replacement resources would mainly be storage);
- the Central Valley (where replacement resources would primarily be solar and storage, with diverse-resource options potentially including offshore wind);
- the Tehachapi and Big Creek Areas (where replacement resources would primarily be wind, solar and storage); and
- the Desert Southwest (where replacement resources would primarily be solar and storage, with diverse-resource options including wind resources from New Mexico or Wyoming).

For each of these scenarios, the Commission would develop cost adders to estimate the needed

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<sup>25</sup> See <https://oehha.ca.gov/calenviroscreen/maps-data>.

<sup>26</sup> Note 1 *supra* at Table 8.

<sup>27</sup> See R.16-02-007, Southern California Edison Company Opening Comments on Administrative Law Judge Ruling Seeking Comment on Proposed Reference System Portfolio and Related Policy Actions (December 17, 2019) at p. 27.

transmission upgrade costs. The transmission adders should be supplied by the CAISO or the proponents of proposed transmission solutions subject to review by the CAISO. Parties should comment on the Commission's proposed methodology and should be invited to supplement the record with their own analyses.

For the scenario where replacement resources for retiring the LCRA gas plants is mainly within the LCRA (i.e., batteries), the CAISO should provide the cost estimate for transmission upgrades to address potential charging limitations. A CAISO study evaluating such requirements is now underway.<sup>28</sup> These upgrades will primarily be local and within the LCRA, but may include transmission lines feeding into the LCRA.

For the scenarios where replacement resources are outside of the LCRA, the transmission cost estimates should cover the major transmission upgrades required to deliver those resources into and within the LA Basin to meet LA Basin LCR needs, which will be the bulk of the cost. An estimate of transmission upgrades associated with resource interconnection should also be considered. A wealth of relevant information on all such costs is available from various public-information sources, including the CAISO's TPP studies, the CAISO's interconnection cluster studies, and various studies on out-of-state and offshore wind transmission needs.

While these transmission costs estimates will be just that – estimates – it is important to note that even the costs of actual transmission projects routinely vary by as much as 30-40%. The type of analysis described above should be sufficient to make planning decisions regarding the location(s) for replacement resources. In addition to cost-effectiveness, the Commission would consider other policy objectives, such as minimizing market power opportunities, promoting resource diversity, reducing transmission-related wildfire risks, siting and permitting considerations, etc.

In the recommendations that it sends to the CAISO for its 2021-22 TPP, the Commission would specify the amount of gas capacity to be retired in the LA Basin LCRA, taking into account party comments. All the retiring and replacement resources will need to be identified at bus level (utilizing a vetted busbar mapping methodology to enable the CAISO to develop the transmission upgrades required; alternatively, the Commission could supply the CAISO with an

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<sup>28</sup> See CAISO, *2020-2021 Transmission Planning Process Stakeholder Meeting* (storage mapping and resource replacement) (June 3, 2020). Available at: <http://www.caiso.com/Documents/Presentation-2020-2021TransmissionPlanningProcess-Jun032020.pdf>.

algorithm or methodology with which to select those busbars and gas-plant retirements and resource additions).

Again, it is critical that these decisions are made in time to include in the 2021-22 TPP recommendations given that any needed transmission, whether to accommodate local or out-of-basin replacement resources, can take seven years or more to plan for and build. This effort must start now, beginning with a revised Planning Track schedule that aims at this objective.

## **V. THE PROCUREMENT TRACK SHOULD MARRY CONSIDERATION OF MEDIUM-TERM RELIABILITY ISSUES AND RESOURCE DIVERSITY**

The Commission should use the Procurement Track to marry the Commission's consideration of medium-term reliability issues (namely, the replacement of the Diablo Canyon nuclear units) with resource diversity considerations, to culminate in a timely decision that ensures that procurement of replacement resources does not result in increased reliance on natural gas facilities and supports resource diversity objectives. The Commission should also focus on repurposing Diablo Canyon infrastructure to promote resource diversity and the achievement of SB 100 goals, and should create linkages between the Planning and Procurement Tracks of this proceeding due to the overlap of issues being considered. Overall, a greater focus on the value of resource diversity is called for. Finally, the Commission must consider each LSE's contribution to the need for integration resources in assigning procurement requirements and associated cost allocation policies.

### **A. "Near-Medium-Term" Reliability Issues Should Be Considered in Conjunction with Resource Diversity Considerations**

The OIR states that the Procurement Track will consider the procurement actions that LSEs need to take within the next few years to ensure near-term reliability, as well as procurement issues associated with long lead-time resources and resources that add portfolio diversity.<sup>29</sup> The Commission should directly link these reliability and diverse-resource issues.

Because the Diablo Canyon power plant is a system resource-adequacy resource within the CAISO balancing area, the Commission has required all load-serving entities to address, in their individual 2020 integrated resource plans and thereafter, how they will "assist in replacing the flexible baseload and/or firm low-emissions energy characteristics of Diablo Canyon when it

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<sup>29</sup> OIR at pp. 4 and 10.

retires in 2024 and 2025.”<sup>30</sup> The Commission has not, however, provided any specific procurement guidance related to the replacement of Diablo Canyon, although that appears to be contemplated as part of the Procurement Track.<sup>31</sup>

As a preliminary matter, as discussed above, the Preferred System Plan will not be adopted until Fall 2021 under the OIR’s proposed schedule and therefore cannot bear upon a potential decision on near-medium term procurement needs, because the latter is anticipated several months earlier, in Spring 2021.<sup>32</sup> CalWEA presumes that any decision on near-medium-term procurement needs will benefit from the aggregation of individual IRP plans, but not from the PSP, which will not be produced in time under the OIR’s proposed schedule.

In any case, more specific Commission guidance on the replacement of Diablo with “flexible baseload and/or firm low-emissions energy characteristics” will be needed in order to ensure that the retirement of Diablo Canyon does not result in increased utilization of gas-plant capacity. Without specific procurement direction, it is quite possible that in-state gas plants will operate more frequently to meet reliability, particularly as imports decline in a Western market that is tightening up.<sup>33</sup> Currently, both imports and in-state gas plants routinely meet demand during evening net-peak load hours<sup>34</sup> and, as imports decline, in-state gas generation can be expected to take up the slack. If additional batteries are expected to fill this need, the Commission must ensure that batteries actually perform as anticipated.

In studying the 200 MW of battery storage currently online, the CAISO has found that it does not currently have a tool to compel a storage resource to charge and be ready for discharge,

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<sup>30</sup> Note 1 *supra* at p.77.

<sup>31</sup> While the topic is not clearly addressed in the OIR narrative, the proposed Preliminary Schedule for the Procurement Track (p. 13) includes several milestones addressing near-medium-term reliability and procurement needs between 2023 and 2026. Presumably, given the Commission’s previous discussion of Diablo Canyon (see *ibid*), these needs relate to Diablo Canyon’s retirement.

<sup>32</sup> OIR, Preliminary Schedules, pp. 12 and 13.

<sup>33</sup> See, e.g., CAISO’s July 22, 2019, comments in R.16-02-007, at pp. 14-15. (“CAISO is concerned that over time imports without resource adequacy contracts will decrease because as other balancing authorities in the west address growing baseload retirements, climate change impacts, and other local pressures or preferences. This is especially true for imports backed by hydroelectric generation, which native balancing authorities may be more likely to rely on in the future due to their relatively low cost and clean energy profile. The Commission should plan for long-term reduced resource adequacy imports accordingly by considering system energy needs across all hours of the year and ensuring that the resource adequacy program procures accordingly.” Footnotes omitted.)

<sup>34</sup> See CAISO daily demand and supply data for various dates, available at <http://www.caiso.com/TodaysOutlook/Pages/supply.aspx> (“supply” tab.).



that these resources are not moving significant amounts of energy across different hours of the day (due in part to high cycling costs compared with revenue opportunities), and that batteries bring new integration challenges, among other concerns.<sup>35</sup> In addition, charging patterns do not match the generally anticipated pattern of consistently charging during the “belly of the duck” and discharging on peak.<sup>36</sup>

For all of these reasons, the Commission must, in addition to developing standards for battery procurement that will ensure the intended performance, reduce the need for batteries in the first place by directing LSEs to procure a diversity of renewable resources that generally match what is being lost with Diablo Canyon. In addition to “flexible baseload and/or firm” resources, these resources should include wind energy, which is generally complementary to solar.<sup>37</sup> We note that over 2,700 MW of northern California (NP15) land-based wind resources have applied for interconnection in the CAISO’s current Queue Cluster 13. Such diverse resources will reduce the need for “integration resources” such as batteries and, thus, themselves constitute integration resources, as the Commission has already recognized.<sup>38</sup>

## **B. Diablo Canyon Should Be Repurposed to Realize SB 100 Goals**

In the Commission proceeding in which the cost issues associated with the decommissioning of the Diablo Canyon Power Plant are being evaluated, PG&E stated that it has engaged the local community in discussions about repurposing the 230 kV and 500 kV systems associated with the Diablo Canyon Power Plant and will include feasible repurposing

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<sup>35</sup> See CAISO, “Energy Storage and Distributed Energy Resources Initiative (ESDER4) Draft Final Proposal, Stakeholder Web Conference” (May 27, 2020). Available at: <http://www.caiso.com/InitiativeDocuments/Presentation-EnergyStorage-DistributedEnergyResourcesPhase4-May27-2020.pdf>.

<sup>36</sup> Note 34 *supra*.

<sup>37</sup> *Ibid*.

<sup>38</sup> See D.19-04-040 (Issued May 1, 2019) at p. 136 (“We also note that Senate Bill (SB) 350 specifically gave the Commission the authority to require CCAs to procure, via long-term contracts, renewable integration resources. [Footnote omitted.] At this moment in time, every resource that requires procuring or retaining, including the renewables themselves, is being used for renewable integration, since renewables are becoming the dominant resources in the electric system. While it may be the case that every single individual generation plant on the system currently is not needed for renewable integration, it is still the case that every type of resource on the system is being utilized for this purpose...”)

opportunities in its 2021 Nuclear Decommissioning Cost Triennial Proceeding.<sup>39</sup> While these local discussions are no doubt important, the repurposing of this remarkably valuable infrastructure must also be addressed in this IRP proceeding. Specifically, consideration of how Diablo Canyon assets might be repurposed to support achievement of the state’s SB 100 goals should be included as an integral part of the Commission’s consideration of long lead-time and/or large-scale resources, and of resource diversity.<sup>40</sup> This issue is clearly in scope, as it could materially impact procurement policies, is narrowly defined, and is consistent with one or more of the IRP proceeding goals.

The infrastructure at the Diablo Canyon nuclear power plant, particularly the 230 kV and 500 kV systems, as well as PG&E’s rights to deliverability transmission capacity from the Diablo Canyon generation site, are rare assets that would be extremely difficult to reproduce today anywhere along the California coastline. The Commission must ensure that these assets are put to their most valuable use. While other uses can be conceived of, it is hard to imagine a more strategic use than for the interconnection and delivery of the proximate offshore wind resources. The wind resources off of the Central Coast are the subject of intense consideration by California, the federal government, and the offshore wind industry, given the high resource quality and relative proximity to load centers compared with other offshore wind resource areas.<sup>41</sup> Two studies, taken together, demonstrate that offshore wind holds substantial promise for achieving SB 100 goals at least cost:

- The Energy Commission’s 2018 *Deep Decarbonization* study showed that the resource diversity provided by out-of-state wind would create potential savings of \$19 billion per year by 2050, as compared to a portfolio dominated by solar and battery resources.<sup>42</sup>

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<sup>39</sup> A.8-12-008, “Pacific Gas and Electric Company 2018 Nuclear Decommissioning Cost Triennial Proceeding Rebuttal Testimony – Revised,” Exhibit No. PGE-12 (August 15, 2019, rev. Sept. 17, 2019) at p. 4-2.

<sup>40</sup> OIR at p. 10.

<sup>41</sup> See National Renewable Energy Laboratory, *Potential Offshore Wind Energy Areas in California: An Assessment of Locations, Technology, and Costs* (December 2016; NREL/TP-5000-67414). <https://www.nrel.gov/docs/fy17osti/67414.pdf>

<sup>42</sup> Mahone, Amber, Zachary Subin, Jenya Kahn-Lang, Douglas Allen, Vivian Li, Gerrit De Moor, Nancy Ryan, Snuller Price. 2018. *Deep Decarbonization in a High Renewables Future: Updated Results from the California PATHWAYS Model*. California Energy Commission. Publication Number: CEC-500-2018-012. (See Figure 16.)

- An E3 study performed for Castle Wind LLC found that offshore wind’s proximity to in-state electricity demand and existing transmission infrastructure makes it a “least-cost resource option even if out-of-state wind is developed in the future.”<sup>43</sup>

Together, these study results indicate that offshore wind has the potential to deliver savings on the order of at least \$19 billion per year if incorporated into California’s SB 100 goals. CalWEA hopes and expects to see the results of a study that combines these two elements this fall as part of the state’s SB 100 effort.

Given the high potential value of offshore wind resources, and the strategic locational value of Diablo Canyon substations and deliverability transmission rights, the Commission should address, in the Procurement Track, whether and how PG&E should preserve the use of Diablo Canyon assets for potential delivery of offshore wind resources. Additionally, the Commission should consider the role that these assets could play in conjunction with a subsea cable proposal that is being studied in the current CAISO TPP cycle.<sup>44</sup> This proposal would link the LA Basin with the Diablo Canyon substation, enabling the retirement of approximately 2,000 MW of gas-plant capacity. For this reason, the Commission should create linkages between the Planning Track (which, as discussed above, should include consideration of gas-plant retirements) and the Procurement Track of this proceeding.

**C. The Procurement Track Should Consider Near-Medium-Term Procurement Needs Ahead of Cost Allocation and Backstop Procurement Issues and Long-Term Diversity Directives**

As indicated in our comments, above, the value of resource diversity should be a key consideration in all aspects of this proceeding: the retirement of gas plants and near-medium procurement needs as well as long-term resource planning. As documented above, resource diversity (specifically wind energy) can dramatically reduce the cost of meeting the state’s clean energy goals, primarily by reducing the need for storage as an integration resource. Moreover, a

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<sup>43</sup> Energy+Environmental Economics, *The Economic Value of Offshore Wind Power in California*. August 2019.

<sup>44</sup> See *2019-2020 CAISO Transmission Report* (March 25, 2020). The Pacific Transmission Expansion (PTE) HVDC Project is described in Section 4.8.2. Available at: <http://www.caiso.com/Documents/ISOBoardApproved-2019-2020TransmissionPlan.pdf>

more diverse resource fleet may prove to be far more reliable than over-reliance on batteries, as also noted above.

While resource diversity should be an ever-present consideration in the planning and procurement tracks of this proceeding, rather than an after-thought as presently envisioned by the OIR,<sup>45</sup> any long-term, diversity-related procurement directives should follow adoption and development of the PSP, as well as consideration of cost allocation and backstop procurement issues relating to near-mid-term procurement decisions; the latter should also follow the adoption of the PSP. This process reorganization will enable the Commission to consider the results of its gas-plant retirement analysis in time to influence its ruling on the TPP.

**D. Cost-allocation Issues Must Consider LSE Contributions to the Need for Integration Resources, Broadly Construed**

The OIR will address the need for “renewable integration or flexible resources” and will continue the Commission’s ongoing consideration in this proceeding of the cost allocation policies associated with procurement ordered out of this proceeding.<sup>46</sup> As noted above, the Commission has previously found that diverse renewable resources themselves constitute integration resources. Therefore, cost allocation policies should take into account the overall resource mix of each LSE; those that are not sufficiently diverse and balanced should be responsible for a larger share of diverse-resource procurement needs or associated costs. We remind the Commission that assigning integration needs on the basis of causation is required by law.<sup>47</sup>

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<sup>45</sup> Preliminary Schedule for the Procurement Track, OIR at p. 13. (“Development of options for procurement framework of long lead-time and/or large-scale resources, *possibly including additional analysis on specific resource types*” will be considered during Summer 2020, following a ruling addressing cost allocation and procurement issues. The Preliminary Schedule also anticipates a *possible* ALJ ruling on resource procurement in Winter 2020-21 following the “result[s] of analysis of specific resource types.” Emphases added.)

<sup>46</sup> OIR at pp. 9-10.

<sup>47</sup> AB 1584 (2019) required the Commission to develop and use methodologies for allocating electrical system integration resource procurement needs to each load-serving entity based on the contribution of that entity’s load and resource portfolio to the electrical system conditions that created the need for the procurement. See Public Utilities Code Sec. 397.

## VI. CONCLUSION

The Commission's system-wide planning decisions should drive individual LSE resources plans and any Commission procurement decisions, rather than the reverse. CalWEA urges the Commission to reconsider the balance of the current IRP cycle to achieve those objectives, as outlined in these comments.

Respectfully submitted,

/s/ Nancy Rader

Nancy Rader  
Executive Director  
California Wind Energy Association  
1700 Shattuck Ave., #17  
Berkeley CA 94709  
Telephone: (510) 845-5077 x1  
Email: nrader@calwea.org

***On behalf of the California Wind Energy  
Association***

June 15, 2020

**APPENDIX:  
RECOMMENDED SCHEDULE AND TIMELINE FOR REVISED  
PLANNING AND PROCUREMENT TRACKS**

Proceeding Milestone	Date	Planning Track	Procurement Track
ALJ ruling seeking comments on objectives and design of 38 MMT PSP portfolio for 2021-22 TPP, including gas plant retirements and other infrastructure planning and related modeling, and possibly including additional information on busbar mapping methodology	Jul-20		
Comments and replies in response to ALJ ruling on 38 MMT PSP and 2021-22 TPP	Aug-20		
Individual IRPs due from LSEs	1-Sep-20		
Workshop(s) on staff modeling results for 38 MMT portfolio for 2021-22 TPP	Nov-Dec-20		
Possible additional process around PSP development, including parties' modeling	Jan-21		
Workshop on individual IRP aggregation results	Feb-21		
ALJ ruling on 38 MMT PSP and 2021-22 TPP recommendations	Feb-21		
Comments and replies on ALJ ruling on 38 MMT PSP and 2021-22 TPP	Mar-21		
Proposed decision adopting PSP and 2021-22 TPP recommendations	Apr-21		
Workshop(s) on individual IRP aggregation results and staff assessment comparing individual IRP resource plans to system needs between 2023 and 2026	May-21		
Proposed decision on near-medium-term procurement needs, if identified	Jun-21		
ALJ ruling seeking comments on cost allocation and backstop procurement issues emanating from adopted PSP and proposed decision on near-medium-term procurement needs, if any	Jul-21		
Comments and replies on ALJ ruling on cost allocation and backstop procurement issues	Aug-21		
Proposed decision on cost allocation and backstop procurement issues	Fall 2021		
Development of options for procurement framework of long lead-time and/or large-scale resources, including additional analysis on specific resource types	Fall 2021		
ALJ ruling seeking comment on procurement framework for long lead-time and/or large-scale resources, and possibly including procurement direction as a result of analysis of specific resource types	Late Fall 2021		
Comments and replies on possible ALJ ruling(s) on resource procurement	Winter 2021-2022		

## VERIFICATION

I, Nancy Rader, am the Executive Director of the California Wind Energy Association. I am authorized to make this Verification on its behalf. I declare under penalty of perjury that the statements in the foregoing copy of “California Wind Energy Association Comments on Order Instituting Rulemaking to Continue Electric Integrated Resource Planning and Related Procurement Processes” are true of my own knowledge, except as to the matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 15, 2020, at Berkeley, California.

/s/ Nancy Rader  
Nancy Rader  
Executive Director  
California Wind Energy Association