

## Stakeholder Comments Template

Submitted by	Company	Date Submitted
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Please use this template to provide your written comments on the 2018 IPE stakeholder initiative Issues Paper posted on January 17, 2018.

Submit comments to [InitiativeComments@CAISO.com](mailto:InitiativeComments@CAISO.com)

**Comments are due February 7, 2018 by 5:00pm**

The issue paper posted on January 17, 2018 and the presentation discussed during the January 24, 2017 stakeholder meeting can be found on the CAISO webpage at the following link:  
<http://www.caiso.com/informed/Pages/StakeholderProcesses/InterconnectionProcessEnhancements.aspx>

Please use this template to provide your written comments on the Issue Paper topics listed below and any additional comments you wish to provide. The numbering is based on the sections in the Issue Paper for convenience.

The Office of Ratepayer Advocates (ORA) is the independent consumer advocate within the California Public Utilities Commission (CPUC), with a mandate to obtain the lowest possible rates for utility services consistent with reliable and safe service levels, and the state's environmental goals.

ORA recommends three objectives for the 2018 Interconnection Process Enhancements, which are: (1) streamlining and clarifying the interconnection process; (2) ensuring that interconnection related costs are allocated based on benefits and or usage; and (3) ensuring that the interconnection queue is managed effectively, and that exceptions to the existing process are

considered only when the value of the resource to its project area or the California Independent System Operator (CAISO)-controlled grid can be demonstrated. Alternatively, ORA recommends that the CAISO consider any proposed exceptions to the existing interconnection process during the CPUC’s next Integrated Resource Plan (IRP) proceeding in 2019, so that the interconnection process can assist with meeting the state’s Renewable Portfolio Standard (RPS) targets cost effectively.<sup>1</sup> During this proceeding the CPUC is anticipated to provide direction on new renewable procurement to meet California’s greenhouse gas (GHG) emission targets for the electricity sector.

Additionally, ORA supports Six Cities’ proposal to allocate project required network upgrades to interconnection customers<sup>2</sup> and requests that this proposal be included in the IPE stakeholder discussion.<sup>3</sup>

## 4. Deliverability

### 4.1 Transmission Plan Deliverability Allocation

To manage the interconnection queue effectively, ORA supports maintaining the existing Transmission Plan Deliverability (TPD) allocation process,<sup>4</sup> rather than allowing projects to remain in the queue to apply for TPD indefinitely. Changes in the queue procedures should only be considered for resources that meet project area needs, support state resource targets or CAISO controlled grid needs, such as resources that can respond to grid demands throughout the day and or provide additional services in addition to energy.

In regards to state resource targets, the modeling conducted in the CPUC’s IRP proceeding demonstrated that there is “minimal need for renewables until 2026”<sup>5</sup> to meet the state’s RPS targets. The Renewable Energy Transmission Initiative 2.0 Final Plenary Report, dated February

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<sup>1</sup> *Proposed Decision of Commissioner Randolph, Decision Setting Requirements for Load Serving Entities Filing Integrated Resource Plans*, California Public Utilities Commission Rulemaking 16-02-007, December 28, 2017 (PD), p.18, Conclusions of Law 1-4. p. 124.

<sup>2</sup> *Comments on Behalf of the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California on the Interconnection Process Enhancements 2018 Initiative Scope*, September 20, 2017, p. 34.

<sup>3</sup> *2018 Interconnection Process Enhancements Issue Paper*, January 17, 2018, CAISO, (2018 IPE Issue Paper), p. 34.

<sup>4</sup> 2018 IPE Issue Paper, p. 7 (“The current TDP allocation process provides two annual opportunities for all interconnection customers following Phase II interconnection studies and after 1 year of parking.” With a pending FERC tariff amendment approval, “a third annual opportunity will be available for interconnection customers meeting certain criteria to seek an allocation of TPD.”).

<sup>5</sup> 2018 IPE Issue Paper, p. 7, citing PD at p. 4.

23, 2017, estimated that California would need between 9,000 to 15,000 megawatts (MW) (beyond 2020) to meet its 50% RPS target by 2030.<sup>6</sup>

As of January 31, 2018, the CAISO interconnection queue requests totaled approximately 43,388 MW of new generation, which consists of 12,259 MW of storage, 28,266 MW of other renewables, and 2,863 MW of other resources.<sup>7</sup> Given the amount of renewable generation in the CAISO queue, it is not necessary to continue to consider a project for Full Capacity Deliverability Status (FCDS) at the expense of later queued projects that could potentially achieve the state’s RPS targets or meet CAISO grid needs at a lower cost.

#### 4.2 Balance Sheet Financing

ORA supports requiring developers to provide financial disclosures that demonstrate that a project has financing or can be financed as a condition of remaining in the queue while reducing risks to other parties.<sup>8</sup> To avoid unnecessary financial costs, ORA does not support requiring executed loan documents to demonstrate balance sheet financing until after a project has secured a Power Purchase Agreement (PPA).

#### 4.3 Participation in the Annual Full Capacity Deliverability Option

ORA supports clarifying the annual full capacity deliverability option in order to manage the queue effectively and supports changes to the existing annual deliverability options that will limit allocation of FCDS for the reasons outlined in section 4.1.

#### 4.4 Change in Deliverability Status to Energy Only

ORA agrees that developers should be provided with an opportunity to convert their projects from FCDS to Energy Only Deliverability Status (EODS) after the allowed project conversion windows in the interconnection process close. In order to avoid negatively impacting other projects in the queue or Participating Transmission Owners (PTOs) and subsequently ratepayers, ORA agrees with the CAISO that late EODS conversion projects should remain responsible for their allocated costs for deliverability network upgrades if these upgrades are still needed for other projects.

#### 4.5 Energy Only Projects’ Ability to Re-enter the CAISO Queue for Full Capacity

ORA does not support on-going capacity status changes throughout the interconnection process, because such changes create uncertainty regarding the required upgrades and responsibility for funding such upgrades.

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<sup>6</sup> *Renewable Energy Transmission Initiative 2.0, Final Plenary Report*, February 23, 2017, California Energy Commission, p. 4.

<sup>7</sup> CAISO Interconnection Queue Report, January 31, 2018, CAISO excel file at <http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=07CB5DCC-FFF6-4C47-A7E7-EC64430CF038>

<sup>8</sup> 2018 IPE Issue Paper, pp. 8-9.

As ORA stated in its August 11, 2017 comments on the 2017 Expedited GIDAP [Generator Interconnection and Deliverability Allocation Procedures] Enhancements Straw Proposal,<sup>9</sup> the conversion to EODS is a reasonable outcome and is preferred for ratepayers since EODS projects are considered equally as effective as FCDS resources in meeting California’s 50% RPS target by 2030 and are more cost effective for ratepayers.<sup>10, 11</sup>

If delivery networks upgrades are required to accommodate a capacity status change of a re-entering project, ORA recommends that the re-entering project be responsible for the entire cost of any delivery network upgrades needed for the project.

#### 4.6 Options to Transfer Deliverability

ORA has no comments on this issue at this time.

#### 4.7 Transparency on Availability of Deliverability

ORA supports the CAISO’s efforts to improve access to deliverability information to allow interconnection customers to make informed decisions regarding their project status as soon as possible.

#### 4.8 Commercial Viability Criteria – Continuous Compliance Obligation

ORA has no comments on this issue at this time.

#### 4.9 Interim Deliverability Status

ORA has no comments on this issue at this time.

#### 4.10 Effective Load Carrying Capacity (ELCC)

ORA supports efforts to explore implications of a new ELCC calculation as soon as possible. ORA agrees that a review of the deliverability assessment from a broader framework is critical, involving study methodology, net qualifying capacity (NQC) determination, and coordination between the Transmission Planning Process (TPP) and Generation Interconnection procedures.

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<sup>9</sup> ORA Comments on 2017 Expedited GIDAP Enhancements Straw Proposal, August 11, 2017, pp. 2-3.

<sup>10</sup> Expedited Generator Interconnection and Deliverability Allocation Procedures (GIDAP) and Enhancements Draft Issue Paper and Straw Proposal, July 24, 2017, CASIO, pp. 9-10 (“It remains to be determined whether additional transmission capacity should be built to make the additional renewable capacity needed to make 50% deliverable, which impacts whether incremental renewable capacity should be procured as FCDS or Energy Only.”).

<sup>11</sup> For energy only deliverability status projects, delivery network upgrades are not required to enable energy delivery under peak or constrained conditions, specifically Local Delivery Network Upgrades and Area Delivery Network Upgrades identified in the On-Peak Deliverability Assessment as part of Phase II Interconnection Studies are not required. *Generator Interconnection and Deliverability Allocation Procedures (GIDAP)*, March 8, 2016, CAISO Tariff Appendix DD, 8.4 Cost Responsibility for Local Delivery Network Upgrades and 8.4.1 Cost Responsibility for Area Delivery Network Upgrades, p. 61. [http://www.caiso.com/Documents/AppendixDD\\_GeneratorInterconnectionAndDeliverabilityAllocationProcess\\_asof\\_Mar8\\_2016.pdf](http://www.caiso.com/Documents/AppendixDD_GeneratorInterconnectionAndDeliverabilityAllocationProcess_asof_Mar8_2016.pdf)

A grid comprised of increasingly varied resources and loads such as intermittent renewables, energy efficiency, demand response, storage, and electric vehicles suggests a coordinated and modernized assessment that may be preferable to methods originating from thermal plants and traditional loads. Updating the deliverability assessment should be a high priority to ensure the most valuable energy resources are interconnected at locations optimal to that value. ORA, therefore, supports the CAISO's proposal to address this issue outside the IPE and to seek input in the 2018-2019 TPP.<sup>12</sup>

#### 4.11 Cancellation or Delay of CAISO Approved Transmission Projects

ORA agrees with the CAISO that there are no issues related to the cancellation or delay of CAISO approved transmission projects that require consideration in the 2018 IPE.<sup>13</sup> ORA supports the cancellation of transmission projects that are not needed, and does not recommend that the CAISO continue to consider transmission projects if they do not meet a CAISO grid need, and or support an interconnection project that would meet an identified local area need or RPS target.

## 5. Energy Storage

### 5.1 Distributed Energy Resources

The CAISO explains that issues related to distributed energy resources (DERs) are separately considered in its Energy Storage and Distributed Energy Resource (ESDER) Phase 3 Initiative.<sup>14</sup> For that reason, ORA agrees that this IPE need not consider clarifications regarding interconnection, jurisdictional boundaries, market participation and dispatch, and safety requirements for DERs. ORA supports communication and coordination between the ESDER Phase 3 Initiative and other relevant DER studies and policies throughout the state, including relevant CPUC proceedings such as: Energy Storage (Rulemaking (R.)15-03-011), the Distribution Resources Plan (R.14-08-013), Rule 21 (R.17-07-007), and the Integrated Distributed Energy Resources (R.14-10-003), among others.

### 5.2 Replacing Entire Existing Generator Facilities with Storage

The CAISO explains that while interconnection customers have in some cases sought to replace the entirety of their project or existing generating facility with storage through the modification process,<sup>15</sup> it is not feasible to allow such changes through the modification process.<sup>16</sup> Instead, the electrical characteristics of the new project and its potential impact on the grid must be

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<sup>12</sup> 2018 IPE Issue Paper, p. 19.

<sup>13</sup> 2018 IPE Issue Paper, pp. 19-20.

<sup>14</sup> 2018 IPE Issue Paper, p. 20.

<sup>15</sup> 2018 IPE Issue Paper, p. 21.

<sup>16</sup> 2018 IPE Issue Paper, p. 22.

studied.<sup>17</sup> The CAISO, therefore, does not plan to include this topic in the 2018 IPE initiative. ORA recommends that to the extent CAISO can continue to provide flexibility in modifying facilities with storage, systems that can maintain similar electrical characteristics should be allowed to make cost-effective choices regarding the addition of storage.

### 5.3 Deliverability Assessment for Energy Storage Facilities

ORA has no comments on this issue at this time.

## 6. Generator Interconnection Agreements

### 6.1 Suspension Notice

ORA supports the proposed requirement that interconnection suspension requests have start and end dates for the suspension. In addition, ORA recommends that the CAISO have the opportunity to approve suspension requests to ensure that suspensions are transparent to other interconnection customers and minimize impacts to them.<sup>18</sup>

### 6.2 Affected Participating Transmission Owner

ORA supports clarifying the policies regarding the financial considerations when interconnection customers must contract with two separate PTOs.

### 6.3 Clarify New Resource Interconnection Requirements

ORA supports clarifying the interconnection requirements for new generators in the CAISO Tariff.

### 6.4 Ride-through Requirements for Inverter based Generation

ORA supports the CAISO's effort to address ride-through requirements<sup>19</sup> and requirements to continue injecting current and return online for inverter-based generation in the 2018 IPE process.

ORA also supports consideration of whether or not it is appropriate to revise the exemption of existing and operational asynchronous generating facilities from the Large Generator Interconnection Agreement (LGIA) Appendix H requirements (including low-voltage ride-through, frequency disturbance ride-through, power factor design, supervisory control and data

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<sup>17</sup> 2018 IPE Issue Paper, p. 24.

<sup>18</sup> 2018 IPE Issue Paper, p. 24.

<sup>19</sup> “The term ‘ride through’ as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the CAISO Controlled Grid during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.” *Large Generator Interconnection Agreement*, September 21, 2016, CAISO Tariff, Appendix V, (CAISO Tariff, Appendix V), 9.7.3 Under-Frequency and Over Frequency Conditions. p. 32.

[http://www.caiso.com/Documents/AppendixV\\_LargeGeneratorInterconnectionAgreement\\_asof\\_Sep21\\_2016.pdf](http://www.caiso.com/Documents/AppendixV_LargeGeneratorInterconnectionAgreement_asof_Sep21_2016.pdf)

acquisition (SCADA) and power system stabilizers).<sup>20</sup> The costs, benefits, and feasibility of updating inverter requirements for existing facilities should be analyzed before reaching a final recommendation whether to update Appendix H exemption.

#### 6.5 Affected System Options

ORA has no comments on this issue at this time.

#### 6.6 Modeling Data Requirements

ORA supports the clarification of data requirements.

## 7. Interconnection Financial Security and Cost Responsibility

### 7.1 Maximum Cost Responsibility for NUs and Potential NUs

ORA supports defining interconnection upgrade cost responsibility in the CAISO Tariff. To this end, ORA supports including the CAISO’s proposed definitions for maximum and current cost responsibilities for network upgrades as well as potential network upgrades in the CAISO Tariff.<sup>21</sup>

### 7.2 ITCC [Income Tax Component of Contribution] for Non-cash Reimbursement Network Upgrade Costs

ORA has no comments on this issue at this time.

### 7.3 Financial Security Postings and Non-Refundable Amounts

ORA agrees with the CAISO that the current non-refundable financial security amounts for interconnection requests are appropriate. ORA requests that the CAISO explain how these funds are divided between “Transmission Access Charge ratepayers and to PTOs to help pay for network upgrades that the withdrawing projects had a cost responsibility for, and are still needed by other projects.”<sup>22</sup> This information will assist with understanding Pacific Gas and Electric Company’s (PG&E) request for a portion of the “non-refundable amounts to be assigned to upgrades that are no longer deemed needed due to reassessment but where the PTO has already incurred costs or irrevocably committed funds to the project.”<sup>23</sup>

### 7.4 Queue Clearing Measures

ORA does not support a one-time interconnection financial security forfeiture holiday because it is not an effective tool for managing the queue and the financial security funds are used to refund ratepayers and PTOs for the costs of considering and completing upgrades that are triggered by

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<sup>20</sup> CAISO Tariff, Appendix V, Appendix H, Interconnection Requirements for a Wind Generating Plant, pp. 62-64.

<sup>21</sup> IPE Issue Paper, pp. 29-30.

<sup>22</sup> IPE Issue Paper, p. 31.

<sup>23</sup> IPE Issue Paper, p. 31.

projects that later withdraw. Instead, ORA supports other measures to manage the queue, such as giving priority queue positions to resources that provide capacity or meet other energy services needed in the project area, and/or serve an identified CAISO controlled grid needs. ORA recommends further consideration of this queue management measure in future IPE stakeholder discussions.

### 7.5 Shared SANU and SANU Posting Criteria Issues

ORA supports allocating shared costs of Stand Alone Network Upgrades (SANU) to more than one project if more than one project triggers a SANU. This would ensure that PTOs are not obligated to fund SANUs when one of the projects that trigger a SANU later withdraws. To this end, ORA recommends revising the interconnection Business Practice Manual cost responsibility requirement for SANUs to allow for shared cost allocation.

### 7.6 Clarification on Posting Requirements for PTOs

The CAISO has pointed out that requiring PTOs to post security to themselves is unnecessary, so long as the PTOs provide appropriate non-refundable funds to the CAISO in accordance with the tariff if they withdraw their projects.<sup>24</sup> ORA agrees and also supports not requiring PTOs to post financial security to themselves for their interconnection projects, because it would reduce interconnection costs for ratepayers.

### 7.7 Reliability Network Upgrade Reimbursement Cap

ORA recommends that the costs of Reliability Network Upgrades (RNU) be shared with current and later clustered projects that rely on the RNU in order to avoid ratepayers covering these cost entirely. If a cluster project triggers an RNU and withdraws, the RNU cost obligations should transfer to later cluster projects. All interconnection customers should be subject to the same repayment limit of \$60,000 per MW for RNUs.

### 7.8 Reimbursement for Network Upgrades

“Six Cities propose[s] that the CAISO consider ‘whether the CAISO’s current allocation methodology for the cost of network upgrades needed to interconnect new (or functionally modified) resources should be revised to allocate such costs to interconnection customers.’”<sup>25</sup> The CAISO points out that significant issues would need to be resolved in order to implement Six Cities’ proposal, and that if adopted, the proposal would “represent a fundamental paradigm shift in the CAISO’s generator interconnection process” that CAISO management is unwilling to consider.<sup>26</sup> CAISO therefore proposes to exclude consideration of Six Cities’ proposal from the 2018 IPE initiative. ORA recommends that the CAISO include this proposal in the 2018 IPE

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<sup>24</sup> 2018 IPE Issue Paper, p. 33.

<sup>25</sup> 2018 IPE Issue Paper, p. 34.

<sup>26</sup> 2018 IPE Issue Paper, p. 34.

initiative because it would address the unresolved interconnection upgrade cost responsibility issues that arise when interconnection projects that trigger interconnection upgrades later withdraw as discussed in issue sections 4.4, 4.5, and 7.7 in this document. It would also result in project PPAs that reflect all the costs related to the project energy delivery.

## 8. Interconnection Request

### 8.1 Study Agreement

ORA supports streamlining the interconnection process by improving the interconnection request form such that it includes the project documentation needed in the study agreement.

### 8.2 Revisions to Queue Entry Requirements

To address stakeholder concerns that project developers are using the interconnection process to conduct speculative project tests, ORA recommends that CAISO provide the deliverability status in the proposed project area as an immediate response to interconnection requests. ORA recommends inclusion of this issue within the scope of the 2018 IPE initiative.

### 8.3 Master Planned Projects (Open Ended and Serial Projects)

ORA agrees with the CAISO that phased projects should not receive a unique status as proposed. All required project approvals should be secured to advance in the interconnection queue process. ORA does not support including this issue within the scope of the 2018 IPE initiative.

### 8.4 Project Name Publication

ORA supports this administrative improvement to the interconnection process.

### 8.5 Interconnection Request Application Enhancements

ORA supports the CAISO's recommended improvements to the interconnection request application, including data collected on Attachment 1 to Appendix A.<sup>27</sup>

### 8.6 FERC Order No. 827

ORA supports the CAISO's position to develop an approach to addressing the Federal Energy Regulatory Commission's (FERC) updated reactive power requirements through the Business Practice Manual (BPM) change management process.

## 9. Modifications

### 9.1 Timing of Technology Changes

ORA has no comments on this issue at this time.

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<sup>27</sup> 2018 IPE Issue Paper, pp. 37-38.

## 9.2 Commercial Viability – PPA Path Clarification

ORA recommends that interconnection customers deliverability status be contingent on securing a PPA for a given project. The existing queue process allows a seven to ten year grace period to secure a PPA, this is generous. It is worth noting that as of January 31, 2018, there were 16 projects in the queue, representing 5,284 MW, that were submitted more than 10 years ago.

## 9.3 PPA Transparency

ORA supports clarifying the requirement to provide copies of secured PPAs to the CAISO to demonstrate commercial viability.

## 9.4 Increase Repowering and Serial Re-Study Deposit

ORA supports increasing the repower and restudy deposit to cover the average restudy costs, which range between \$7,000 and \$54,000.<sup>28</sup>

## 9.5 Clarify Measure for Modifications After Commercial Operation Date (COD)

ORA supports the proposed clarifications on allowable project modifications and timing constraints.

## 9.6 Short Circuit Duty Contribution Criteria for Repower Projects

ORA supports the CAISO's current allowance of changes to existing generators where they do not increase capacity or substantially change the electrical characteristics of the generator. ORA recommends exercising caution in applying more consistent criteria in short circuit duty tests for repower and modification requests. It is important to find an appropriate balance between consistency and flexibility that allows for case-by-case engineering judgement.

## 9.7 Material Modification for Parked Projects

ORA supports material modifications for parked projects that demonstrate that the project modification would have value to the project area or the CAISO controlled grid.

# 10. Additional Comments

As stated in these comments, at this time the CAISO controlled grid has limited need for new RPS and Full Capacity Deliverability Status resources. For this reason, ORA recommends that the CAISO only consider exceptions to the interconnection queue process on a cases by case basis and only if the project demonstrates a specific value to the project area or CAISO controlled grid. Alternatively, changes to the existing interconnection process rules could be considered after the completion of the next IRP process in 2019.

Additionally, ORA supports Six Cities' proposal to allocate project related network upgrades to interconnection customers because it would address unresolved cost responsibilities for project

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<sup>28</sup> 2018 IPE Issue, p. 42.

triggered network upgrades, and requests that this proposal be included in the scope of issues within the 2018 IPE stakeholder discussion.<sup>29</sup>

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<sup>29</sup> 2018 IPE Issue, p. 34.