Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President, Market and Infrastructure Development

Date: August 29, 2018

Re: **Decision on Interconnection Process Enhancements – Track 2**

This memorandum requires Board action

EXECUTIVE SUMMARY

The Interconnection Process Enhancement (IPE) 2018 is the California Independent System Operator Corporation's current stakeholder initiative in its ongoing commitment to a continuous improvement process of the Generator Interconnection and Deliverability Allocation Procedures (GIDAP). As discussed at the July Board meeting, IPE 2018 identified a total of twenty-five (25) topics for inclusion in the IPE initiative this year. Some will require tariff amendments and some will result in modifications to business practice manuals. Seven enhancements were approved at the July Board meeting, and eight additional topics have reached successful conclusion in the stakeholder process and are being presented here for Board consideration. They are:

1. Allocating transmission plan deliverability
2. Options for converting to energy only
3. Options for transferring deliverability
4. Retaining energy storage facilities added to retiring generators
5. Generator Interconnection Agreement suspension
6. Eliminating conditions for partial recovery of financial security
7. Adding project names to interconnection queue
8. Prohibiting technology changes for delayed projects

Management recommends the following motion:

> ***Moved, that the ISO Board of Governors approves the proposed interconnection process enhancements, as described in the memorandum dated August 29, 2018; and***
>
> ***Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposal, including any filings that***

implement the overarching initiative policy but contain discrete revisions to incorporate Commission guidance in any initial ruling on the proposed tariff amendment.

DISCUSSION AND ANALYSIS

The ISO currently has 289 active projects in the interconnection queue that have not achieved commercial operation. To manage the interconnection and queue management processes effectively in a changing environment, the ISO strives to enhance interconnection processes when needed. To that end, Management seeks Board approval of the following enhancements:

1. Allocating transmission plan deliverability

Transmission plan deliverability refers to the transmission capacity needed for a generator to be deemed full capacity deliverability status (FCDS) and have the ability to deliver its output during peak conditions. A resource does not have to have transmission plan deliverability to interconnect to the ISO system and can instead opt to interconnect as an energy only resource. However, interconnection customers generally seek transmission plan deliverability to be eligible to provide resource adequacy capacity to a load serving entity. The ISO allocates transmission plan deliverability based on a project's progress, as reflected through its status with permitting, financing, site control, and most importantly, in obtaining a power purchase agreement (PPA). Management proposes to modify the transmission plan deliverability allocation process to better align the process with the current generation procurement landscape in California, and to mitigate issues with projects that have not obtained a PPA. Management proposes seven deliverability allocation ranking groups, as depicted below. This proposal also provides interconnection customers greater opportunity to obtain deliverability while in energy only status, which has generally prevented projects from receiving deliverability. By providing an option for energy only projects to obtain a deliverability allocation, the opportunity for energy only projects seeking deliverability is enhanced, which allows for the elimination of the more restrictive annual full capacity

deliverability process for energy only projects. The proposed seven allocation groups are shown in the table below.

Allocation Group	Project Status	Commercial Status
1	Study/Parking Process	Executed or regulator-approved PPA requiring full capacity deliverability status (FCDS) or interconnection customer is load serving entity serving own load
2	Study/Parking Process	Shortlisted in a RFO/RFP
3	Study Process (Following Ph. II Only)	Proceeding without a PPA
4	Converted to Energy Only, or Energy Only projects that achieved commercial operation	Executed or regulator-approved PPA requiring FCDS
5	Converted to Energy Only, or Energy Only projects that achieved commercial operation	Shortlisted in a RFO/RFP
6	Converted to Energy Only	Commercial operation achieved
7	Energy Only	Commercial operation achieved

The allocation groups are designed to prioritize projects based on their position in the queue cluster study process (including parking opportunities), giving priority to projects that are eligible to have delivery network upgrades built to achieve FCDS. Additional priority is given to projects that have obtained a PPA, or are on a PPA shortlist, that requires a project to be FCDS. Lower priority is given to projects that are energy only and the lowest priority given to projects that have reached commercial operation without an allocation as energy only. Parking is an option where a project that fails to obtain an allocation can choose to suspend further action for up to two years, which provides additional time to obtain a PPA and remain eligible for groups 1 and 2.

Allocation groups 1 and 2 include projects that have completed the study process and projects that are coming out of their first or second year of parking following the study process. Groups 1 and 2 require an executed PPA or to be on an active shortlist for obtaining a PPA that requires FCDS. Group 3 includes projects that have just completed the study process and attest that they will proceed to commercial operation regardless of whether they are able to obtain a PPA. Groups 4 and 5 include projects that originally requested FCDS but converted to energy only because they did not qualify for an allocation while eligible to participate in groups 1 and 2. The proposal has been modified from the original draft final proposal presented to stakeholders on July 10, 2018 to also allow in Groups 4 and 5 energy only projects that achieved commercial operation. Groups 6 and 7 include projects that have achieved commercial operation with an energy only status and request an allocation. Groups 6 and 7 have the lowest priority because their ability to proceed to commercial operation is not contingent on receiving an allocation and are not required to have a PPA to receive an allocation. Group 7 is last because those projects were not studied as FCDS in the phase II study process.

2. Options for converting to energy only

Because energy only projects do not have deliverability such that they can provide resource adequacy capacity, they do not have to finance delivery network upgrades as a condition of interconnection. Currently, projects may only voluntarily convert from full capacity deliverability status or partial capacity deliverability status to energy only deliverability status at certain times during the interconnection process (generally very early). Management seeks to provide more opportunities for projects to convert to energy only. Management also proposes to better define the consequences for such conversions, namely, ensuring that such conversions do not shift costs to other interconnection customers or transmission owners late in the interconnection process. This protection will apply regardless of whether the change to energy only status is by customer choice or required by the tariff.

Management proposes to allow projects to convert from full capacity deliverability status to partial capacity or energy only at any time following the Phase II study process. The following are the situations where a project that converts to energy only is required to retain cost responsibility for their assigned deliverability network upgrades[1], unless the annual reassessment study shows that these upgrades are no longer needed for other queued projects:

a. Projects that change to energy only deliverability status by choice after its phase II study is complete.
b. Projects that are converted to energy only as a result of failure to meet commercial viability criteria.
c. Projects that are converted to energy only as a result of failing to meet the allocation retention criteria, except as specified in the modification below.

The above proposal has been modified from the original draft final proposal presented to stakeholders on July 10, 2018 to incorporate stakeholder input received after the draft final proposal was posted. Based on that input the ISO determined that a modification to the proposal was warranted and an addendum to the draft final proposal was posted on August 28, 2018. Specifically, the addendum addressed two circumstances where projects that are converted to energy only as a result of failing to meet the allocation retention criteria will not be required to retain the cost responsibility for the delivery network upgrades.

1) If a project that obtained a deliverability allocation by having a PPA and the procuring entity unilaterally terminates the PPA through no fault of the

[1] The project sponsor will be fully reimbursed for these costs once the upgrade is in-service and the generator achieves commercial operation.

interconnection customer. The project would have to demonstrate evidence on the reason that the procuring entity terminated the PPA.

2) If a project that obtained a deliverability allocation by being included in an RFO shortlist, but does not receive a PPA.

Projects in these two circumstances could also park or re-seek deliverability if they and their cluster still have opportunity to do so under the tariff.

3. Options for transferring deliverability

Although deliverability is not a property right that can be sold or assigned, interconnection customers have some ability to effectively "transfer" deliverability among their own onsite generating units. Examples include transferring deliverability from an existing generator to a newly constructed onsite generating facility through the repower process, and between generating facilities at the same point of interconnection through the material modification process. Generally the same entity must own the original facility that holds the deliverability and the new facility seeking to receive the deliverability. Management proposes to clarify the methodology used in the deliverability transfer assessment process to improve transparency and the efficiency of the assessment and to provide one additional opportunity for transferring deliverability, which is to transfer deliverability between the original facilities and expansion facilities for interconnection requests submitted under the behind-the-meter independent study process. The same deliverability transfer methodology will apply to the reservation of deliverability associated with a generator in the repowering process, the transfer of deliverability among generating units at a generating facility, the transfer of deliverability within the same interconnection request, and the transfer of deliverability associated with the behind-the-meter capacity expansion process.

4. Retaining energy storage facilities added to retiring generators

Management proposes to modify the generating unit retirement assessment process to include an evaluation to determine if a storage facility that has been added to an operating generating facility can continue to operate after the original generating facility retires. This assessment will be based on the ISO's current analysis of whether the new facilities will materially change the electrical characteristics of the generator such that new studies are required. In addition, the retirement assessment will determine if the deliverability associated with the original generator can be transferred to the storage facility. This will allow the storage facility to remain online with deliverability as long as there is no reliability impact (or there is an ability to mitigate that impact).

5. Generator Interconnection Agreement suspension

Currently, interconnection customers have a unilateral right to suspend their generation interconnection agreements for up to three years starting immediately following execution of the agreement. This suspension does not require the customer to define

the agreement suspension's start and end dates, which often impact the construction of network upgrades needed for other projects. Management proposes to modify the generator interconnection agreement suspension process to: 1) require a generator that requests a suspension to provide a start and estimated end date of such suspension, and 2) condition allowing the suspension on a finding by the ISO that the suspension will not materially impact other interconnection customers. The interconnection customer can seek to mitigate identified material impacts to other customers (*e.g.,* continuing to make payments on shared network upgrades while in suspension) to satisfy that condition.

6. Eliminating conditions for partial recovery of financial security

Interconnection customers post interconnection financial security to finance the construction of their network upgrades. This security is liquidated if the customer withdraws from the queue. However, when a project withdraws from the interconnection queue, it recovers a substantial part of its interconnection financial security if it meets one of several criteria (*e.g.*, it failed to secure a power purchase agreement or critical permit). Virtually all customers have met the requirements to receive a partial refund of their financial security. Management proposes to eliminate the burden for receiving a refund by eliminating the conditions for partial recovery of interconnection financial security for withdrawn projects. Consequently, interconnection customers will recover any refundable amount more quickly upon withdrawal.

7. Adding project names to interconnection queue

The ISO's public interconnection queue currently provides a variety of project information by queue number (*e.g.*, point of interconnection, participating transmission owner, capacity, interconnection agreement status). The ISO tariff currently considers project names as confidential information and does not provide project names in the public interconnection queue. Management proposes to add project names to the public interconnection queue. This will provide more transparency for customers seeking to identify unique project names that conform to NERC reliability standards, and will allow for better coordination with other state agencies dealing with permitting.

8. Prohibiting technology changes for delayed projects

The tariff currently does not provide detailed limitations on the timing or types of technology and fuel type changes that an interconnection customer may request. Stakeholders have observed that older projects in the queue have received approval for technology changes very late in the process, including for projects that have already been in the queue for ten years or more. Management proposes to prohibit projects from requesting technology changes if the project's current commercial operation date

has exceeded or will exceed the 7- or 10-year time-in-queue threshold. Management proposes to nevertheless allow *de minimus* fuel-type change (lesser of 5% or 10 MW).

POSITIONS OF THE PARTIES

The ISO conducted stakeholder outreach on these topics consisting of an issue paper on January 24, 2018, a straw proposal on May 21, 2018, and a revised straw proposal on July 10, 2018. Stakeholders were able to provide comments at each phase with a majority fully or partially supporting the eight Track 2 topic proposals with some exceptions. The more notable exceptions are summarized below along Management's response to them. A comprehensive summary of all stakeholder comments is provided in Attachment A.

Allocation of transmission plan deliverability

First Solar and Intersect Power recommend deliverability be allowed to projects that obtain a PPA with counterparties that do not have a resource adequacy requirement. The ISO does not agree that the limited amount of remaining deliverability available for allocation should be provided to projects that are procured by entities that do not have a resource adequacy requirement. First Solar also recommended revising the criteria associated with the proposed allocation group 3 where projects designate that they will proceed to commercial operation even if they are not able to obtain a PPA for their project. Specifically, First Solar recommends that projects should be allowed more time to elect the allocation status of a project that will proceed to commercial operation even if it does not obtain a PPA, and further request the ability to change the project's Commercial Operation Date (COD) if a PPA is obtained. The ISO does not agree because the recommended change would allow "gaming" the process whereby projects could get an allocation when they have no intention of building their project without a PPA. This is the very behavior the ISO seeks to eliminate through the proposed criteria.

EDF-R, the Large Scale Solar Alliance (LSA), and NextEra recommend reducing the PPA requirements from PPAs that require deliverability to PPAs that are seeking deliverability, but do not require deliverability as an absolute requirement. As stated previously, the ISO does not agree that the limited amount of remaining deliverability available for allocation should be provided to projects that are procured by entities that do not require deliverability as a requirement within the PPA.

Various parties would like the opportunity for energy only projects to re-enter the queue, pay for upgrades identified as needed in a deliverability study, and seek a deliverability allocation. Currently, once an energy only project completes the interconnection process, it cannot reenter the interconnection process to be restudied and seek to build additional network upgrades to allow the project to become fully deliverable. While the ISO decided not consider this topic in IPE 2018 due to not having sufficient time for it given all the other 2018 policy issues, the ISO agrees to consider this topic in a future IPE stakeholder initiative.

Options for converting to energy only

EDF-R, LSA, and NextEra recommend that extra studies be performed before the interconnection customer elects to convert to energy only so that the customer will know if its network upgrades are no longer needed. Alternatively, these stakeholders recommend that the ISO provide the interconnection customer with the ability to withdraw its request to convert to energy only if their delivery network upgrades are still needed. The ISO disagrees because these additional study requirements would be burdensome and can be performed by the interconnection customers themselves. The ISO's study process schedule is integrated with the transmission planning study process and cannot accommodate additional studies.

Intersect Power suggests that funds should only be retained if deliverability upgrades are still needed for other projects in the same cluster. The ISO disagrees because that would require the transmission owner to fund the subject upgrade if the project withdraws after converting to energy only, producing an opportunity for the interconnection customer to game the withdrawal process.

First Solar expressed concerns over the number of projects that would be adversely impacted by these changes and urged the ISO to consider other ways to address the concern identified with projects that purposely put themselves in a position where they are required to be converted to energy only in order to have their cost responsibility for delivery network upgrades removed, thereby reducing their non-refundable funds when they subsequently withdraw from the queue. In follow up discussions with First Solar, the ISO found that First Solar had misinterpreted the breadth of projects impacted by the proposal. However, they did raise a valid concern related to projects that receive an allocation by having a PPA or being on a PPA short list, and then lose the allocation in the retention process through no fault of their own. As a result, the ISO modified the proposal to exclude projects that fall within those scenarios.

Options for transferring deliverability

EDF-R, LSA, and NextEra support the proposal and recommend that that such transfers be extended to any project at the same point of interconnection, regardless of ownership. The ISO disagrees because this would make deliverability a marketable commodity, which would be a significant paradigm shift in the current deliverability procedures and bypass the ISO's deliverability allocation process.

Prohibiting technology changes for delayed projects

EDF-R, First Solar, and NextEra recommend technology additions, not wholesale or partial changes, be allowed beyond the 7/10 year time-in-queue threshold. The ISO disagrees because the process of adding new technologies to a project has enabled projects to incrementally make changes that result in wholesale technology conversions, which warrant a new interconnection request.

CONCLUSION

Management recommends that the Board approve the eight changes proposed in this memorandum. These changes are generally supported by stakeholders and were refined to address many of their comments and concerns throughout the stakeholder process. The proposed modifications improve the effectiveness of allocating deliverability to projects and expands customer options. These modifications also protect projects, transmission owners, and ratepayers. The proposed modifications will continue to improve the ISO's generator interconnection procedures to help California and the West to have robust capacity and meet their public policy goals.