

Interconnection Discussion Forum *Aggregator Agreements Edition*

Hosted by CPUC Energy Division Interconnection Team

October 19, 2021 | 1:30-4:00 PM

Held virtually via WebEx



California Public
Utilities Commission

Meeting Logistics

Today's agenda and slides have been distributed to the IDF participant list and R1707007 service list. If any updates are required after this meeting, they will be distributed again within the week.

All attendees (except panelists) are automatically on Mute.

If you have questions: unmute yourself, send them via **chat directly to Jimmy Mahady (CPUC Regulatory Analyst) or raise your hand.**

Ground rules

Interconnection Discussion Forum is structured to stimulate an honest dialogue and engage different perspectives

Interconnection Discussion Forum is expressly not part of the formal proceeding

Keep discussion respectful

Chat feature is only for Q&A or technical issues. Do not start sidebar conversations with panelists

Agenda

Note: If needed, we can truncate or extend timing below to accommodate for exchange.

**1:30 – 1:40 PM – Welcome and Introduction
(Jimmy Mahady, CPUC Energy Division)**

**1:40 – 2:00 PM – Template aggregator agreement and coordination
with other CPUC proceedings
(Lead Presenters: PG&E, SCE and SDG&E)**

**2:00 – 2:20 PM – Stakeholder perspectives
(Lead Presenter: Brad Heavner, CALSSA)**

2:20 – 3:00 PM – Open Discussion

**3:00 – 3:05 PM – Wrap up and next steps
(Kristin Landry, CPUC Energy Division)**



Aggregator Agreements

Interconnection Discussion Forum

October 19, 2021



Agenda



- **Regulatory Background**
 - Scope and Purpose in Rule 21 OIR
 - Context within Upcoming High DER OIR
- **Template Aggregator Agreements**
 - Stakeholder Perspectives
 - Open Discussion
- **Next Steps**

Background:

Scope and Purpose in Rule 21 OIR



Working Group 2	Working Group 4
<p>Issue 6: Should the Utilities develop forms and agreements to allow DER aggregators to fulfill Rule 21 requirements related to smart inverters? What should be included in the forms and agreements?</p>	<p>Issue F: What interconnection rules should the Commission adopt to account for the ability of DERMS and aggregator commands to address operational flexibility need?</p>
<p>WG2 Report: Three perspectives for moving forward: those posed by Utilities, Tesla, and Stem. WG2 provided a draft agreement that was incomplete but could serve as a basis for continued discussion.</p>	<p>WG4 Report: Proposal F-2 to develop a consensus template Aggregator Agreement or different proposals for a template Aggregator Agreement.</p>
<p>Decision 20-09-035:</p> <ul style="list-style-type: none"> Resolution E-5000 found that Phase 2 communications requirements must be limited to technical capabilities, and the establishment of contracts constitutes a legal issue. Therefore, Issue 6 is considered moot at this time and, therefore, resolved. 	<p>Decision 21-06-002:</p> <ul style="list-style-type: none"> Advice letter due June 4, 2022, to allow time for discussion of cybersecurity requirements. Tier 2 Advice Letter, on behalf of all stakeholders requesting approval of the consensus template. If non-consensus, Tier 3 Advice Letter that includes all stakeholder recommendations and positions.

Background:

Context within Upcoming High DER OIR



Track 1 Distribution System Operator	Track 2 Distribution Planning Process	Track 3 Smart Inverter Operationalization
<p><i>Scope:</i></p> <ul style="list-style-type: none"> Broadly focuses on high-level policy issues involving distribution system operator roles and responsibilities as well as IOU and aggregator business models. 	<p><i>Scope:</i></p> <ul style="list-style-type: none"> Focuses on near-term evolution and improvement of adopted framework, analytic tools, and planning into a more holistic DPP. Includes carryover DRP/IDER work. 	<p><i>Scope:</i></p> <ul style="list-style-type: none"> Includes operationalizing smart inverters to leverage advanced functionality to provide grid services.
<p><i>Consider:</i></p> <ul style="list-style-type: none"> Third-party DER integration Roles and responsibilities of aggregators 	<p><i>Consider:</i></p> <ul style="list-style-type: none"> Ongoing Partnership Pilots Potential, evolving role of aggregators in future 	<p><i>Consider</i></p> <ul style="list-style-type: none"> Cybersecurity Interoperability Issues unique to aggregators

Aggregators within Rule 21



Rule 21 Communications Requirements: Section Hh.5 outlines the communications requirements and mandates that the requirements shall be between:

- 1) the Distribution Provider and the individual Generating Facility's inverter control or energy management system;
- 2) the Distribution Provider and communication to the Generating Facility through an aggregator not co-located or part of the Generating Facility (*allowance of aggregator use under section Hh.5 is subject to Commission approval of applicable forms and agreement not currently developed*); or
- 3) other communication options as mutually agreed to by Applicant and Distribution Provider.

Aggregator: An entity that provides the communication capability functions required in Section Hh on behalf of one or more Generating Facilities that utilize inverter-based technologies. An Aggregator is intended to perform a role that would otherwise be performed by individual Generating Facilities. The Aggregator shall act as a conduit, sending commands from the Distribution Provider to a Generating Facility and sending information from a Generating Facility to Distribution Provider. *See WG2 Final Report, at p.8.*

- Sections Hh.6 and Hh.8 contain inverter function requirements that must be performed in response to communications made by the Distribution Provider.
- Section Hh.7 contains requirements relating to information that an inverter-based Generating Facility must communicate to the Distribution Provider.

WG2 Draft DER Aggregator Agreement



- Agreement's applicability
- Responsibilities of the Supplier (DER Aggregator), including communications functions, cybersecurity and privacy procedures, and dual participation restrictions
- Rights for testing and approval
- Terms and conditions
- Insurance requirements
- Confidentiality provisions
- Notice requirements

Stakeholder Perspectives



IOUs: Proposed principles for developing an agreement.

- The IOUs proposed that aggregators will be required to supply information in a consistent manner to ensure each IOU can assess their communication system, scheduling system, and performance capabilities, and the supplier will be responsible for costs associated with application review.
- SDG&E proposed that, to be eligible, an aggregator must first be able to demonstrate to SDG&E's satisfaction that the communications/dispatchability functionality required by the aggregator agreement can be achieved during the duration of the agreement.

Tesla: Recommended consideration of several sections of the agreement but offered observations.

- There isn't much clarity in terms of what this agreement encompasses. Specifically, is it a contract that requires entities to have certain capabilities versus the actual use of those capabilities?
- The agreement should not be worded such that we are signing up for a potentially evolving set of obligations and capabilities. It should not be a sort of open-ended agreement that allows additional requirements to be inserted down the road that a developer would then be obligated to meet by virtue of having signed this agreement.

Stem: Raised major issues that require Commission clarification/resolution before template can be finalized.

- Distinction between the aggregator as a conduit of commands and the aggregator as the executor of functions.
- Requirement for end-to-end testing for a generating facility that elects aggregator option for Rule 21 compliance.
- The certification and approval status of aggregators as software is changed over time.

Discussion



- For stakeholders who participated in Working Group 2, what elements were unresolved or non-consensus? Was it just a lack of time, or are there fundamental disagreements?
- What are the topics/terms that the agreement must cover, such as consumer protection/privacy, cybersecurity, minimum service levels, etc.?
- How should we approach development of a template Aggregator Agreement?
- Are there different use cases that will require different versions of an agreement? What elements can be standardized?
- Is there existing precedent for a template agreement? Such as from the CAISO, Demand Response, or IDER Partnership Pilots?

Next Steps?

Aggregator Agreement

Purposes of Agreement

- This agreement is not mandatory as a condition of interconnection.
- The agreement is for aggregators to manage voluntary customer participation in grid services programs.
- Utilities do not need to pay for aggregators to develop their capabilities, but programs will need to offer compensation for participation in programs. Utilities pay for the aggregated service.



Use Cases

- Programs for voltage and frequency support
- Contracts for grid visibility
- Demand response programs
- Interconnection that avoids operational flexibility limitations

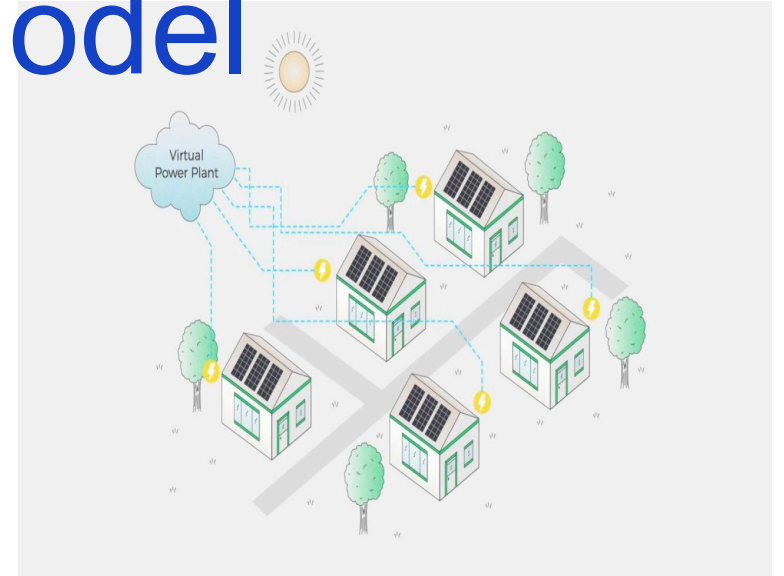


Elements of the Agreement

- Cybersecurity is an important part of the agreement.
- Performance standards will likely be different for each program.
- Mutuality provisions are needed, with appropriately shared liability. Each party must comply with all applicable laws. Each party is responsible for their own actions.
- Licensing and pricing terms may be specific to the use case, but the template should include a section for it.

Benefits of Aggregator Model

- Aggregators may already have established communications included at the DER.
- Aggregators may already have established cybersecurity protocols.
- Aggregators are good at managing customer interactions.
- Aggregators have established ways to maintain customer facilities.
- It can cost more for utilities to support communications at a customer site.



Problems with Draft IOU Aggregator Agreement

- The scope needs defining. It is unclear what the agreement covers.
 - Make clear it is not mandatory. Highlight which terms and conditions are negotiable.
- Rule 21 governs in case of "inconsistency." What is "inconsistency?"
 - If Rule 21 is incorporated entirely, why is "operating normally" defined by certain Rule 21 communication functions?
- The agreement is unilateral not mutual. IOUs have obligations too.
- Aggregators should not be required to hit a moving cyber target at zero-cost.
- The agreement is commercially limiting.
 - What are the implications of this agreement governing over other program requirements?
 - Generating facilities should not be limited to working with only one aggregator.
- Communication testing terms should be simple. Current terms are contradictory and onerous.
- Force majeure should be scrutinized to ensure communication can still occur during extreme weather events.
- Cyber insurance of \$2 million per claim is onerous and out of market.
- IOUs owning all data or information provided under the agreement is onerous and requires scrutiny.

Wrap up and closing thoughts

Please feel free to share additional feedback and questions with Kristin.Landry@cpuc.ca.gov

Thank you!

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