



UM 2111

Phase 2 Kickoff
September 27, 2024



Agenda



- Welcome Back
- Phase 1 remaining issues
 - Annual Handbook Update Process
 - Evolution of Equipment
- Phase 2 Issues
 - Interconnection Delays
 - Address DTT related requirements
 - Separate investigation into framework for resilience projects
- PGE QF-LGIP Filing ([UM 2346](#))

Introduction



- Phase 1
 - Adopted IEE 1547-2018 standards
 - Updated rules in both Divisions 82 Small Generator Interconnection Rules and 39 Net Metering Rules (docket AR 659)
- Ongoing efforts
 - Data conversion to export capacity, 6-month updates received from JU
 - [Idaho Power](#) update completed
 - [PGE](#)
 - New applicants being input at export capacity
 - Received data from ETO on projects receiving incentive funding
 - Should be completed within one-year requirement
 - [PacifiCorp](#)
 - New applicants being input at AC values
 - Received data from ETO on projects prior to Jan 1, 2017
 - Much manual work remaining

Phase 1 Issues



- Remaining Phase 1 issues
 - Annual Handbook Update Process
 - Evolution of Equipment

Annual Handbook Update Process



- Initial draft updates to Utility Handbooks submitted May 15, 2024
- Draft updates presented at May 30 workshop
- Final draft updates submitted June 14, 2024
 - Incorporated feedback from May 30 workshop
- Utilities accepted comments through July 15, 2024
 - Comments/answers posted on OASIS
 - Redlined version of handbook posted
- Revised handbooks went into effect on August 15.

Annual Handbook Update Process

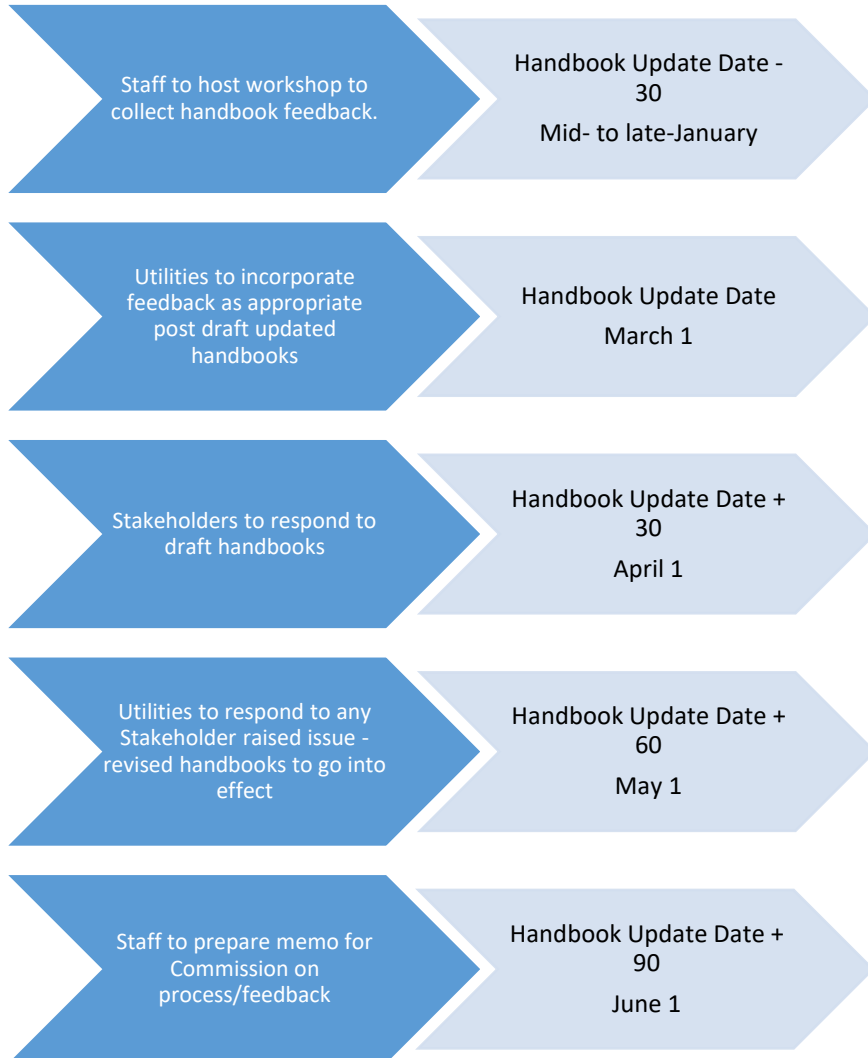


- Order 24-068 requires Staff involvement
(W)e direct Staff to hold a workshop or similar process to review and collect feedback on utility handbooks at least annually in order to determine whether Commission engagement with any issues related to the process and content of the utility handbook is warranted.

Proposal for feedback and future handbook updates

- Target March for utility annual handbook updates
 - Out-of-cycle updates allowed
- Prior to update, Staff to collect stakeholder feedback
 - Workshop for feedback targeted for mid-January
 - Utilities to incorporate feedback in updates as appropriate
- Standard process once utilities post draft updates OAR 860-082-0030(1)(b)
(b) Interconnection requirements handbook. Each public utility must post an interconnection requirements handbook on its public website. Prior to revising its handbook, a utility must provide public notice on its website and use best efforts to notify organizations representing interconnection customers as specified and periodically updated in the handbook. The utility must provide a minimum of 30 days for interested persons to comment, and the utility must respond within 30 days to any comments received and make its responses public.

Annual Handbook Update Process



- Handbook update proposal – dates of note
- Consistent with OAR 860-082-0030(1)(b)

Equipment Evolution



- Order 24-068

We direct Staff to work with utilities and interested persons, as a part of the subsequent handbook update process, to deliver a proposal for regular proactive investigation of the potential for inverter specifications and configurations to eliminate the need for additional equipment.

- From PacifiCorp Handbook:

At the time of this handbook publication, there are no commercially available inverters that are UL certified to take the generation offline within 0.1 seconds and able to detect fault conditions on the high side of the step-up transformer, and therefore no inverter specifications or options will satisfy the requirement without the need for additional equipment. As inverter technologies advance and as Pacific Power periodically reviews and updates this handbook, Pacific Power will assess whether inverter specifications have advanced to the point where an inverter setting or option may satisfy the requirement to take the generation offline within 0.1 seconds. Until that time, projects seeking to interconnect to a circuit using high-speed reclosing will be required to install protective equipment. The specific equipment that will be required must be assessed on a case-by-case basis, but can include protective relays, reclosers, and/or direct transfer trip.

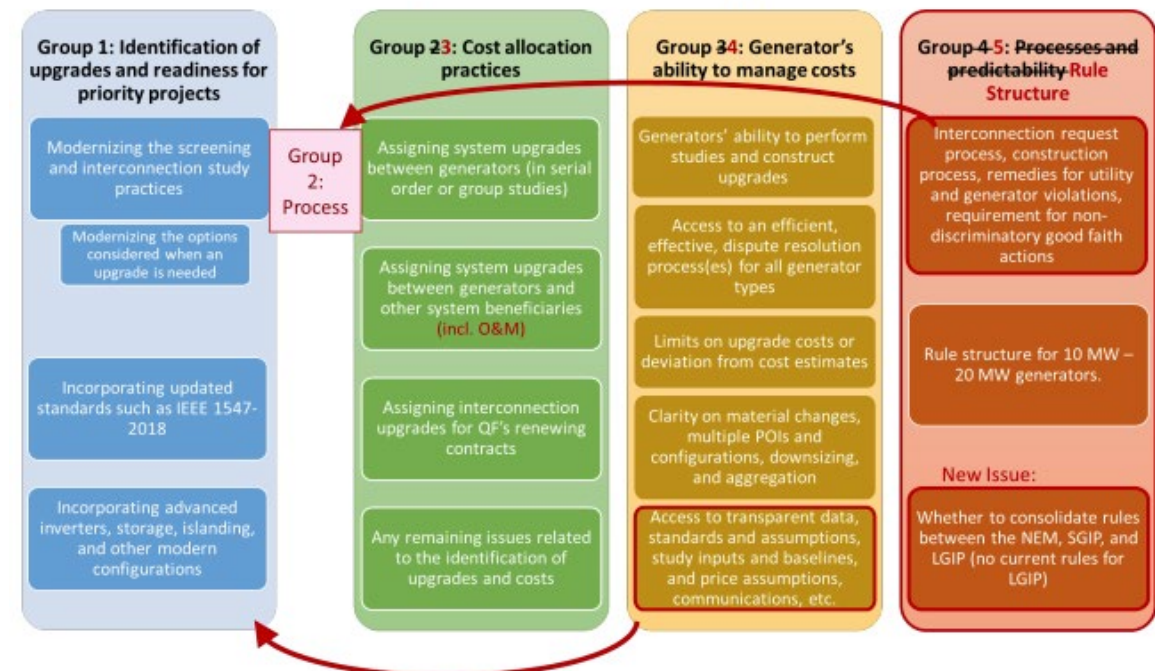
- Addressing these requirements should be a part of the annual handbook update process, with discussion at the feedback workshop

Phase 2 Issues



- What's changed since initial phasing proposal?
- Interconnection delays
 - Staff is aware of interconnection customers concerns with PacifiCorp delays
- FERC order 2023 – Cluster Studies
 - Timelines
 - Group study for FERC
- Microgrid/islanding policies and practices
- Hosting capacity
 - Do CBRE's have the information they need?
 - Increasing transparency - impact/incorporation of updated data requirements/ screens?
- HB 2021/Transmission Constraints

Figure 2. Staff's Final UM 2111 scope proposal



Phase 2 Issues



- Phase 2 issues
 - Interconnection Delays
 - Address DTT related requirements
 - Commission may open a separate investigation into framework of resilience projects
- Propose two workstreams for first two items
 - Investigation into interconnection process and delays (potential contested case)
 - Technical working group to resolve disagreements over protection equipment requirements
- FERC cluster study implementation occurring simultaneously

Phase 2 Issues



Thoughts on topics and framework?

Interconnection Delays



- Multiple complaints on interconnection
 - Docketed contested cases UM 2322, UM 2305, UM 2343
 - Others docketed but not contested at this point UM 2342, UM 2344
- Issues
 - Delays both pre- and post application submittal
 - Requirements, such as DTT

Interconnection Delays



- Workstream to address interconnection delays in UM 2111.
- Questions to frame discussion
 - Should the Commission establish standards and enforceable timelines for interconnection studies and construction?
 - Should the Commission address the ability of third parties to construct interconnection facilities?
 - Should the Commission modify additional process rules for NEM and SGIP?

Direct Transfer Trip (DTT)



- Specifically with respect to IBR projects.
- The motivation for further discussion stems from several OPUC complaints
 - UM 2322 most recent example
- Staff to address in separate workstream
- DTT, when required, can substantially increase project costs, potentially to the point of making them not financially viable.
- Preliminary review indicates it may be an overengineered solution in most cases, making the high costs unjustified.
- Providing the utilities an opportunity to make the case that the cost is reasonable. Discussion with design engineering staff preferred. Stakeholders may also present.
- The hope is to achieve this through a combination of utility and/or stakeholder driven presentations, and collectively working through several hypothetical interconnection request examples.

Direct Transfer Trip (DTT)



Would like the utilities to present supporting engineering details regarding DTT as a requirement for:

- Short recloser open interval, i.e., high speed reclosing
- Circuits with high penetrations of inverter based resources; high generation to load ratio
- Deenergized and/or Hot Line work on circuits with inverter base resources
- Wildfire mitigation
- Substation power transformer protection
- Any other reasons

Direct Transfer Trip (DTT)



Let's discuss possible format of next workshop here.

- Who's interested in presenting?
 - Utilities?
 - Stakeholders?
- On what subjects?
- Does one group want to take on DTT as a whole?
- Do we want to spit up the individual subjects?
- PUC to provide interconnection examples in advance.

A follow up email with presentation subjects and/or example interconnection scenarios, reflecting the outcome of this discussion, will be sent out next week.

Other Engineering Topics



Will likely save these for the second or third workshop:

- Grounding transformers (at POI)
- 3V0 sensing on high voltage side of substation power transformers
- Testing procedures or requirements that are (or can be) used at IBR's that ensure operation as expected by the utility.

Working Group Process



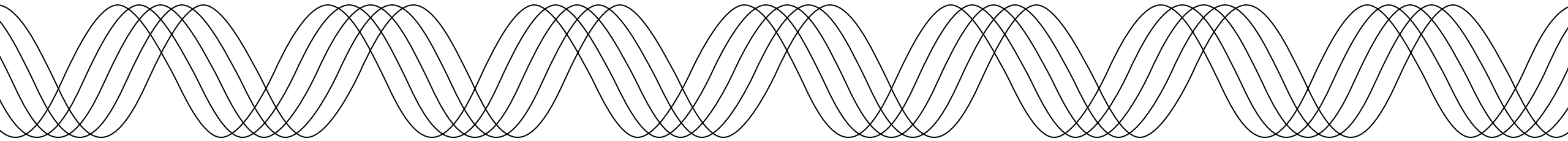
- Approximately 6 weeks between workshops
- Targeting end date of workgroup process beginning of Q2 2025
- Identify consensus issues early
- Surface issues requiring Commission decisions

PGE QF-LGIP Filing



PGE QF-LGIP Filing

September 27, 2024



PGE's QF-LGIP Filing – Overview

Filed September 17, 2024 (UM 2346), and requests an effective date of December 1, 2024, so PGE can initiate the Transitional Cluster Study on January 1, 2025 (currently no QF-LGIP requests in the queue).

Cluster study process would only apply to QF interconnection requests greater than 20 MW. No changes to small generator interconnection study process.

Substantially aligns with FERC Order No. 2023, allowing PGE to initiate a single cluster study process for Oregon-jurisdictional QF requests and FERC-jurisdictional interconnection requests.

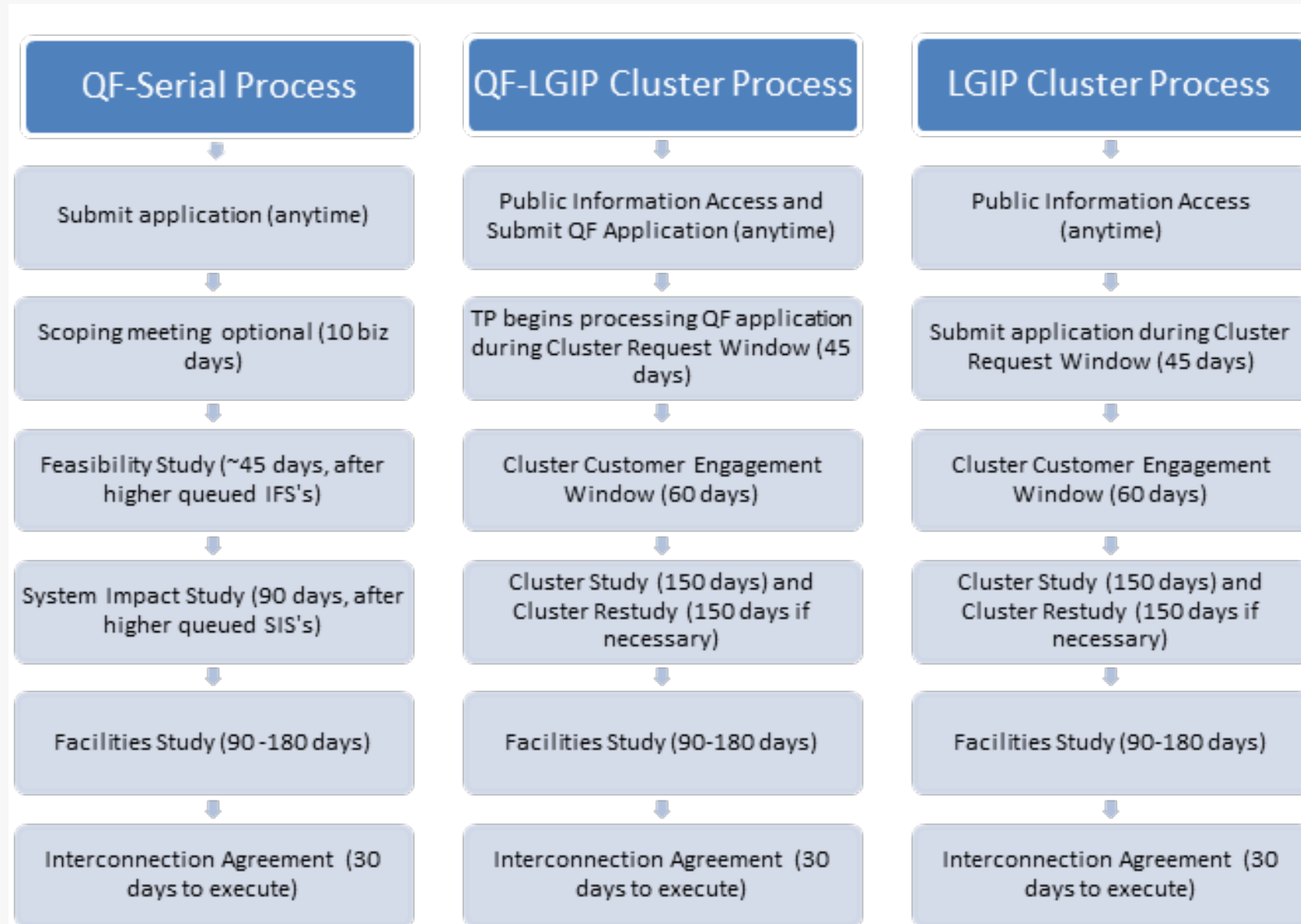
FERC Order 2023 Changes - Process

- Requires Transmission Providers (TPs) to transition from first-come, first-served serial study process to studying large generator interconnection projects in batches using an annual first-ready, first-served cluster study process
 - Designed to decrease the time it takes to move generation projects through the interconnection queue, improve certainty in the interconnection process, and create opportunities for generators to share in the cost of cluster studies and common Network Upgrades
 - Includes a Transitional Cluster Study process to transition currently queued requests to the cluster study process
- Allocates Network Upgrade costs to Interconnection Customers within a cluster area using a proportional impact method that determines the facility's contribution to the need for a specific upgrade.
 - Reduces costs to an individual request by creating opportunities for customers to share in the cost of Network Upgrades

FERC Order 2023 Changes - Requirements

- Imposes new study deposits and fee, stricter commercial readiness, and site control requirements, and withdrawal penalties on Interconnection Customers
 - Ensures that only projects likely to be built are in the queue (mitigates speculative project entry)
 - Mitigates potential harm to other Interconnection Customers in the queue
- Imposes study delay penalties on the TP and requires affected system coordination among TPs to increase the speed of interconnection queue processing

New Cluster Study Process



Benefits to QF-LGIP Projects

- Single large generator interconnection cluster study process for Oregon QF-LGIP and FERC-jurisdictional large generator interconnection projects will provide more efficient and certain path to interconnection
 - Decreased time to study QF requests (as compared to current serial process)
 - Avoids conflicting study assumptions, confusion, and disparities between QF and non-QF generators
- Defines interconnection window for projects and provides higher levels of certainty around request processing
 - TP penalties for non-performance
 - Fewer speculative projects
 - Provides annual guidance for requests
- Reduces interconnection costs
 - Creates opportunities for QF and non-QF generators in a cluster study to share in the cost of cluster studies and common Network Upgrades

Next Steps



- Staff will publish final scope and schedule for workstream launch
- May reach out to stakeholders on issues
 - Questions
 - Proposals

Conclusion



Thank you for participating