Post-COD As-Built Documentation Checklist

This checklist ensures that projects achieving Commercial Operation Date (COD) comply with post-COD as-built documentation requirements outlined in Large Generator Interconnection Agreement (LGIA) Article 5.10.3. Within one hundred twenty (120) calendar days following COD, Interconnection Customers are required to provide complete and accurate as-built drawings and supporting data. This documentation enables Idaho Power to maintain accurate system models and ensures the safe and reliable operation of the transmission system in accordance with Good Utility Practice.

1. As-Built Drawings

- ☐ Single Line Diagram
  - Must be stamped by a licensed Professional Engineer licensed in the State of the Point of Interconnection.
- ☐ Site Plan showing the Large Generating Facility and Interconnection Customer Interconnection Facilities
- ☐ Plan and elevation drawings showing the layout of the Interconnection Customer Interconnection Facilities

2. Electrical & Protection Details

- ☐ Relay functional diagram
- ☐ Relaying AC and DC schematic wiring diagrams
- ☐ Relay settings for all facilities associated with Interconnection Customer's step-up transformers
- ☐ Relay settings for all facilities associated with connecting the Large Generating Facility to the step-up transformers and the Interconnection Customer Interconnection Facilities

3. Equipment Data

- ☐ Impedance Values (determined by factory tests) for the associate step-up transformers and the Large Generating Facility
- ☐ Specifications for:
  - ☐ Excitation System
  - ☐ Automatic voltage regulator
  - ☐ Large Generating Facility control and protection settings
  - ☐ Transformer tap settings
  - ☐ D-Curves for generators
  - ☐ Communications (if applicable)

4. Modeling

☐ **A validated PSCAD electromagnetic transient (EMT) model.**

- Only required for Non-Synchronous Generator submissions.
- EMT model should adhere to the requirements listed by the latest version of the Electranix PSCAD requirements.

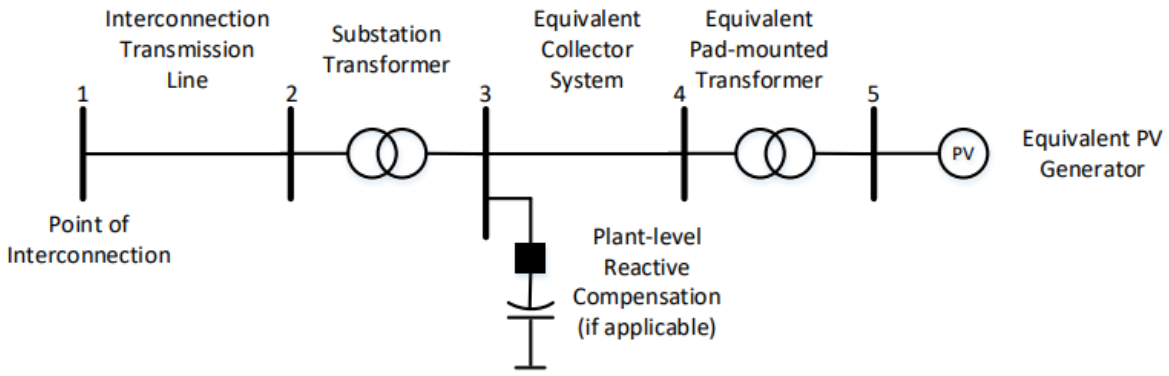
☐ **Appropriately parameterized generic library RMS positive sequence dynamic models**

- Use GE PSLF Models
- The model should be properly parametrized[1]. The default parameters listed in the library model are provided as a starting point to prevent model initialization issues. These parameters are not suitable replacements for site-specific parameters.
- A list of approved models can be found on the WECC site under the Modeling and Validation Subcommittee.

☐ **Steady State Power Flow Models**

- Use .epc, or .pwb data formats only.

An example of a single-generator equivalent power flow representation for a solar PV power plant is shown here[2]:



Single-generator power flow model notes:

- An explicit representation of the interconnection transmission line.
- An explicit representation of all station transformers.
- An equivalent representation of the collector systems.
- An equivalent representation of inverter pad-mounted transformers with a scaled MVA rating.

---

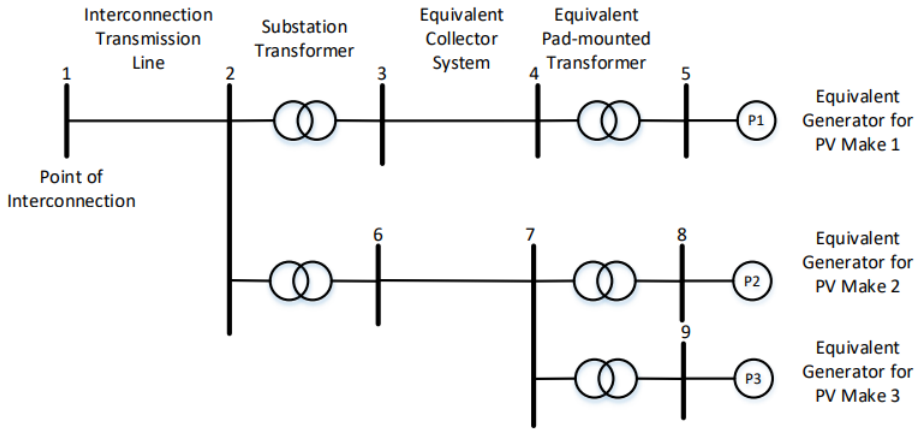
[1] Federal Energy Regulatory Commission (FERC), "*Pro forma LGIP*", Attachment A to Appendix 1, https://www.ferc.gov, August 20, 2024

[2] Western Electricity Coordinating Council Modeling and Validation Work Group, "*WECC PV Power Plant Dynamic Modeling Guide*," WECC Renewable Energy Modeling Task Force, April 2014

- An equivalent representation of generators scaled to match the total capacity of the plant.
- An explicit representation of all plant-level reactive compensation devices either as shunts (fixed or switchable) or as generators (FACTs devices), if applicable.

If a plant has different makes of the inverters installed and these inverters have different reactive capability, control setup, or protection setup, a multi-generator representation is required. The determination of single or multiple generator equivalence should take into account the number of the main substation transformers, the collector system behind each main substation transformer, the placement of different makes of inverters behind the main substation transformers, the setting difference among inverters, and the mix of different inverters.

An example of a multi-generator equivalent power flow representation for a solar PV power plant is shown here:



Multi-generator power flow model notes:

- Each substation transformer is explicitly represented in the power flow model.
- If the same inverters are installed behind the substation transformer, represent the inverters with one equivalent collector circuit, one equivalent pad-mounted transformer, and one equivalent generator.
- If different inverters with the same control and protection setting are installed behind one substation transformer, represent all inverters by one equivalent collector circuit, one equivalent pad-mounted transformer, and one equivalent generator.
- If inverters with different settings are installed behind the same substation transformer, model each type of inverter that has at least 10 MVA installed capacity by one equivalent generator with its own equivalent pad-mounted transformer. The type of inverters less than 10 MVA installed capacity may be aggregated with another type of inverter in one equivalent generator.

Review/Revision History

Review Date	Revisions
07/13/2026	Initial Post-COD As-Built Documentation Checklist