

## Alabama Power Company Distributed Energy Resource Interconnection Process

Prior to initiating the installation of a Distributed Energy Resource (DER), the customer or installer is required to submit an interconnection application for approval through PowerClerk. Please review the DER Interconnection Process outlined below for submission guidelines and contact details based on system size. For all inquiries, contact us at [g2apcrenewables@southernco.com](mailto:g2apcrenewables@southernco.com).

### ***Submission of an Interconnection Application for a DER System.***

Interconnection documents can be accessed through the Alabama Power Company (APC) website as well as on the PowerClerk home page.

- Tier III only: The installer may submit a pre-application (optional) for basic information. A full application, including the full fee, is still required if the installer chooses to proceed after receiving the results of the pre-application.
  - A \$300 fee is required for the pre-application. APC Power Delivery (PD) will have 15 business days to respond and provide the requested data report. This option is designed to provide readily available basic data from the Company's Distribution System, such as system voltage, equipment ratings, distance from substation, and peak loading.
- V2H and V2G: The applications will go through the normal interconnection process. Additional criteria are referenced below in Appendix 1.

The customer or installer must submit the Interconnection Application along with the required supporting documentation. All system designs must receive approval prior to interconnection with APC's system. **The DER owner or installer is advised against purchasing equipment or starting construction before the design has been accepted by APC.**

The requirements for each item below can be found in the Alabama Power Company Distributed Energy Resources Technical Interconnection Requirements Guidebook (herein after referring to as Guidebook).

- A complete submission through PowerClerk must include the following items:

- Interconnection Application
- Single-line diagram (Section 5.3.1)
- Site plan (Section 5.3.2)
- Manufacturer equipment specification sheets (Section 5.3.3)
- Labeling (Section 5.3.4)
- Photographs of existing equipment (Section 5.3.5)
- Post installation photographs (Section 8.1.1)

After submitting the application, the following study fee (if applicable) must be paid:

Tier	System Size	Study Fee Cost	Study Duration	Additional Information	Contacts
Tier I	Up to 25 kW	No cost	1 – 2 weeks		April Crum 205.913.9682 <a href="mailto:acrum@southernco.com">acrum@southernco.com</a> Chante' Scott 205.913.3737 <a href="mailto:cscott@southernco.com">cscott@southernco.com</a>
Tier II	>25 kW – 100 kW	\$500	2 – 4 weeks		April Crum 205.913.9682 <a href="mailto:acrum@southernco.com">acrum@southernco.com</a> Chante' Scott 205.913.3737 <a href="mailto:cscott@southernco.com">cscott@southernco.com</a>
Tier III	>100 kW	\$1,000	4 – 12 weeks (depending on the size of the facility)	Please see additional Tier III information below.	Derrick Cherry 205.257.1600 <a href="mailto:ddcherry@southernco.com">ddcherry@southernco.com</a> Percy Coleman 205.533.1866 <a href="mailto:pcoleman@southernco.com">pcoleman@southernco.com</a>

Tier III additional information:

- The initial application requires a \$1,000 screening fee. Additional fees and/or charges may be required if APC determines that additional studies are required or that enhancements to the electrical system are necessary to accommodate the customer's interconnection.
- If additional studies are required, the study fee may cost an additional \$10,000 - \$50,000, depending on the size of the facility and the type of interconnection study required. Additional studies may take up to 26 weeks to complete.
  - Within 4-12 weeks, an initial screening report will be provided, which will either:
    1. Accept the application to move forward without additional costs, or
    2. Provide a high-level estimation of minimum system upgrade costs and the amount for a further required detailed distribution impact study and/or transmission study.

- Please mail all interconnection related fees to the address below:

Alabama Power Company  
600 18<sup>th</sup> St N  
Birmingham, AL 35203  
Attention: Customer Renewables Team  
6N-0651 Corp HQ

***The APC PD Interconnection Engineer will review the interconnection packet.***

- If the review is complete and approved, with no revisions or upgrades required, the customer or installer may proceed with the installation.
- If the review is complete but requires revisions or upgrades:
  - The revision or upgrade requirements will be emailed to the customer or installer.
  - The customer or installer must submit the required revisions or upgrades for further review.
  - The customer or installer has the option to revise the plans to avoid the upgrade, which will require a new review.
  - Alternatively, the customer or installer can pay for the upgrade. An estimate provided by the local office engineer will be valid for 90 days.

***Construction and Installation.***

- Once the design is approved, the customer or installer may proceed with the construction and installation of the DER system. Please note the following:
  - The design approval is valid for 365 calendar days from the date of acceptance.
  - If the construction or installation is not completed within the 365 - day period, the customer or installer is required to submit a new application.
  - An extension may be requested in writing by the customer or installer. The request must include evidence that the equipment has been ordered and the installation is delayed due to equipment availability.
  - If the customer or installer requests to drop service, APC advises waiting until the design is accepted before requesting the drop service and installing their equipment.
  - If the customer or installer chooses to proceed before the design is approved and the design or equipment does not meet our requirements, the customer or installer will have 30 days to make corrections, or power will be disconnected.
  - Additionally, APC will advise if an electrical inspection may be required before service can be reconnected if it is within an inspected area when a drop service is scheduled.

### ***Testing and Commissioning.***

- The testing and commissioning of the DER system vary according to the tier.
  - Tier I and Tier II:
    - The customer may operate the DER in parallel with APC's system for brief periods solely to complete testing and commission. The system should be turned off at all other times.
    - Operating continuously without written permission may lead to the system being disconnected and locked with an APC padlock.
    - The customer or installer is also required to notify the Authority Having Jurisdiction (AHJ) to request an electrical inspection if the installation is within an area that has an electrical inspector.
  - Tier III only:
    - Prior notification and written permission from APC for specific requested dates is required to operate the DER in parallel with APC system for any reason, including initial synchronization and commission testing.
    - Please refer to Section 7.2 of the Guidebook for more details.

### ***After installation.***

- The customer or installer notifies APC that the installation is complete.
  - The customer or installer provides any updates if revisions were made during construction.
    - For Tier I and Tier II: The customer or installer provides post construction photographs of the DER, as specified in Section 8.1.1 of the Guidebook.
    - Tier III only: All information required by Section 7.2 of the Guidebook will be provided in final as-built format once APC is notified.
- In accordance with city or county requirements, either an electrical inspection or the Parallel Generator Installation Certification may be required.
  - APC receives notification from the electrical inspector that the DER system has successfully met the requirements of the AHJ.
  - The customer or installer will return the Parallel Generator Installation Certification signed by a licensed electrician.

### ***Witness testing.***

- For Tier I and Tier II:
  - APC may perform an on-site inspection to verify that the site was constructed according to the plans and confirm proper operation of the AC disconnect and E-stop at APC's discretion.
  - If any deficiencies are found, the customer or installer will be notified. Once the corrections are made, the customer or installer must notify APC for a re-inspection.
  - If no deficiencies are found, the meter will be reprogrammed or replaced. Our accounting department will be notified to start the billing process. APC will provide written permission to operate the DER in parallel with the APC system.
- For Tier III:
  - An on-site witness test will be performed. Please refer to Section 9 of the Guidebook for more details.

### ***Permission to operate.***

- Upon successful completion of the witness testing, APC will provide written permission to operate to the customer and installer, giving authorization to operate the DER system in parallel with the APC system.
- If you make any modifications to the existing system, including replacing inverters with anything other than the exact same manufacturer and model—even if the nameplate rating does not change—or add to or remove from the existing system in any way, you are required to submit a new application and receive permission to operate the modified system **PRIOR TO** connecting it in parallel with the APC system.

## **Alabama Power Company V2H & V2G Technical Interconnection Requirements**

### ***Definitions:***

- V2H (Vehicle to Home): Energy stored in a Battery Energy Storage System (BESS) onboard a vehicle is used to power all or a portion of a facility during an APC distribution system power interruption. A Microgrid Interface Device (MID) ensures separation from the APC distribution system.
- V2G (Vehicle to Grid): Energy stored in a BESS onboard a vehicle is used to power a facility while operating in parallel with the APC distribution system, with or without exporting power to the APC distribution system.

### ***Interconnection Requirements:***

- V2H:
  - Application through normal interconnection process of APC, including technical application requirements (APC Guidebook section 5.3).
  - External AC disconnect required (APC Guidebook section 6.1).
  - MID must meet requirements (APC Guidebook section 6.4).
  - V2H inverter not required to be UL1741 certified.
  - Any exportation of power from the vehicle BESS or incorporation of other sources while operating in parallel with the APC system makes it V2G.
- V2G:
  - Application through normal interconnection process of APC, including technical application requirements (APC Guidebook section 5.3).
  - Must meet all requirements of the “Southern Company Distribution Interconnection Policy: Operation of Distributed Energy Resources (DER) in Parallel with the Distribution System Policy” (SoCo IP) and the “Alabama Power Company Distributed Energy Resources Technical Interconnection Requirements Guidebook” (APC Guidebook).