

ISO Basics

Q: What is the ISO?

A: The California ISO (Independent System Operator Corporation) is a nonprofit public benefit corporation that manages the flow of electricity across the high-voltage, long-distance power lines that make up 80 percent of California's power grid. It provides open and non-discriminatory access to the transmission grid, supported by a competitive energy market for resources one megawatt or greater. For more information, visit the [Understanding the ISO](#) site.

Q: What is the “[market](#)”?

A: The ISO administers an energy and ancillary services market, but does not participate nor compete in it. The market is a place where resources and customers bid or self schedule available supply or needed demand for energy products and services. The ISO is responsible for economically and efficiently clearing the available supply to meet the forecasted demand, using the available transmission and at the most reasonable cost. The ISO is also responsible for procuring sufficient ancillary services to meet reliability requirements for unforeseen events.

Q: What are “[ancillary services](#)”?

A: These are services and products necessary to maintain reliable operation of the transmission system. Spinning and non-spinning reserves are available capacity that can be converted to energy immediately or within 10 minutes. Regulation reserves respond to changes in supply and demand every 4 seconds.

Q: What is an interconnection?

A: Interconnection refers to the technical aspects and equipment required to connect generators or other resources, such as energy storage devices, to the transmission system.

Q: How do I know if I am within the ISO balancing authority area?

A: If your project is located within the yellow area on this ISO [map](#), then your project is inside the ISO balancing authority area. Non-yellow regions are in the balancing authority area of another entity as identified on the map. If your project is located in a non-ISO balancing authority area, you will need to contact that balancing authority or local utility for interconnection.

Q: How do I interconnect my project?

A: For projects within the ISO balancing authority area, whether the project interconnects via the ISO's interconnection process or via a utility's interconnection process will depend on which transmission facility the project uses to connect to the grid. If your project connects directly to one of the high voltage transmission lines described below by territory, then it will follow all of the requirements for an interconnection with the California ISO, **otherwise** it will follow all of the requirements for an interconnection with the utility that serves the territory where the project is located. Facilities under ISO operational control (ISO interconnection process) are:

[PG&E area](#) — transmission lines 60 kV and higher;

[Southern California Edison area](#) — transmission 220 kV and 500 kV; some 115kV and 66 kV lines;
[San Diego Gas & Electric area](#) — transmission 69 kV and higher;
[Municipal areas](#) — some facilities owned by a municipal utility but outside the municipal boundaries; and
[Other transmission lines](#) — Startrans, Trans Bay Cable, Trans-Elect NTD Path 15, Western Area Power Administration Path 15, and several transmission lines outside the ISO Balancing Authority Area for which it has operational control (i.e., Eldorado-Moekopi-Four Corners, Mead-Adelanto, Mead-Phoenix, IPP-Adelanto, etc.).

If you are still unsure where to interconnect your project, please contact your [local utility](#).

*Please note that interconnection is the first of several process that **must** be completed.

Q: If I am outside of the [ISO balancing authority area](#), can I still connect to the ISO?

A: Yes, however, interconnection will likely require an import allocation. Import allocations are based on available capacity and available Resource Adequacy import capacity. For more information on available import allocation, please click [here](#). There are also options for dynamic transfers. For more information on dynamic transfers, please visit NERC's whitepaper on Dynamic Transfers by clicking [here](#).

Q: Is there a minimum capacity needed to be eligible to interconnect to the ISO grid?

A: While there is no explicit minimum capacity needed in order to connect to the ISO grid, there are economic and market considerations that should be made. Costs associated with interconnection are up-front funded by the project (see [Interconnection Basics presentation](#)). Per the ISO Tariff, a participating generator is a generator with a rated capacity of 1 MW or greater, or a resource with a rated capacity of from 500 kW up to 1 MW if the resource elects to be a participating generator, or a set of unit providing ancillary services or imbalance energy through aggregation arrangements approved by the ISO.

Q: What is a Scheduling Coordinator?

A: To participate in the ISO market you must be a certified scheduling coordinator (SC), or retain the services of a certified SC to act on your behalf. Scheduling coordinators are entities that bid or self-schedule resources into the market. They also handle the credit and collateral posting requirements and the payments and charges settlement process. For more information, visit the [scheduling coordinator](#) page on our website.

Q: I want to sell energy in the ISO market, what do I need to do?

A: To participate in the wholesale power market, there are several steps, including interconnection of a resource, modeling the unit in the ISO's systems, contract implementation, installation of metering and telemetry equipment, and signing agreements. Each process has its own milestones and timelines, and can take up to two years, or longer to complete. The first step in integrating a resource is to determine whether to interconnect via the ISO's interconnection process or via the local utility's interconnection process. If a resource interconnects via a utility's transmission interconnection process, it must still complete all of the subsequent ISO requirements in order to participate in the wholesale power market. Evaluating the criteria and notifying the ISO and/or your local utility as far in advance as possible of your intent to interconnect is most appreciated. For more information, see the [Interconnection Basics presentation](#) or visit the [Resource Interconnection page](#).