

Distributed Generation

Solar as a Distributed Energy Source

Solar energy carries most value as a distributed energy source. Distributed energy means energy produced at or close to the point of use. Distributed generation typically ranges from 1 kilowatt to 5 megawatts in capacity. This contrasts with central generation, which is associated with large 500 to 3000 megawatt generating plants that are usually located at a distance from where the energy is consumed. The electricity is then transported through the transmission and distribution infrastructure to the consumer.

Distributed generation is well-suited to the use of some renewable energy technologies, because they can be located close to the user and can be installed in small increments to match the load requirement of the customer.

Solar energy reduces the cost of investment in grid transmission extension, which carries both an economic cost and a time element associated with capital investment and planning approvals. Solar energy can also be introduced in small increments to closely match the load requirements and is a good fit with daily load peaks. It does not need to be guaranteed or predictable, as solar energy systems can pass surplus power back to a grid during the day while drawing on the grid at night.

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