

Distributed Generation Aggregation

*Uncover a new
revenue stream
by taking
advantage of
your existing
energy assets*

Faced with growing capacity and transmission problems, power companies are searching for additional energy sources that can be brought on line quickly and economically to satisfy peak demands. A key source already exists: distributed generation (DG) units now used only for periodic power backup by industrial and commercial businesses.

A “Hidden” Revenue Stream

More than 90,000 MWs of DG capacity currently exists with 60,000 MWs of new capacity planned by 2012. A necessary protection against the increasing threat of blackouts and interruptions, these DG assets represent a substantial investment to owners, as well as a vast untapped energy source.

Today, underutilized DG assets represent a potential revenue stream for owners and a source of additional capacity for utilities and independent system operators (ISOs). As energy demands continue to soar, ISOs around the country are establishing or expanding load curtailment programs that include aggregation of DG assets, while state agencies develop interconnection standards to ensure grid integrity and operational safety, ultimately allowing DG owners to sell energy to the grid.

Benefits to DG Owners

Utilities and ISOs recognize DG assets as technically and financially viable resource for emergency power, load curtailment, energy and ancillary services. They also know that DG units are likely to play a key role in future programs that let DG owners sell power back to power marketers. For DG owners, both initiatives can translate into practical financial opportunities.

Implementing DG Aggregation Projects

Notwithstanding the anticipated benefits of DG aggregation, many DG owners express concerns about availability of their assets, environmental issues, and long-term impacts. Addressing those issues depends on the credibility and expertise of the “aggregator.” E³ International[®] is one of the nation’s premier energy consulting firms, with hundreds of successful projects in the fields of energy efficiency, distributed generation, alternative power systems and power quality management. As one of the first companies to participate in DG aggregation, E³ International has gained the experience to provide DG owners with fundamental assurances.

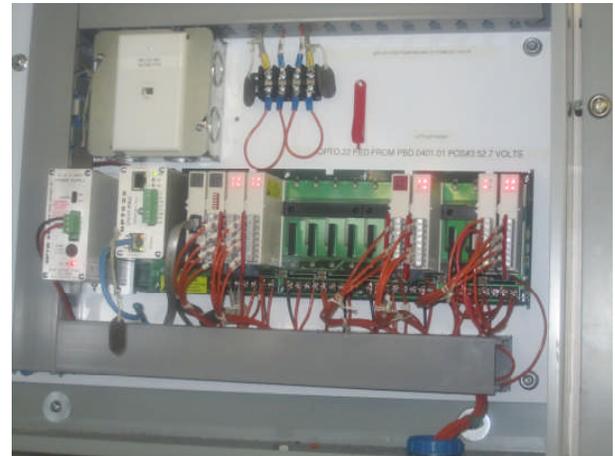
- The primary mission of any DG unit is to supply power to the owner when needed. That primary mission remains constant under an aggregation program, which typically would use the power from your DG unit 100 hours per year. When you need power, you will have it.
- Environmental regulations play an escalating role in distributed generation, particularly for older diesel-powered units. We manage compliance with all environmental regulations – federal, state and local.
- System maintenance and testing are critical for DG reliability. Through regular usage, under managed conditions, your DG units will be ready when you need them – 24 hours a day, 7 days a week.



Trust the Experts

As a pioneer in the field of DG aggregation, no company knows more about the technical issues, financial benefits, or management challenges associated with DG aggregation.

- We have been involved in New York State Energy Research and Development Authority (NYSERDA) projects to help develop and pilot NY City's first Emergency Demand Response Program, developing technical and operational guidelines to ensure program success. We have also worked with NYSERDA and the US DOE to evaluate DG aggregation within price responsive load markets, including day ahead, deficiency, and real time markets.
- We have worked with customers in the California ISO, the NYISO and the PJM (Pennsylvania, New Jersey, and Maryland) ISO to develop DG aggregation programs.
- We are actively involved in developing and implementing interoperability approaches to allow demand response resource to participate in the NYISO ancillary services market by providing non-spinning reserves to support grid reliability.
- We have developed computer models to predict demand side response capabilities for any building participating in the day ahead ancillary services and emergency demand response programs in the NYISO, based on building characteristics and ambient conditions.



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Your Partner in Sustainable Energy Projects