

Enbala Virtual Power Plant (VPP) Solution

Power Up Relationships with Distributed Energy Resources

Between customer-installed solar, behind-the-meter storage, demand flexibility and other distributed energy resources, there's plenty of power out there to harness. Turn it into dispatchable capacity with Enbala's Virtual Power Plant (VPP) solution.

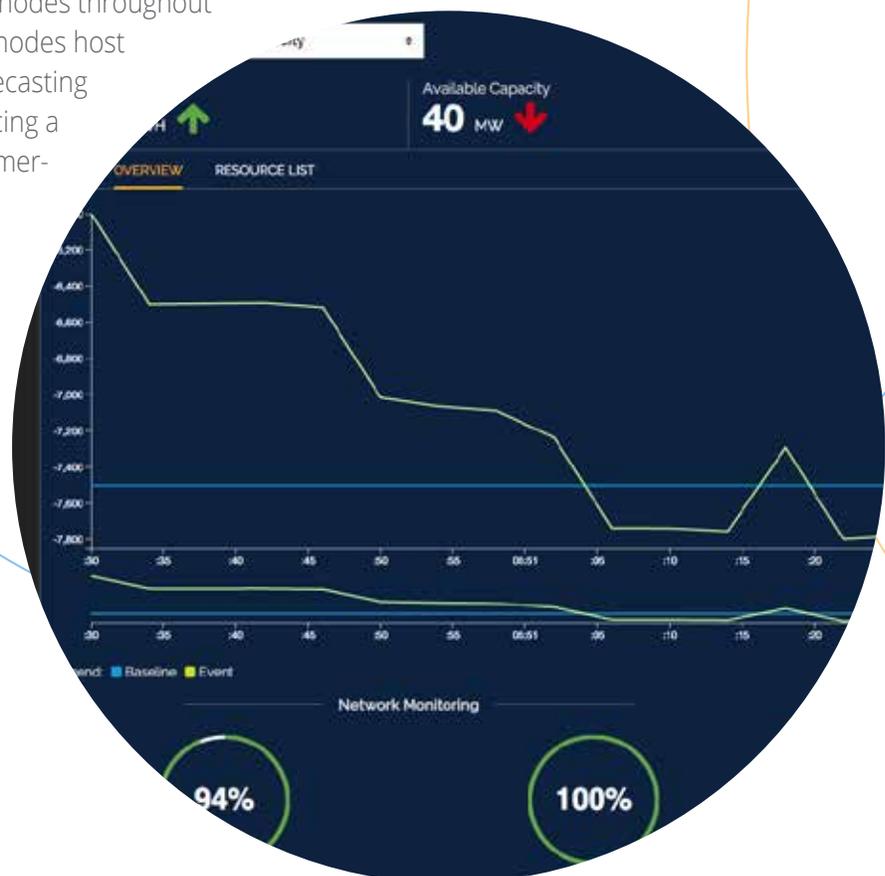


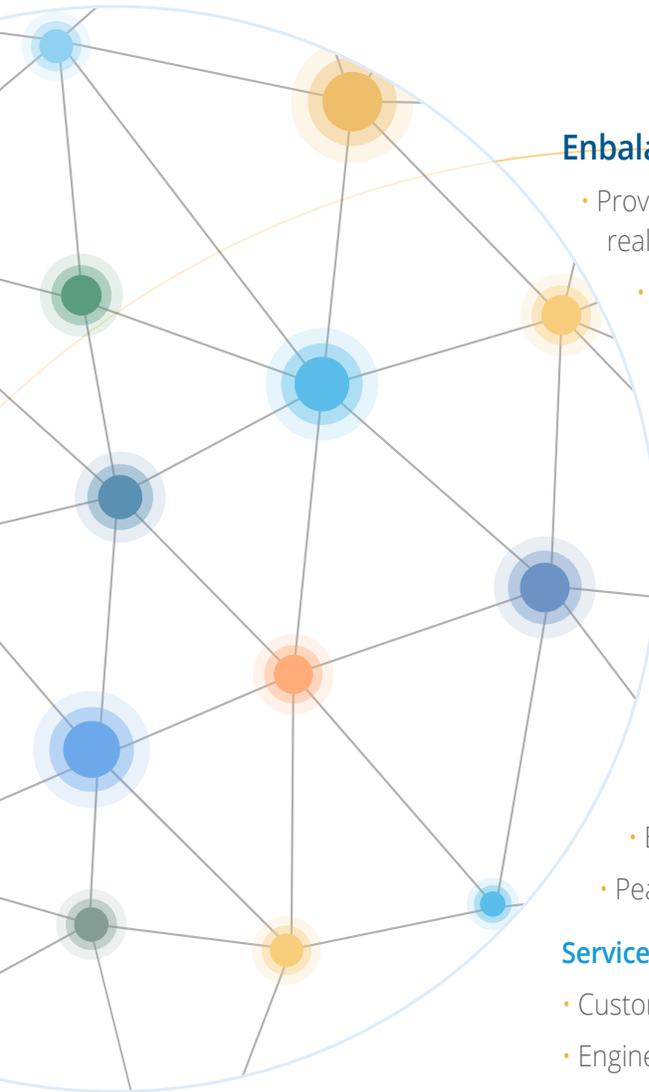
Built on the **Enbala Engine™**, a powerful software platform for managing distributed energy resources (DERs), the VPP solution uses real-time communications infrastructure to monitor, control, coordinate and manage energy assets connected to your utility. The portfolio built with these aggregated DERs becomes a single dispatchable resource that can provide grid services, such as capacity, operating reserves or regulation service.

That opens up opportunities to strengthen customer relationships by providing a way for your customers to achieve even more value from their DER investments. Enbala has extensive experience bidding VPP capacity into wholesale markets, and your customers can gain additional revenue streams by allowing their DER equipment to participate in such programs.

Distributed Architecture for Distributed Generation

The Enbala Engine uses distributed computing nodes that interface with DERs to execute local commands and relay state information back to optimization nodes throughout the network. Those optimization nodes host the software components for forecasting and value maximization by balancing a number of inputs, including customer-specified constraints, customer demand-charge management and grid needs. The optimization nodes also manage control and dispatch, as well as energy market interfacing, by calculating optimal real and reactive power contributions for each DER within the network, based on real-time communications and capabilities.





Enbala Engine Key VPP Capabilities

- Proven expertise delivering wholesale, ancillary grid services through a real-time, single point of dispatch for hundreds of distributed assets
- Time-tested approaches to meeting customer constraints while optimizing customer assets and market participation
- Ability to provide multiple grid services simultaneously, using the same distributed equipment
- Real-time awareness of resource availability to maximize the value of grid services that a portfolio of DERs can provide
- Precise forecasting and long-term optimization

Market Applications

- Demand response (capacity)
- Operating reserves
- Regulation service
- Energy dispatch
- Peak demand management

Services

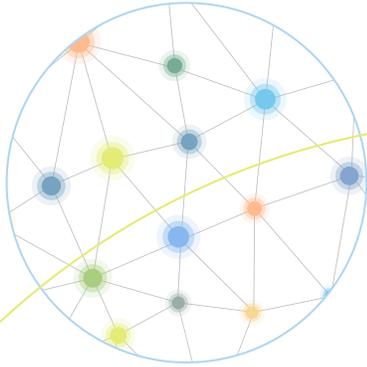
- Customer value identification, targeting and recruitment support
- Engineering and enablement support
- DER troubleshooting and customer issue resolution support
- Fully staffed 24/7 Network Operations Center

VPP Possibilities: More Powerful than You Imagine

Enbala's platform can leverage a broad range of DERs, including distributed generation, energy storage devices and smart inverters, as well as controllable load itself. Each resource within the portfolio operates under its own constraints, which are configured based on the type of asset and specific customer requirements.

The Enbala VPP's diverse portfolio meets diverse requirements, because each DER can be configured to support the owner's preferred operational strategy while maximizing value both locally and globally. Local objectives can include peak demand management to reduce energy bills and energy firming for on-site generation. Global objectives include things like substation peak management, system capacity and ancillary services.

Customer load
+ solar
+ battery storage
= a LOT of untapped potential.
Let Enbala help you capture it.



About Enbala

Enbala has a single, defining passion: to make the world's power grids greener and more reliable, efficient and predictable by harnessing the power of distributed energy.

We do this with a transformative real-time energy-balancing platform that we believe will fundamentally change the utility landscape. Enbala's real-time energy-balancing platform transforms energy system operations with a flexible approach for creating dispatchable energy resources. It unobtrusively captures and aggregates available customer loads, energy storage and renewable energy to form a network of continuously controlled energy resources. The platform dynamically optimizes and dispatches these resources to respond to the real-time needs of the power system. For more information, visit enbala.com or follow us Twitter at twitter.com/Enbala and on LinkedIn at linkedin.com/company/enbala-power-networks.



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