Case Study

ASAVIE

Building Virtual Power Infrastructure for the Future

Solo Energy developed and delivers an innovate renewable energy service to the energy market leveraging Asavie's secure IoT connectivity network as a service in order to enable easy control and monitoring of energy consumption.

CHALLENGES

Solo Energy charges its battery-based storage network from the grid during periods of peak renewable generation and low demand when wholesale electricity market prices are typically lower. Additionally, Solo Energy allows for charging from on-site solar PV/ wind generation where present. When wholesale market prices increase, Solo Energy would switch their customers' power supply, from grid to battery sourced, delivering lower-cost electricity stored in the battery network.

Solo Energy faced a number of network connectivity challenges as they rolled out their physical and virtual infrastructure:

- They needed to aggregate data from geo-dispersed locations into a secure private cloud application
- They required a minimal IT footprint at the install sites, and sought a simple "plug'n'play"
- Connectivity solution to enable the energy storage unit to automatically register with the Solo Energy cloud
- Needed secure remote access to manage the energy storage unit, free from cyber security threats

> *Trust in the data we aggregate from our energy storage assets is core to the success of our Virtual Power Plant. We get this peace of mind from Asavie SD IoT™.*
>
> *Liam Breathnach, CTO, Solo Energy*

solo energy

Solo Energy is a new 'energy-storage-as-a-service' utility business. FlexiGrid is a cloud-based software platform, that controls and aggregates battery storage systems, including both static batteries and Electric Vehicles, to create a distributed energy storage network operating as a centrally controllable Virtual Power Plant, delivering savings to consumers and valuable services to the power system operators and electricity suppliers alike.

SOLUTION DEPLOYED

Asavie SD IoT™ is a network as a service offering; enabling secure connectivity of IoT projects to application services in the cloud and/or on-premise. Within minutes Solo Energy could provision and deploy a scaled network, securely connecting the remote energy storage units to the Solo Energy cloud.

The Asavie SD IoT™ end-to-end private network, provides Solo Energy with connectivity that is off the public internet and hence free from cyber security threat. Furthermore, the flexible controls and security policies, allows Solo Energy to independently manage the secure connectivity and costs in real-time.

The distributed Solo Energy network also facilitates the provision of services to the national grid that would otherwise have required capital investment by national power agencies into the network and traditional power plants.

RESULTS

Solo Energy has benefited in a number of ways from leveraging Asavie's technology as part of the overall solution.

- Ease of integration, minimal effort to interconnect Solo Energy cloud with the cellular enabled storage units
- Reduced truck rolls, ability to access and manage the energy storage units from a centralized location
- Centralized view of the connected storage units, with integrated network status and alert notifications
- Rapid deployment, no up-front expense or CAPEX requirement to build a physical secure network
- Scalable on-demand, ease of turning up new energy storage units in the private network

Asavie's approach to secure connectivity aligns with our energy-storage-as-service model. Furthermore, their service facilitates rapid deployment, provides us with the ability to scale easily and helps us to keep our costs low, making it easier to say yes to the smart grid of the future.

Liam Breathnach,
CTO, Solo Energy

EASY ACCESS

Minimal effort to interconnect storage units with cloud-side storage management platform

NO CAPEX

No up-front expense requirement to build a physically secure network

SCALABLE

Easy on-demand private network creation to turn up new energy storage units

Asavie makes secure connectivity simple for any size of mobility or IoT deployment in a hyper-connected world.

ASAVIE