



Case Study

Anesco contacted Astec when they required flexible and reliable control for their critical energy service monitoring in the United Kingdom.



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Digital

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Background

Enabling the transition to net-zero, Anesco operates 24,000 renewable assets for their customers, representing 1.1GW of clean energy. With such a large estate of assets to be controlled and maintained, Anesco approached Astec Solutions to integrate the latest technology to facilitate rapid and critical service monitoring across the United Kingdom.

The proposed project would see the creation of a scalable, fit-for-purpose monitoring and control system to replace a third-party solution. Anesco desired a greater level of control and the capacity to upgrade and develop over time without the need for a complete overhaul.

The desired system would provide central control without an analogue connection or using a SCADA, utilising remote equipment at each site. These locations would then be connected via the cloud to the central platform, enabling Anesco to monitor power delivery to the National Grid and independently schedule each asset's behaviour.

Astec would place a panel with cellular capability at each site to facilitate sending crucial data to the cloud and receiving operating instructions. In doing so, Astec would afford greater control and flexibility to Anesco with a solution that utilises both Thingworx and Azure IOT Hub.

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Cloud Control

Astec provides leading cloud-based solutions. With a platform based on Thingworx, off-premise control ensures a centralised platform can undertake key operational actions reliably and at pace. The performance of this system is supported with Azure IOT Hub, allowing for devices at the edge to send and receive data and link together disparate sites on a single platform.

Astec Solutions provides expertise in delivering hybrid Information Technology and Operational Technology, focusing on machine and equipment connectivity. The modern cloud platforms created by Astec heavily leverage Microsoft Azure, which, thanks to Astec's Microsoft Gold partnership status, ensures positive and future-ready outcomes





Flexible & Reliable

Anesco allows its customers to leverage their renewable assets to generate a return by providing services to the National Grid, which helps maintain a constant 50hz power frequency. With national events, power station failures or other happenings or disruptions, this frequency can fluctuate, resulting in a loss of power to homes and businesses.

Astec created systems that allow Anesco to undertake dynamic containment to best respond to this challenge. Anesco required the ability to monitor the National Grid requirements in real-time and manage tolerances to provide and store power depending on need. Service monitoring is undertaken at a minimum frequency of 20hz or 50 times a second to ensure quality and continuity. In enabling such effective reaction times, Anesco can ensure they generate a great return on investment and act as a critical operational partner to the National Grid.

Anesco provides a file of their system monitoring data, at a 50ms resolution, each hour to the National Grid as a requirement for partnership. Therefore, this high-frequency polling data was integrated into the cloud solution, allowing for accurate and timely reports as a part of the entire system package.

Control & Scalability

In completing this project, Astec delivered a modern solution able to monitor Anesco assets, download and action scheduling plans, and upload crucial data at a high frequency. Anesco can now scale its offerings with confidence and continue to fulfil its contractual obligations for monitoring, data delivery and the fulfilment of services to the National Grid.

The interface for operators is a secure web-based solution. The Anesco team can rapidly and easily view assets, check values, and troubleshoot service, power, or connectivity issues. In addition, administrators can connect to assets remotely to carry out any maintenance or update work required solely through the web platform. Operators can also view data and control power delivery at a local level, ensuring stability for the National Grid and an optimised return on investment for their customers.

Scalability is an essential factor for Anesco; the cloud platform, alongside a remote panel with 4G connectivity, presents a perfect template for expansion. The National Grid is preparing to roll out additional services in the coming years, and Anesco is now in a prime position to take advantage of this growing space without the need for costly, piecemeal solutions.

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EDRIC HOUSE



Astec IT Solutions delivers world-class Smart Manufacturing Solutions for the Consumer Packaged Goods, Food & Beverage, Chemicals, Oil & Gas, Life Science and Utilities Industries.

With expertise spanning Industrial IoT, MES and Automation & Control, Astec works in close collaboration with clients to ensure desired outcomes in operational efficiency, flexibility and uptime.

As the sole Premier Solution Partner for GE Digital in the UK, Astec has an unmatched depth of knowledge with a high-calibre team of Microsoft Certified Professional software engineers.

With a dedicated support team and trusted solutions, your operation is fit for the future with Astec IT Solutions.



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Continue the conversation. Get in touch with our expert team:

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