



The Packaged Solution Advantage: A Turnkey Alternative to Custom Energy Management Applications

Organizations in every industry realize the value of managing their critical energy assets more effectively. Backup generators and entire emergency power supply systems are mission-critical assets, but they are usually monitored and managed manually. Testing and compliance reporting are difficult. Readiness is not always assessed as frequently or as well as it should be. Laborious manual processes are error-prone, and the mistakes normally go unnoticed until these assets are called into service during a power outage.

The reason this problem exists is that organizations have had no good options in the past. The management applications provided by manufacturers only support the latest generations of generators and automatic transfer switches. And because most organizations have assets from different vendors and of different vintages, customized integration has historically been required to manage the entire inventory.

Now there is a better alternative: the packaged Digital Energy Network solution from Blue Pillar. This solution brief highlights the common problems encountered in custom integration projects, and describes how Blue Pillar has been able to overcome these problems with a turnkey solution.

Problems with Custom Projects

Custom integration projects normally encounter these problems:

- Limited capabilities owing to the complexities involved
- Missed deadlines and cost overruns
- Creation of cyber-security vulnerabilities
- “Final” version normally poorly documented
- Work-arounds and manual procedures still necessary
- Any change to the energy infrastructure requires additional development

Custom Integration Projects

Custom integration projects take considerable time and effort to complete, which inevitably makes them quite expensive. The cost could be justified by the many benefits of having centralized control of the organization’s energy assets, of course, but there is an even bigger problem: The monitoring and control capabilities are usually inadequate.

Most custom projects are able to provide only limited capabilities owing to the enormous complexities involved when attempting to integrate different systems from different vendors. Each individual asset requires, in effect, its own development project. This tends to result in inconsistencies in how each asset is

The Digital Energy Network Advantage

Blue Pillar's Digital Energy Network affords these important advantages:

- *Proven, packaged solution* - As an off-the-shelf product, deployment is both straightforward and fast with no project-specific engineering required.
- *Broad energy asset support* - The large Asset Library supports virtually every system ever made from virtually every manufacturer.
- *Robust Cyber-security* - The Asset Interface Microservers provide stateful firewall protection for all assets throughout the Digital Energy Network.
- *Highly configurable and scalable* - The Blue Pillar solution grows and adapts to any change in the energy infrastructure almost effortlessly.

managed, forcing facility managers to learn different techniques for different systems.

Given these and other challenges, most custom projects end the same way: They are declared complete after a basic set of rudimentary capabilities is working well enough to use. Obviously, any capabilities originally desired that are missing from this "final" version continue to require manual procedures and/or work-arounds.

A worse problem involves the cyber-security vulnerabilities that exist in any software that has not been rigorously tested for such exposures. And the enterprise firewall affords little or no protection, as the normal vector for a cyber-attack of an industrial control application is the phishing scam on an unsuspecting employee.

Just as each individual asset requires its own development effort, so too does any change in the energy infrastructure. If the "final" version of the software were well documented, integrating minor changes might not be too difficult. But custom code is almost never sufficiently documented for anyone except the original programmer to understand well enough to even attempt making any changes.

The typical outcome of a custom integration project is a system with limited capabilities that will forever remain limited. Such systems serve out their useful (normally short) lives until they are abandoned out of frustration or replaced with something better.

Blue Pillar's Packaged Digital Energy Network Solution

Blue Pillar's Digital Energy Network provides a more capable and cost-effective alternative to custom command and control systems. The packaged, turnkey Digital Energy Network adds a cyber-secure layer of intelligence to an organization's energy assets, making them "digital" with full remote command and control capabilities, and then networks all of them into a system of subsystems that can be monitored and managed centrally.

Blue Pillar's Digital Energy Network consists of Blue Pillar Enterprise Software that runs on a central server or in the cloud, and ruggedized Asset Interface Microservers that connect the energy assets, such as generators, switchgear, automatic transfer switches, fuel systems, cogeneration and chillers.

The Microservers add a layer of intelligence with firewall protection, effectively providing a way to upgrade or modernize any asset regardless of its age or built-in control capabilities. The Microservers also normalize the many differences among energy assets, thereby enabling all to be supported by a unified set of applications with a consistent user interface.

The Digital Energy Network can also interface with other energy management systems, including those for buildings, campuses and/or microgrids, thereby providing a holistic view with real-time situational awareness down to the circuit level. Facilities managers then monitor and manage the entire energy infrastructure through an intuitive Blue Pillar Dashboard.

As a packaged system of subsystems, the Digital Energy Network allows for rapid, turnkey implementation. Blue Pillar has amassed a large Asset Library containing

“The resulting plug-and-play Digital Energy Network provides a more comprehensive and, in most circumstances, more cost-effective alternative to custom control systems.”

— Peter Asmus, Senior Research Analyst at Pike Research

standardized interfaces for virtually every vendor and vintage of generator and automatic transfer switch, and a growing list of other equipment.

The packaged nature of Blue Pillar’s Digital Energy Network enables a virtually foolproof, turnkey implementation. Each project begins with an inventory of the energy assets, after which Blue Pillar provides a complete set of detailed wiring diagrams and step-by-step work instructions to connect the Asset Interface Microservers. This “cookbook” approach eliminates the most common problems, and any wiring or other mistakes made during the installation are detected by the application and can be corrected before the Digital Energy Network goes live.

A typical project with Blue Pillar takes less than three months from the site survey to full functionality. The Dashboard’s intuitive and consistent user interface makes for minimal learning curve, allowing most users to become fairly proficient in its use in about a day.

Best of all is that Blue Pillar’s Digital Energy Network just works. There is no customization necessary, or any tweaking or tuning required. And it keeps working with full support for any change in the energy infrastructure. As with the initial implementation, any new asset is simply connected to an Asset Interface Microserver, and it can then be managed fully from the Dashboard just like every other asset.

Conclusion

Facilities managers now have a good option for centralizing the monitoring and management of diverse and distributed energy assets: the Digital Energy Network from Blue Pillar.

Blue Pillar’s Digital Energy Network provides a more capable and cost-effective alternative to custom command and control systems, where the initial development effort is frequently plagued by delays and cost overruns, and the results are usually unsatisfactory.

The Digital Energy Network is simple to implement, simple to use, and capable of supporting virtually any energy asset—now or when it is added at anytime in the future without any upgrade or disruption. The long wait for the right way to monitor and manage critical energy assets is finally over.

To learn more about how your organization can benefit from a Digital Energy Network, please visit Blue Pillar on the Web at www.bluepillar.com or call (888)234-3212.



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