

On-Site Power Generation — Top 5 Service Challenges & Solutions



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The demand for on-site power generation systems has been gaining importance in the United States.

With a growing number of blackouts that have disrupted the grid electricity supply in recent years, the need for alternative power sources continues to climb. Population growth and the rise of natural disasters have pushed more and more businesses to implement on-site power generation systems to ensure business continuity. Furthermore, with the 2020 global COVID-19 pandemic, the resilience of the power grid system and service infrastructure may be pushed to the brink.

According to the spring North American Electric Reliability Corporation (NERC) assessment,

“As pandemic mitigation and containment strategies continue, prolonged periods of operator sequestration and deferred maintenance on equipment increases the industry’s risk profile and could exacerbate impacts to the Bulk Power System (BPS) during the summer months and potentially over the longer-term horizon.”



Workforce and supply chain interruptions, uncertain demand forecasts and the potential for unplanned outages due to deferred maintenance and refueling issues could challenge the BPS, should the novel coronavirus pandemic continue into the hottest months.

With growth comes increased pressure on on-site power generation service companies. Whether these service organizations provide system installation, repair or maintenance services, there is pressure to improve service levels and maximize productivity across their field service operations.

According to a recent article published by IIoT World, the four challenges facing power generation companies in their digitalization journey include:

- 01.** Driving operational excellence
- 02.** Knowledge and workforce management
- 03.** Regulatory compliance
- 04.** IoT and Cybersecurity



There is a direct relationship between having an effective digitization journey and creating a competitive edge. When service teams actively use technology, it leads to better-served customers. At FieldAware, we measure overall Field Service Maturity across two dimensions – technical maturity and operational maturity. We find time and time again, utilizing an open and integrated service platform is the crucial source in bridging these two critical threads together, enabling organizations to stand out and deliver world-class service.

This white paper addresses the top 5 critical challenges field service operations face in the on-site power generation systems industry and how to solve them by leveraging a Field Service Management (FSM) solution to increase productivity and customer satisfaction.

The Top Challenges Impacting On-Site Power Generation Systems

Today's on-site power generation system providers must juggle an array of daily responsibilities while complying with strict regulatory standards, maintaining aging assets and infrastructure, and facing pressure to cut costs and complete more work with fewer resources.

The goal of most service companies is to maximize their operations with efficient processes, productive workers and happy customers. Successful service delivery involves many inter-related components, and a field service management solution is the crucial enabler to efficiency.

The Top 5 service challenges impacting these responsibilities are:

- 01. Effective Installation Planning and Execution
- 02. Optimal Installation Change Management Practices
- 03. Accurate Job Data Capture and Processing
- 04. Efficient Execution of Job Repair and Maintenance
- 05. Adoption of the Internet of Things (IoT)



An FSM solution connects back-office processes to the field workers. The system ensures that these teams have the real-time information they need to carry out their job efficiently and effectively – from job creation to final invoicing. The benefits of the right field service management solution go beyond the work of your dispatch team and the field workers.

Let's take a more in-depth look into each of these challenges and how an FSM solution addresses each, enabling services organizations to have a competitive edge and deliver world-class service performance.



01.

Effective Installation Planning and Execution

Having an effective installation plan that is properly executed is critical. Without it, job completion efforts and timelines can be extended, impacting profit, days sales are outstanding and customer satisfaction.

Within these plans, it's important that operation teams are able to ensure the right skilled technicians and/or crew are scheduled in the proper order, delays between phases are minimized, especially with inspection completions. Having the right plan with the right execution ensures the installation is performed on-time, within budget and at the lowest cost.

Solution:

Having a scheduling system that allows the planner to link a series of dependent jobs together can prove effective for project implementation. Each linked job can be considered a phase of the implementation or can represent a portion of the installation work that can be performed by a specific team.

Using smart scheduling, driven by AI, can enable customers to optimize the sequence, schedule and execution of linked jobs and identify key areas where maximum resource utilization can be achieved.

Additionally, it can also adapt to assign certain tasks to specific crew members from the office or the field, in real time, resulting in greater resource efficiency and accuracy.



02. Optimal Installation Change Management Practices



Disruptions to the best-laid plans are inevitable.

The ability to effectively plan, re-plan and execute installation jobs when an unexpected disruption or delay occurs can determine if the project is successful or not. Stage delays in the installation process require rescheduling all subsequent stages or steps, as well as all the other jobs or tasks that involved those resources.

In some cases, the disruption is not immediately known to the scheduler, which can compound the impact on all future jobs on the schedule. Worst case, the project is paused and never completed. The consequence can be missed or delayed jobs for other customers resulting in poor customer satisfaction, inefficient use of resources and billing delays which are all bad for business.

Solution:

Utilizing features within an FSM solution can minimize the impact of disruption, improving customer satisfaction, maintaining profit margin and optimizing field resources immediately.

With active email alerts and paused job reports, dispatch teams are made aware when delays happen. This functionality eliminates job delays and enables proactive re-working of the schedule to accommodate customer's needs.

When disruptions do occur, smart scheduling can test scenarios in planning mode using a dynamic visual scheduling board that allows the scheduler to perform what-if analysis to reschedule the impacted jobs.

03. Accurate Job Data Capture and Processing

When job work documentation is manually processed and paper-based, job information can be incomplete, lost or lack the necessary details or signatures to formally complete jobs.

This incomplete data is especially impactful for final inspections or job invoicing. For inspections to be completed as quickly and as possible, clear and accurate data and documentation are essential. For many, this critical information is gathered on paper, often written manually in the field.

When manual, paper-based processes are used, the service organization experiences delays in inspections, inaccurate or duplicate data entry, use of outdated forms and setbacks in processing required paperwork. Without proper and complete documentation, including on-site photo and video capture, the service team will experience numerous issues. These can include out-of-compliance reporting, billing delays and lost paperwork resulting in increased administrative costs due to document filing and storage, accounts receivable research and inspection management and potential penalties.

Solution:

Moving to mobile forms digitize workflow and processes with inspection checklists,

signature capture and photo/video

documentation automatically attached to each job. These capabilities enable the field technician to capture rich, accurate data at the worksite directly in the form, including pictures, videos, sketch pad, audio recordings and barcode scans. All of these assets are embedded directly in the digital form, so there's no need to attach files separately in emails.

Once these digitized, mobile forms are submitted, workflows can be triggered that route information internally to the resource responsible for scheduling inspections. Since all the information supporting inspections and job close-out packages are in the electronic form, the job inspection and completion process is significantly accelerated.

When disruptions do occur, smart scheduling can test scenarios in planning mode using a dynamic visual scheduling board that allows the scheduler to perform what-if analysis to reschedule the impacted jobs.



04.

Efficient Execution of Job Repair and Maintenance



It is essential that schedulers properly assign the appropriate technician to the job in a timely manner based on skills, service areas and other workforce management policies.

If the wrong resources are dispatched, diagnosis may be incorrect or not performed. The repairs are not completed as quickly as possible, and the power generation asset downtime is extended. These challenges cause billing delays, lost revenue, poor customer satisfaction and potential SLA penalties.

Solution:

Smart scheduling also comes in handy here because it assists the scheduling team by optimizing the assignment of work based on workforce management policies. Smart scheduling will automatically balance the workload to optimize the sequence of jobs and the allocation of qualified resources to best meet the business goals of efficiency and effectiveness. This in turn improves profitability and maximizes customer satisfaction.

05. Adoption of the Internet of Things (IoT)

IoT and field service have always been viewed as a dream match.

The promise of IoT, to remotely monitor activities and proactively dispatch a technician, and eventually provide predictive maintenance, aims to improve the customer experience and deepen loyalty with the service provider. Without a core field service system that is able to take in the IoT data and integrate with an IoT solution to automate the service process and workflows, service operations teams are not able to capitalize on the rich data. They lack the capabilities to streamline the service process missing out on significant cost savings and creating new service offerings.

Solution:

Finding an FSM solution, like a field service hub which integrates with an IoT system can pass important data used to monitor on-site power generation systems remotely. System disruptions can be better predicted and managed so technicians can be dispatched proactively based on system performance and testing data. These service insights can prevent emergency repairs, improve customer satisfaction and deepen loyalty between the service provider and their customer by fixing issues before they occur. IoT also allows for the possibility of diagnosing problems remotely without ever having to dispatch a truck, saving time and expense.



Never before could on-site power generation service providers monitor, in real-time, whether a machine or device was working correctly. IoT also provides other operational efficiencies and cost reductions. Since IoT uses real-time analytics to identify issues, alarm codes and other machine-driven triggers, the services and parts required for an individual system can be more accurately defined.

This insight increases first-time fix rates, saving time and money. Additionally, the ability to remotely triage and resolve an issue provides a timelier problem resolution. It reduces the amount of costly “truck rolls” required to support a service organization’s customer base.

In a nutshell, predictive maintenance that connects to cloud platforms and employs algorithms to analyze data allows machines to “self-heal,” reduces downtime, allows for a flexible, on-demand workforce and contributes to increased profits.

Are you experiencing one of these challenges?

Finding an FSM solution can certainly address these obstacles and help you grow in your path of Field Service Maturity, especially as you scale your business with the important growing need for on-site power generation systems.

Interested in learning about FieldAware's FSM solution? Visit us online today at fieldaware.com and request a demo to see our field service management hub in action.



About FieldAware

FieldAware is a cutting-edge, cloud-based, mobile field service management hub, empowering companies to transform their field service with automated processes and streamlined operations. FieldAware is advancing field service with comprehensive solutions including optimized scheduling, dynamic and intelligent forms capture, robust reporting and analytics, AR, and IoT. FieldAware's flexible platform streamlines technician enablement and digitizes business processes while automating the collection and dissemination of field and back office information. Combining our award-winning, easy to use/easy to adopt software with the industry's best implementation and support services, FieldAware provides rapid ROI, accelerating improvements in productivity, safety, compliance, customer satisfaction and revenue growth.

Contact Us

To learn more about our solutions or to schedule a demo:

Call us on

US and Canada **800-935-0736**

UK **0800 098 8487**

Australia, APAC **1800 821 628**

Email us at sales@fieldaware.com

Visit www.fieldaware.com

