compassites
right direction

Case Study

Azure Power

Client Profile:

Azure Power Global Limited is an independent power producer, a developer and an operator of utility and commercial scale solar PV power plants headquartered in New Delhi, India. The company was founded in 2008 by entrepreneur Inderpreet Wadhwa. The company has a track record of delivering solar projects and a total portfolio of over 1000 MW across 18 states.

Technology Used:

PHP, MySQL and OS Ticket

Business Situation:

Azure Power was experiencing difficulties in ensuring budget control and revenue tracking due to not having real time visibility into the performance of its solar power-based energy plants. There were no tracking or alerting features in place, and their existing dashboard lacked many crucial performance-related components. Azure Power wanted a solution to gain transparency into their operations to gain greater control over production and costs.

Solution Approach:

Compassites came up with a solution that addressed four critical aspects:

Real time monitoring:

Compassites' application could monitor the health of the plants, track actual generation compared to the budgeted one, ensure power plant performance is maintained, as well as do a real time performance analysis of every attribute that may be impacting overall performance and may be causing losses in generation.

Alerts:

Alerts are of two types:

- Proactive alerts: These include alerts on equipment needing cleaning and inverter efficiency checking at 15-minute intervals. Any inverter that shows more than a 3% deviation from expected performance will be singled out for analysis.
- Reactive alerts: These are alerts sent post the occurrence of an unforeseen situation, such as equipment damage due to stray animals, weather elements, etc.

Workflow assignment:

Daily maintenance tasks are monitored using a maker-checker model wherein these tasks are connected with automated workflows. If, for instance, a plant gets damaged, an automated workflow reports the specific damage and requests replacements.

Reporting:

This includes live dashboards showing performance data from plant level to inverter level, as well as real time reports of weather attributes (temperature, wind speed, and sunlight intensity).

Benefits & Results:

- 50% efficiency enhancement in operations and maintenance
- 30% reduction in losses
- Operations are now running within budget and revenue forecasts are being met

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