HOW **ENGIE** ENERGIZED ITS REPORTING PROCESS

For utility companies, end-of-month reporting periods can be stressful. Management waits impatiently to receive the closing reports with KPIs from the previous month's accounting cycle. The data is often incomplete and not up-to-date, and those responsible for the reports spend days preparing labor-intensive, manual reports. Now imagine the added pressure of being the world's number one independent power producer, with over 115 gigawatts of installed capacity and millions of customers relying on your business to run reliably and efficiently. That's precisely the kind of frustrating situation ENGIE, a French multinational electric utility company, faced each month before it automated its business management process with the help of OSIsoft's PI System™.

Prior to using the PI System, it would take information managers like Frederick Foulon, Head of Business Information Management at ENGIE, up to five business days after the start of a new month to do a "fast close," a financial report containing data on megawatt hours produced each month. Foulon needed 12 business days to do actuals reporting, or KPIs such as fuel consumption, run hours for the plant, power availability, and other indicators. Nearly all the steps in the reporting process – from gathering data to transferring, collating, contextualizing and interpreting the data – had to be done manually. Awash in seemingly endless iterations of Excel spreadsheets, ENGIE's onerous reporting process had to be repeated with some slight variation for each of their 64 plants across Europe and other data providers in their network, further increasing the time and complexity of the reporting process.

ENGIE's Excel-based reporting system was time-consuming and unreliable. Updated total energy production data from a grid operator, for example, would often not appear in final reports because all the manual steps made updating prohibitively complicated. The end-of-month KPI reports were not the most accurate and up-to-date representation of the company's business functions.

CHALLENGE

Laborious and time consuming process to create monthly reports on plant operational data and key performance indicators (KPIs).

SOLUTION

The PI System with Asset Framework (AF) automates reporting process.

BENEFIT

Financial reports now take 1 hour instead of five days to prepare and KPI reports take one day instead of 12 days.

Real-time Operational Intelligence: The PI System allows ENGIE to trend energy output data from each plant for daily and monthly totals.

To address such challenges, ENGIE adopted the PI System to gather real-time data from its various power plants and other data sources. Using OSIsoft's Asset Framework (AF), a contextualization layer of the PI Server, engineers created standard data models of the power plant equipment to structure raw data streams into a coherent hierarchy of plants, assets and processes. During ENGIE's presentation at PI World Barcelona in 2018, Business Analytics Data Manager Roy Nolf explained how he and his team used AF to set up different data models with AF templates. One function, for example, analyzed the total megawatts produced by a plant on the previous day. With AF, ENGIE could run calculations that automatically aggregated the data into the daily and monthly energy output totals needed for fast close and KPI reporting.

AF brought other benefits. Data managers were able to receive more information about the cause of an outage – whether it was planned, unplanned, or due to internal or external reasons – through custom AF analytics. Once operations data was contextualized and structured, it could be fed to Power BI dashboards and made instantly available in IT systems for centralized decision-making at ENGIE's headquarters.

With the help of the PI System, ENGIE's data management teams were able to fully automate their entire reporting system for each power plant. Changes to energy net totals are now automatically updated on a daily basis, saving both time and resources. Instead of five business days, fast close reports are now available one hour after the month ends. Instead of waiting an anxiety-inducing 12 business days, managers now only wait one day for the actuals and KPI reports. In the future, ENGIE hopes to leverage Event Frames to gain more operational insights by creating automatic notifications that will be sent to data managers to give them instant access to more information when there is a big drop in load.

"This is what I wanted to show you," Nolf said at the end of his presentation, "the real force of AF. The result gives me the same feeling as when Hannibal from the A-Team puts his cigar in his mouth and says 'I love it when a plan comes together.'"

For more information about ENGIE and the PI System, watch the full presentation here.

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> — Roy Nolf, Business Data Analytics Manager, ENGIEt

Foulon, Frederik and Nolf, Roy. "How PI AF helps you to facilitate your data management process." https://www.osisoft.com/Presentations/How-PI-AF-helps-you-to-facilitate-your-data-management-process/