

CASE STUDY

CLIENT

BURNS & MCDONNELL

INDUSTRY



Utilities

PROJECT

Transmission SCADA Replacement Program (TSRP)

LOCATION

Northern California

SERVICES PROVIDED

Risk and Change Management

Status, Forecasting, and Actual Cost Reporting

Possession of Accruals / Accrual Owner

Engineering, Procurement and Construction CWA Management



DRMcNATTY

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DRM supports Project Management

DRMcNatty supported the company with Project Management provision for a multiple phase program created to implement a direct SCADA path for control and visualization of the electric substations. DRM provided project scheduling, cost controls, and effective coordination strategies among a technically diverse team in order to support the Transmission SCADA Replacement Program (TSRP).



OVERVIEW

The Transmission SCADA Replacement Program (TSRP) was launched to upgrade the remote monitoring and control capabilities to all electric substations. The Transmission Grid Operations (Grid Ops) group currently utilizes the Alstom Grid EMS system to monitor the grid and a separate Scada system (RTscada) for control. Grid Ops can currently control the SCADA devices from the EMS, but the communication through RTscada is cumbersome and not acceptable for real-time control room operators. Additionally, RTscada also has security architecture issues. DRMcNatty was sought out for project management support with TSRP to oversee multiple projects from project kickoff and scoping through testing and implementation. Ultimately, a direct SCADA path for control and visualization will be implemented across the entire grid to remove the dependency on RTscada.

CHALLENGES

The DRM team was immediately tasked with owning project accruals and schedules for multiple projects and contracts in various phases of the project life cycle. Many project scopes were underdeveloped, resulting in project delays and change orders. Meanwhile, the roles and responsibilities among several key stakeholders were in a process of transition. The DRM team developed work-flow processes and activity trackers for the diverse project team and dynamic ongoing projects. These tools were regularly utilized in future projects for weekly status reporting and more transparent milestone forecasting, which allowed for more precise cost control.

Since DRM was brought onboard to assist TSRP, the apparent confidence in initial scope development ultimately resulted in a smaller project life cycle, allowing for the increase in annual target testing goals.

SOLUTION

Developing a more proficient understanding of the current state and future goals of the program allowed us to recognize gaps and disconnects in the process flow for a typical project. The roles and responsibilities of all stakeholders first had to be clearly defined, communicated, and able to be easily referenced in a mutually shared database. A thorough analysis was done of in-flight projects to discover and understand the setbacks that were being encountered. Unfortunately, while filling in these gaps, additional loopholes and process flaws were exposed throughout the remediation process. DRM assisted

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in recognizing these flaws in the diverse project process flows which naturally lead to increased confidence among all stakeholders for understanding common project issues and ways to mitigate and reach resolutions.

The DRM team established new methods for tracking project activities and sub-processes for projects under EPC contracts, as well as projects utilizing internal construction resources. The transparency allowed for any stakeholder to verify and understand the current state and status of any project. Naturally, this new method solidified the data being recorded Primavera P6 for tracking of project schedules and resources for the program for visibility outside of the TSRP program.

The initial project delays and setbacks from program inception led to eventual circumstances of having to navigate with other projects often having a higher priority. DRM assisted in facilitating awareness of TSRP, communication among program level stakeholders, and overall coordination between TSRP and coinciding projects by understanding the goals and needed resources for each of the projects. Where a project might typically be put “on hold”, DRM helped recognize multi-program alignment opportunities to shorten asset testing durations and allow for additional future testing windows.

RESULTS

DRM was effective in understanding and improving the overall TSRP work process with significant additions in project visibility, program coordination, and resource loading. The program realized many benefits from these efforts, such as modification or clarification to existing design and construction standards, and identifying windows of opportunity for project alignment among different programs. The implementation of these measures helped improve communication and transparency within and outside the program. Project risks became more easily identifiable and predictable, allowing the project team to stay ahead and on schedule, allowing for more opportunities for better time management as project portfolios were increased.

In summary, the DRMcNatty Team established and executed strategies leading to increased annual target testing goals. By identifying and remediating work process flaws, improving communication among a diverse team of internal and external stakeholders, and creating more opportunities for the TSRP PM & PMO team to better align resources and project tasks. With the support from DRM, the project team was able to redefine program efficiency and set higher goals for the future of TSRP.



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