

EMS/BMS Project Update

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Background

- The NYISO currently has a combined Energy Management System (EMS) and Business Management System (BMS) from ABB collectively referred to as Ranger
- The Ranger System was initially placed into operation in 2005, upgraded in 2007 and incrementally enhanced through marketplace and business directed initiatives
- In 2012, ABB announced that they would cease further evolution of the Ranger System in favor of consolidating their products into a single Network Manager Product (NM)
- The Ranger System runs on a dedicated proprietary hardware platform that is projected to reach its end of support lifecycle in 2019
- During 2014 a roadmap assessment included a review of the current vendors and their product offerings
- As a result of the assessment and competitive RFI process, the NYISO staff recommended proceeding with the selection of the ABB EMS and BMS on a single NM platform
- In June of 2016, the NYISO executed a contract with ABB that is based on project milestones and tied to defined acceptance criteria

Total Project Cost

- In 2015 the estimated total cost of the project was \$30.7 million
- In developing the system requirements, we identified a number of additional requirements which has driven the project up from \$30.7 million to \$33.7 million
- The increase in cost includes enhancements and new functionality. Many of the enhancements enable more effective and comprehensive testing strategies or increased preparedness for transition to the new system.
- The project cost includes:
 - Hardware
 - Production Software
 - Software Customization
 - Factory and Site Implementation Services
 - Internal Labor Estimates

Project Implementation

- The project team is a cross-functional group of dedicated team members
- NYISO and ABB held a kick-off meeting in July 2016 and design of the new system is currently in progress
- The following implementation schedule remains unchanged:



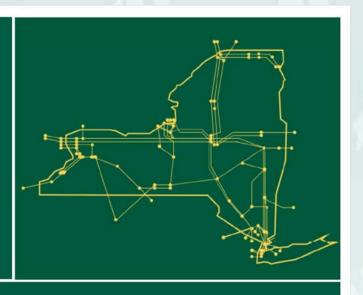
Project Phases:

- 1. EMS/BMS Roadmap Preparation
- 2. Board Advised of Selected Alternative
- 3. Prepare Statement of Work and Contract Phase
- 4. Technical Design, System Development and Vendor Testing
- 5. Site Acceptance Test, User Acceptance Test, Parallel Operations and Production Deployment

Next Steps

- Ongoing dialogue with stakeholders
- Continued technical design and system development phase of project
- Project milestone reporting

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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