

32nd Annual EQ Technical Meeting - **EQPM Extension Project**

Presenting:

Exelon – Corporate G&O / Corp. EQ Engineer

Gary Van Cleave

KCI – VP of Operations

Bob Murr

Technical Support:

Exelon – I&C Engineering Manager

Anthony Dippolito

Exelon – I&C Engineer / Project Manager

Surendra Salgia

KCI – Chief Executive Officer

Aiham Alsammarae

KCI – President

Anup Behera

KCI – Project Manager

Janice Bieronski

KCI – Project Engineer

Tim Norman



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Background

- Clinton Power Station (2019)
 - CPS - Funded their station EQPM review
 - 262 PMs examined and 70% extended for 7 component types.
 - Followed by PILOTs at Byron & Nine Mile Point 1 with similar results noted proving repeatability.
- Exelon expanded the effort to examine it's entire fleet under a corporate initiative.
 - Common component types across the fleet
 - Transmitters
 - Limit Switches
 - Solenoid Operated Valves
 - Other components noted for potential savings
 - Relays, AC & DC MCC Buckets, Trip Units, Radiation Detectors, Motor Rewinds
- Projected savings in excess of \$30M

Approach and Methodology

Phase I

- Challenge the basis for the current PM frequency
- Identify conservatisms and potential opportunity

Phase II

- Develop the basis, seek additional data
 - Use actual plant conditions (temps, duty cycle, cycling, operating voltage)
 - Functionality review (PAOT aging recovery)
 - Latest qualification test reports
 - Perform simple additional qualification test

Phase III

- Implement the frequency extension
 - EQ Binder Update
 - PMMR
 - De-scope outage work

Exelon Results and Next Steps

- **CPS results**
 - 175 PMs extended
 - Outage scope reduction
 - Equipment replacement avoided entirely
- **Fleet work is in progress (60%) complete**
 - Similar results
 - SOV, LS and transmitters at most sites
 - Exceeding expectations at several sites, more opportunity
- **Path for EQPM extension going forward**
 - Project completion expected Q1 2021
 - IF sufficient opportunities and cost savings are noted we will go back to request a second round of funding for the additional work.
- **Cost Savings Realized in many ways**
 - Equipment replacement avoidance
 - Design Modification for obsolescence avoided
 - Procurement, planning, installation, dose, scaffolding, disposal avoided.

Exelon Lessons Learned from EQPM project

- Differing levels of EQ experience at each site
- Differences in Binders from station to station as well as MidWest to MidAtlantic
- Need Primary & Back-up EQ Engineers at the stations
- Installation location temperature information not always readily available
- Communications:
 - Key to keeping everyone informed
 - Keeping actions in front of the team
 - Keeping milestones / deadlines
- Cost updates need to be based on actuals and not estimates

QUESTIONS