

*2019 Nuclear Utility Obsolescence Group
Annual Meeting*

BWROG Obsolescence Committee Update

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BWROG Parts Obsolescence Committee Chairman*

Purpose

The BWROG Parts Obsolescence Committee is focused on delivering obsolescence solutions for obsolete GE Hitachi BWR Parts.

Benefits

Provide a forum for utilities to provide and share obsolescence data specific to their sites to determine shared interest and aid in the development of obsolescence solutions.

Past Meetings

First committee meeting: Feb 2016

Other meetings: May/Oct 2017; April/Aug. 2018

Current Meetings

April 2019, Wilmington, NC

Aug 2019: Possible Sandia National Labs in Albuquerque, NM with Doug Osborn

Surveys / Teleconferences – Monthly operating rhythm for teleconferences

Participating Utilities :

- | | |
|---------------------|-----------------|
| 1. DTE Energy | 6. FirstEnergy |
| 2. Duke Energy | 7. PSEG |
| 3. Energy Northwest | 8. SNC |
| 4. Entergy | 9. TVA |
| 5. Exelon | 10. Xcel Energy |

Topics

Product/Committee Accomplishments

Current Scope – Issues & Challenges

Product Status – Last Time Buy, Future Scope

Parts Obsolescence Priority Tool

Summary

BWROG-TP-16-007 CR120B Relay (SR/NS)

- CR120B0 – Open AC Relay
 - * CR120BC
 - CR120BD – Open DC Relay
 - * CR120BL – Latched Relay
 - CR120BP – Industrial Relay
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- The BWROG Parts Obsolescence Committee identified the CR120B Relay product line as a product that still has a demand and is critical to support the utilities operations.
 - All committee members will have the ability to purchase the CR120B Relays as needed by the sites.
 - GEH can now actively provide CR120B Relays.
 - Proposed Last time Buy (LTB): CR120BC & CR120BL Relays – finalize by Aug. meeting

BWROG-TP-17-1-386 CR120A Relay (SR/NS)

- The BWROG Parts Obsolescence Committee identified the CR120A Relay product line as a product that still has a demand and is critical to support the utilities operations.
- All committee members will have the ability to purchase the CR120A Relays as needed by the sites.
- GEH can now actively provide CR120A Relays.

BWROG-TP-18-1-386 CR124 Relay (SR/NS)

- CR124C
- CR124D
- CR124E
- CR124F
- CR124G

BWROG-TP-2-386 HFA65 Relay Refurbishment

- Control Spring
 - Contact Spring Heavy
 - Contact Spring Light
 - Moving Contact
 - Fixed Contact
 - Operating Coil – (Various Part Numbers)
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- The BWROG Parts Obsolescence Committee identified the CR124 & HFA65 Relay product line as a product that still has a demand and is critical to support the utilities operations. All committee members will have the ability to purchase the CR124 Relays as needed by the sites. GEH can now actively provide CR124 Relays.
 - The HFA65D and HFA65E families were discontinued approximately five years ago with no identified replacement. All committee members will have the ability to refurbish HFA65 Relays as needed by the sites predicated on replacing those parts still available without need to replace the pole piece, which is currently unavailable for purchase.

2019 Technical Products

Reverse Engineer

CR120K

- GEH gap analysis and testing in final stages - GEH testing new iteration of design this week (2/18-2/22)
- New part #s and equivalencies provided.
- 2nd quarter release (NS)

Electro Governor Mechanical/ Ramp Generator Signal Convertor (EGM/RGSC)

- Procurement Spec and Gap Analysis
- GEH/Paragon partnership and supply agreement in progress
- Functional test project plan
- EMI/RFI plant specific

Alternate Replacement: Reference BWROG-TP17-2-386 Obsolescence Assessment

CR2820 Relay

- Design Input Request (DIR) sent out by GEH to develop Alternative Replacements.
- Need SR conditions
- Solutions consist of 3 types of Relays: Timing, Standard & Protective.
- 2nd quarter release (NS).

CR127 Switch

- Unable to source original Intellectual Property; potential alternates identified

GEH Supplier Negotiation / Last time buy opportunity

SAM Relay

IJCX Relay

180 Meter – Limited Inventory

185 Meter – Limited Inventory

CR120BC Relays – decision by Aug Meeting

CR120BL Relays – decision by Aug Meeting

AGM Temp Indicator Switch – Qty 10 piece Min.

Future Assessments

IAC Relay

CR115G Product Family

CR120E

CR122A

SFF Relay or (188C8866)

HEA Relay

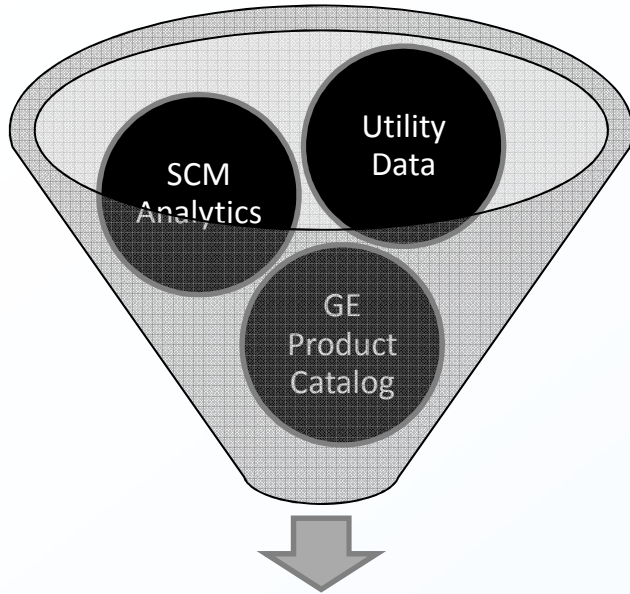
CR306

CR151 other than A & C

Developed in 2017 by GEH to find common obsolete parts.

- Participating utilities provide installed asset/inventory data
- GEH performs analytics to identify the most critical obsolete parts using SPV, Criticality and projected demand.
- Assessment is made by confirming install base and reviewing demand data.
- Potential Solutions are placed in process for Design Information Request (DIR).
- Scalable option to put customer parts on proactive obsolescence watch to integrate with real-time supply chain analytics ... Similar to EESP or system focused EOSP

Parts Obsolescence Priority Tool



Identify Gaps, reduce future procurement risks, reduce quote and lead time for better outcomes.



BWROG
Obsolescence
Committee

Parts Obsolescence Priority Tool

- Phase 1 – Parts ordered from GEH within the last 10 years.
- Phase 2 – Parts with no GEH order history, prioritized based on SPV and customer demand.
- Demand is based on customer input and data “clean up”.



Product Summary

2016

- Spectra E, F, G Frame Breaker
- CR120B Relay

2017

- Spectra K Frame Breaker
- CR120A

2018

- HFA65 Relay (refurbishment)
- CR124 Relay
- CR2940 Switch

2019

- HPCI/RCIC Analog System (EGM/RGSC)
- CR127 Switch
- CR2820 NS, CR2820 SR
- CR 120K Relay

2020

- EPA Breaker
- RPS MG Set
- AK & AKR Breakers

****Not all funded by BWROG Parts Obsolescence Committee****

Summary

The BWROG Parts Obsolescence committee is focused on delivering solutions based on the following:

- Top obsolescence/priority lists
- GEH identified obsolescence

Engagement is key for developing strategies and methods to identify and evaluate new opportunities. Solutions continue to expand to GE supplied parts produced by other vendors.