



DELIVERING THE  
NUCLEAR PROMISE

nuclear matters: my work • my plant • my industry

# Delivering the Nuclear Promise: Standard Item Equivalency Process (SIEP)

Configuration Management Benchmarking Group  
July 2019  
Al Lafleur – NextEra Energy

# SIEP Overview

## **Issue**

Standardized processes to perform alternate replacement item evaluations.

## **End-State**

Standard item equivalency evaluation process (SIEP) procedure and mentoring guide that interface with and leverage the Standard Design Change Process (SDP) where appropriate.

# SIEP Overview

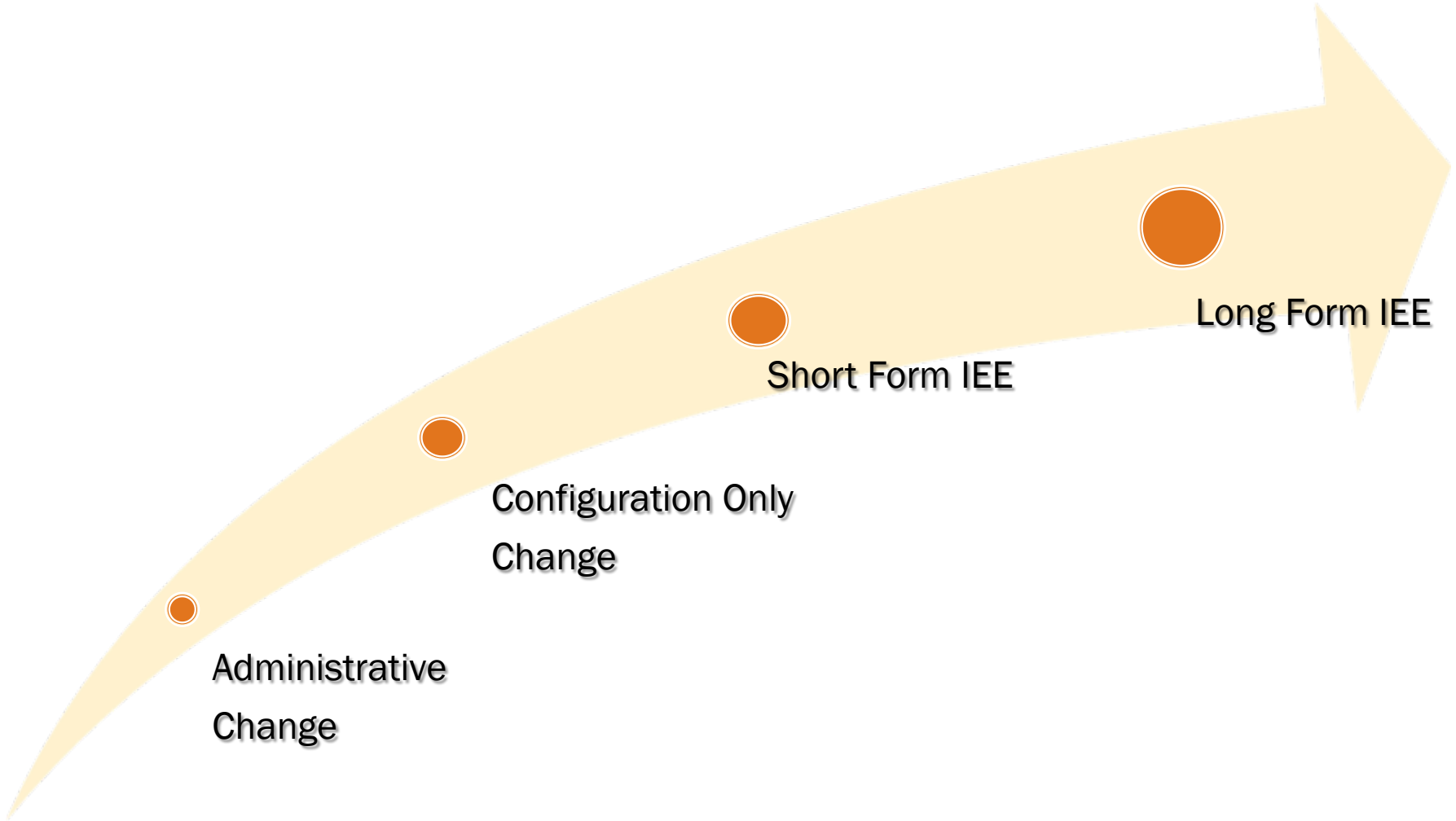
## **Vision of Excellence/Value Proposition**

Improve quality and timely disposition of alternate replacement items necessary to address issues such as obsolescence through application of a best practice industry standard alternate replacement items evaluation in an efficient manner

## **Why important?**

A key element of this effort is to streamline the item equivalency evaluation process using a graded approach, and promote standardized training and mentoring structures

# SIEP Graded Evaluation Process



# SIEP Activities

## SIEP Activity in 2018

- Design Oversight Working Group (DOWG) approved Rev. 0 of the SIEP procedure
  - Some comments held for future revision
- NEI issued Efficiency Opportunity EO-18-EG-01
  - SIEP team drafted wording
  - Cost savings worksheet drafted
    - Both fleet and non-fleet utility information provided
- SIEP procedure approved and available on INPO Nuclear Community Site
  - Nuclear Industry Standard Process Engineering NISP-EN-02

# SIEP Training

- SME training provided after EPRI Procurement Forum in February 2018
  - Additional Suppliers and Utilities attended
- Mentoring Guide and Key
  - IMG-SIEP-001, Industry Mentoring Guide Standard Equivalency Process
    - IMGK-SIEP-001, Industry Mentoring Guide Key Standard Item Equivalency Process
  - Training Staff consulted in development of mentoring guide
  - Implementation of Mentoring Guides – Part of Change Management Plan – Utility Responsibility
  - Supplements or replaces the Utility Training requirements for Personnel performing the Item Equivalency Process



# SIEP Training

- Upon Completion – prepare, review item equivalency evaluation processed in accordance with NISP-EN-02
  - Most utilities allow unqualified/trainee to prepare IEE
    - May require mentor to sign with preparer or just independent review
- Most Utilities consider this a separate qualification from Standard Design Process (SDP)
- Mentoring guide can be implemented in ACAD or Non-ACAD program depending on functional location in organization
  - If under nuclear engineering – ACAD
  - If under supply chain – May not be ACAD
- Mentoring Guide provides standardized method for Utility to utilize in their existing training program
  - Will help personnel transferring or supporting multiple utilities – exemption documented by responsible utility



# SIEP Communication

- Take the time to find out who performs Item Equivalency Evaluations at your facility/Utility
- Review INPO Website – Delivering the Nuclear Promise for SIEP information
- Utilize SIEP Training Presentation
  - EPRI JUTG provided at February 2018 Meeting
    - Use below link to get to EPRI JUTG Meeting information
      - <https://membercenter.epri.com/Programs/065756/pages/eventdetails.aspx?eventID=76BE79E4-191B-4F70-8814-BD57DC5CADAC&eventScope=Cockpit>
- Ensure training staff are notified of the new qualification standards at your facility/Utility





# SIEP Relevant Standards

- **Performance Objectives and Criteria (INPO)**
  - **CM.3-2:** Processes used to maintain consistency among the physical plant configuration, design and licensing requirements and the documented plant configuration are clearly defined.
  - **CM.3-10:** Procedures, drawings, training lesson plans, and related documents are updated promptly by the responsible departments following configuration change implementation.
  - **CM.3-13:** Equivalency evaluations ensure that part replacements do not adversely affect the design functions of systems, components, and structures. Critical design and operational characteristics, including system response effects, are identified and evaluated. Changes in characteristics are thoroughly analyzed, documented, and validated through testing, when necessary, and are approved before the part is placed in service.
- **INPO 10-005, Principles for Maintaining an Effective Technical Conscience**

# SIEP Benefits

- Equivalencies developed by Nuclear Safety System Suppliers (NSSS) requires a certification to the utility that the appropriate design review and item equivalency was performed by the NSSS. This certification requires utility review for compliance with specifications, but does not require a separate utility specific equivalency.
- Reduce evaluation time through use of new short/long form processes.
- Reduction in SDP design products by allowing the use of simpler item equivalency process (for some utilities).
- Collaboration between PE & Design Engineering for items that are within the “Technical Bounding Requirements” where certain inputs from Design lets PE finish the equivalency (versus where Design used a design change or design equivalent change in the past) – such as special installation requirements, overload heater changes, minor calc updates.

# SIEP – Configuration Management Focus

- CM Role in the Item Equivalency Process
  - SIEP Responsible Engineer analyzes and documents special requirements and impacts and takes appropriate actions within Utility-specific processes
    - Engineering Change – Document Change Request (DCR)
    - Implement updates and changes
      - Supports installation of equivalent replacement item
      - Identified by SIEP Impact Assessment
      - Updates documents, databases and controlled documents



# SIEP References

- Efficiency Opportunity EO-18-EG-01
- IMG-SIEP-001, Industry Mentoring Guide Standard Equivalency Process
- IMGK-SIEP-001, Industry Mentoring Guide Key Standard Item Equivalency Process
- Nuclear Industry Standard Process Engineering NISP-EN-02
- Cost savings worksheet
- Change Management Plan
- SIEP Forms
  - Short
  - Long
  - Impact Assessment

# Project Overview – Questions?



# SIEP – Configuration Management Focus

## Alternate Item Impact Assessment Form – PG 1

Alternate Item Impact Assessment Standard Item Equivalency Process NISP-EN-02 Form 3		Catalog ID Number: _____	
		Page 1 of 2 Rev. 0	
<b>Scope/Applicability</b>			
Cat. ID	Description		
RE			
APPLICABILITY TO: <input type="checkbox"/> FLEET	<input type="checkbox"/> (List Sites here)	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>A.1 Special Requirements/Instructions</b>			
SPECIAL STORAGE / RECEIVING:			
MAINTENANCE:			
POST-ISSUANCE TEST / INSPECTION:			
<b>A.2 Updates of Databases</b>			
DATABASES REQUIRING REVISION BY NSCINED PE:			
DATABASE		METHOD OF REQUEST	
<b>A.3 Updates of Controlled Documents/Drawings</b>			
Plant Impacted Documents <small>Enter document type, number, sheet, and current revision level (where applicable)</small>	Evaluation Revision Number	EQUIPMENT # / TAG #	SPECIFIC INFORMATION <small>(Description of change, reference to mark-up, etc.)</small>

# SIEP – Configuration Management Focus Alternate Item Impact Assessment Form – PG 2

Alternate Item Impact Assessment Standard Item Equivalency Process NISP-EN-02 Form 3		Catalog ID Number: _____									
		Page 2 of 2 Rev. 0									
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A.4 Attachments											
A.5 Signatures											
Responsible Engineer: _____											
Other Reviewer (as required): _____											

# SIEP – Configuration Management Focus Long Form - Impact Review

Long Form Item Equivalency Evaluation Standard Item Equivalency Process NISP-EN-02 Form 1	SIEE Number:  <div style="text-align: right;">Page 6 of 6 Rev. 0</div>																																												
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# SIEP – Configuration Management Focus

## Short Form - Impact Review

Short Form Item Equivalency Evaluation Standard Item Equivalency Process NISP-EN-02 Form 2	SIEE Number:		
	Page 5 of 5 Rev. 0		
<b>B.1 Special Requirements/Instructions</b>			
SPECIAL STORAGE / RECEIVING:			
MAINTENANCE:			
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