

Industry Perspective on COLA Standardization

NRC Public Meeting on
Design Centered Approach
February 21, 2006



Objectives of Presentation

- Discuss industry activities and plans for COL application standardization
 - Submittal of high-quality applications with sufficient detail to facilitate NRC review
 - Opportunities for early review & standardization
 - Processes/procedures for submittal and review/acceptance of standardized content
 - Referencing standardized content in COL applications
- Achieve common understanding of design-centered approach
- Establish criteria for selection of standardized content
- Identify needed actions to implement approach

Agenda

- Introduction to NPOC/Industry-NRC Interfaces
- Standardization of COL Applications
 - What can be standardized
 - How will standardization work

NPOC Overview

Mark Geckle

Constellation Energy
(*NPOC Secretary*)



NPOC Origination and Charter

- New Plant Oversight Committee
 - Formulation Meeting at ANS Winter Meeting in Washington D.C. - November 14, 2005
- Mission
 - To support rebirth of the nuclear power industry through successful deployment of all selected (or under consideration) technologies of new nuclear power plants
- Committee falls under NEI governance



NPOC Membership

■ Membership:

- CNO (or higher) of current nuclear licensed facilities that have expressed intent to file COLA or ESP as evidenced by letter sent to NRC
- NEI is an ex-officio member

■ Members:

Constellation (Mike Wallace)

Duke (Brew Barron)

Exelon (Chris Crane)

SCANA (Steve Byrne)

TVA (Karl Singer)

Dominion (Dave Christian)

Entergy (Gary Taylor)

Progress (Scotty Hinnant)

Southern (Barnie Beasley, Jr.)

NEI (Marv Fertel)



NPOC Objectives

- Provide unified direction and voice for the nuclear industry on policy matters related to new nuclear:
 - NRC rulemaking, guidance documents, processes, resources, schedules
 - DOE and Treasury Department rulemaking on Energy Policy Act of 2005 nuclear provisions
 - Consensus view to Capitol Hill

Industry – NRC Interface

I. Oversight & Policy Issues

NPOC

NRC Senior Management

II. Generic Issues (Common for all new nuclear)

NEI
(NEI-04-01,
Part 52)

NRC Staff
(RG/SRP
Update)

III. Standardized Application Interactions & Development (common for each technology)

Applicants

Consortia
(Standardized Team
Application Sections)

**NRC Technology
Project Managers**
(Review of Std Team
Application Sections)

IV. Specific Applications

COL Applicant
(COL Application)

**NRC COL
Project Manager**
(Review of Plant
Specific COLAs)

Standardization Approach

Peter Hastings

Duke Power Company

(Licensing Manager, Nuclear Projects)



Standardization Approach - Introduction

- NRC and industry support standardization of COL applications
 - Central to managing applicant and NRC resources and maintaining schedules for COL application reviews
 - Implementation of NPOC/industry initiative
 - Consistent with Design-Centered Approach
- Common understanding needed of expectations and benefits
- Need for timely action to realize benefit of standardization in pre-application phase



Keys to Success of Standardization and Early Submittal/Review

- “Large amount” of standardization
- Separable issues/submittals
- “Worth tackling” – i.e., clear benefit in terms of schedule, resources, or certainty
- Commitment to use of standard material by other applicants
- Robust NRC approval of standard material – SER or better



What Is “Standard”?

- Standardized
 - Technology specific (standardized within AP1000, ESBWR, or U.S. EPR)
 - Technology neutral
 - ◆ Process/Policy issues
 - ◆ Operational program descriptions – generic
- Non-standard
 - Site-specific (e.g., site suitability)
 - Operational program descriptions – site specific
 - Consistent approach
- Identification efforts to date
 - Standard content identified at section X.y level
 - “Topicals” list to close COL Action Items
 - Initial work in identifying potential technology-specific “modules”



Standardized Content (Example)

COLA Section		Potential Common Section for a Specific Reactor Type	Potential Common Section for All Reactor Types	Applicant and/or Site-Specific Section	Combination of Common and Applicant/ Site-Specific Section
FSAR Chapter 8 – Electric Power					
8.1	Introduction	X			
8.2	Offsite Power System			X	
8.3	Onsite Power Systems	X			
8A	Miscellaneous Electrical Systems (ESBWR)				X
8B	Realistic Station Blackout Evaluation (ESBWR)				X
FSAR Chapter 9 – Auxiliary Systems					
9.1	Fuel Storage and Handling	X			
9.2	Water Systems				X
9.3	Process Auxiliaries	X			
9.4	Air Conditioning, Heating, Cooling, and Ventilation				X
9.5	Other Auxiliary Systems				X
9A	Fire Protection Analysis (AP1000)				X
9A	Fire Hazards Analysis (ESBWR)				X
9B	Summary of Analysis Supporting Fire Protection Design Requirements (ESBWR)	X			

Preliminary/Predecisional



Criteria for Early Submittal

- Urgency/importance of issue resolution (includes critical path items)
- Departure/deviation from regulation (e.g., DCD, ESP) or guidance
- New or unreviewed subject area (e.g., new methodology)
- Long lead time to draft, evaluate, or resolve issue
- Opportunity to mitigate future resource problems
- Complicated or controversial issue
- Separability as standard content
- Early review/approval needed to provide confidence in follow-on work
- Information can be ready for early review



Examples of Standardized Content for Early Submittal

- Generic (e.g., Operational Programs)
- Technology-specific
 - Closure of COL Open Items
 - Design changes

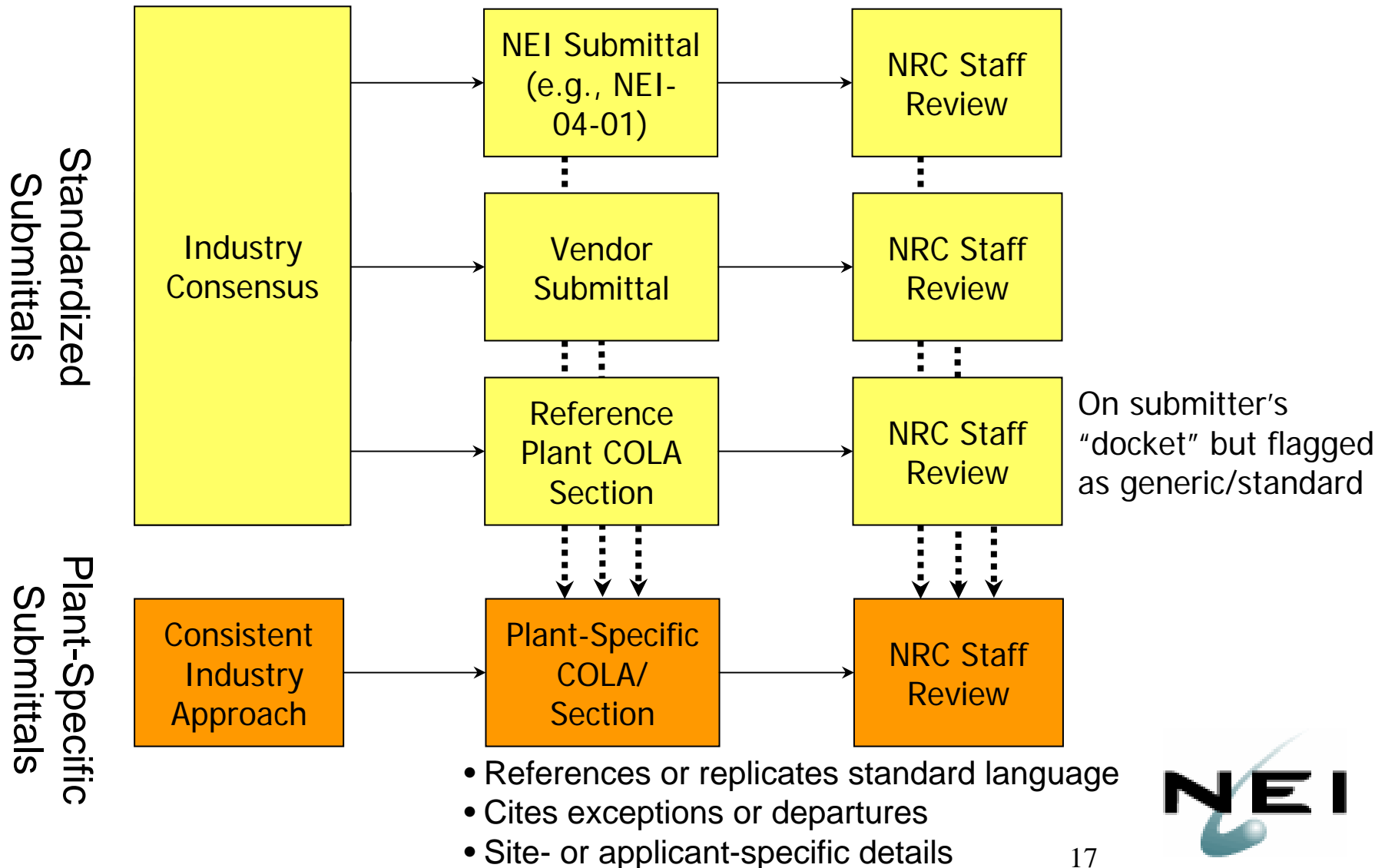


Standardization Vehicles

- Approach for standardization of:
 - Submittal of standardized input (early or otherwise)
 - NRC Staff review and RAIs
 - Staff approval
 - Finality
 - Reference to approved standard sections by other applicants



Standardization: Submittals



Example: Certified Design (AP1000)

- Common goal: closure of open items and review of design changes
- Submittals by Westinghouse to be associated with the generic portion of the “reference plant” review
- Letter pending with proposal for joint submittal of Topical Reports (including schedule)
- Review results in one of three conclusions:
 - SER indicating open item is closed
 - SER indicating open item is partially closed; remaining portion of open item is rewritten as more limited open item
 - SER to reflect limited number of design changes
- Individual applicants reference standardized content
- Additional finality through supplemental rulemaking or other mechanism

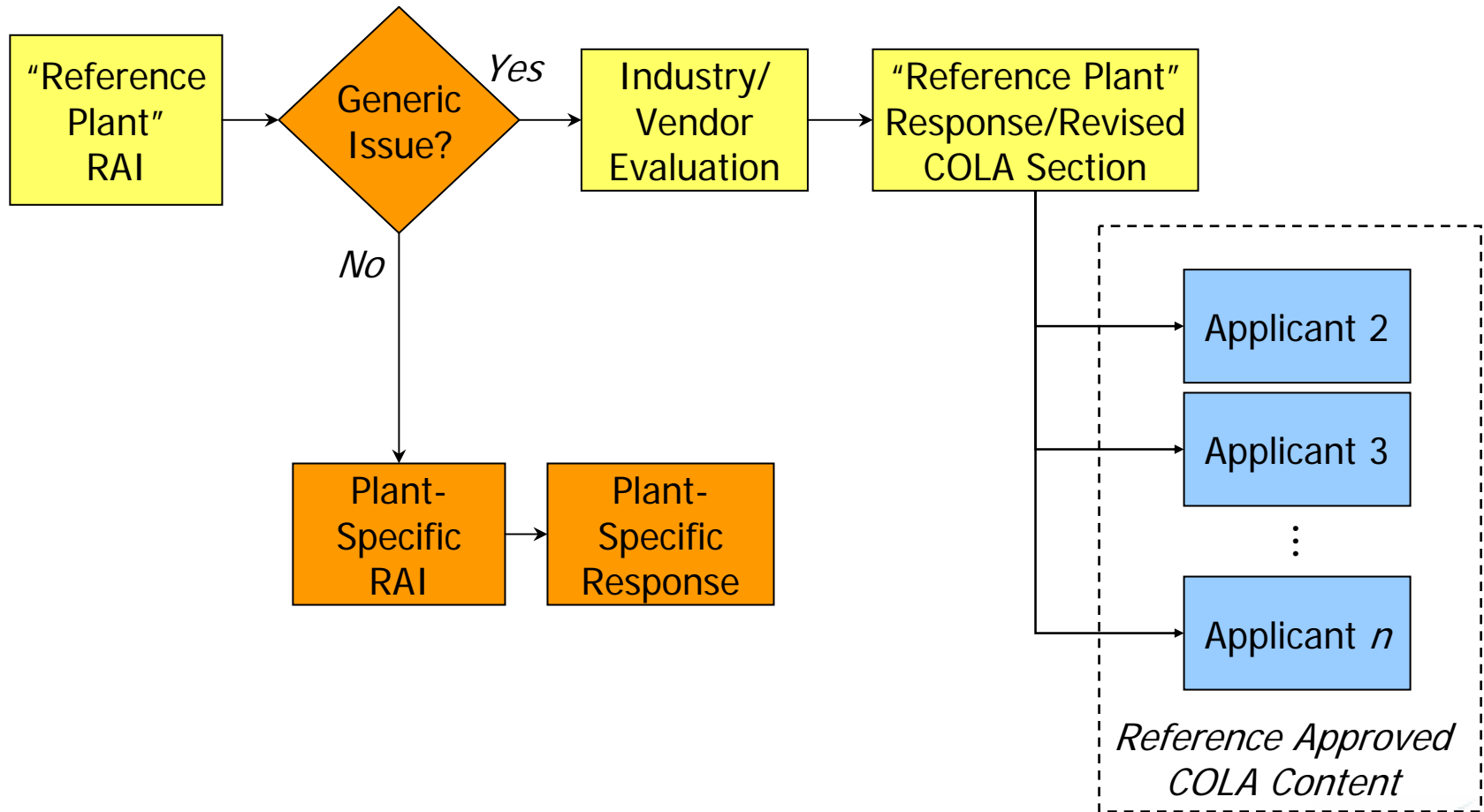


Example: Parallel Design Certifications (ESBWR & U.S.EPR)

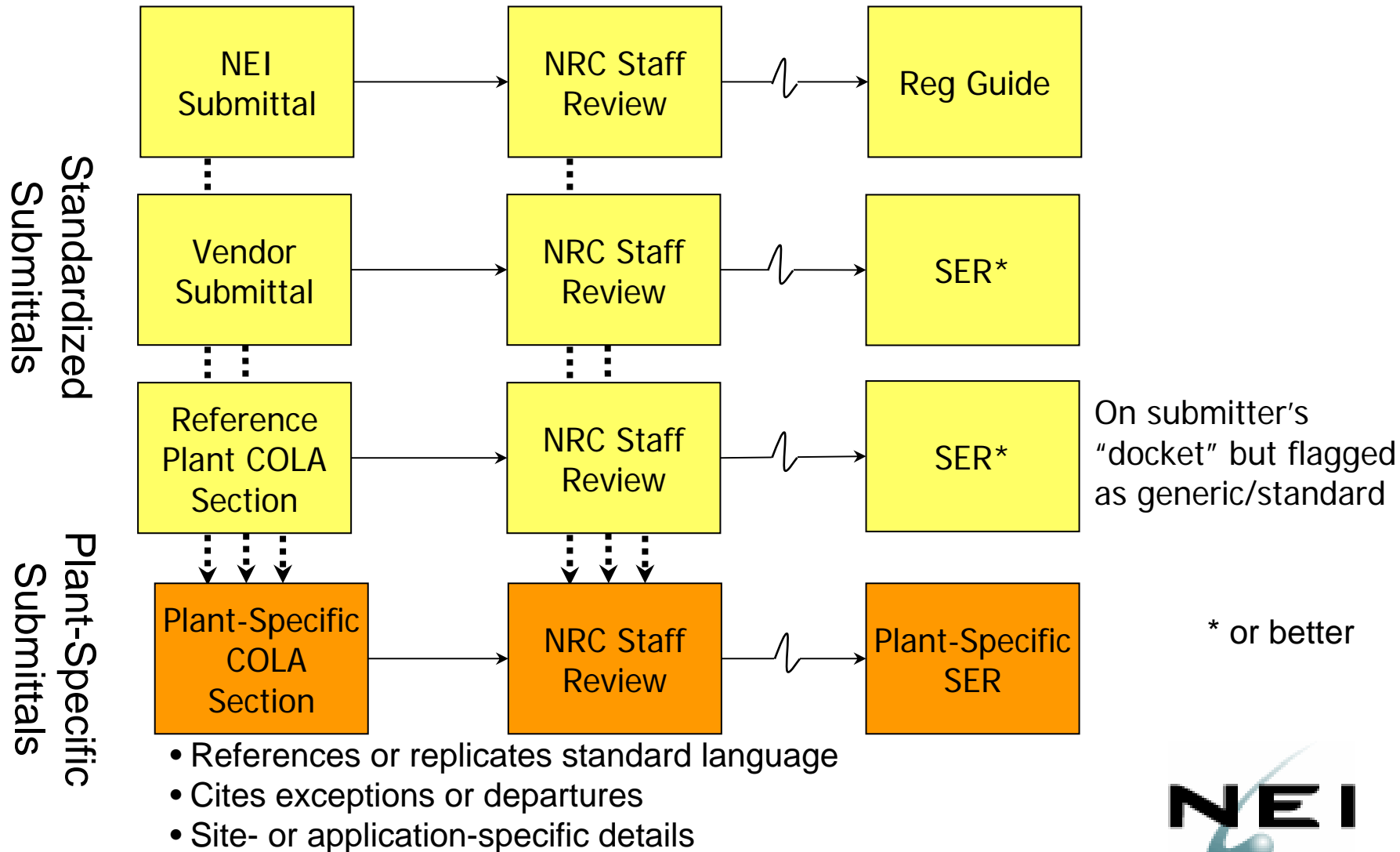
- Similar concept for addressing issues early, but with opportunity to feed directly into Design Certification (DC) process
- DC or pre-DC phase submittals, with SERs for some Topical Reports
- Identify opportunities in parallel COLA preparation effort to:
 - Roll issues into design certification (ESBWR)
 - Submit additional information prior to DCD submittal or as part of DCD (U.S. EPR)



Standardization: Reviews



Standardization: Approvals



Standardization: Finality

- Rulemaking
 - DC rulemaking
 - Supplemental rulemaking
- Possible hearing on “standard content” SERs
- Plant-specific hearings



Implementation Issues

- Acceptability of phased COLA submittals
- Reference by subsequent applicants
- Guidance applicable to generic content at time of submittal – vs – guidance applicable at time of COLA referencing standard content
- Dependencies between standardized content
- Increased efficiency in hearing process for standardized content

Next Steps

■ Process and Products

- Assess commonality between industry and NRC re: design centered approach
- Identify process issues in need of further discussion
- Schedule interaction to resolve process issues

■ Implementation

- Finalization of criteria and identification of standard sections
- Upcoming COLA guidance workshops will inform ongoing development of standard content
- Initial submittals
- Schedule for all

