



SL-TR-1 Revision 26 Pre-Submittal Meeting

February 1, 2021

Agenda



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- Introductions
 - Overview of Sargent & Lundy Services to the Nuclear Industry
 - SL-TR-1A Revision – Primary Drivers and Background
 - SL-TR-1 Revision 26 Submittal

Participants & Introductions



- Nuclear Regulatory Commission:
 - Kerri Kavanagh – Branch Chief - Quality Assurance and Vendor Inspection Branch
 - Leslie Perkins – Project Manager - Office of Nuclear Reactor Regulation
 - Andrea Keim – Office of Nuclear Reactor Regulation
- Sargent & Lundy:
 - Tom Behringer – Chief Nuclear Officer
 - Mark Santschi – Director of Engineering & Innovation
 - Sandy Jannetty – Project Director (PSEG)
 - Quinn Reynolds – Project Manager (AEP)
 - Randy Kurtz – Quality Assurance Director
 - Jim McIntyre – Senior Quality Service Manager
 - Adam Mrugacz – Quality Services Manager

A decorative header featuring a blue geometric pattern of overlapping triangles and polygons, creating a sense of depth and movement.

Overview of Sargent & Lundy Services to the Nuclear Industry



Nuclear Power Group Engineer of Choice / MSA



<u>Client</u>	<u>BWRs</u>	<u>PWRs</u>	<u>CANDUs</u>	<u>Totals</u>	<u>Status</u>
Ameren UE	0	1	0	1	Awarded 2017
American Electric Power	0	2	0	2	Renewed 2018
Arizona Public Service	0	3	0	3	Renewed 2017
Bruce Power	0	0	8	8	Expected 2019
Constellation Generation (Exelon)	2	3	0	5	Renewed 2018
Detroit Edison	1	0	0	1	Expected 2020
Dominion Generation	0	7	0	7	Renewed 2014
Duke	2	9	0	11	Awarded 2018
Energy Harbor	1	3	0	4	Renewed 2019
Energy Northwest	1	0	0	1	Awarded 2021
Exelon	12	4	0	16	Renewed 2018
FPL / NextEra	1	7	0	8	Awarded 2014
Luminant	0	2	0	2	Awarded 2021
Nebraska Public Power District	1	0	0	1	Awarded 2021
Ontario Power Generation	0	0	10	10	Awarded 2012
Pacific Gas & Electric	0	2	0	2	Awarded 2014
Talen Susquehanna	2	0	0	2	Awarded 2015
PSEG Nuclear	1	2	0	3	Awarded 2018
Southern Nuclear Operating Company	2	4	0	6	Awarded 2013
STPNOC	0	2	0	2	Awarded 2011
Tennessee Valley Authority	3	4	0	7	Renewed 2017
Wolf Creek	0	1	0	1	Awarded 2017
Xcel Energy	1	2	0	3	Renewed 2019
Totals	30	58	18	106	
Represents 88 of 96 operating US nuclear units, plus 18 Canadian Units					

As of January 2021

Nuclear Power Group

2020 Top 10 Clients - Services



CLIENT
TENNESSEE VALLEY AUTHORITY
EXELON
DOMINION
PSEG
AEP
DETROIT EDISON
XCEL ENERGY
SOUTHERN NUCLEAR
ARIZONA PUBLIC SERVICE COMPANY
AMEREN

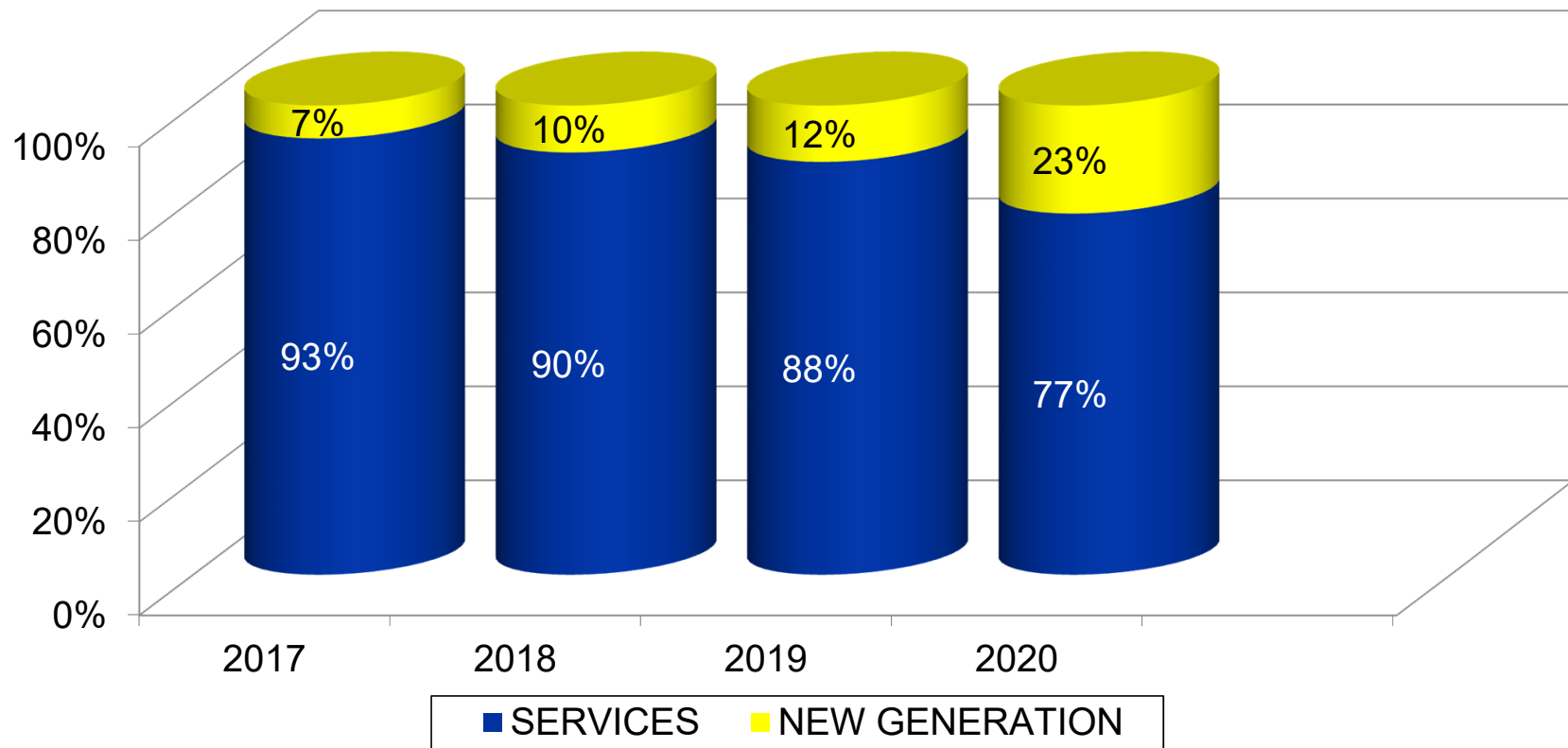
Nuclear Power Group

2020 Clients - New Facilities



CLIENT
NUSCALE POWER
WESTINGHOUSE
SOUTHERN NUCLEAR
SHINE MEDICAL TECHNOLOGIES
EMIRATES NUCLEAR
KEPCO
X-ENERGY
EDEN

Nuclear Power Group Services Versus New Generation



S&L Government Services Division



- S&L acquired ARES Energy Services Division (ESD) in May 2019
- ARES ESD was integrated as the Sargent & Lundy Government Services Division
 - Work performed by this Division is under the *Sargent & Lundy Engineering Services, Inc. (ESI) Quality Assurance Program Manual*.
 - The Divisions work is primarily targeted at Department of Energy (DOE) activities.

SL-TR-1A Revision – Primary Drivers & Background



Revisions to SL-TR-1A



- Primary drivers for the Changes to SL-TR-1A include
 - An update to the ASME NQA-1 2008/2009a edition
 - Extending I&C System Integration to Safety-Related services
 - General Updates

Change to ASME NQA-1 2008/2009a



- Sargent & Lundy clients for New Facilities and other business opportunities are more frequently requiring ASME NQA-1 2008/2009a as the QA program basis
 - NuScale
 - Shine Medical
 - Eden
 - X-Energy
 - Societatea Nationala Nuclearelectrica

Current Digital Engineering Scope



Specifications

Detailed Design &
Design Changes

Calculations

FAT/SAT Witnessing

V&V

Critical Digital Reviews

Qualitative Assessments

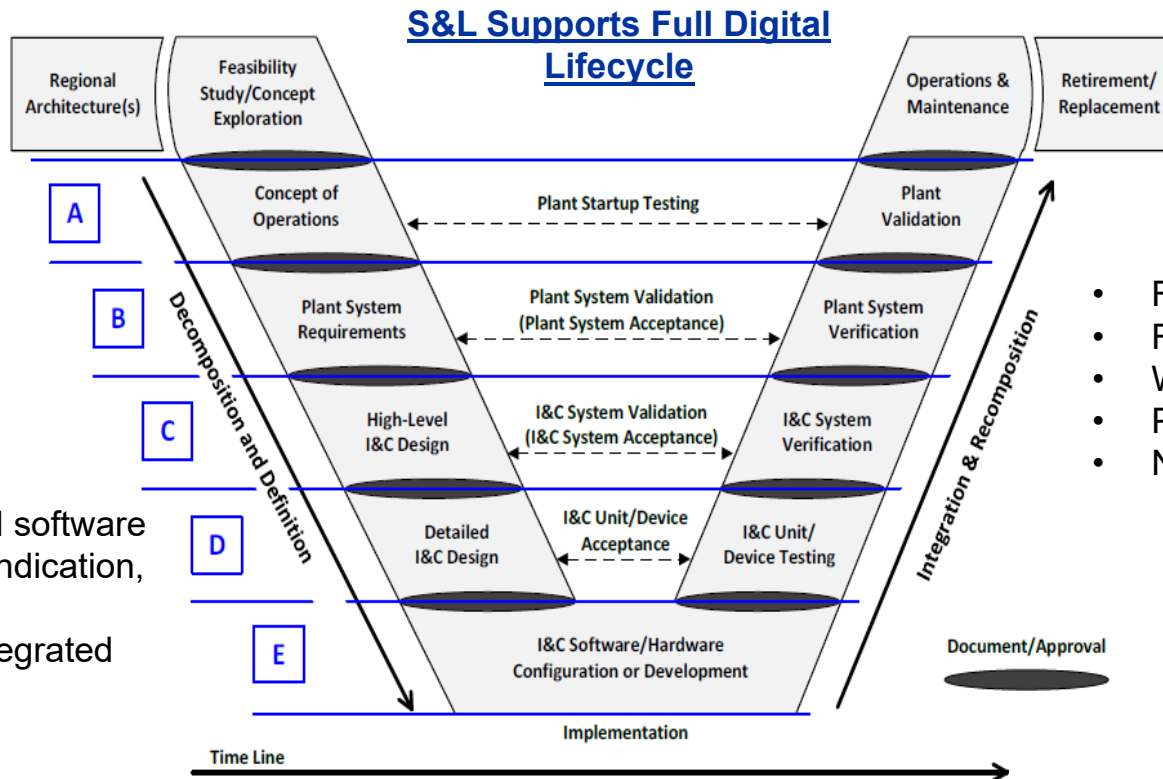
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Training

Current System Integration Activities Non-Safety-Related Scope



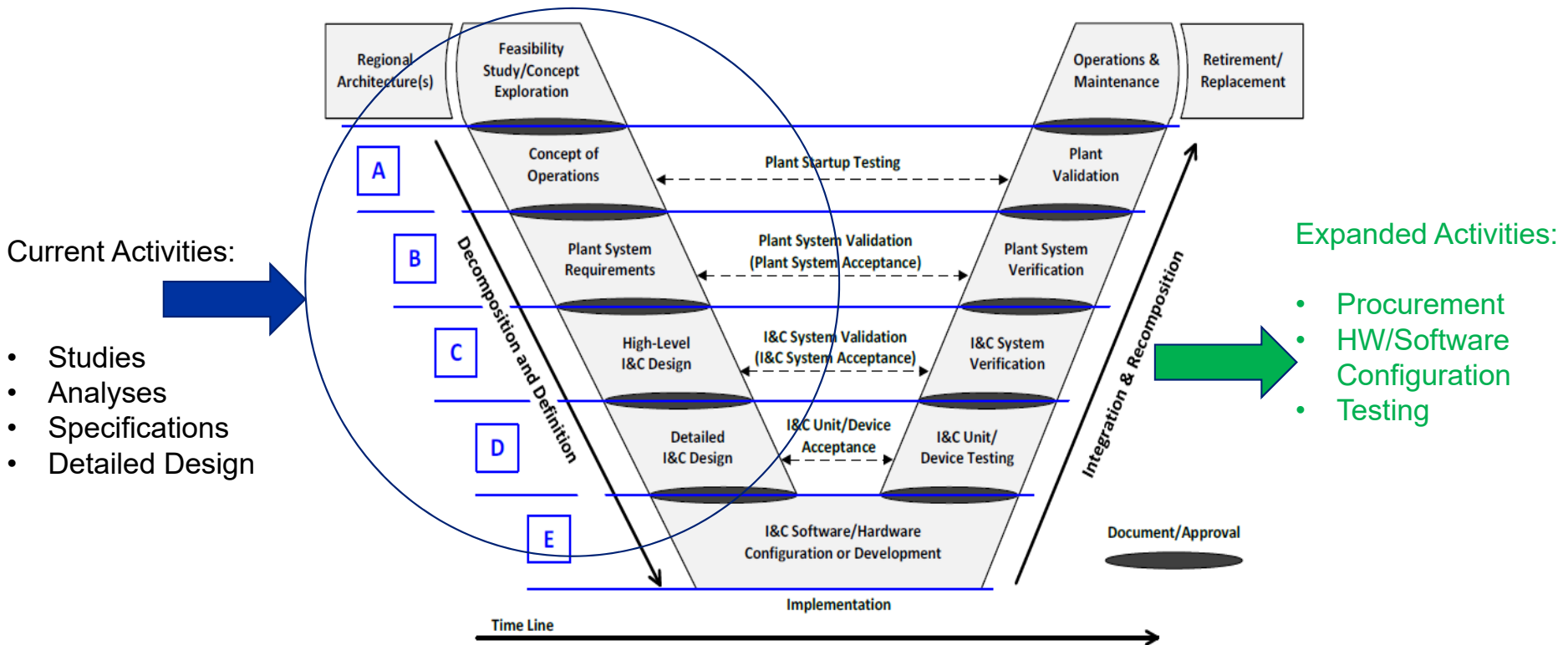
- Select hardware and software
- Configure controls, indication, and Graphics
- Perform Unit and integrated testing



- Relays
- Recorders
- Workstations
- PLCs
- Networking Equipment

EPRI DEG "Vee Model"

Future System Integration Activities Safety-Related Scope



EPRI DEG "Vee Model"

General Updates



- Updated commitments based on revisions to Regulatory Guides
- Recent organizational changes
 - The Nuclear Power Technologies Group is now the Nuclear Power Group
 - The Director of Engineering, Chief Operations Officer and Director of Operations is subsumed under the single title of Director of Engineering & Innovation.
- Revised to remove 10 CFR 50.55(e) as this regulation is not applicable to the activities S&L or its suppliers are typically engaged in.

SL-TR-1 Revision 26 Submittal



Submittal Content



- SL-TR-1 Revision 26 Submittal Content
 - Cover letter
 - SL-TR-1 Revision 26 with changes tracked and a summary of changes listing
 - ASME NQA-1 1994 and 2008/2009a Comparison Matrix
 - Details the changes between 1994 and 2008/2009a and Sargent & Lundy's evaluation of the impact to SL-TR-1A Revision 25.
 - Comparison Matrix Approach

ASME NQA-1-1994 Content	ASME 2008/2009a Content	Impact to SL-TR-1A Rev. 25
Content in common with 08/09 is in BLACK. Content not in 08/09 is highlight in RED	Content in common with 1994 is in BLACK. Content added in 08/09 is highlight in BLUE	Changes to SL-TR-1A are noted. Changes to supporting procedure/standards are identified but not detailed.

- Submittal will be Electronic (Requested document formats? (.doc, .pdf, .xls))
- NRC Review and Safety Evaluation Report Schedule?



Thank You
