



Advanced Nuclear Technology

2024 Product Catalog

EPRI ADVANCED NUCLEAR TECHNOLOGY (ANT) PROGRAM

The Advanced Nuclear Technology (ANT) program is helping to accelerate the deployment of new nuclear power around the world. The program includes an extensive portfolio of products that target efficiency improvement opportunities that minimize deployment and operational risks and uncertainties. The program portfolio includes a myriad of products that support informing integrated resource planning, driving design innovation, reducing deployment costs, and support plant startup. The program’s activities evaluate and address the challenges of deploying and operating nuclear power plants of all plant designs including large light-water reactors, small modular reactors (SMRs) and the diverse non-water-cooled reactor technologies.

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2024 PRODUCTS

FABRICATION AND PROCUREMENT

3002026519	Advanced Nuclear Technology: Alloy 690 Steam Generator Tubing Specification Sourcebook: 2023 Revision
3002025254	Supply Chain Challenges and Opportunities for Structural Components in Advanced Energy Systems: EPRI Workshop Summary
3002023900	Small Modular Reactor Vessel Manufacture and Fabrication: Phase 1—Progress (Year 4)
3002023867	Advanced Nuclear Technology: Evaluation of New Fabrication and Pre-Treatment Processes on Relative PWSCC Susceptibility of Alloy 690 Tubing
3002021059	Advanced Manufacturing Methods: Candidate ALWR and IWSMR Primary System Components and Roadmap
3002021037	Program on Technology Innovation: Small Modular Reactor Vessel Manufacture and Fabrication: Phase 1—Progress (Year 3)
3002019764	Quick Insight Brief: Directed Energy Deposition-Additive Manufacturing
3002019761	Quick Insight Brief: Manufacture of Nuclear Components Using Powder Metallurgy and Hot Isostatic Pressing
3002019335	Small Modular Reactor Vessel Manufacture and Fabrication: Phase 1-Progress (Year 2)
3002018274	Advanced Nuclear Technology: Code Development of PM-HIP Alloy A508—Progress Report
3002018273	ICME and In-Situ Process Monitoring for Rapid Qualification of Components Made by Laser-Based Powder Bed Additive Manufacturing Processes for Nuclear Structural Applications
3002012354	A Study of the Material Properties and Performance of Hot Isostatic Pressed (HIP) Type 316L Stainless Steel Powders and HIP Processing Available from Today's International Supply Chain
3002010500	Advanced Nuclear Technology: Demonstration of Powder Metallurgy-Hot Isostatic Pressing
3002010488	Advanced Nuclear Technology: Advanced Method for the Production of Cans Used in Powder Metallurgy-Hot Isostatic Pressing
3002010481	Advanced Nuclear Technology: Demonstration of the Applicability of Risk-Informed In-Service Inspection to the New Build Fleet
3002010468	Advanced Nuclear Technology: Development of Real Time Nondestructive Evaluation for Weld Inspections
3002009557	Advanced Nuclear Technology: Development of Thick Section Welding Technologies: Residual Stresses in 30-mm Thick SA508 Steel Narrow Groove Welds-A Cross-Process Comparison
3002009412	Advanced Nuclear Technology: Alloy 690 Steam Generator Tubing Specification Sourcebook
3002008033	Advanced Nuclear Technology: PWR Steam Generator Tube Pre-Filming Technology Assessment
3002008031	Advanced Nuclear Technology: Elimination of Dissimilar Metal Welds Using Powder Metallurgy-Hot Isostatic Pressing
3002008030	Program on Technology Innovation: Innovative Manufacturing Process for Nuclear Power Plant Components Through Powder Metallurgy-Hot Isostatic Processing
3002005438	Reduced Pressure Electron Beam Welding of Thick Section Vessel Steels
3002005433	Advanced Nuclear Technology: Elimination of Dissimilar Metal Welds Using Powder Metallurgy-Hot Isostatic Pressing
3002005403	Innovative Manufacturing Process for Nuclear Power Plant Components via Powder Metallurgy and Hot Isostatic Processing Methods: Manufacture of a Steam Separator Inlet Swirler
3002005398	Advanced Nuclear Technology: Risk-Informed In-Service Inspection/Risk-Informed Break Exclusion Region Application to a Second New Build Site
3002004496	Advanced Nuclear Technology: Implementation Manual for ASME Code Case N-818-1
3002003132	Elimination of Dissimilar Metal Welds Using Powder Metallurgy-Hot Isostatic Pressing: Feasibility Study
3002003131	Innovative Manufacturing Process for Nuclear Power Plant Components via Powder Metallurgy-HIP
3002003119	Advanced Nuclear Technology: Risk-Informed In-Service Inspection/Risk-Informed Break Exclusion Region Results for First Site
3002002499	Cyber Security Procurement Methodology Training Module Rev. 14.00
3002000643	Advanced Nuclear Technology: Implementation of ASME Code Case N-818
3002000525	Guidelines for Fabrication and Assembly of Alloy 690 Components in PWR Primary Systems
1026723	Alloy 690 Procurement Specification, Revision 1
1025298	Risk-Informed Strategies for the New Build Fleet: Risk-Informed Procurement and USNRC Rule 10CFR50.69
1023502	Cybersecurity Procurement Benchmark
1023007	Methodology for Risk-informed Procurement for New Plant Deployment
1021416	Advanced Nuclear Technology: Equipment Reliability for New Nuclear Plant Projects --- Industry Recommendations for Procurement
1021181	Advanced Nuclear Technology: Reduction of American Society of Mechanical Engineers III Weld Fabrication Repairs--Fitness for Purpose

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FABRICATION AND PROCUREMENT (continued)

1021180	Methodology for Risk-informed Procurement
1021178	Modularization of Equipment for New Nuclear Applications
1021160	Nondestructive Evaluation: Guidelines for Inspectability for New Plant Components
1021154	Nondestructive Evaluation: Evaluation of Filmless Radiography
1019213	Modularization of Equipment for New Nuclear Applications
1019209	Welding and Fabrication Critical Factors for New Nuclear Power Plants
1016755	Advanced Nuclear Technology: Standard Specifications for New Plant Commodity Items
1016537	Program on Technology Innovation: Advanced Nuclear Technology--Component Margins and Monitoring Database

ADVANCED REACTOR RESEARCH

3002026618	The State of Sensors for Advanced Reactor Applications
3002026571	Program on Technology Innovation: Nuclear Reactor Heat Rejection Configurations—Assessment of Cooling System Technologies for Advanced Reactors
3002026495	Advanced Nuclear Technology: Evaluation of Risk Analysis Methods and Tools for Advanced Reactors
3002023909	Evaluation of Existing Storage Technology for Irradiated Advanced Reactor Fuel: Options for Onsite Containerized Storage of Irradiated Fuel and High-Level Waste Arising from Advanced Reactors
3002023898	Microreactors: Miniature Nuclear Energy Sources
3002021039	Light Water Small Modular Reactor Technology: 2021 Cost and Performance Update
3002023904	Program on Technology Innovation: Digital Twin Applications for Advanced Reactors
3002025482	Coal Repowering White Paper Series: Repowering Coal-Fired Power Plants for Advanced Nuclear Generation
3002023999	Nuclear Energy in Long-Term System Models: A Multi-Model Perspective (Executive Summary)
3002023697	Nuclear Energy in Long-Term System Models: A Multi-Model Perspective
3002025344	Advanced Nuclear Technology: Owner-Operator Reactor Technology Assessment Guide—2022 Version
3002018348	Rethinking Deployment Scenarios for Advanced Reactors: Scalable Nuclear Energy for Zero-Carbon Synthetic Fuels and Products
3002021038	Evaluation of Chloride Fuel Salt Lifetime in a Fast-Spectrum, Liquid-Fuel Molten Salt Reactor
3002020925	Program on Technology Innovation: Advanced Reactor Cost Model Guide Development: Scoping Study Summary Report
3002022311	Rethinking Deployment Scenarios to Enable Large-Scale, Demand-Driven Non-Electricity Markets for Advanced Reactors
3002018239	Advanced Nuclear Technology: Integrated Pressurized Water Reactor (iPWR) Containment Aerosol Deposition Behavior—Phase 3
3002015935	Advanced Nuclear Technology: Economic-Based Research and Development Roadmap for Nuclear Power Plant Construction
3002015752	Program on Technology Innovation: Early Integration of Safety Assessment into Advanced Reactor Design—Project Capstone Report
3002015751	Program on Technology Innovation: Owner-Operator Requirements Guide (ORG) for Advanced Reactors, Revision 1
3002015750	Uranium Oxycarbide (UCO) Tristructural Isotropic (TRISO) Coated Particle Fuel Performance: Topical Report EPRI-AR-1(NP)
3002014651	Advanced Nuclear Technology: Implementation Guidance on Industry Materials Guidelines for Advanced Light Water Reactors
3002013031	Advanced Nuclear Technology: Modular Accident Analysis Program (MAAP5) Benchmarking Against Integrated Pressurized Water Reactor (iPWR) Aerosol Deposition Testing
3002011917	Program on Technology Innovation: EPRI Workshop on Process Hazard Analysis to Probabilistic Risk Assessment for Advanced Reactors Proceedings: Vanderbilt University, Nashville, TN, July 18-19, 2017
3002011803	Exploring the Role of Advanced Nuclear in Future Energy Markets: Economic Drivers, Barriers, and Impacts in the United States
3002011802	Program on Technology Innovation: Owner-Operator Requirements Guide (ORG) for Advanced Reactors, Revision 0
3002011801	Program on Technology Innovation: Early Integration of Safety Assessment into Advanced Reactor Design - Preliminary Body of Knowledge and Methodology
3002010479	Program on Technology Innovation: Expanding the Concept of Flexibility for Advanced Reactors, Refined Criteria, a Proposed Technology Readiness Scale, and Time-Dependent Technical Information Availability
3002010478	Program on Technology Innovation: Government and Industry Roles in the Research, Development, Demonstration, and Deployment of Commercial Nuclear Reactors: Historical Review and Analysis

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ADVANCED REACTOR RESEARCH (continued)

3002009413	Program on Technology Innovation: Review of Advanced Reactor Technology with Emphasis on Light-Water and Non-Light-Water Small Modular Reactor Designs
3002008046	Interim Progress on Two White Papers Supporting Advanced Reactor Commercialization: Expanding the Concept of Flexibility and Exploring the Historical Role of Public-Private Partnerships
3002008044	Program on Technology Innovation: Government and Industry Roles in the Research, Development, Demonstration, and Deployment of Commercial Nuclear Reactors: Historical Review and Analysis
3002008041	Program on Technology Innovation: Scoping Study for an Owner-Operator Requirements Document (ORD) for Advanced Reactors
3002005460	Program on Technology Innovation: Technology Assessment of a Molten Salt Reactor Design -- The Liquid Fluoride Thorium Reactor (LFTR)
1025636	Program on Technology Innovation: Assessment of Fusion Energy Options for Commercial Electricity Production
1025006	Program on Technology Innovation: Tradeoffs Between Once-Through Cooling and Closed-Cycle Cooling for Nuclear Power Plants
1023036	Program on Technology Innovation: Review of EPRI Advanced Light Water Reactor Utility Requirement Document to Include Small Modular Light Water Reactors
1018896	Program on Technology Innovation: Readiness of Existing and New U.S. Reactors for Mixed-Oxide (MOX) Fuel
1016760	Program on Technology Innovation: Cladding and Structural Materials for Advanced Nuclear Energy Systems
1016759	Program on Technology Innovation: The Next Generation Nuclear Plant
1016758	Program on Technology Innovation: Sonoluminescing Submicron Bubbles
1016643	Program on Technology Innovation: Advanced Fuel Cycles - Impact on High-Level Waste Disposal
1015387	An Economic Analysis of Select Fuel Cycles Using the Steady-State Analysis Model for Advanced Fuel Cycles Schemes (SMAFS)
1015114	Program on Technology Innovation: Nuclear Hydrogen Assessment and Evaluation of SuperGrid Demonstration
1003386	EPRI NMAC Maintainability Review of the Pebble Bed Modular Reactor Demonstration Plant
1001231	EPRI NMAC Maintainability Review of the International Gas-Turbine Modular Helium Reactor Power Conversion Unit

CONSTRUCTION

3002026496	Lap Splicing of Large Steel Reinforcing Bars
3002026483	Advanced Nuclear Technology: Lessons Learned and Best Practices from the Development of a Digital Twin for Construction Quality
3002024898	Overview of Advanced Construction Techniques for Optimizing New Nuclear Projects
3002023901	Advanced Welding for Infrastructure and Construction: Review of Advanced Welding Techniques and Evaluation of Future Applications in Modular Construction
3002023902	Quality Assurance Inspections for Embedded Items in Concrete Members Using Alternative Techniques
3002023903	Streamlined Construction Evaluation for Traditional Reinforced Concrete for Nuclear Power Applications
3002023907	Alternate Requirements for Construction of ASME Section III Division 5 Components Commensurate with their Contribution to Safety and Risk
3002023908	Advanced Nuclear Technology: Self-Consolidating Concrete for Massive Concrete Applications
3002022905	Applications of High-Energy X-Ray Technology: 3D Imaging of Underground Transmission Steel Casings and Inspection of Steel-Concrete-Steel (SC) Structures
3002021018	Advanced Nuclear Technology: Best Practices for Construction Acceptance Tests
3002021014	Advanced Nuclear Technology: Prefabricated Structural Modules for Nuclear Construction—Survey of Experience and Roadmap for Future Development
3002013030	Program on Technology Innovation: Nondestructive Evaluation on Mockups for Steel-Concrete Nuclear Power Plant Construction
3002016067	Modular Construction Roadmap: Identifying Gaps for Development to Improve Modular Construction in Future Nuclear Power Plants
3002015934	Advanced Nuclear Technology: Guidance for Performing Inspections of Reinforced Concrete Construction
3002015814	Small Modular Reactor Vessel Manufacture and Fabrication: Phase 1—Progress
3002013041	Advanced Nuclear Technology: Optimization of Concrete Placements for Nuclear Power Plant Construction – A Guide to Best Practices for Placing Concrete
3002010496	Advanced Nuclear Technology: Investigating Mechanical Splicing of Reinforcing Steel

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CONSTRUCTION (CONTINUED)

3002010470	Advanced Nuclear Technology: Guidance for Cyber Security During New Nuclear Plant Construction
3002010467	Advanced Nuclear Technology: Augmented Reality Technologies for New Nuclear Plant Applications
3002010463	Advanced Nuclear Technology: Assessment of Moisture-Tolerant Coatings for Decreasing Open Top Construction Time
3002007577	Advanced Nuclear Technology: Mass Concrete Modeling and Thermal Control: Investigation of Delayed Ettringite Formation and Thermal Cracking in Massive Concrete Structure
3002007567	Advanced Nuclear Technology: Demonstration and Evaluation of Self-Consolidating Concrete Mixtures
3002007425	Advanced Nuclear Technology: New Nuclear Power Plant Information Turnover Guide (Revision 1)
3002005228	Advanced Nuclear Technology: Evaluation of Self-Consolidating Concrete Mixtures and Structural Members - Phase 1
3002000521	Advanced Nuclear Technology: Supplier Quality Management for New Nuclear Plant Construction Projects
3002000520	General Outline for Conducting Quality Inspections and Tests of Concrete Placement at Nuclear Facilities: Standard and Optimized for Electronic Viewing Versions
3002000294	Nondestructive Evaluation of Steel-Concrete Construction Mockups
1025300	Advanced Nuclear Technology: Quality Control of Concrete During Construction - Voids Detection
1023495	Korea Hydro & Nuclear Power Co., Ltd. Nuclear Power Plants: Construction and Technology Experience
1023006	Advanced Nuclear Technology: Embedded Sensors in Concrete
1022933	Nondestructive Evaluation: Evaluation of Filmless Radiography
1022684	Elements of Pre-Operational and Operational Configuration Management for a New Nuclear Facility
1021415	Advanced Nuclear Technology: Equipment Reliability for New Nuclear Plants: Industry Recommendations for Design

DESIGN

GENERAL

3002020426	Developing a Regulatory Requirements and Compliance Map: A Cyber Security Technical Assessment Methodology Topical Guide
3002013032	Advanced Nuclear Technology: Integrated Pressurized Water Reactor (iPWR) Containment Aerosol Deposition Behavior: Phase 2b: Results and Analysis
3002011817	Safety Integrity Level (SIL) Certification Efficacy for Nuclear Power
3002010494	Advanced Nuclear Technology: Identification of Nondestructive Examination Needs for New Nuclear Plant Designs
3002010491	Advanced Nuclear Technology: Integrated Pressurized Water Reactor (iPWR) Containment Aerosol Deposition Behavior—Phase 2a: Technical Basis and Test Plan for Experimental Testing and Computational Fluid Dynamics Analysis
3002007408	Advanced Nuclear Technology: Advanced Battery Evaluation for 1E Service Qualification
3002004310	Human Factors Guidance for Control Room and Digital Human-System Interface Design and Modification
3002004218	Advanced Nuclear Technology: Integrated Pressurized Water Reactor (iPWR) Containment Aerosol Deposition Behavior: Phase 1—Test Plan Development
3002003129	Advanced Nuclear Technology: Advanced Light Water Reactor Utility Requirements Document, Revision 13
3002003130	Advanced Nuclear Technology: Advanced Light Water Reactors Utility Requirements Document Small Modular Reactors Inclusion Summary
3002002987	Materials Reliability Program: Investigation of Likely Local Primary Circuit Chemistries in PWR Plants (MRP-387)
3002002074	Advanced Nuclear Technology: EPRI Utility Requirements Document (URD) Fukushima Lessons-Learned Treatment
3002000864	Advanced Nuclear Technology: Regulatory Performance Requirements for Safety-Related Instrumentation, Revision 1
3002000220	Advanced Nuclear Technology: Aerosol Decontamination from Nuclear Containments
3002000221	Advanced Nuclear Technology: Impact of EPRI Pre-Operational and Operational Configuration Management Report (1022684) on the Nuclear Industry
3002000194	Advanced Nuclear Technology: Potential Modification to Source Term Requirements
1025297	Feasibility Evaluation of Glass Reinforced Spiral Wound High Density Polyethylene for Circulating Water System Piping
1025296	Long Term Performance of PE4710 Materials in Disinfectant Treated Nuclear Raw Water Systems
1025006	Program on Technology Innovation: Tradeoffs Between Once-Through Cooling and Closed-Cycle Cooling for Nuclear Power Plants
1024945	Program on Technology Innovation: Sonoluminescing Bubbles and the Synthesis of Nanocatalysts for Hydrogen Production

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DESIGN (CONTINUED)

GENERAL (continued)

1023036	Program on Technology Innovation: Review of EPRI Advanced Light Water Reactor Utility Requirement Document to Include Small Modular Light Water Reactors
1023008	Advanced Nuclear Technology: Design Reliability Assurance Program Implementation Guidance
1023005	Advanced Nuclear Technology: Startup Program Guideline--Lessons Learned
1023004	Fire Testing of High-Density Polyethylene Pipe
1023003	BWRVIA Modeling of Advanced Boiling Water Reactor
1022876	Stress-Based Fatigue Monitoring (MRP-330)
1023003	BWRVIA Modeling of Advanced Boiling Water Reactor
1022876	Stress-Based Fatigue Monitoring (MRP-330)
1021415	Advanced Nuclear Technology: Equipment Reliability for New Nuclear Plants: Industry Recommendations for Design
1021094	Evaluation of Design Methods for Above Ground High Density Polyethylene Pipe
1021092	Technical Guidance for Achieving Higher Levels of Electromagnetic Compatibility for Advanced Nuclear Power Plants
1019216	Valve Regulated Lead Acid (VRLA) Battery Qualification Assessment
1016333	Program on Technology Innovation: EPRI Materials Management Matrix (MMM) Project
1015112	Program on Technology Innovation: Security Technology Evaluation for New Nuclear Power Plants
1013503	Program on Technology Innovation: Technical Support for GE Economic Simplified Boiling Water Reactor (ESBWR)-Radwaste System Design
1010070	Program on Technology Innovation: AP1000 Combined License Design Support
1007741	Assessment of AP1000 Conformance with the ALWR URD
1003176	AIMS Architectural System Description and Implementation Plan
1002994	AIMS Implementation for AP1000: Pre-Production Safeguards Interface List Module

MATERIALS

3002026567	Program on Technology Innovation: C-C Composites for Nuclear Applications
3002026565	Program on Technology Innovation: SiC-SiC Composites for Nuclear Applications
3002023876	Advanced Reactor Materials Challenge
3002023824	Evaluation of New Residual Stress Management Techniques: Impact of Surface Stress Improvement on Inspectability
3002022614	Advanced Nuclear Technology: High-Temperature Concrete Study for Advanced Reactors
3002018275	Advanced Nuclear Technology: New Materials Scoping Assessment for Nuclear Applications
3002018262	Environmentally Assisted Fatigue Screening Methods (Revision 1)
3002016950	Program on Technology Innovation: Materials Properties Assessment and Gap Analysis for Lead-Cooled Fast Reactors: A Survey of Available Materials Data
3002016949	Program on Technology Innovation: Material Property Assessment and Data Gap Analysis for Sodium-Cooled Fast Reactors
3002015815	Program on Technology Innovation: Material Property Assessment and Data Gap Analysis for the Prospective Materials for Very High Temperature Reactors (VHTRs) and Gas-Cooled Fast Reactors (GFRs)
3002013214	Environmentally Assisted Fatigue (EAF) Knowledge Gap Analysis: Update and Revision of the EAF Knowledge Gaps
3002013028	Advanced Nuclear Technology: Evaluation of New Stress Mitigation Techniques
3002011397	Advanced Nuclear Technology: Round Robin Study on Nondestructive Examination of HDPE Pipe Joints (Public Version)
3002010761	Materials Reliability Program: Stress Corrosion Crack (SCC) Initiation Testing of Ni-Base Alloys for PWR Applications – Part 1 (MRP-426)
3002010498	Advanced Nuclear Technology: Economic Evaluation of Upgrading Materials for New Nuclear Power Plant Designs
3002010486	Advanced Nuclear Technology: Use of High-Strength Headed Bars as Shear Reinforcement for Structural Concrete
3002010465	Advanced Nuclear Technology: Alloy Code Development for Powder Metallurgy-Hot Isostatic Pressing
3002010464	Advanced Nuclear Technology: Comparison of Residual Stress Modeling and Measurement of a Small Modular Reactor Nozzle

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DESIGN (continued)

MATERIALS (continued)

3002009545	Advanced Nuclear Technology: Round Robin Study on Nondestructive Examination of HDPE Pipe Joints
3002008761	High-Density Polyethylene Flaw Development, Sample Fabrication, and Performance Demonstration
3002007535	Advanced Nuclear Technology: Anchorage of High-Strength Headed Reinforcing Bars
3002005440	Advanced Nuclear Technology: Anchorage of High-Strength Reinforcing Bars with Standard Hooks
3002005434	Advanced Nuclear Technology: Literature Review of Mechanical Testing Methods to Evaluate the Integrity of HDPE Butt-Fusion Joints
3002005432	Advanced Nuclear Technology: Review of Advanced Light Water Reactor Component Opportunities for Use of Powder Metallurgy – Hot Isostatic Pressing
3002005402	Advanced Nuclear Technology: Guidance for Advanced Light Water Reactor Primary System Component Residual Stress Management
3002003922	Generic Evaluation of Environmentally Assisted Fatigue in BWR and PWR Reactors: A Feasibility Study
3002003133	Advanced Nuclear Technology: Material Properties Affecting the Butt Fusion of HDPE Pipe
3002003120	Advanced Nuclear Technology: The Long-Term Oxidative Resistance of Butt Fusion Joints in High-Density Polyethylene Piping
3002002748	Materials Reliability Program: Laboratory Testing of Primary Water Stress Corrosion Crack Growth Rates in Alloy 152/52 Weld Metals (MRP-377)
3002002441	Materials Reliability Program: Technical Basis for Reexamination Interval Extension for Alloy 690 PWR Reactor Vessel Top Head Penetration Nozzles (MRP-375)
3002000524	Applicability of High-Density Polyethylene in Nuclear Piping Systems with Internal Radionuclides
1026724	Environmentally Assisted Fatigue Gap Analysis and Roadmap for Future Research: Roadmap
1025823	Guidelines for Addressing Environmental Effects in Fatigue Usage Calculations
1025297	Feasibility Evaluation of Glass Reinforced Spiral Wound High Density Polyethylene for Circulating Water System Piping
1025296	Long Term Performance of PE4710 Materials in Disinfectant Treated Nuclear Raw Water Systems
1024568	EPRI Materials Management Matrix Project: KHNP Advanced Pressurized Water Reactor (APR1400) Materials Management Tables – Revision 0
1024567	EPRI Materials Management Matrix Project Gap and Opportunity Assessment: Revision 0
1023009	Evaluation of Design Options for Buried Piping Containing Radioactive Materials
1023004	Fire Testing of High-Density Polyethylene Pipe
1022683	EPRI Materials Management Matrix Project: U.S.–Advanced Pressurized Water Reactor Materials Management Tables
1021089	EPRI Materials Management Matrix Project: AREVA U.S. EPR™ Materials Management Tables, Revision 0
1021088	EPRI Materials Management Matrix Project: Advanced Light-Water Reactor—Pressurized Water Reactor Degradation Matrix, Revision 1
1020488	Advanced Nuclear Technology: EPRI Materials Management Matrix Project—Toshiba Advanced Boiling Water Reactor Materials Management Table Report, Revision 0
1019611	Advanced Light Water Reactor - Boiling Water Reactor Degradation Matrix (ALWR BWR DM), Revision 0
1019210	EPRI Materials Management Matrix Project: General Electric - Hitachi Advanced Boiling Water Reactor (ABWR) Materials Management Table Report, Revision 0
1016751	EPRI Materials Management Matrix Project: AP1000 Materials Management Table Report
1016334	Program on Technology Innovation: EPRI Materials Management Matrix Project

PLANNING

3002026582	Program on Technology Innovation: A Comparison of Capital Costs Between Large Light Water Reactors and Small Modular Reactors: Considering the Impact of Financing Costs
3002026566	Characterization of the Global Pulp and Paper Market for Potential Applications of Nuclear Energy
3002026564	Overview of the District Energy Market for Consideration of Nuclear Energy
3002026514	Conceptual Design Guide for Developing a Nuclear-Integrated Hydrogen Facility
3002025692	New Build Nuclear Plant Development and Technical Assistance: Guide to EPRI Resources
3002026494	Advanced Nuclear Technology: New Nuclear Plant Project Development and Execution Guideline
3002023910	Advanced Nuclear Technology: Site Selection and Evaluation Criteria for New Nuclear Energy Generation Facilities (Siting Guide)—2022 Revision

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DESIGN (continued)

PLANNING (continued)

3002022555	Quick Insight Brief: Elements of Digital Twins and Projects Updates
3002021012	Advanced Nuclear Technology: Study of Key Cost Drivers and Solutions for Nuclear Power Plant Balance-of-Plant Construction
3002015932	Advanced Nuclear Technology: Guide to Designing Structures for Constructability
3002011816	Digital Engineering Guide: Decision Making Using Systems Engineering
3002008039	Program on Technology Innovation: HTTPN, Securing Nuclear Network Communications in the Age of the Internet of Things
3002008037	Advanced Nuclear Technology: Emergency Planning Zone Size Evaluation for Small Modular Reactors
3002005435	Advanced Nuclear Technology: Site Selection and Evaluation Criteria for New Nuclear Power Generation Facilities (Siting Guide)
3002004310	Human Factors Guidance for Control Room and Digital Human-System Interface Design and Modification
3002002852	Advanced Nuclear Technology: Guidance and Methodologies for Managing Digital Instrumentation and Control Obsolescence
1019539	Program on Technology Innovation: Integrated Generation Technology Options
1015207	Program on Technology Innovation: Nuclear Power Generation Technologies
1015113	Program on Technology Innovation: New Plant Deployment Program Model
1011717	Program on Technology Innovation: Staff Optimization Scoping Study for New Nuclear Power Plants
1002997	Combined Operating License Model Program Plan
1002996	Early Site Permit Model Program Plan

SEISMIC

3002018345	Advanced Nuclear Technology: Cost Basis for Utilizing Seismic Isolation for Nuclear Power Plant Design
3002011804	Advanced Nuclear Technology: Modeling Vertical Free-Field Motion for Soil-Structure Interaction of Embedded Structures
3002009429	Advanced Nuclear Technology: High-Frequency Seismic Loading Evaluation for Standard Nuclear Power Plants
3002000561	Seismic Isolation of Nuclear Power Plants
3002000296	Valve-Regulated Lead Acid (VRLA) Battery Seismic Testing: Initial Investigation
1023127	Central and Eastern United States Seismic Source Characterization Project: Workshop 1 Proceedings
1021097	Central and Eastern United States Seismic Source Characterization for Nuclear Facilities
1019220	Central and Eastern United States Seismic Source Characterization Project: Workshop 3 Proceedings
1019219	Central and Eastern United States Seismic Source Characterization Project: Workshop 2 Proceedings
1016756	Project Plan: Central and Eastern United States Seismic Source Characterization for Nuclear Facilities
1015111	Program on Technology Innovation: Validation of CLASSI and SASSI Codes to Treat Seismic Wave Incoherence in Soil-Structure Interaction (SSI) Analysis of Nuclear Power Plant Structures
1015110	Program on Technology Innovation: Effects of Spatial Incoherence on Seismic Ground Motions
1015109	Program on Technology Innovation: Seismic Screening of Components Sensitive to High-Frequency Vibratory Motions
1015108	Program on Technology Innovation: The Effects of High-Frequency Ground Motion on Structures, Components, and Equipment in Nuclear Power Plants
1014099	Program on Technology Innovation: Use of Cumulative Absolute Velocity (CAV) in Determining Effects of Small Magnitude Earthquakes on Seismic Hazard Analyses
1013504	Program on Technology Innovation: Effect of Seismic Wave Incoherence on Foundation and Building Response

OPERATIONS

3002025693	Program on Technology Innovation: Landscape of Automation in Nuclear Power Plants
3002023869	Roadmap Towards an Autonomous Plant: A High-Level Overview of Technologies Important for Autonomous Plant Operation
3002023899	Robotic Process Automation for Nuclear Power Plants: Evaluation of Near-Term Opportunities
3002023905	Program on Technology Innovation: Using Digital Engineering Tools and Methods for New Nuclear Projects--A Review of the State of the Art
3002020976	SMART Chemistry Quick Guide—BWR Online Offgas Analysis
3002020441	SMART Chemistry: Plant Demonstrations

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OPERATIONS (continued)

3002020440	Plant Modernization Business Case: Automated Chemistry
3002020014	Quick Insight Brief: Digital Twin Activities at EPRI
3002018238	Small Modular Reactors (SMRs) Volume 2: NuScale PWR Design Gap Closure and Guidance
3002016698	HAZCADS: Hazards and Consequences Analysis for Digital Systems - Revision 1
3002016063	Water Chemistry Control in Small Modular Reactors (SMRs): Volume 1: NuScale PWR Design Gap Analysis
3002015933	Advanced Nuclear Technology: Refinement of Evacuation Time Estimate (ETE) Calculation and Modeling Methodologies
3002015805	SMART Chemistry QUICK GUIDE – Steam Generator Blowdown Online Monitoring: Modular Approach
3002014377	SMART Chemistry Quick Guide: Online Ion Chromatograph
3002014085	2018 SMART Chemistry Demonstration Skid Design
3002013029	Advanced Nuclear Technology: Alarm Prioritization and Filtering Methodology Improvement
3002012754	Cyber Security Program Guide for Nuclear Power Facilities
3002012752	Cyber Security Technical Assessment Methodology: Risk Informed Exploit Sequence Identification and Mitigation, Revision 1
3002011816	Digital Engineering Guide: Decision Making Using Systems Engineering
3002010493	Advanced Nuclear Technology: Assessment of Automation Technologies to Reduce Chemistry and Radiochemistry O&M Costs
3002009584	Advanced Nuclear Technology: Reactor Coolant Radiological Source Terms for Normal Operation-Public Version: Technical Bases for Updating the ANSI/ANS 18.1-1999 Standard to Incorporate Contemporary Best-Estimate Radiological Source Terms in Principal Fluid
3002008874	Advanced Nuclear Technology: Review of Gaps and Issues Identified During Advanced Pressurized Water Reactor Design Chemistry Assessments
3002008296	Advanced Nuclear Technology: Optimum Hot Functional Testing Chemistry Control Practices for Pressurized Water Reactors
3002008295	Advanced Nuclear Technology: Guidance for Chemistry Control in Advanced Pressurized Water Reactor Designs
3002008028	Advanced Nuclear Technology: Chemistry Control Guidance for Advanced Design Boiling Water Reactors
3002007516	Advanced Nuclear Technology: Major Component Replacement Sourcebook with Applicability to New Plant Water Chemistry
3002007071	Advanced Nuclear Technology: Using Technology for Small Modular Reactor Staff Optimization, Improved Effectiveness, and Cost Containment
3002006350	Seasonal/Annual Cooling Tower Impacts (SACTI) Version 2.0 with Source Code
3002005515	Triton Steam Generator Thermal Hydraulics Code (TRITON), version 1.0
3002005513	Triton Steam Generator Thermal-Hydraulics Code: Interim Report on Validation Using Experimental Test Results
3002005437	Advanced Nuclear Technology: Advanced Welding Processes to Enhance Single-Side Examination Capabilities for New Austenitic Welds
3002005404	Advanced Nuclear Technology: Reactor Coolant Radiological Source Terms for Normal Operation – Updated and Revised Methodology
3002005236	Advanced Nuclear Technology: Guideline for Online Monitoring Requirements to Support TSTF-425 Instrumentation and Control Surveillance Management Programs
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OPERATIONS (continued)

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<u>1024502</u>	An Assessment of PWR Water Chemistry in Advanced Light Water Reactors: US-APWR
<u>1024499</u>	An Assessment of PWR Water Chemistry Control in Advanced Light Water Reactors: U.S. EPR™
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