Climate READi: Power

Initiative Overview

September 2023

Resources: www.epri.com/READi
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EPRI Climate Resilience and Adaptation Initiative (READi)

CLIMATE READi
RESILIENCE AND ADAPTATION INITIATIVE

- **COMPREHENSIVE:** Develop a *Common Framework* addressing the entirety of the power system, planning through operations
- **CONSISTENT:** Provide an informed approach to climate risk assessment and strategic resilience planning that can be replicated
- **COLLABORATIVE:** Drive stakeholder alignment on adaptation strategies for efficient and effective investment

Workstream 1	Workstream 2	Workstream 3
Physical Climate Data & Guidance	**Energy System & Asset Vulnerability Assessment**	**Resilience / Adaptation Planning & Prioritization**
• Identify climate hazards and data required for different applications • Evaluate data availability, suitability, and methods for downscaling & localizing climate information • Address data gaps	• Evaluate vulnerability at the component, system, and market levels from planning to operations • Identify mitigation options from system to customer level • Enhance criteria for planning and operations to account for event probability and uncertainty	• Assess power system and societal impacts: resilience metrics and value measures • Create guidance for optimal investment priorities • Develop cost-benefit analysis, risk mitigation, and adaptation strategies

Deliverables: Common Framework "Guidebooks"

- Climate data assessment and application guidance
- Vulnerability assessment
- Risk mitigation investment
- Recovery planning
- Hardening technologies
- Adaptation strategies
- Research priorities

Recent Deliverables

READi Insights: Extreme Heat Events and Impacts to the Electric System

Evaluates severity of recent extreme heat events in the context of historical records and climate change and potential future implications of extreme heat for the power system (300202552)

Costs & Benefits of Proactive Climate Adaptation in the Electric Sector

Outlines how proactively implementing adaptation strategies is expected to result in a more resilient power system, avoided damages, and reduced societal impacts (3002025872)

Workstream 2 Asset Literature Review Series

Five volumes of literature reviews that characterize asset vulnerability to climate change for nuclear, non-nuclear, cross-cutting topics, and transmission and distribution assets. (3002025313, 3002026314, 3002026315, 3002 026316)

Climate-Informed Planning & Adaptation for Power Sector Resilience

Compilation of literature from researchers and industry stakeholders on climate risk, power system impacts, and current practices to address power system resilience against climate hazards (3002026317)

Physical Climate Data 101

Over 250 comments from 19 EPRI members and 10 CRAG organizations during review period for the first training in the Climate 101 series (3002026223, 3002026297, 3002026298, 3002026296)

READi Insights: Extreme Winter Weather Challenges for the Power System

Evaluates severity of recent extreme winter events in the context of historical records and climate change and potential future implications of extreme heat for the power system (3002027393)

Year One Annual Report

Overview from the first year of activity, summarizing current progress and the plan ahead for the remaining two years. (3002027401)

Together...Shaping the Future of Energy®

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