Silas,
We are pleased to offer the newest installment of EPRI's Energy Systems and Climate Analysis (ESCA) newsletter, highlighting our new analysis on **EPA's proposed new and existing source standards for power plants**. We are also excited to share:

- An invitation to this week's **SMARTargets™** public event
- A new report analyzing the latest trends in electric company resource planning
- Step-by-step instructions for developing **localized climate change information**
- A recent analysis of **supply chain** and **workforce impacts** of the IRA to inform technology cost assessments

All of ESCA's publicly available work, and past announcements, can be found on the ESCA website.

Research Highlights

Analysis of EPA's Proposed New and Existing Source Standards for Power Plants

In May 2023, the U.S. Environmental Protection Agency (EPA) released proposed emissions limits and guidelines for carbon emissions from new and existing fossil fuel-fired power plants, under Sections 111(b) and (d) of the Clean Air Act, respectively. The proposed rules create complex incentives for generator operation, entry, and exit amid ongoing changes to the power system from Inflation Reduction Act (IRA) tax credits, state policies, company emissions targets, and other drivers. These changes introduce uncertainty about the relative effects and emissions benefits of the proposed power plant rules, which depend on system interactions and require detailing modeling to assess.

In our most recent analysis, using EPRI's U.S. Regional Economy, Greenhouse Gas, and Energy (US-REGEN) model we find:

- EPA's proposed rules could drive additional low-emitting capacity and emissions reductions beyond IRA incentives, though the extent depends on unknowns in the planning environment.
- The proposed rules are emissions intensity standards and not technology mandates, meaning that the technologies on which standards are based may not be the ones deployed and that emissions reductions depend on uncertainties in the planning environment.
- Natural gas capacity could a play role in regional decarbonization efforts, even as the proposed rules and other trends lower utilization.
- Uncertainties about impacts of the proposed rules and other drivers on costs, resource adequacy, and distributional outcomes offer opportunities for future research.

For more information, please contact John Bistline at JBistline@epri.com

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Invitation to SMARTargets: A Methodology for Grounded and Actionable Climate Targets Aligned with Global Goals

SMARTargets™

A Methodology for Grounded and Actionable Climate Targets Aligned with Global Goals

EPRI's new SMARTargets™ project will develop a methodology for setting company-level greenhouse gas emission targets aligned with global goals. The methodology will help companies establish targets that are grounded and actionable — considering uncertainty, recognizing their unique characteristics, and accounting for multiple societal objectives, such as sustainability, affordability, and reliability. In addition to helping with target setting, the methodology will assist organizations in preparing for different possible low-carbon futures with robust strategies and the flexibility needed to manage transition risks.

The SMARTargets initiative will include a cross-sector stakeholder advisor coalition with finance, non-governmental, and climate disclosure organizations providing input. The project also includes extensive outreach to educate stakeholders on the science relevant for GHG target setting, as well as the methodology.

Please join the project's public event on January 31, 2024, to learn more about the initiative.

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State of Electric Company Resource Planning

The pace of change in electric company resource planning has accelerated with recent resource plans considering increasingly complex emerging themes, including extreme weather, stakeholder engagement, equity, and more. Electric company resource planning in the United States determines decarbonization portfolios, energy costs, and investment plans for hundreds of billions of dollars in new electricity system capital, covering half the United States electricity system.

This report provides summary analysis on trends, projections, and themes from electric company resource planning across the United States. It provides strategic analysis, industry benchmarks, and emerging areas of focus that can inform experienced planners, regulators, and other stakeholders working on individual electric company resource plans.

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For more information, please contact Steve Dahlke at SDahlke@epri.com

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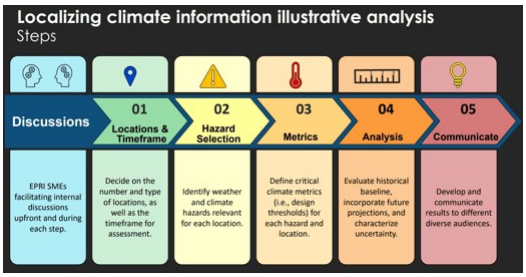
Developing Local Climate Change Information: Steps and Illustrative Analysis

Companies need to better understand the physical climate change risks their systems face now and how these risks may change in a future climate. Companies beginning the journey of conducting a physical climate risk assessment can use this publication to understand the steps associated with the process, where to start, and who to involve. It can also help companies that have already produced physical climate hazard assessments, allowing them to compare and revisit their process and explore alternative ways of communicating information.



READ REPORT

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Local climate change data appropriate to an individual company and different internal decision-makers can be developed from a sequence of concrete steps, beginning with identifying company needs. This illustrative assessment provides a generalizable process for companies, facilitating evaluation of changes to a wide-range of locations and climate hazards and providing a foundation for future physical climate risk assessments.

For more information, please contact Erik Smith at ESmith@epri.com

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IRA Supply Chain and Workforce Analysis to Inform Technology Cost Assessments

The Inflation Reduction Act offers potentially beneficial tax credits for deploying new generation and storage assets, but some tax credit bonuses require compliance with certain criteria that may entail additional costs. Understanding the expected net benefit of the credits as well as some aspects of the market for apprenticeship labor and domestic content will help resource planners develop better cost assumptions for their planning efforts.

This report begins with a brief overview of the Inflation Reduction Act of 2022 and an analysis of some of the key requirements for tax credit bonuses: the market for

apprenticeship labor and domestic content in the United States. It then presents the findings of a cost study on compliance with the IRA's labor and domestic content bonus requirements.

The results indicate that compliance with the labor bonus requirements (prevailing wages and apprenticeships) may result in significant savings across technologies and credit types, whereas compliance with the domestic content bonus requirements (domestically sourced iron, steel, and manufactured products) may cost nearly as much or more than the value of the bonus.

For more information, please contact Romey James at RJames@epri.com

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Member Center

The ESCA Group conducts its research as part of EPRI Programs 178 (*Resource Planning for Electric Power Systems*) and 201 (*Energy, Environmental, and Climate Policy Analysis*). Examples of recent program-specific research includes:

- State of Hydrogen Modeling in Electric Company Resource Planning (3002026595) - Program 178
- Energy Storage in Long-Term Resource Planning: A Review of Modeling Approaches and Utility Practices (3002028378) - Program 178
- Differences in Regional Decarbonization Opportunities, Uncertainties, and Risks (3002028181) - Program 201
- National Implications of Utility CO2 Targets: 2023 Update (3002028700) - Program 201

For more information about these programs, please contact Nidhi Santen (P178) or John Bistline (P201).
Thank you for your continued interest in our work. If you have any questions, please email eea@epri.com.
Best,
EPRI Energy Systems and Climate Analysis Group

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