



Flexible Solutions for Uncertain Times

July 2025

The demands on public utility commissions (PUCs) are reaching historic proportions: Between 2012 and 2024 the total number of dockets US PUCs managed increased by more than 30,000. This **growth in proceedings and our ability to meet this moment has outsized consequences** for the health of our communities, the growth of the US economy, and how our electric grid weathers the coming decades.

RMI is here to support PUCs and energy system stakeholders as they navigate these challenges without missing a beat. From **resources that can help PUCs work smarter and faster** (*IRPs for Speed* and *Regulatory Agility*) to specific solutions for the most pressing challenges today (*Turbine Backlogs* and *Power Shift*), **we're here to help**.

IRPs for Speed

Utilities with integrated resource plans accounted for nearly half of U.S. load growth in 2024. As building and vehicle electrification adds to growing electricity demand from data centers, utilities and regulators have an opportunity to redesign IRPs to meet this period of rapid and sustained load growth while preserving the level of rigor needed to support decision-making.

With gigawatt-scale changes in growth projections from quarter to quarter, planning cycles that last two to three years are too slow to capture the pace of change.

Changes to the planning and procurement process can help make analysis more timely and more relevant to customer needs:

- **Make planning faster:** Use smaller updates with more replicable and automated approaches that are run quarterly or annually in complement to multi-year IRPs
- **Use adaptive planning:** Run thousands of potential scenarios to identify common investments across them between planning cycles
- **Integrate customer needs on an ongoing basis:** Leverage tariffs and other ad-hoc procurement windows to collect data that refines planning assumptions

Reach out to Charles Cannon (ccannon@rmi.org) if you are interested in ways RMI can support your work to redesign planning for an era of load growth.

Regulatory Agility to Meet This Moment

Regulators play a critical role in maintaining reliability, affordability, and more. As technology advances rapidly and strains to the grid multiply, PUCs are being asked to tackle more issues and consider bigger investments than they have in decades.

RMI's insight brief *Regulatory Agility: Responsive and Adaptable Regulation for a Shifting Energy System* offers three strategies PUCs across the United States are implementing to evolve with these challenges:

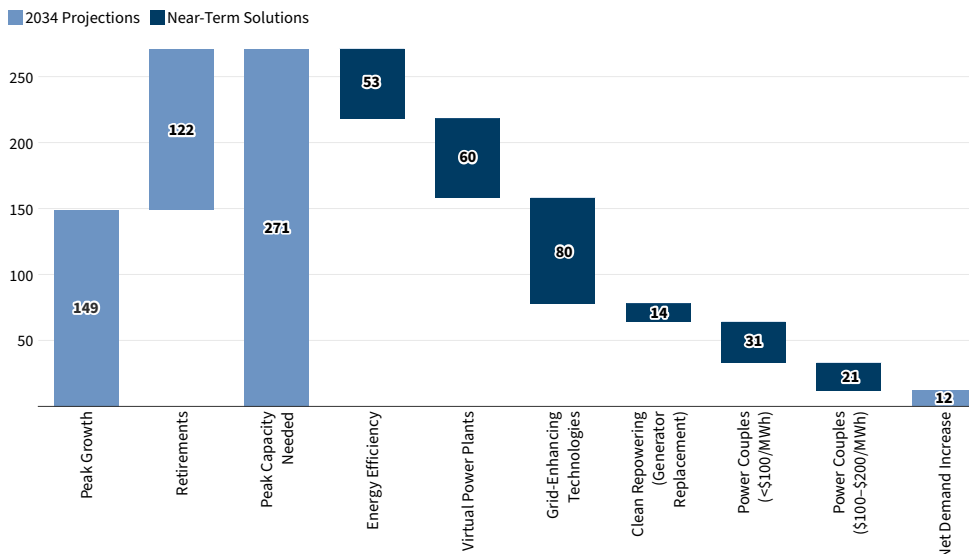
- Design a culture, systems, and workforce that is more proactive, transparent, and supportive of change
- Create docket structures that can tackle multiple issues concurrently
- Engage stakeholders early, inclusively, and accessibly

We refer to these strategies as “regulatory agility,” or the ability of PUCs to act with responsiveness, adaptability, and flexibility.



Check out the report for examples of regulatory agility from PUCs across the country.

Potential 10-year peak demand growth and near-term solutions (GW)



Source: 2024 Long-Term Reliability Assessment (NERC, Dec 2024); A National Roadmap for Grid-Interactive Efficient Buildings (DOE, May 2021); Virtual Power Plants, Real Benefits (RMI, Jan 2023); Pathways to Commercial Liftoff: Innovative Grid Deployment (DOE, Apr 2024); Clean Repowering Opportunities by Plant (RMI, Jan 2024); How “Power Couples” Can Help the United States Win the Global AI Race (RMI, Feb 2025)

Turbine Shortages Demand Innovative Solutions

After years of flat or declining electricity demand, US utilities are projecting rapid growth driven by AI, electrification, and industrial expansion. Many utilities are planning to meet demand growth with new gas-fired power plants. However, gas turbine manufacturers are reporting record production backlogs. Orders placed now are unlikely to be fulfilled until 2028 or later, and costs are soaring. For example, Duke Indiana’s latest estimated procurement cost for the Cayuga combined-cycle plant is \$900 million higher than estimated in the past year’s resource plan.

Fortunately, utilities have better options to meet load growth than new gas power. [Energy efficiency](#), [virtual power plants](#) (VPPs), [grid-enhancing technologies](#), [clean repowering](#), and hybrid “[power couples](#)” sited at existing fossil generator points of interconnection can meet more than 90 percent of projected near-term load growth. These solutions support economic growth while protecting customers from the cost and reliability risks of a constrained gas turbine supply chain.



Read our article on how your state can leverage near-term, affordable solutions to address the resource gap.

Strength (and Resilience) in Numbers

Virtual power plants (VPPs) are a modular solution that scale to meet the demands of load growth while hedging against uncertainty. VPPs aggregate distributed energy resources (DERs) to provide grid services, and by 2030 they could scale to meet 10 to 20 percent of peak demand. VPPs are low-cost and rapidly deployable — able to meet the speed of load growth while keeping rates affordable.

Basic VPPs can be deployed in less than six months with less than \$1 million of investment at a net cost that is 40 percent cheaper than a conventional peaker plant. More sophisticated VPPs not only shave system peaks, but also provide distribution services that help reduce costs and relieve strain on distribution infrastructure.

Explore what regulators can do to unleash the greatest benefits of VPPs in our *Power Shift* report. We find that in a representative power system in the Intermountain West, VPPs could reduce household costs by \$140 per year.

