

The Cost-Effective Path to Reduce Carbon Emissions in PJM Interconnection States



Achieving decarbonization goals requires effective, efficient solutions that do not unduly burden consumers or impede the reliability of our power grid – while allowing for continued competition and innovation.

To inform these solutions, EPSA retained Energy & Environmental Economics (E3) to perform an independent and unbiased analysis of **regional market-based pathways** to reliably and cost effectively achieve decarbonization goals in the PJM Interconnection (PJM) footprint, which serves 65 million electricity customers in 13 states and the District of Columbia.

While EPSA supports and will continue to advocate for nondiscriminatory market-based strategies that allow all resources to compete to reduce carbon emissions – such as **an economy-wide, national price on carbon** – as the optimal solution to solve the global problem of climate

change, we recognize the challenges that exist today in its implementation. We also recognize and appreciate the differences in state energy policies across the PJM service region.

Acknowledging those limitations, E3's analysis shows that it will be increasingly important to seek out **alternative policy solutions that utilize competition** to offer greater efficiencies than the current patchwork quilt of state subsidies and policies. These competitive approaches could deliver **substantial benefits for states, consumers, and market participants** today, and these benefits **will grow substantially in the future** as clean energy goals become more aggressive.

Below are key findings from E3's analysis that help inform a cost-effective, reliable approach to reducing emissions in the PJM region.

Business-as-usual costs

\$3B/YR

Targeted and restrictive state policies and subsidies unnecessarily increase costs to consumers and do little to achieve long term decarbonization goals. Relative to a reference case with no clean energy policy, a business-as-usual (BAU) approach that relies on current policy instruments such as Zero Emission Credits (ZECs), and mandates for offshore wind would increase system costs by **\$3 billion per year** in 2030, while only reducing carbon emissions by **40 MMT**.

Carbon pricing saves

\$2.8B/YR

In contrast, regional market-based approaches that allow greater resource participation can achieve significant progress toward decarbonization and clean energy goals at a much lower cost to consumers. Compared to current restrictive policies, or the BAU scenario, a carbon price of **\$10/ton** would reduce PJM carbon emissions by **80 MMT (or 28%) per year by 2030** at a savings of **\$2.8 billion**.



A regional Clean Electricity Standard (CES) that provides partial credit to natural gas resources would reduce emissions at a comparable cost to direct carbon regulation – achieving **80 MMT in emissions reductions in 2030 at a cost of \$400 million, a savings of \$2.8 billion per year**. A regional, market-based approach to reduce emissions will allow all resources – including nuclear, solar, onshore wind, offshore wind, and carbon capture – to compete on a level playing field while recognizing each resource’s relative emissions benefits, reliability attributes and costs.



We support greater regionalization of existing market-based policies, such as the Regional Greenhouse Gas Initiative (RGGI). However, we must be careful to avoid shifting emissions to non-participating states (leakage).



50-90 GW of firm, flexible natural gas generation will be needed to maintain system reliability in PJM even under deep decarbonization scenarios modeled through 2045.

EPSA member companies – America’s competitive power suppliers – are committed to meeting the needs of all power customers and the evolving grid. To that end, a number of EPSA members have voluntarily established emissions reduction and clean energy goals. EPSA does not oppose policies to decarbonize the power grid. However, the E3 analysis provides resounding evidence that **targeted subsidies and restrictive policies significantly increase consumer costs and are not the right approach** to ensure system reliability in a sustainable manner.

The analysis shows that PJM’s diverse resource mix and geographic reach can provide substantial opportunities for **low cost decarbonization**. Competitive, market-based approaches can in turn provide a path for new market entrants and continued **innovation** while minimizing consumer costs.

As one of our core principles, EPSA supports efforts to combat climate change through **transparent, open, and non-discriminatory competitive markets**, such as an economy-wide price on carbon, that **allow all resources to compete** to reduce carbon and other emissions. Competitive markets that incorporate both environmental and reliability requirements will yield the lowest cost set of resources and technologies that jointly produce the greatest emission abatement while maintaining reliability.

We encourage all market participants to utilize this analysis to develop a sustainable path forward and we look forward to working with all stakeholders.

The Electric Power Supply Association (EPSA) is the national trade association representing America’s competitive power suppliers. EPSA members provide more than 150,000 MW of reliable and competitively priced electricity from environmentally responsible facilities using a diverse mix of fuels and technologies including natural gas, wind, solar, hydropower, geothermal, storage, biomass, and coal. EPSA seeks to bring the benefits of competition to all power customers. Learn more at www.epsa.org and connect with us on [LinkedIn](#) and Twitter [@EPSAnews](#).