2023 ENVIRONMENTAL ORGANIZATIONS PIEOUG PRESENTATION TO PJM BOARD

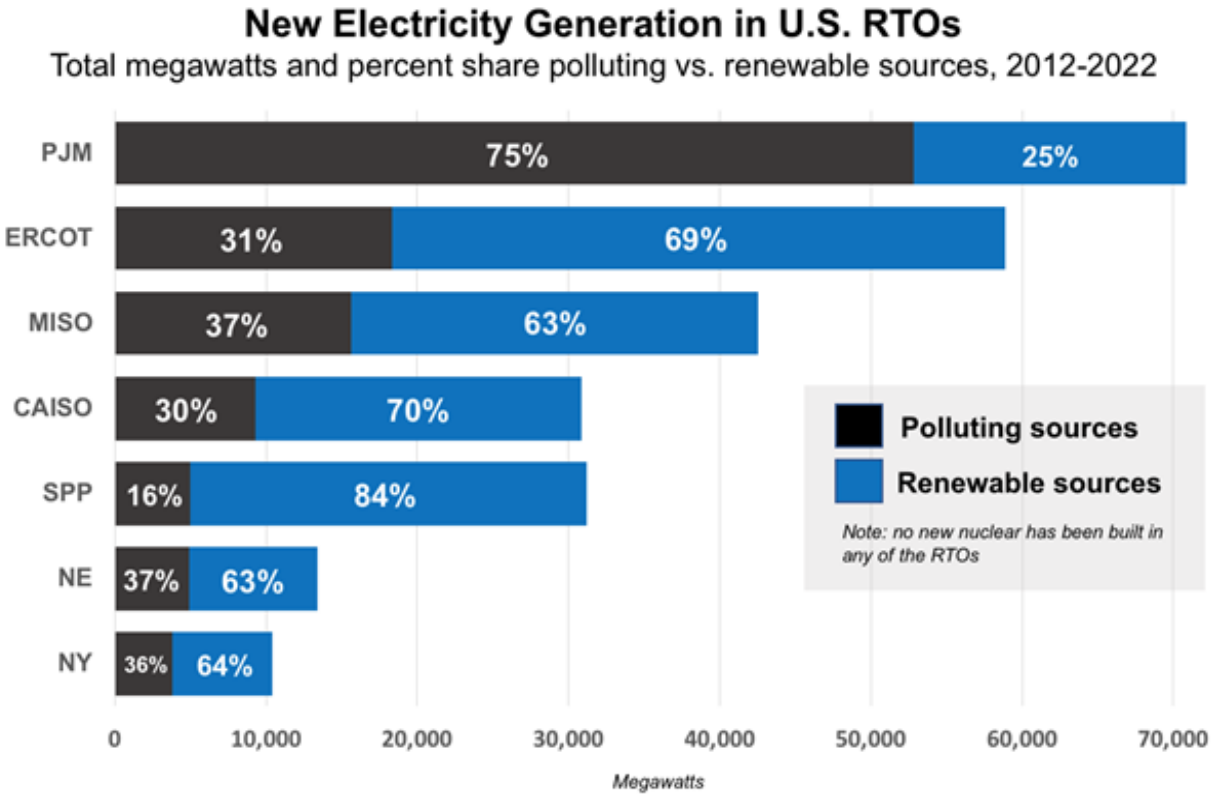
May 3, 2023

Presentation Topics

- PJM – State Policy Alignment
- RTO Governance
- Resource Adequacy (Comments on CIFP Scope)
- Interconnection & Transmission Planning Reforms

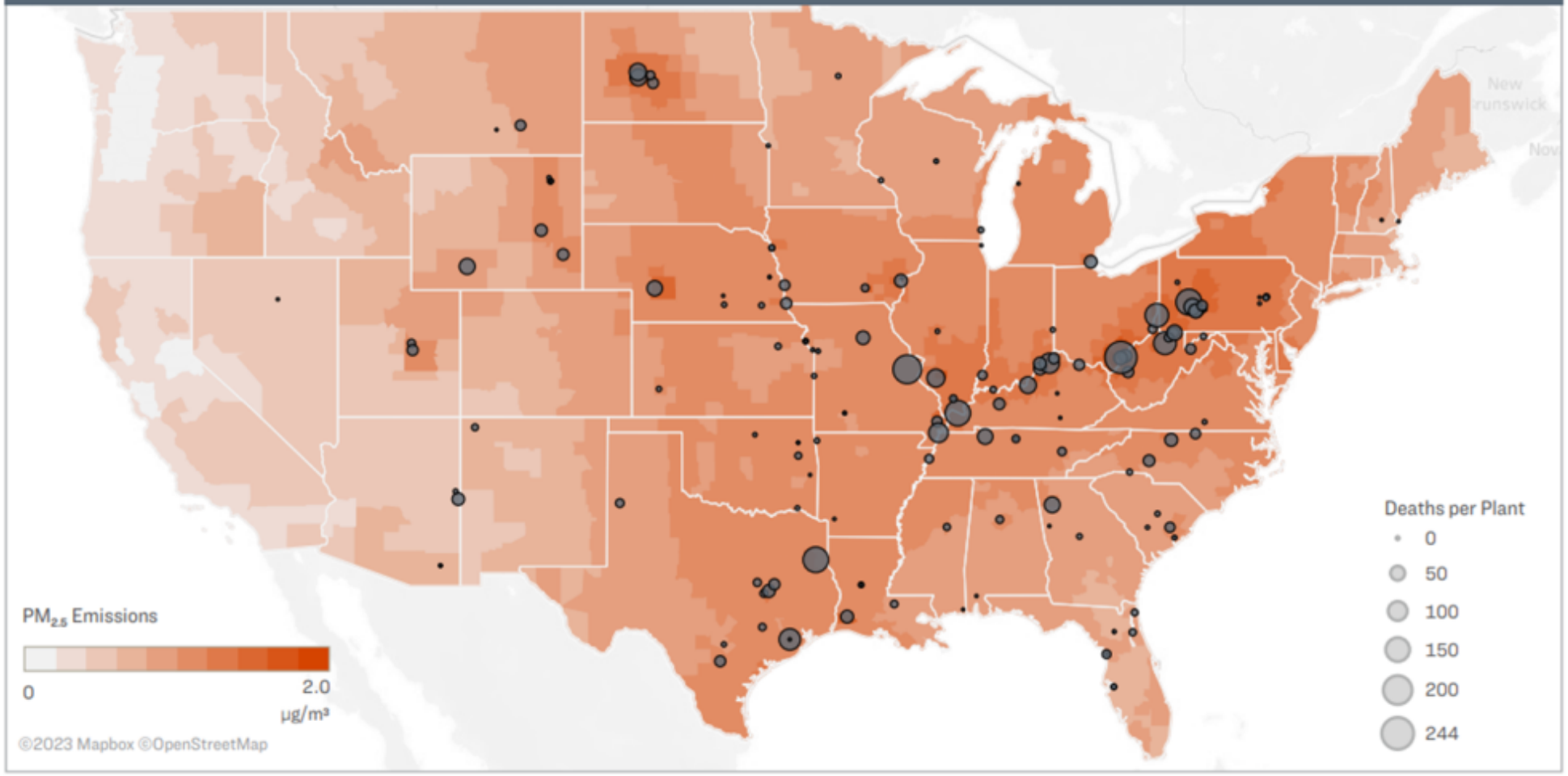
PJM is on the cusp of the energy transition, but shouldn't look past problems with today's fleet

- Plenty of wind and solar in the interconnection queue, but committed capacity from those resources is less than 4% of the 148,085 MWs that cleared in the most recent BRA
- PJM is making progress and must stay focused on the most pressing challenges for market design and transmission planning



The energy transition is urgent, not an inconvenience

Figure 3: County-level $PM_{2.5}$ pollution (shown in shades of red corresponding to intensity) from remaining coal-fired power plants (which are shown as gray circles, sized by their total associated mortality impacts). *Source: Sierra Club analysis of data provided by Clean Air Task Force.*



Source: Sierra Club, Out of Control: The Deadly Impact of Coal Plant Pollution (Feb. 2023)

Energy Transition in PJM: Resource Retirements, Replacements & Risks

- Resource adequacy issues are of significant interest to the public, state and federal policymakers, and need to be handled with the utmost care
- Problems with the Retirement report's approach
  - **Ignoring role of capacity market price signals** in modulating pace of exits and new entry – leaves impression that states must act on their own
  - **Overstates retirement impacts of certain rules** and ignored ways in which those rules are designed to be sensitive to reliability impacts
  - Asymmetric representation of impacts of state and federal policy on retirements v. new entry – creates **lopsided impression of the effect of state policies** on resource adequacy

Top priorities for Resource Adequacy CIFP

- **Fixing gas accreditation** is the vital immediate need, both for reliability generally and to ensure accurate price signals.
- The Board should encourage and support PJM staff in keeping **strict performance requirements** and meaningful penalties for capacity resources. Making it easier to not perform is exactly the wrong thing to do right now.
- Upstream gas industry practices are endangering reliability and presenting unreasonable costs to the electric industry. PJM should not be shy of using capacity market rules to force **changes in gas contracting and operations**.
- **Mutual support** is a moral imperative and a foundation of the electricity industry. The Board should reject any changes that undermine this.

To ensure resource adequacy and facilitate decarbonization, PJM must do more to address the pace of new resource entry

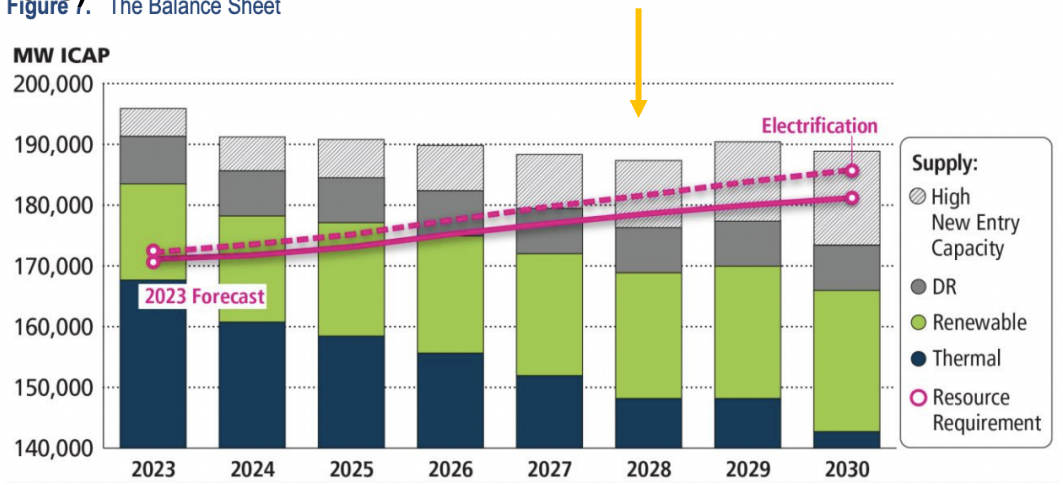
- Feb. 2023 Energy Transition report highlighted the risk of **resource adequacy shortfalls** if PJM does not correct the imbalance between the pace of retirements and the pace of new entry

- PJM's response has dealt mostly with retirements and their implication for resource adequacy; more focus should be placed on **accelerating the entry of new resources** through further interconnection reforms and proactive transmission planning
  - Clean energy resources are increasingly the **lowest-cost** sources of generation; IRA incentives accelerate that trend
  - States and customers are demanding **more carbon-free energy**, which PJM has pledged to enable

Queue Transition Cycle	Projected ISA	First BRA
Fast track	Sept 2024	2028/29
Up to AG1 (TS1)	May 2025	2028/29
Up to AH1 (TS2)	June 2026	2029/30
All projects submitted after AH1 (Sept 2021)	Sept 2027	2031/32

No projects will exit the queue in time to participate in a BRA for the worst-case scenario (RA shortfall beginning in 2028)

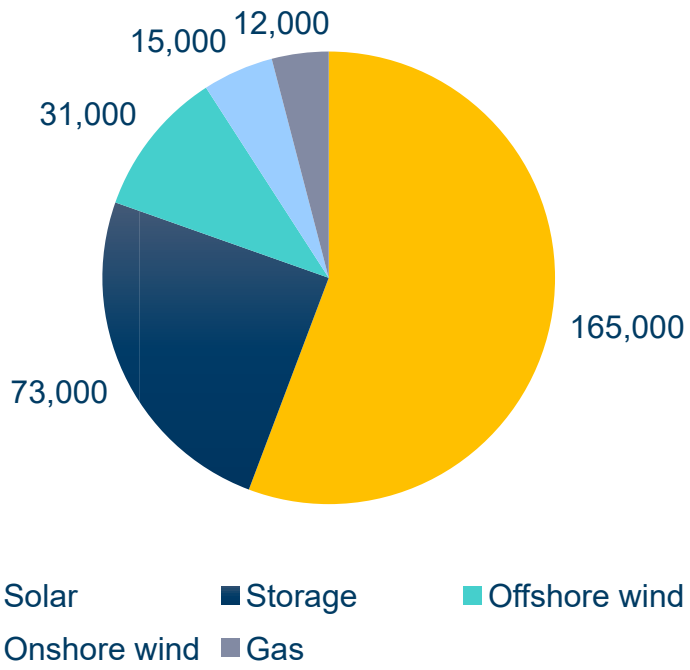
Figure 7. The Balance Sheet



Source: PJM

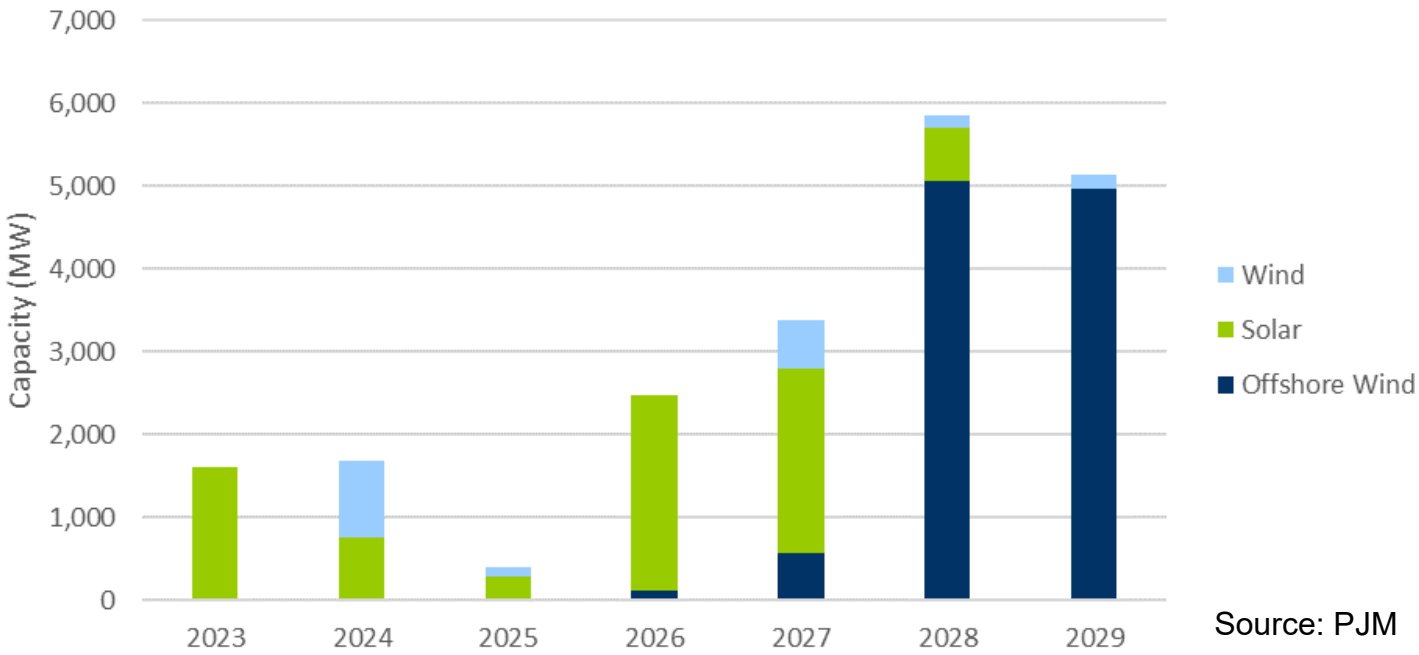
The clean energy in PJM's queue can help maintain resource adequacy if enabled to come online more quickly

Capacity (MW) in PJM queue, 2022



Source: LBNL

Projected clean energy capacity additions in PJM, 2023-2029

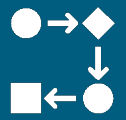


Source: PJM

The Energy Transition report projected **40 GW of retirements**; there are **290+ GW in the queue.**

The above projections of new entry by queued renewable projects (onshore wind, solar, and offshore wind) have been de-rated by historical withdrawal rates.

Building on recent reforms, additional, near-term interconnection solutions can help more efficiently integrate new resources



Establish a separate, streamlined generator replacement process

- Growing interest in **re-using** the site of retiring fossil plants for renewables and/or storage
- Other RTOs have created specific interconnection study processes for these cases, which are **shorter**, **cheaper**, and **less prone to delays**
- Clarifying PJM's processes in this realm could help specifically **address the resource adequacy risks** IDed in the Feb. 2023 report

Alleviate network upgrade costs through near-term, cost-effective transmission tools

- Grid-enhancing technologies (GETs) are a promising tool for ensuring **optimal use** of the existing transmission system
- Studies and pilot projects are growing, including a **new study** kicking off focused on the PJM region
- Interconnecting customers want the option to use GETs as a **lower-cost alternative** to network upgrades proposed by TO
- There is more PJM can do to **encourage consideration and deployment of GETs** by TOs in the region

Ensure sufficient staffing and resource capacity to keep pace with new requests

- Several ways to address this in the near, medium, and longer-term (consultants, automation, hiring and retention, etc.)
- Would like to know more about the **scope of the need**, what might make hiring challenging, what plans PJM has in the works in this regard

Proactive transmission planning can set the region up for long-term success in new entry integration

Identify opportunities for timely, high-priority transmission upgrades

- We applaud PJM's recent creation of the **Scenario Analysis & Special Studies** group to ID transmission needs & short-term solutions
- Need to consider interconnection queue and transmission **holistically** – where and how can targeted transmission improvements help unlock more low-cost generation (whose benefits would be broadly socialized)?

Reduce barriers to capacity imports/exports

- Commercial interest exists in **importing low-cost renewable resources** from other regions into PJM
- Previous Energy Transition reports released by PJM have highlighted the potential for **greater net exports** as renewable energy deployment in the region increases
- This year, PJM declined to initiate an **interregional planning** process with MISO
- Updating capacity import rules and processes, in addition to more proactive interregional transmission planning, could help ensure PJM is maximizing the **diversity and cost-effectiveness of its resource portfolio**

Thank you!

Please reach out with questions:

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