



## PA's Transmission Data at a Glance\*

- Pennsylvania's total RTEP transmission investment from 2016 through 2020 exceeded \$4 billion
- PA's total installed capacity in 2020: 44% is natural gas, 21.3% is coal, and 19.4% is nuclear
  - PA's installed capacity tracks closely PJM's overall footprint where natural gas and coal are 43.4 and 27.5%, respectively, and nuclear represents 17.7%
- PA's queued capacity by fuel type for 2020: solar represents 54.6% of new interconnection requests in PA, while natural gas represents approximately 32% of new requests
  - PJM's Interconnection requests for 2020: solar represents approximately 56% and natural gas— 27% of new requests

<sup>\*</sup>Data obtained from the Pennsylvania State Infrastructure Reports prepared by PJM and PJM's RTEP reports, available at <a href="https://www.pjm.com/library/reports-notices">https://www.pjm.com/library/reports-notices</a>.



# PA's Alternative Energy Portfolio Standards (AEPS) Act Requirements

#### **Alternative Energy Portfolio Standards Resources**

Tier I		Tier II
Solar Photovoltaic (PV)     (Solar PV is a Tier I     resource but also has a     stand-alone requirement)	<ul> <li>Wind power</li> <li>Low-impact hydropower</li> <li>Geothermal energy</li> <li>Biologically derived methane gas</li> <li>Fuel cells</li> <li>Biomass energy</li> <li>Solar thermal</li> <li>Generation of electricity inside of Pennsylvania utilizing by-products of the pulping process and wood manufacturing process</li> <li>Certain muni and coopowered by dropower</li> </ul>	<ul> <li>Waste coal</li> <li>Distributed generation systems</li> <li>Demand-side management*</li> <li>Large-scale hydropower</li> <li>Municipal solid waste</li> <li>Generation of electricity outside of Pennsylvania utilizing by-products of the pulping process and wood manufacturing process</li> </ul>

<sup>\*</sup>These were added to Tier I in 2009. To account for these additional resources, an annual adjustment is added to the non-solar portion of the Tier I requirement.

Source: PAPUC 2020 AEPS Annual Report

#### **AEPS requirements:**

- Increasing annual percentage requirements from June 1, 2006 - May 31, 2021
- As of May 31, 2021, the requirements totaled a final goal of 18%
  - Tier I 8% (0.5% solar carve-out)
  - Tier II 10%
- AEPS requirements remain at this level in perpetuity or until the AEPS Act is amended.

#### **In-state Provision of Credits:**

- Alternative Energy Credits (AECs) used to satisfy the solar PV carve-out of Tier I and to satisfy Tier II requirements must come from in-state resources.
- Remaining Tier I requirements may be met through AECs generated anywhere in PJM (including solar PV).

<sup>\*</sup>Includes energy efficiency, demand response and use of industrial by-products and technologies such as waste heat.



## **PAPUC Engagement at FERC**

PAPUC filed comments to FERC's transmission ANOPR at RM21-17

- PAPUC Chairman Gladys Brown Dutrieuille is a member of the Joint Federal-State Task Force on Electric Transmission, AD21-15
  - NARUC filed initial comments to transmission ANOPR
  - First meeting of the Task Force to be held on November 10, 2021
- PAPUC has joined OPSI comments on transmission issues related to transmission incentives, network upgrades, etc.

## **PAPUC Comments to Transmission ANOPR**

## Participant Funding Model

- The PAPUC supports the participant funding model and its cost causation principle. Its benefits include:
  - Promoting efficient siting of generation projects
  - Allowing the parties that are best positioned to control interconnection costs
  - Various drivers for new generation: access to market, federal, state, local, corporate goals, in-state procurement requirements
- FERC should not mandate additional proactive planning drivers that are not based on **secured financial commitments** of proposed generator interconnections or building the transmission system to accommodate preferred but uncertain generation development.
- The Commission should protect customers from paying for transmission costs based on:
  - Generalized or speculative estimates of transmission benefits; and
  - Stranded transmission costs from generation resources that do not interconnect to the grid



## PAPUC PAPUC Comments to Transmission ANOPR

## Participant Funding Model—Areas for Consideration

- The Commission should allow for incremental improvements to the participant funding model rather than eliminate it
  - Increased coordination among participants within "interconnection cluster zones" may result in economies of scale, more efficient interconnection process
  - Cost sharing among generator interconnecting customers
- To the extent that federal, state, and local public policies are fully aligned, they can be used to identify areas where additional generation is likely to be needed or developed, such that it may be prudent to synchronize the generation interconnection process for these potential resources with the transmission planning process. However, any additional financial risks associated with this type of public policy driven generation planning should be borne by the sponsoring states and the generators benefitting from the increased efficiencies.



# PAPUC PAPUC Comments to Transmission ANOPR

## **Transmission Planning Principles**

- Reliability and resilience should be the foundational principles for transmission planning
- Incremental transmission planning with regular retooling and updates should provide a nimbler and more cost-disciplined approach to building the grid of the future compared to long-term visionary plans with aggressive generation development without financial commitment
- Regional transmission planning should be based on verifiable and quantifiable inputs and assumptions that are available for stakeholder review through an open and transparent transmission planning process. Such processes should take into consideration and incorporate constructability issues and relevant state siting laws.
- Incorporation of grid-enhancing technologies that maximize the useful life of assets and deliver savings to customers through increased capacity and efficiency
- Evolving generation mix will require reliability upgrades due to large generation deactivations
  - Need to use existing transmission capacity efficiently and minimize stranded costs



# PAPUC PAPUC Comments to Transmission ANOPR

## **Cost Allocation Principles**

- The Commission should uphold the foundational beneficiary pays principle of Order 1000 for needed transmission facilities identified in the regional transmission planning process and the just and reasonable State Agreement Approach in PJM
- The Commission should uphold the foundational cost causation principle for network upgrades necessary to allow generation to interconnect to the grid
- The Commission should allow for incremental improvements to the participant funding model rather than eliminate it
- The Commission should maintain regional diversity and flexibility in the implementation of Order 1000
- The Commission should protect customers from paying for transmission costs based on generalized or speculative estimates of transmission benefits