



The Energy Industry and PJM

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PJM Interconnection

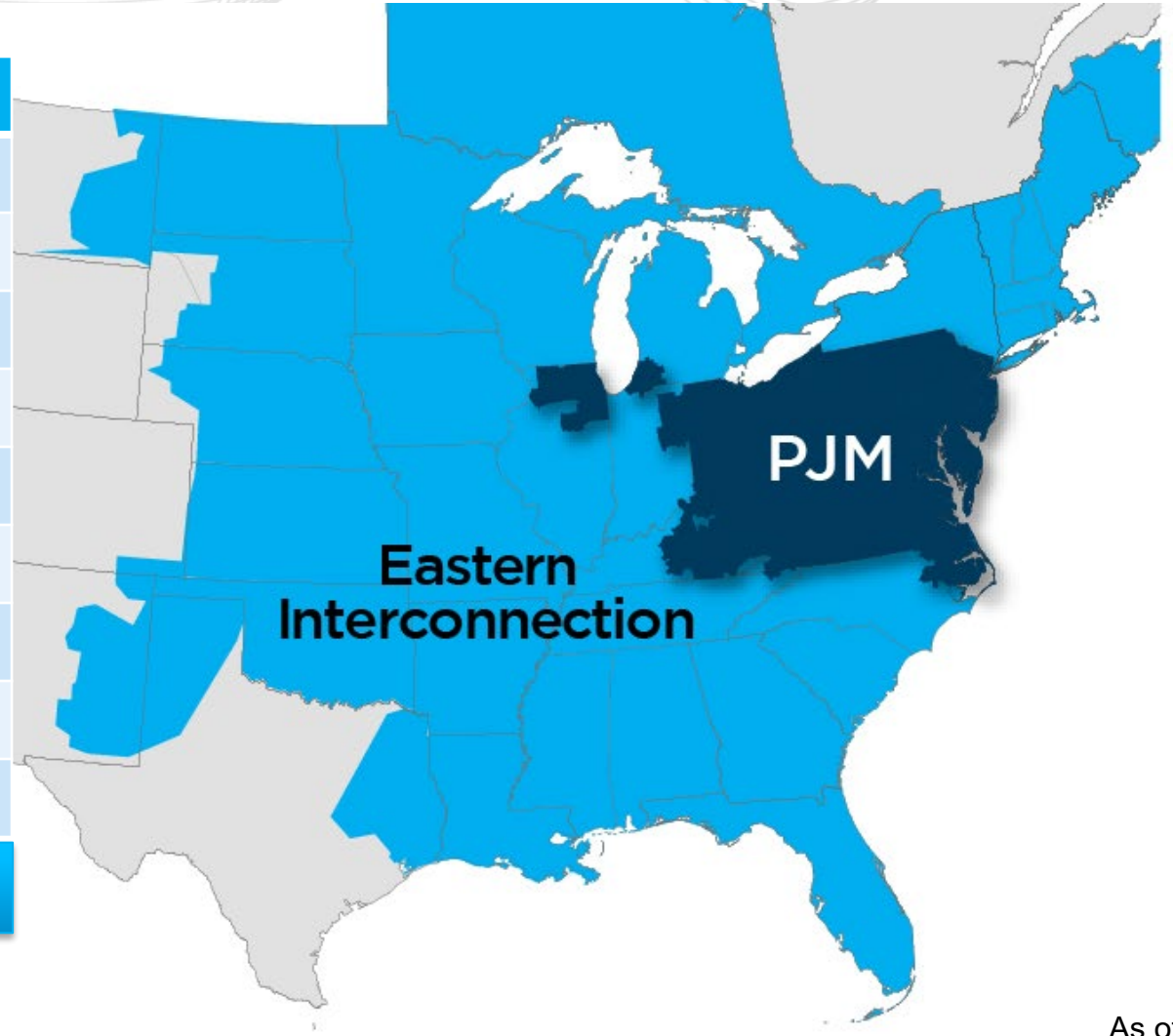
West Virginia Public Energy Authority

Sept. 28, 2022

Key Statistics

Member companies	1,060+
Millions of people served	65
Peak load in megawatts	165,563
Megawatts of generating capacity	185,442
Miles of transmission lines	85,103
2020 gigawatt hours of annual energy	782,683
Generation sources	1,436
Square miles of territory	368,906
States served	13 + DC

21% of U.S. GDP Produced in PJM



As of 2/2021

PLANNING



Planning for the future like...



OPERATIONS



Matches supply with demand like...

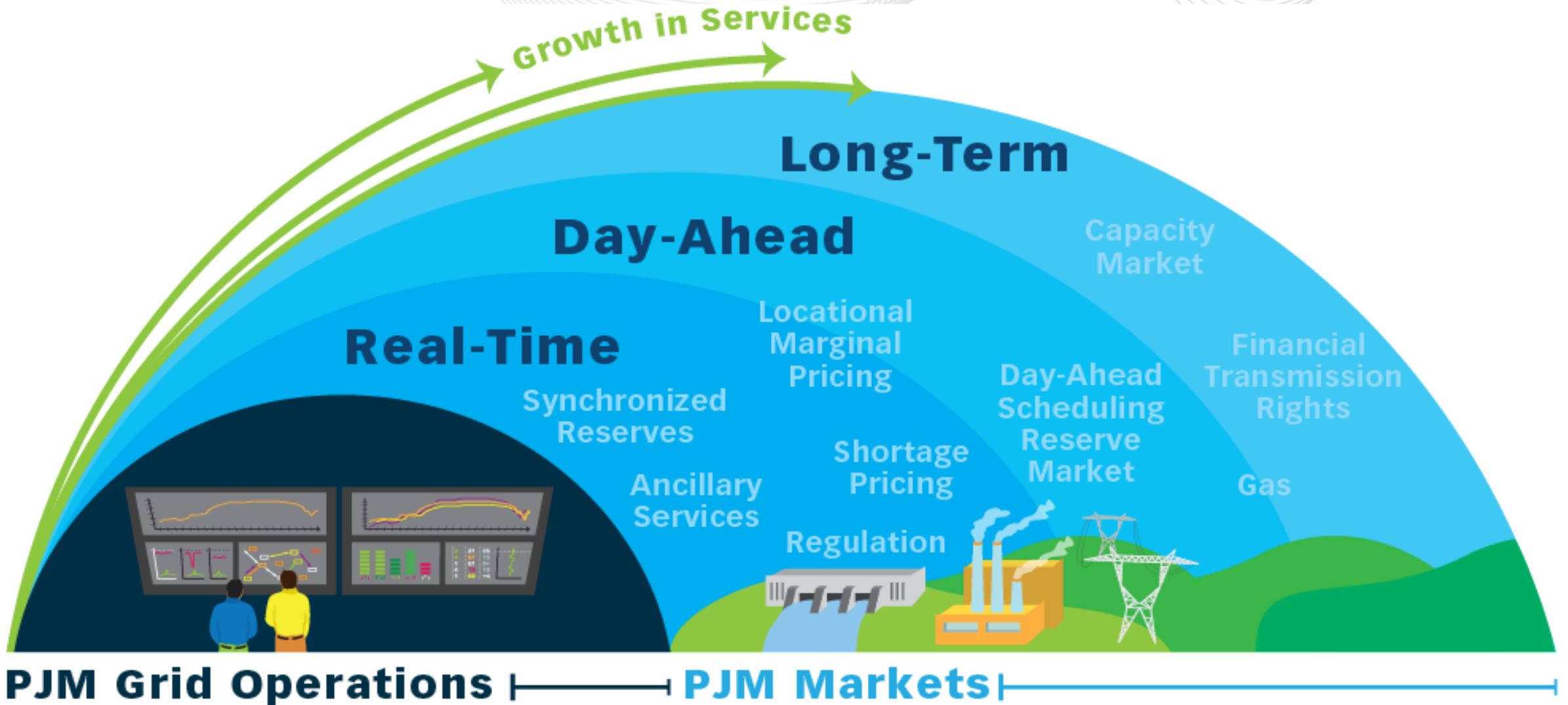


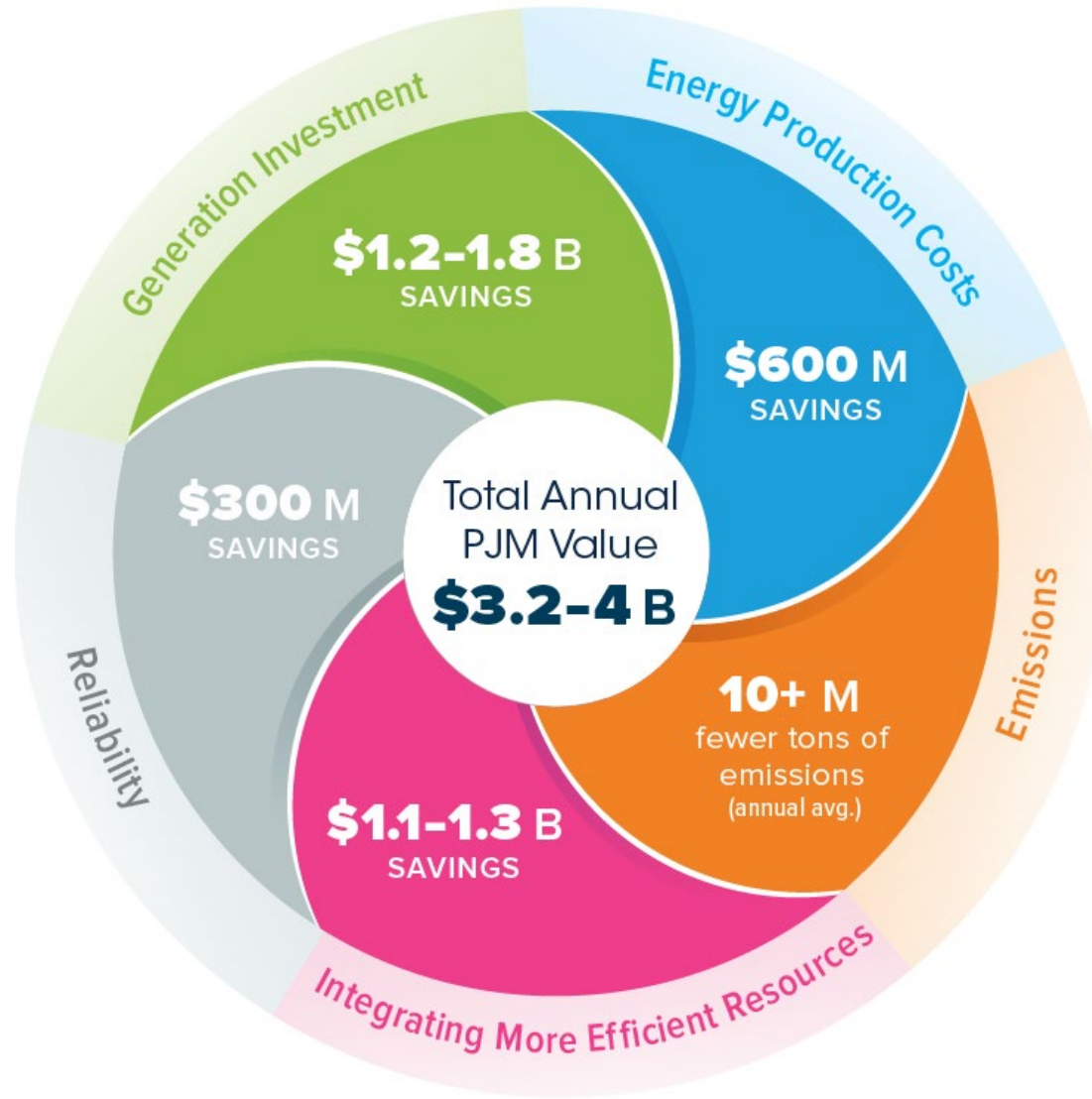
MARKETS



Energy Market Pricing like...







— All numbers are estimates. —



1 | Submit their supply resources to PJM for economic dispatch



2 | Self-schedule their own supply resources to meet their load obligations

3 | Purchase energy from other market participants



4 | Import energy from outside PJM

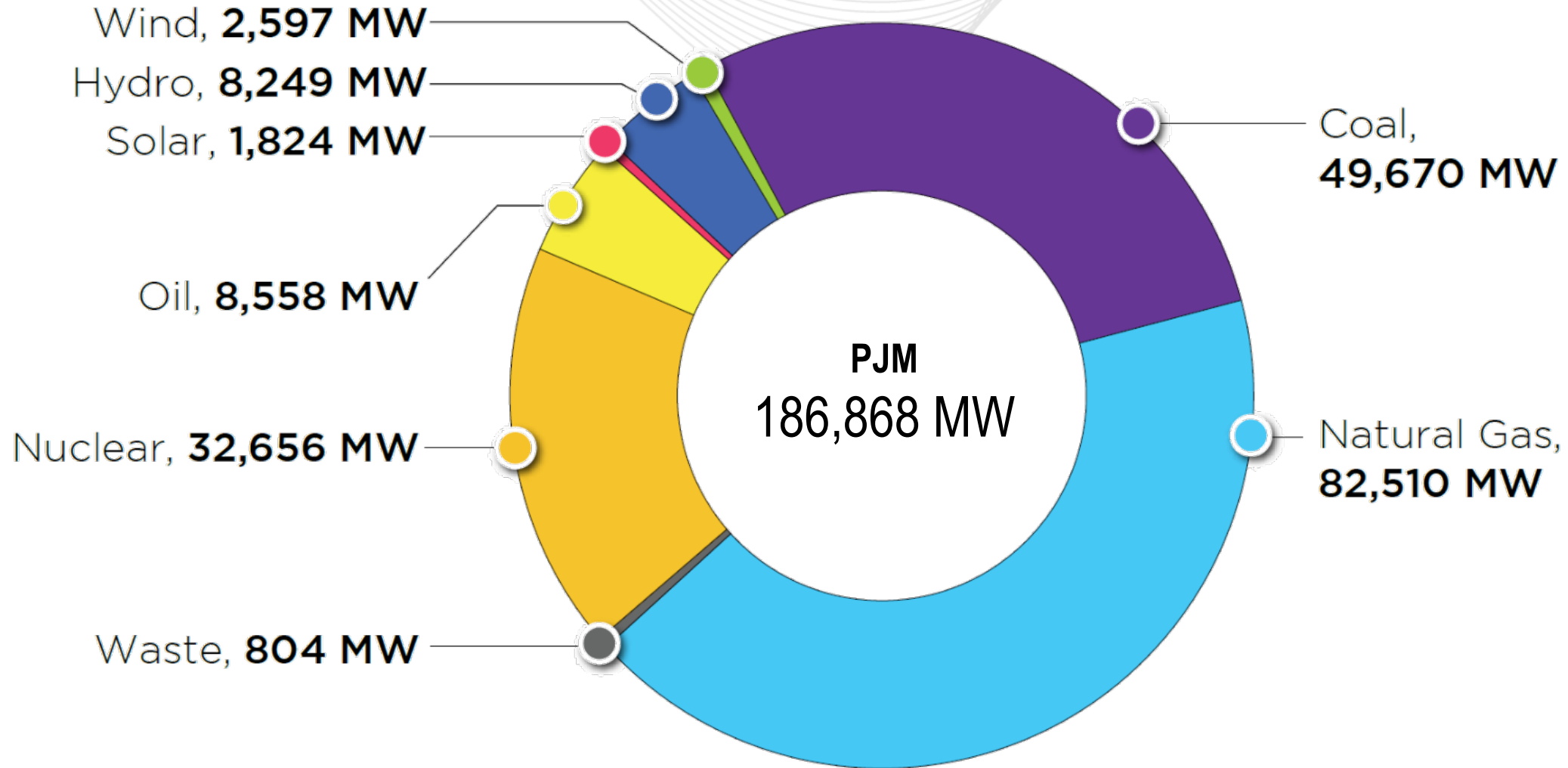
5 | Purchase from the spot market

**Load
Serving
Entity Supply
Obligations**

A photograph of a city skyline at night, with various buildings illuminated and a residential area in the foreground.

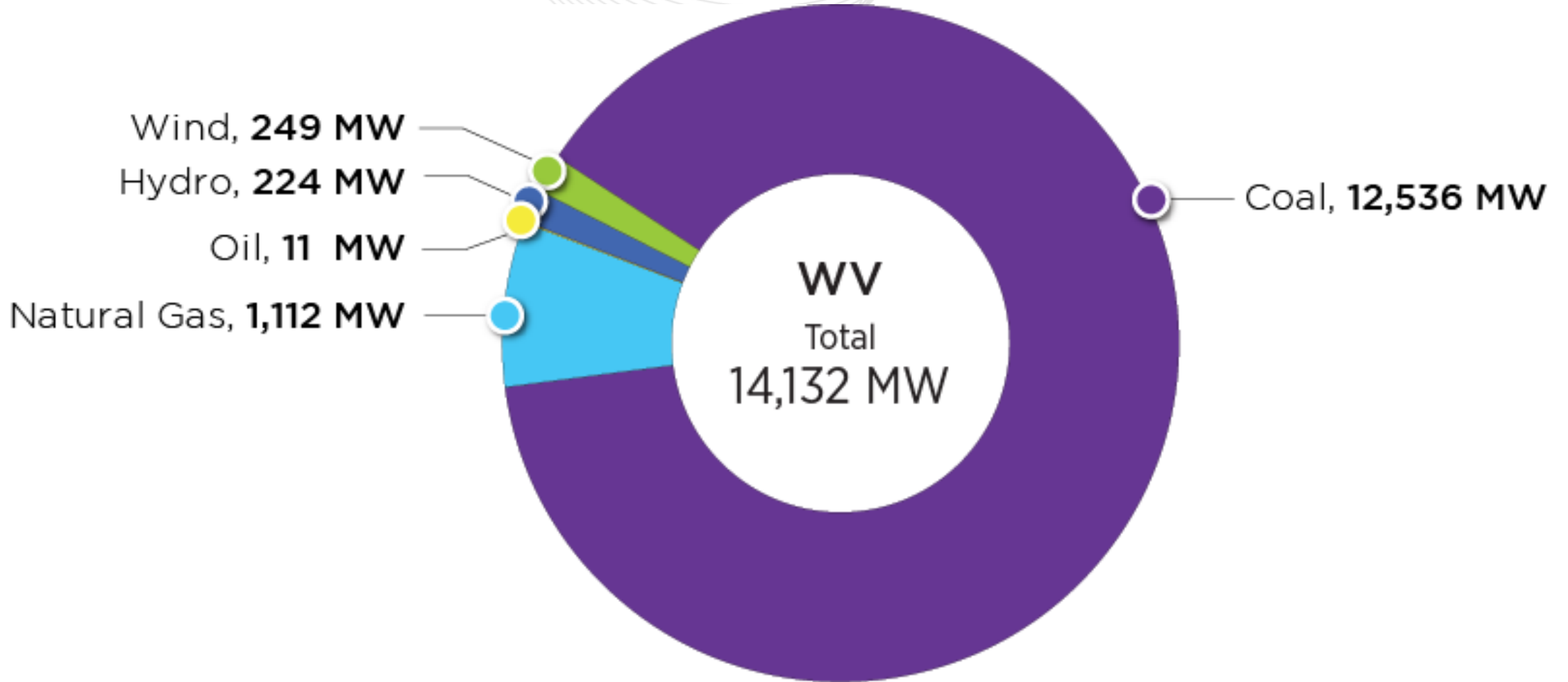
PJM – Existing Installed Capacity

(CIRs – as of Dec. 31, 2021)



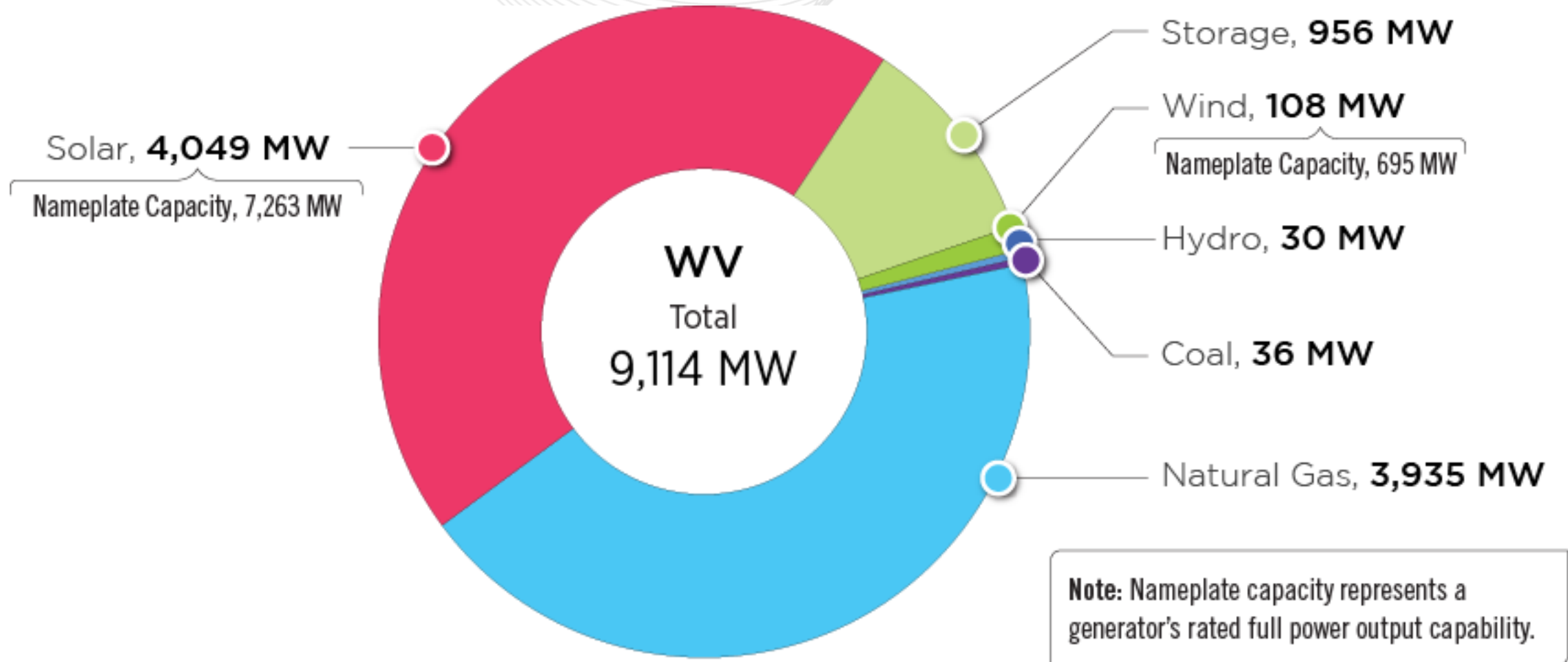
West Virginia – Existing Installed Capacity

(CIRs – as of Dec. 31, 2021)

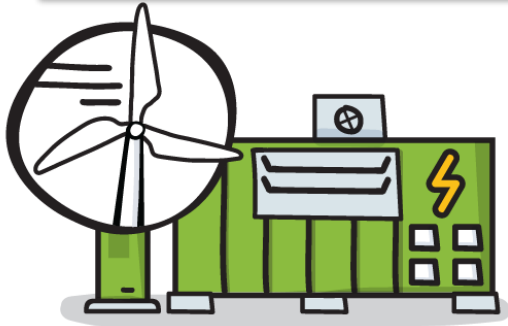


West Virginia – Queued Capacity (MW) by Fuel Type

(Requested CIRs – as of Dec. 31, 2021)



Unprecedented Number of Changes in the Power Industry



Storage and
renewables



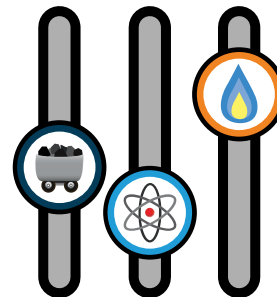
Distributed energy
resources



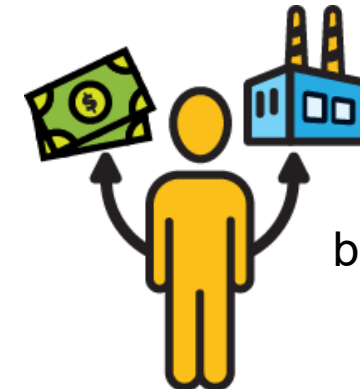
Energy efficiency



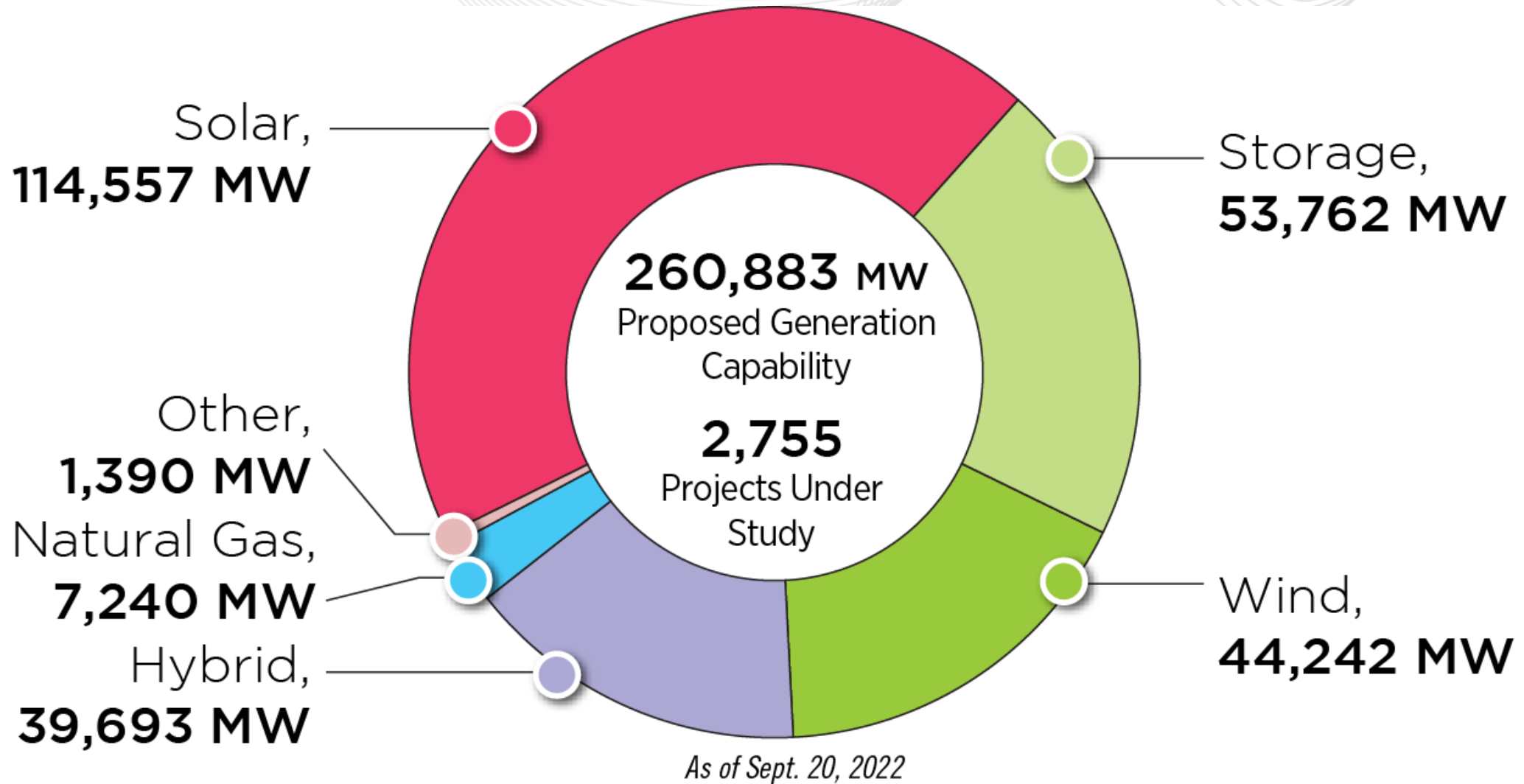
Alternative
technologies



Fuel swap

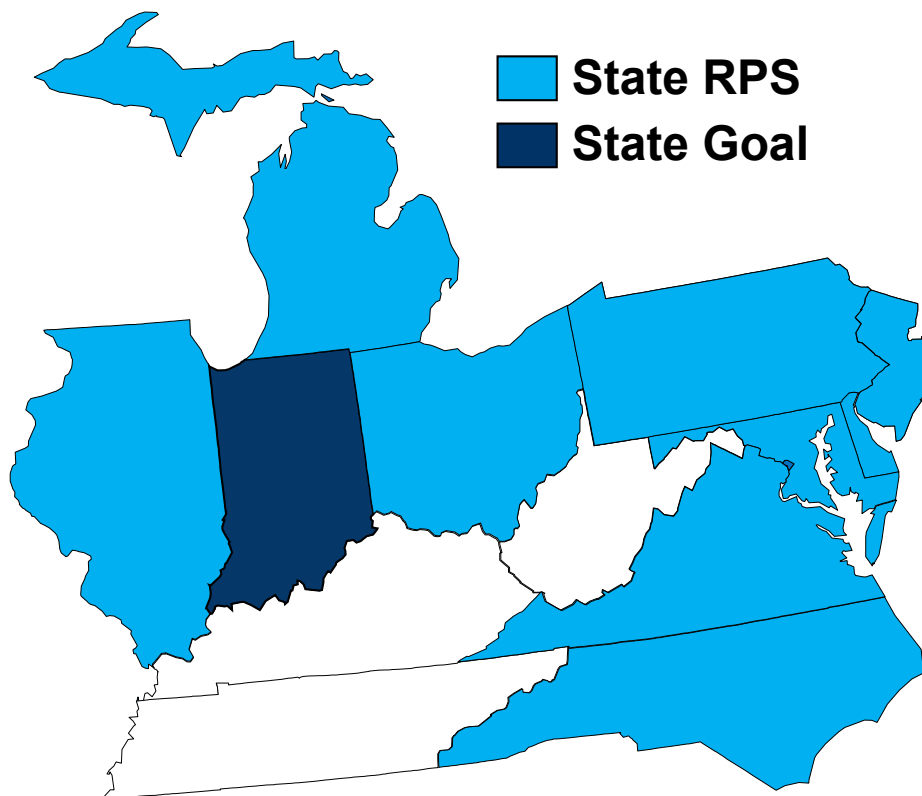


Customer
behavior and
choice



State Renewable Portfolio Standards (RPS) require suppliers to utilize renewable resources to serve an increasing percentage of total demand.

State RPS Targets*



☀️ NJ: 50% by 2030**	☀️ VA: 100% by 2045/2050 (IOUs)
☀️ MD: 50% by 2030**	☀️ NC: 12.5% by 2021 (IOUs)
☀️ DE: 40% by 2035	OH: 8.5% by 2026
☀️ DC: 100% by 2032	MI: 15% by 2021
☀️ PA: 18% by 2021***	IN: 10% by 2025***
☀️ IL: 50% by 2040	

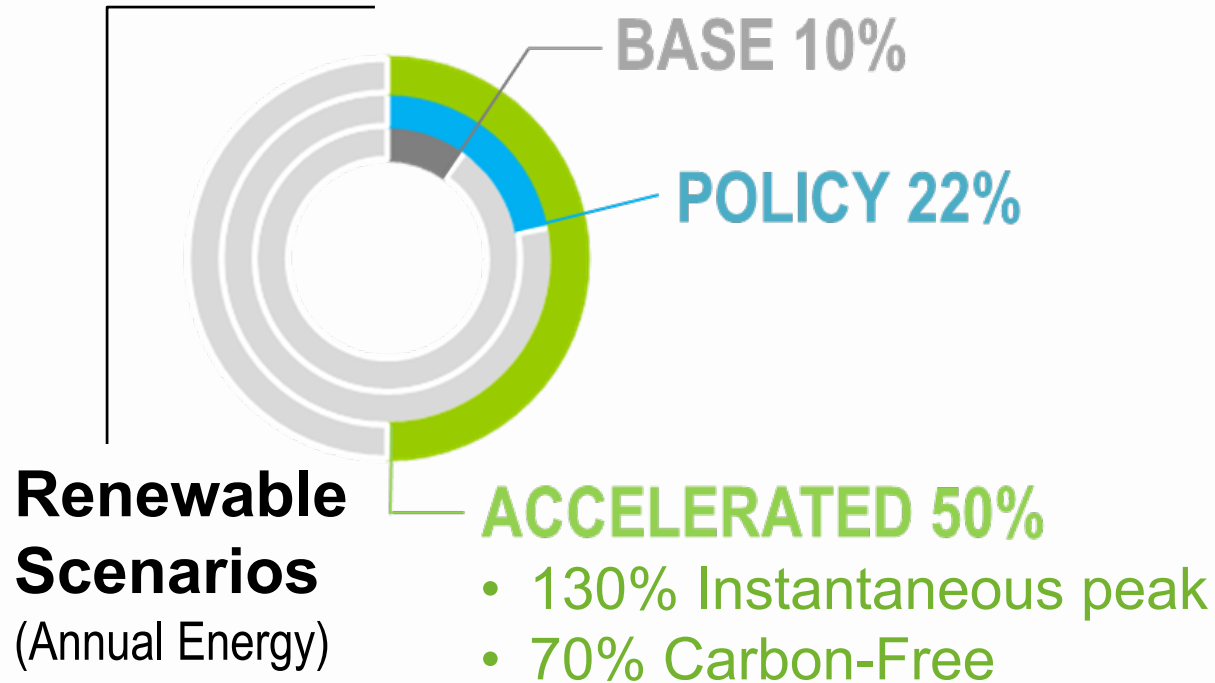
☀️ Minimum solar requirement

* Targets may change over time; these are recent representative snapshot values

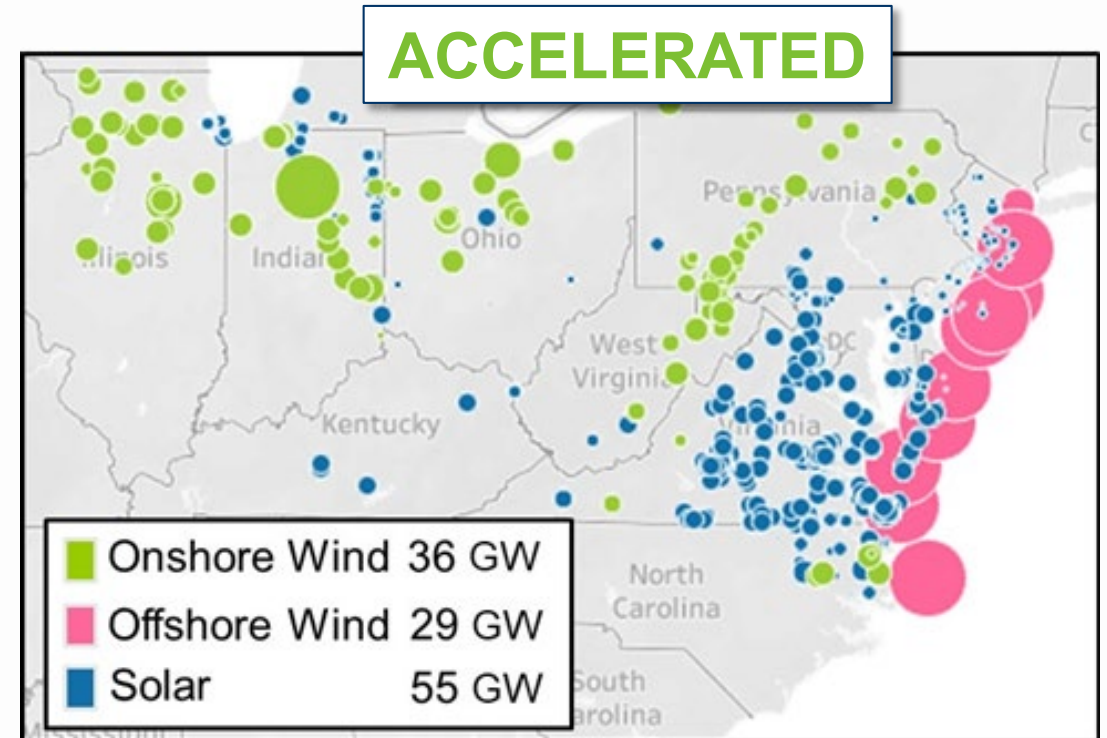
** Includes an additional 2.5% of Class II resources each year

*** Includes non-renewable "alternative" energy resources

“**Living study**” to identify gaps and opportunities; the initial findings should not be regarded as expected outcomes, but as bookends to be refined as the study progresses.



Note: Policies and Market rules “as-is” April 2020.





**Facilitate
Decarbonization**



**Grid of
the Future**



Innovation

RELIABILITY