



PJM Winter Preparedness 2020/2021

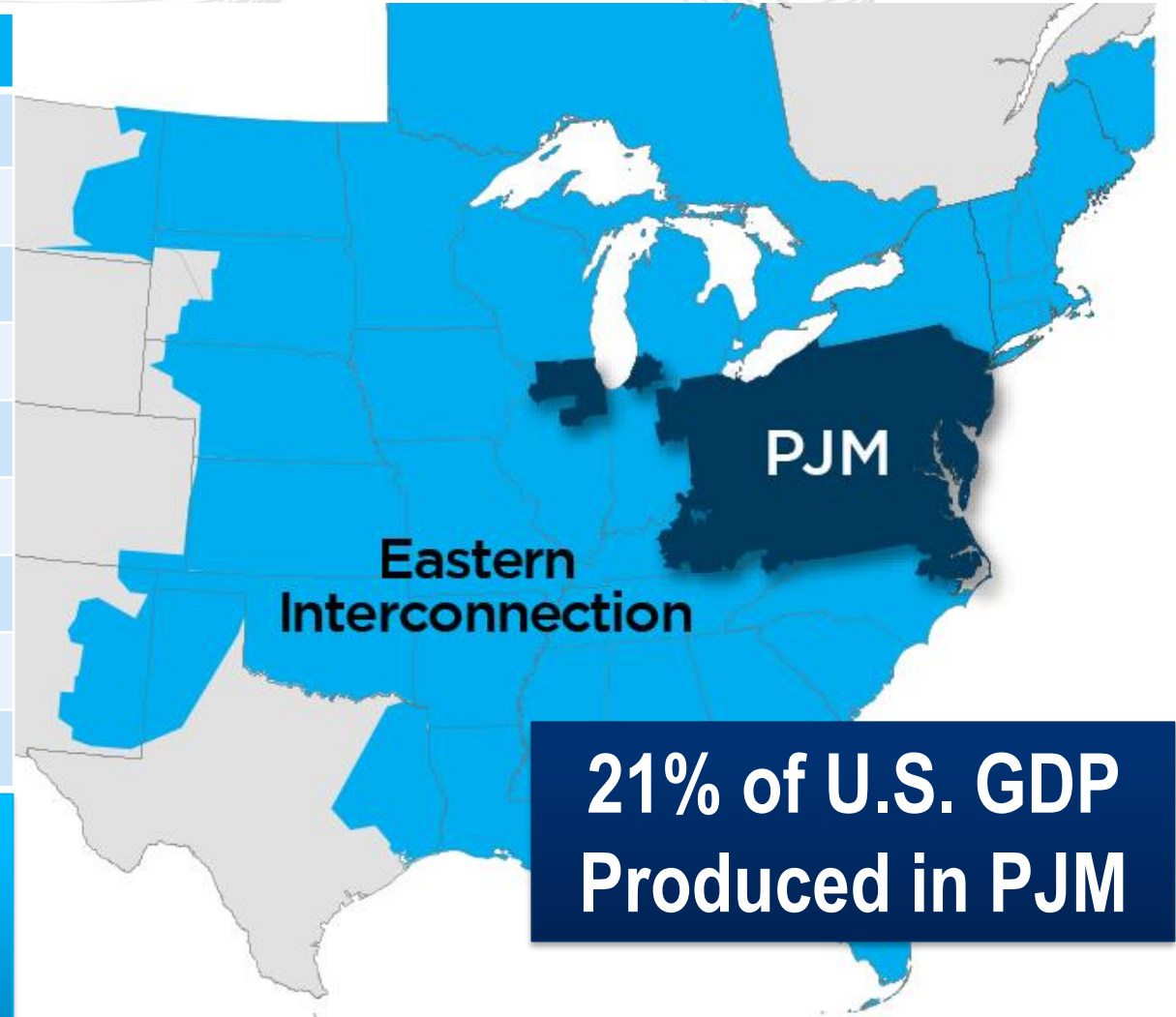
Stephen Bennett
Manager, Regulatory & Legislative Affairs
PJM Interconnection

PA Senate Democratic Policy Committee
September 29, 2020

Key Statistics

Member companies	1,040+
Millions of people served	65
Peak load in megawatts	165,563
Megawatts of generating capacity	186,788
Miles of transmission lines	84,236
2019 gigawatt hours of annual energy	787,307
Generation sources	1,446
Square miles of territory	369,089
States served	13 + DC

- 27% of generation in Eastern Interconnection
- 26% of load in Eastern Interconnection
- 20% of transmission assets in Eastern Interconnection



As of 2/2020

Reliability

- Grid operations
- Supply/demand balance
- Transmission monitoring

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Regional Planning

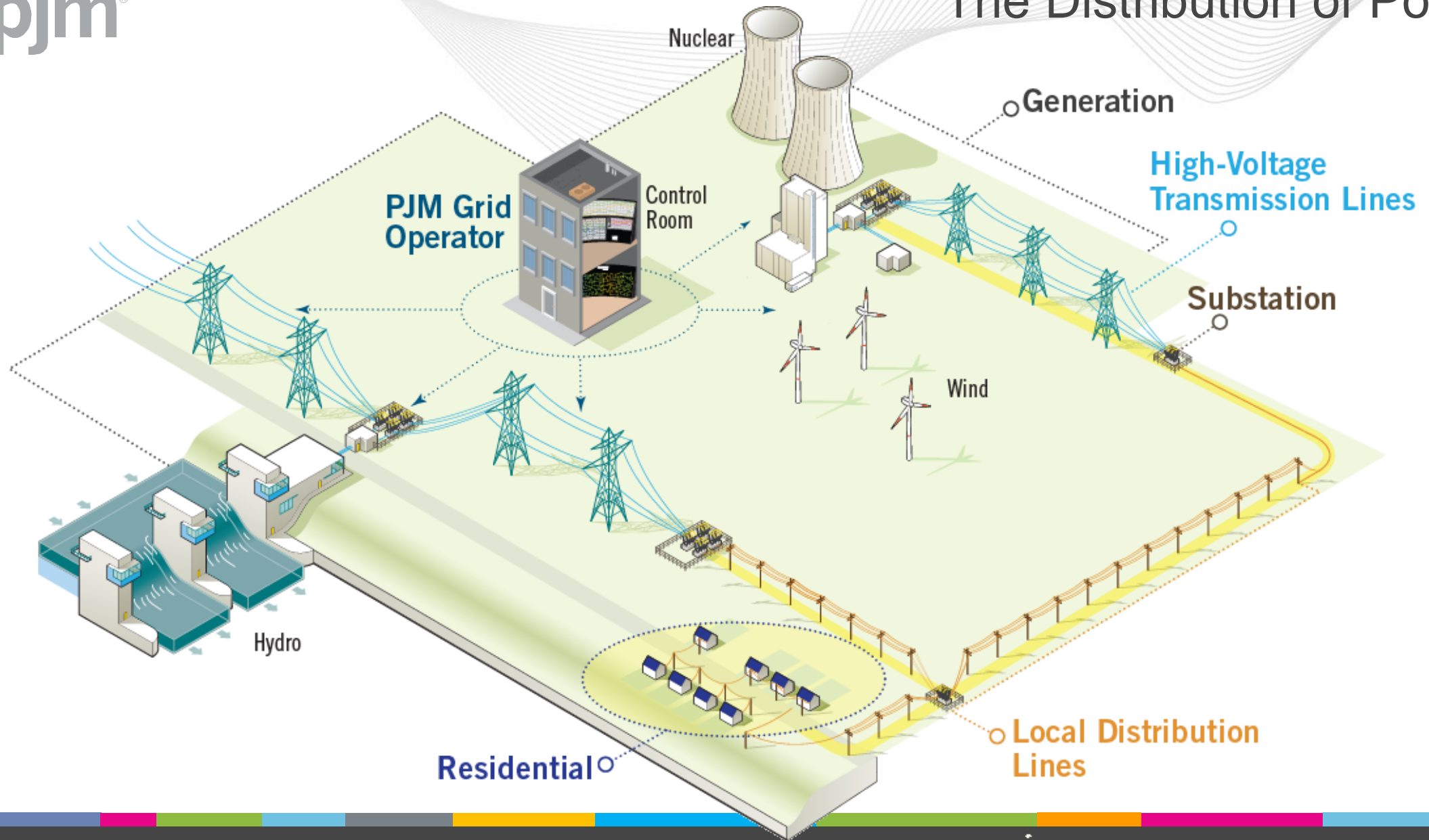
- 15-year outlook

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Market Operation

- Energy
- Capacity
- Ancillary services



- **Forecast:** PJM forecasts winter peak demand at approximately 137,000 MW
 - PJM has over 186,000 MW of supply and demand-side resources
 - PJM's all-time winter peak is 143,434 MW, set on Feb. 20, 2015
- **Analysis:** PJM analyzes the expected demand for electricity, weather predictions and other factors to develop its forecast for winter operations
- **Coordination:** PJM works with members to prepare for cold weather by testing resources, conducting drills and surveying generators for fuel inventory
- **Checklist:** PJM's preparation checklist includes increasing staffing for weather emergencies and maintenance activities to ensure equipment is ready for winter conditions
- **Gas Supply:** PJM closely coordinates with natural gas supply and transportation across the region
- **Pipelines:** PJM studies potential pipeline service disruptions and the effect on generators.

50/50 Non-diversified Peak Load Base Case

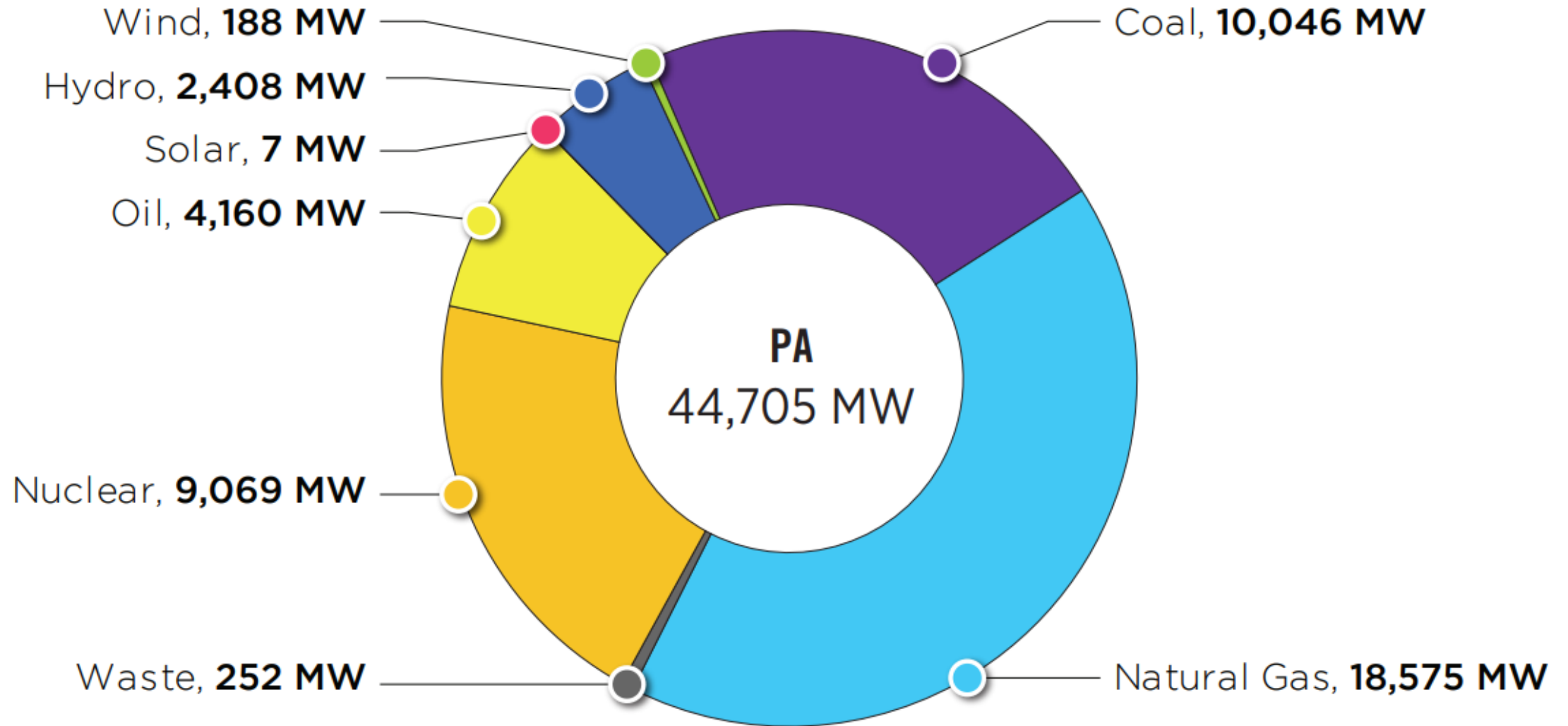
LAS Load Forecast	136,449 MW
Preliminary RTO Net Interchange	4,000 MW** (Exporting)
PJM RTO Installed Capacity	186,294 MW (preliminary)
Discrete Generator Outages	15,942 MW

** 4,000 MW of net interchange is modeled in the OATF base case and accounts for historical and forecasted Pseudo Tie data.

IN PROGRESS

- Peak load base case study
- Sensitivity Studies
- Results expected in October

- **Existing Capacity:** Natural gas represents approximately 41.6 percent of the total installed capacity in the Pennsylvania service territory while coal represents approximately 22.5 percent. In PJM natural gas and coal are 42.4 and 28.7 percent of total installed capacity.
- **Interconnection Requests:** Natural gas represents 56.4 percent of new interconnection requests in Pennsylvania, while solar represents approximately 35.5 percent of new requests.
- **Deactivations:** 976.2 MW in Pennsylvania gave notification of deactivation in 2019.
- **RTEP 2019:** Pennsylvania's 2019 RTEP projects total approximately \$957.1 million in investment. Approximately 73.4 percent of that represents supplemental projects. These investment figures only represent RTEP projects that cost at least \$5 million.



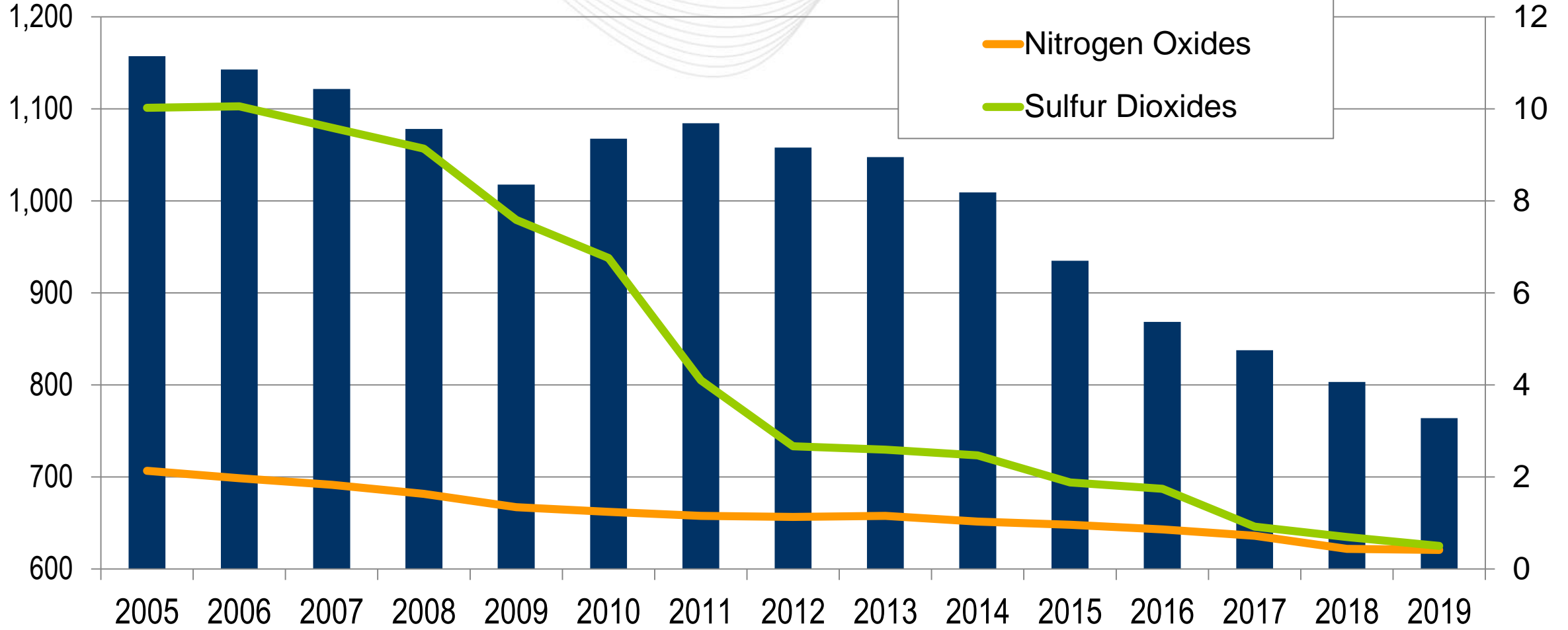


Pennsylvania – Average Emissions (lbs/MWh)

(Feb. 7, 2020)

CO₂
(lbs/MWh)

SO₂ and NO_x
(lbs/MWh)



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