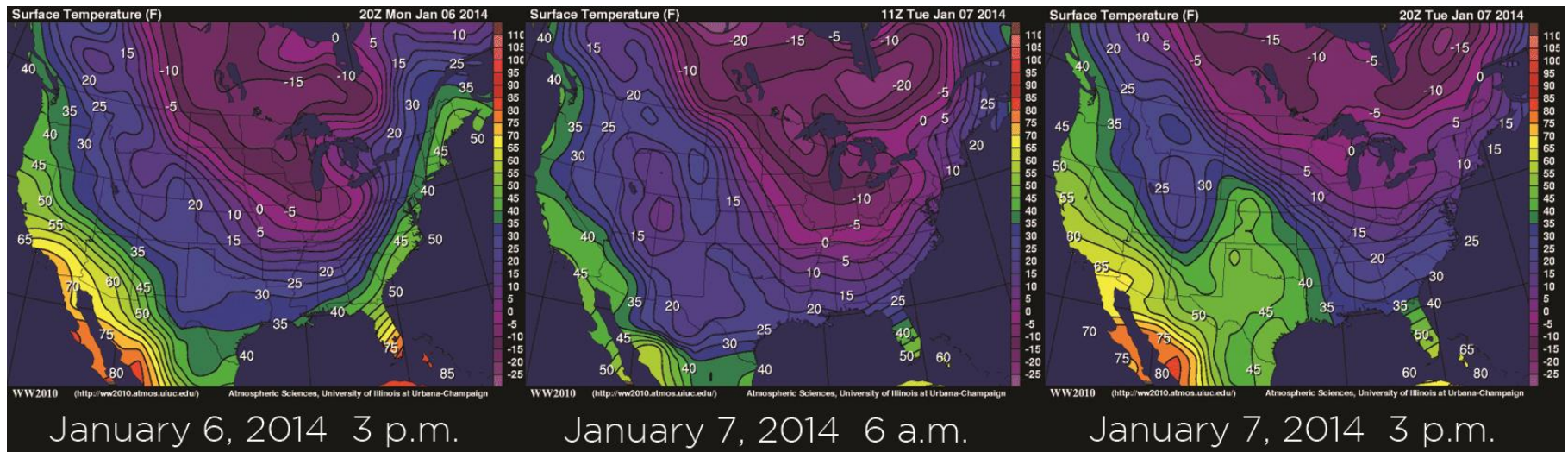




2014 Winter Conditions and Impacts on Electricity Markets in the PJM Region

Adam Keech, USA

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25 August – Cigre Session Paris 2014



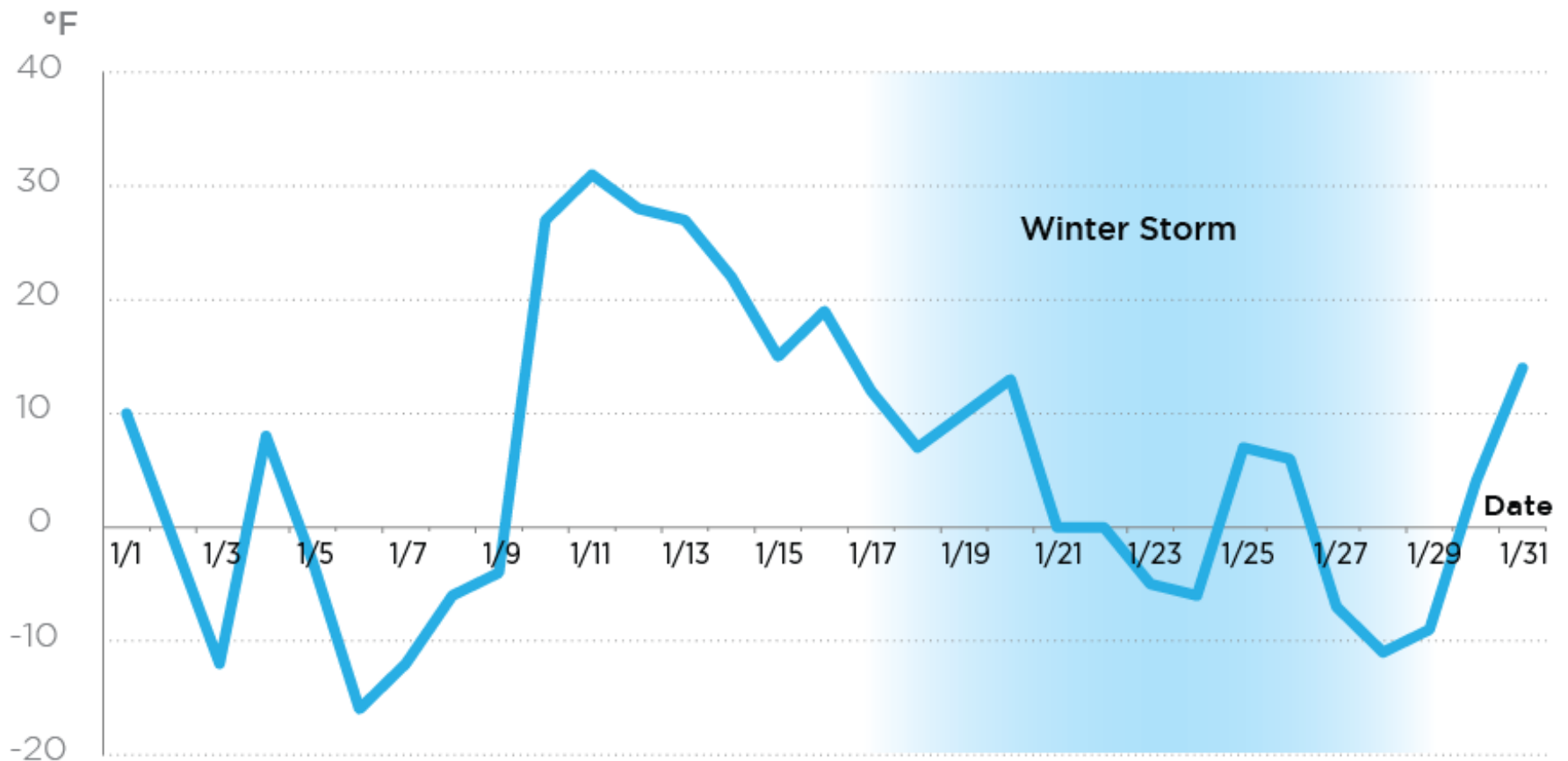
Source: University of Illinois at Urbana-Champaign

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Minimum Temperatures – January 2014

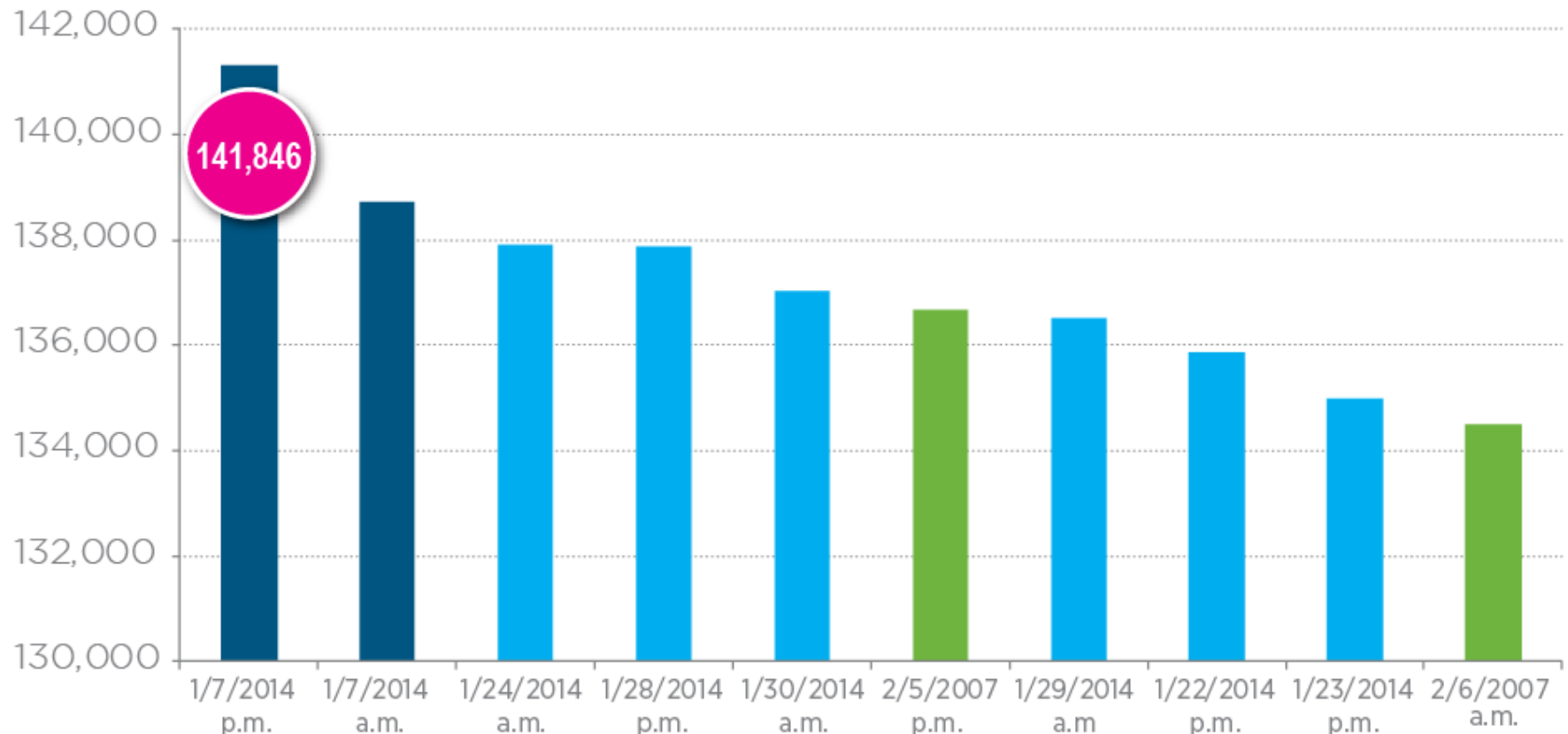
Columbus, Philadelphia, Chicago and Richmond



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Maximum Winter Peak Demands

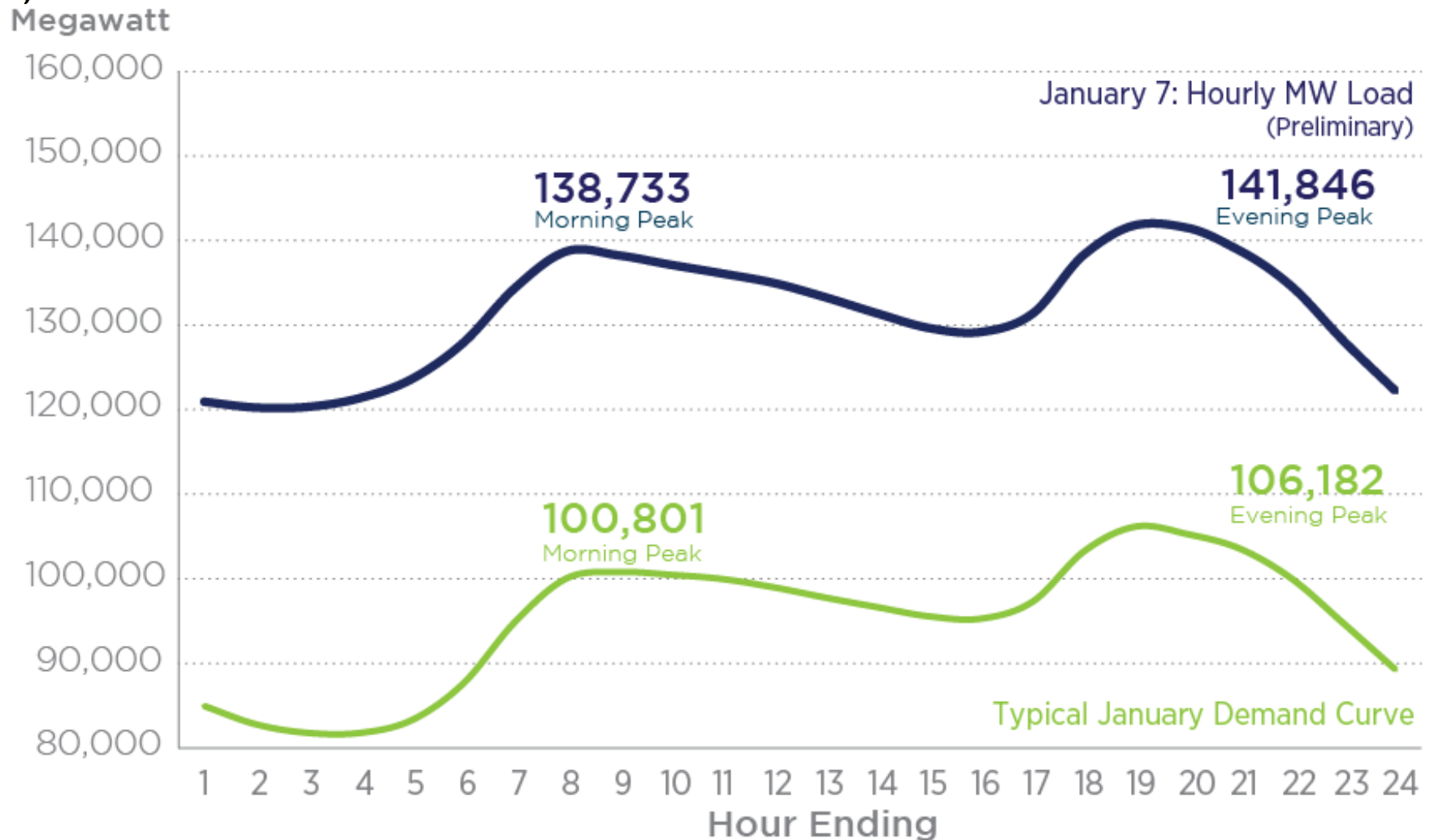
Megawatt



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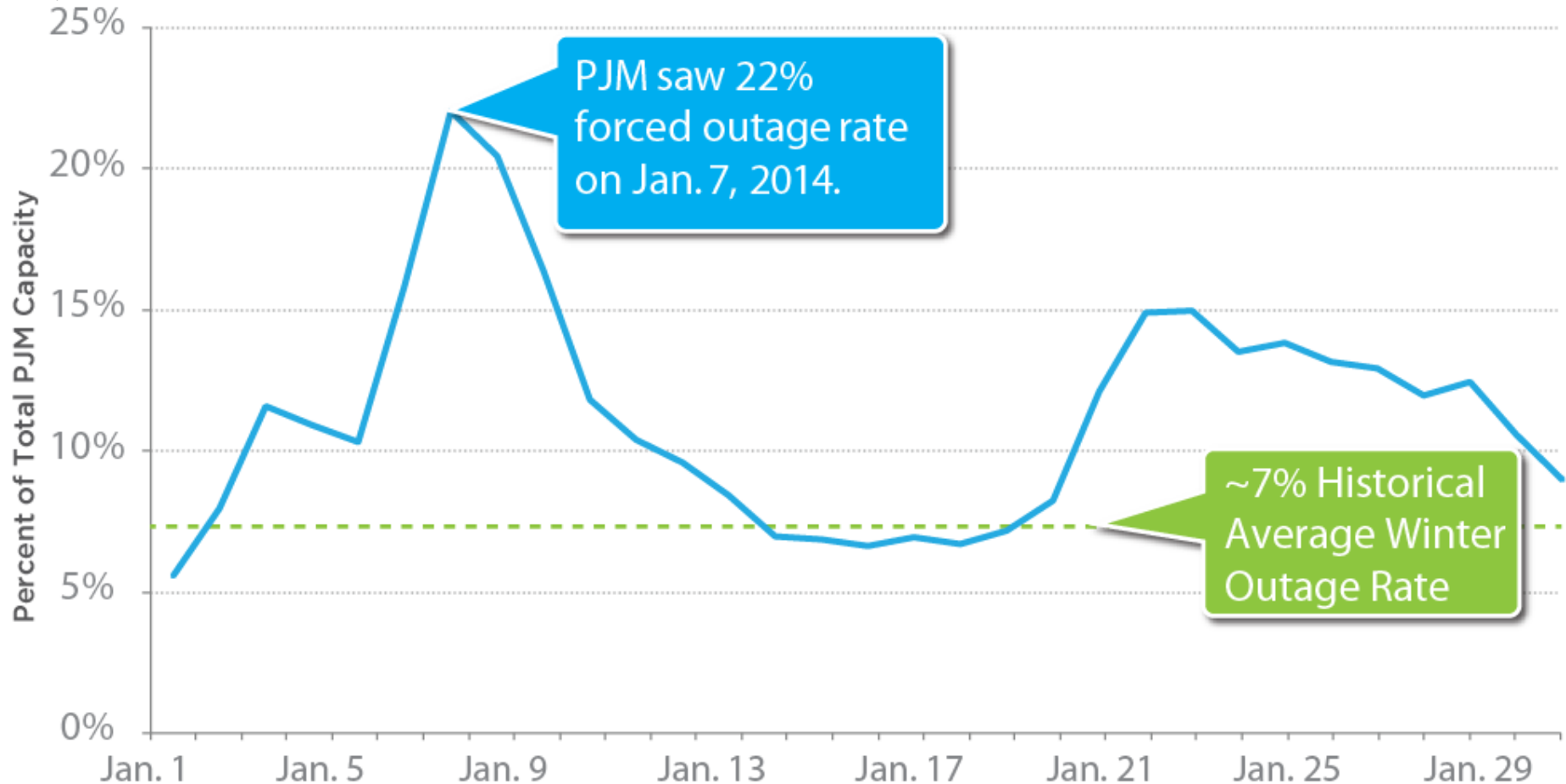


January 7 Load Compared to Typical January Day



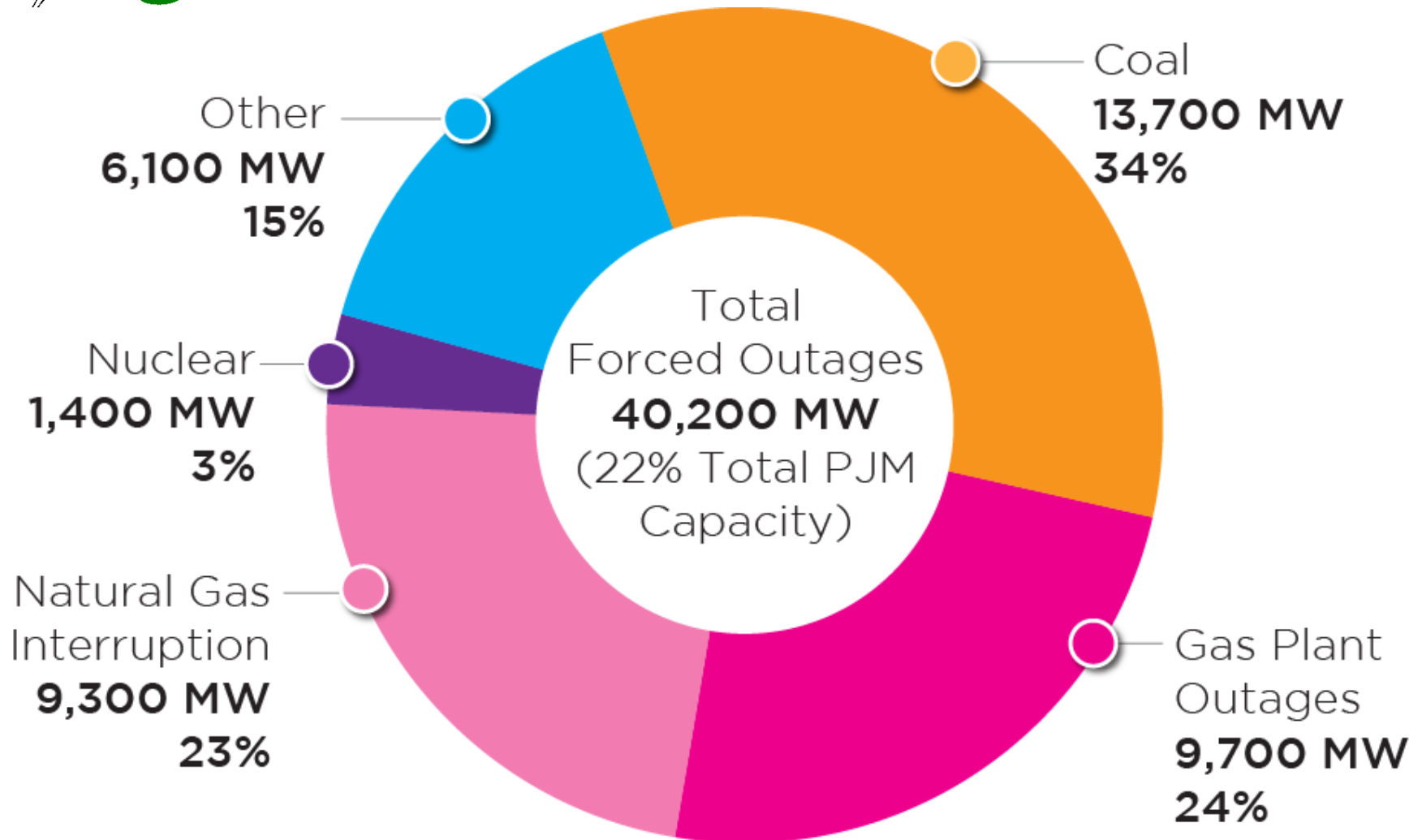


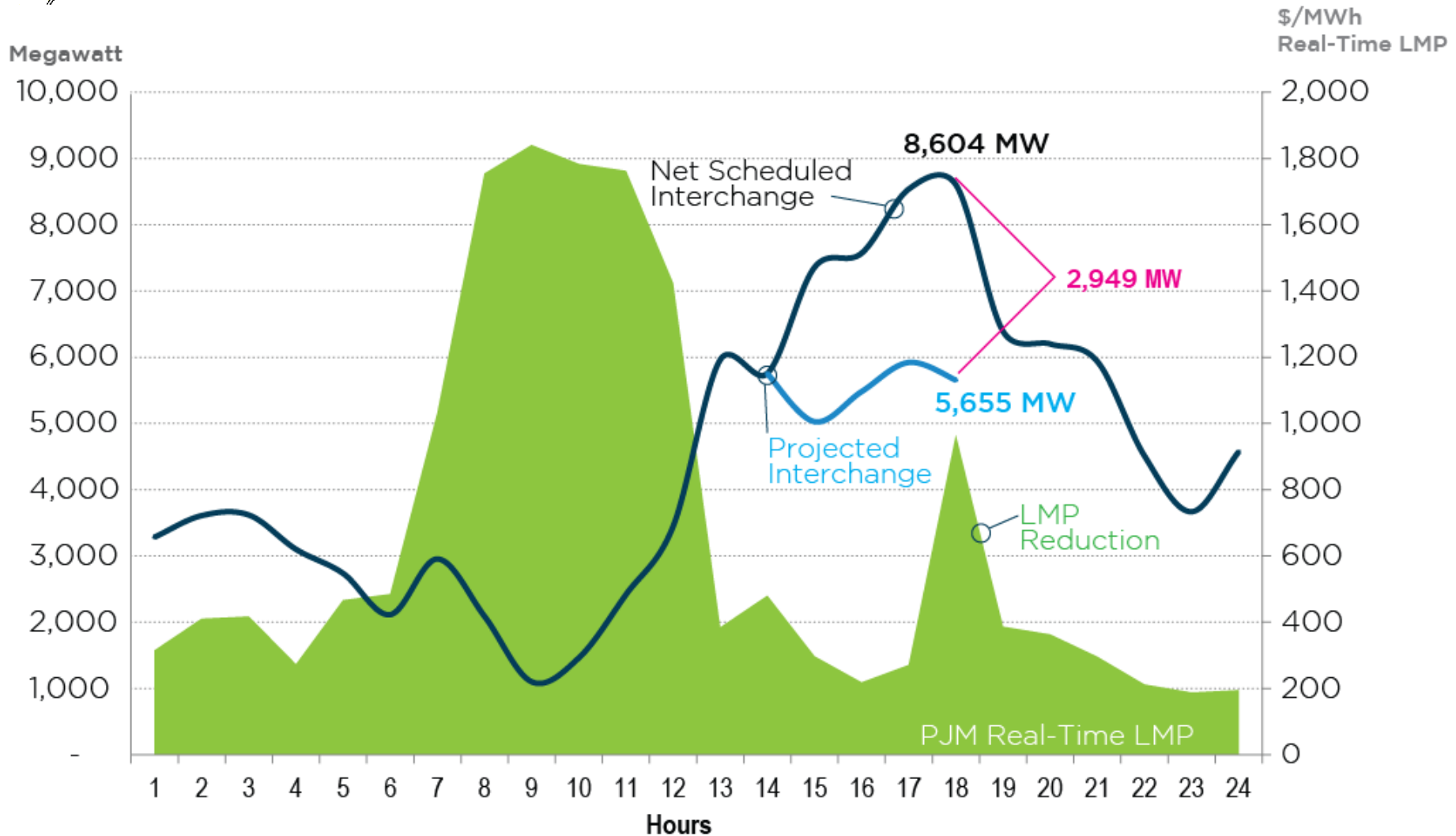
2014 Morning Peak Outaged ICAP%



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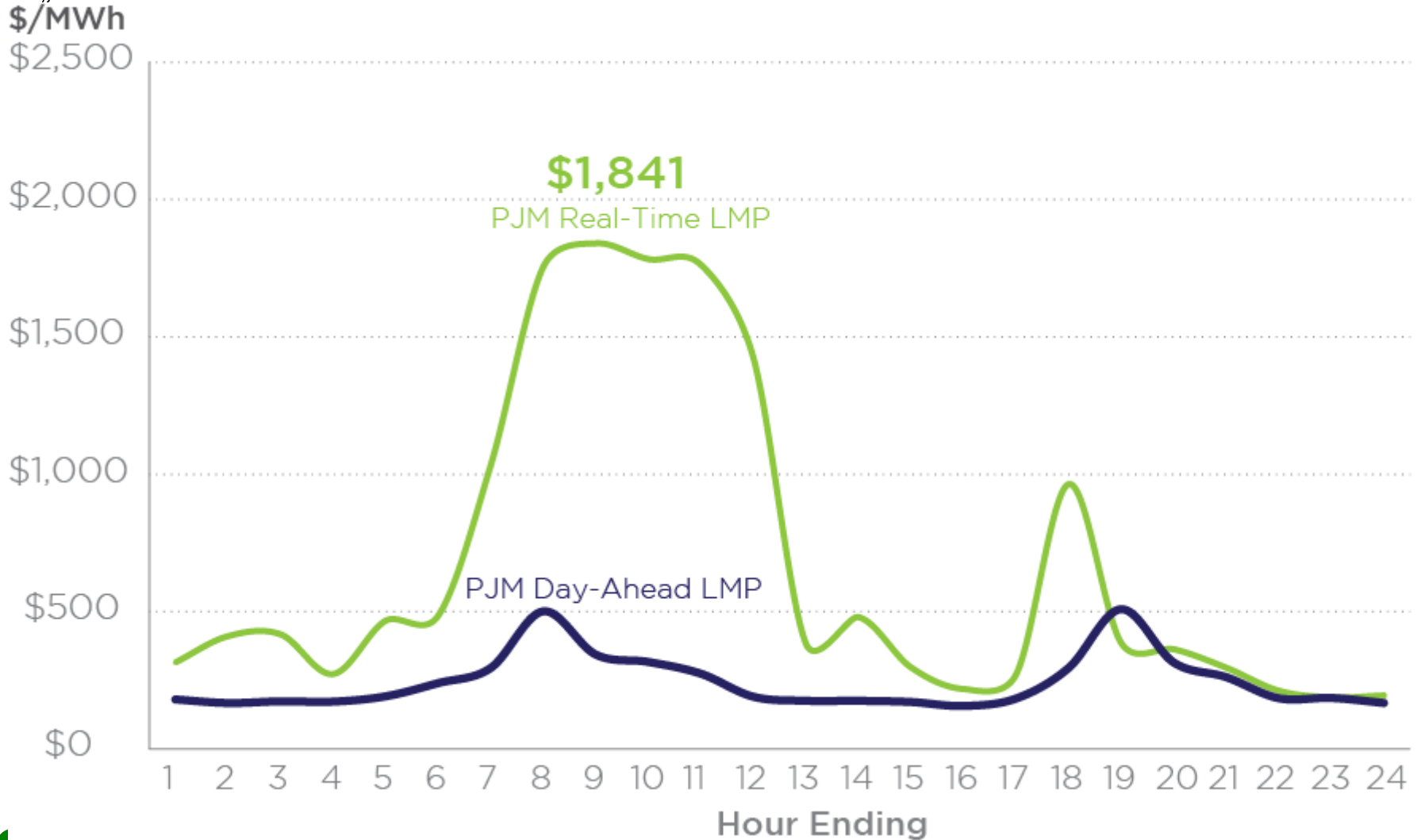
Forced Outages – January 7 Evening Peak (7pm)







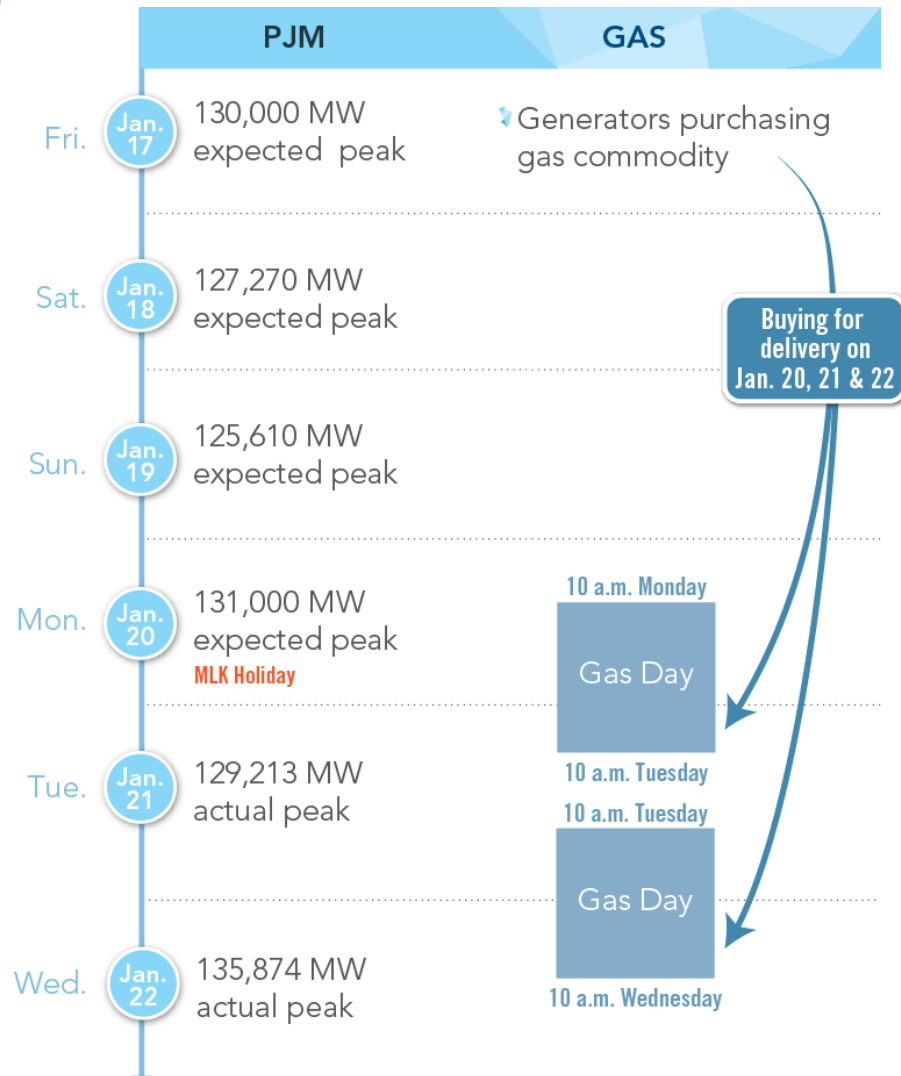
Real-Time and Day-Ahead Prices – January 7



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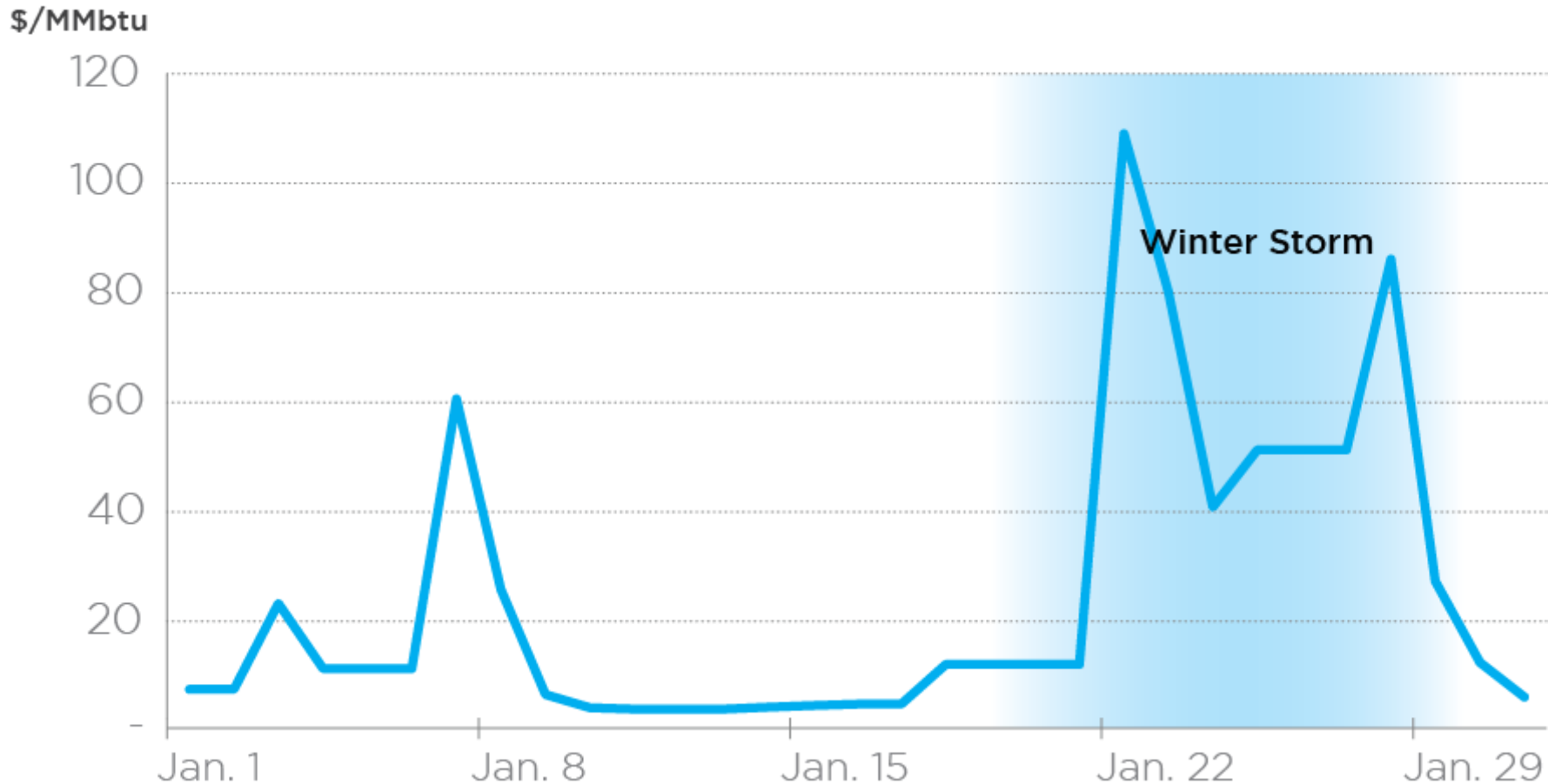


Holiday Considerations



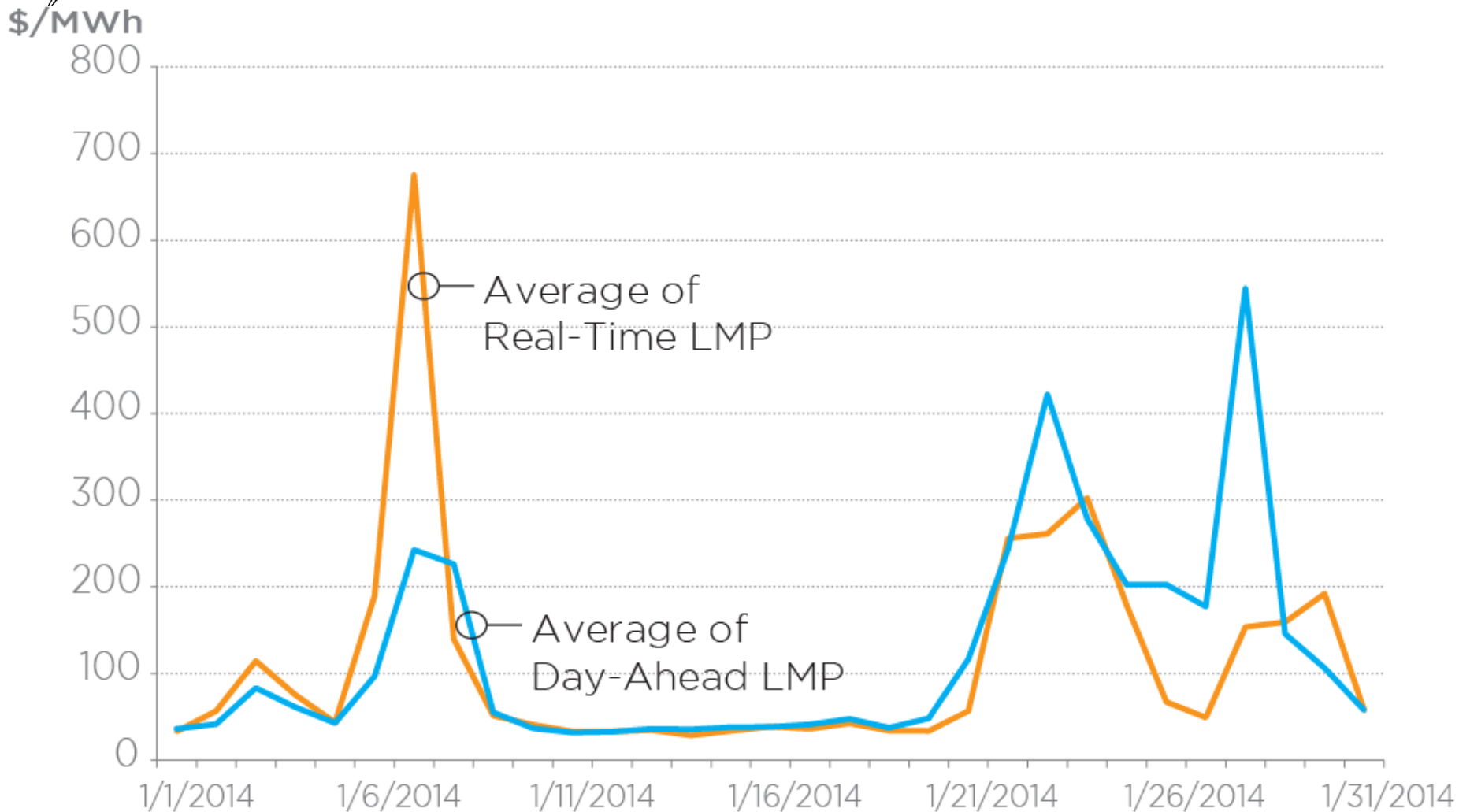
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Gas Prices (Market East) – January 2014





2014 PJM Load-Weighted LMPs

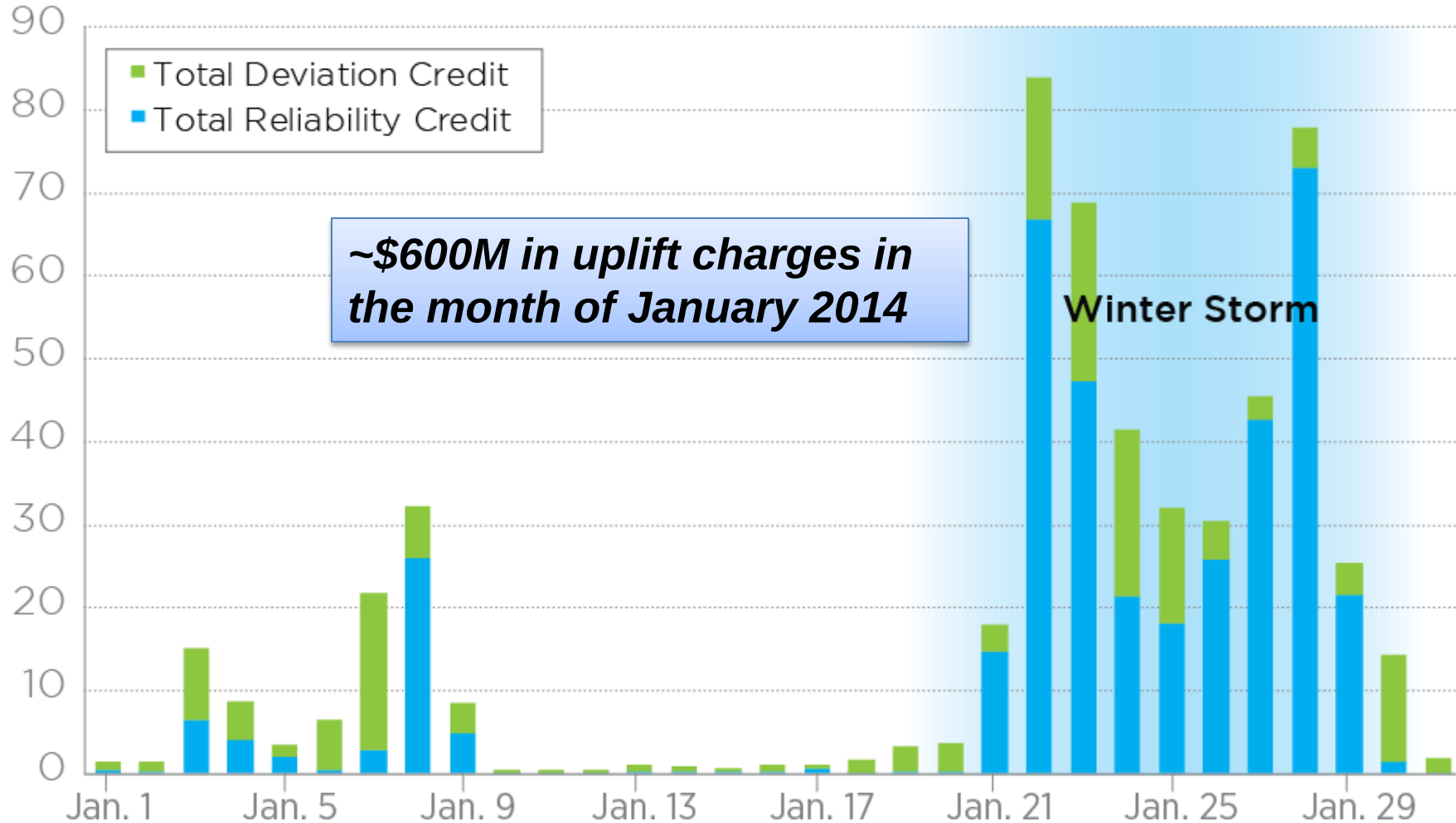


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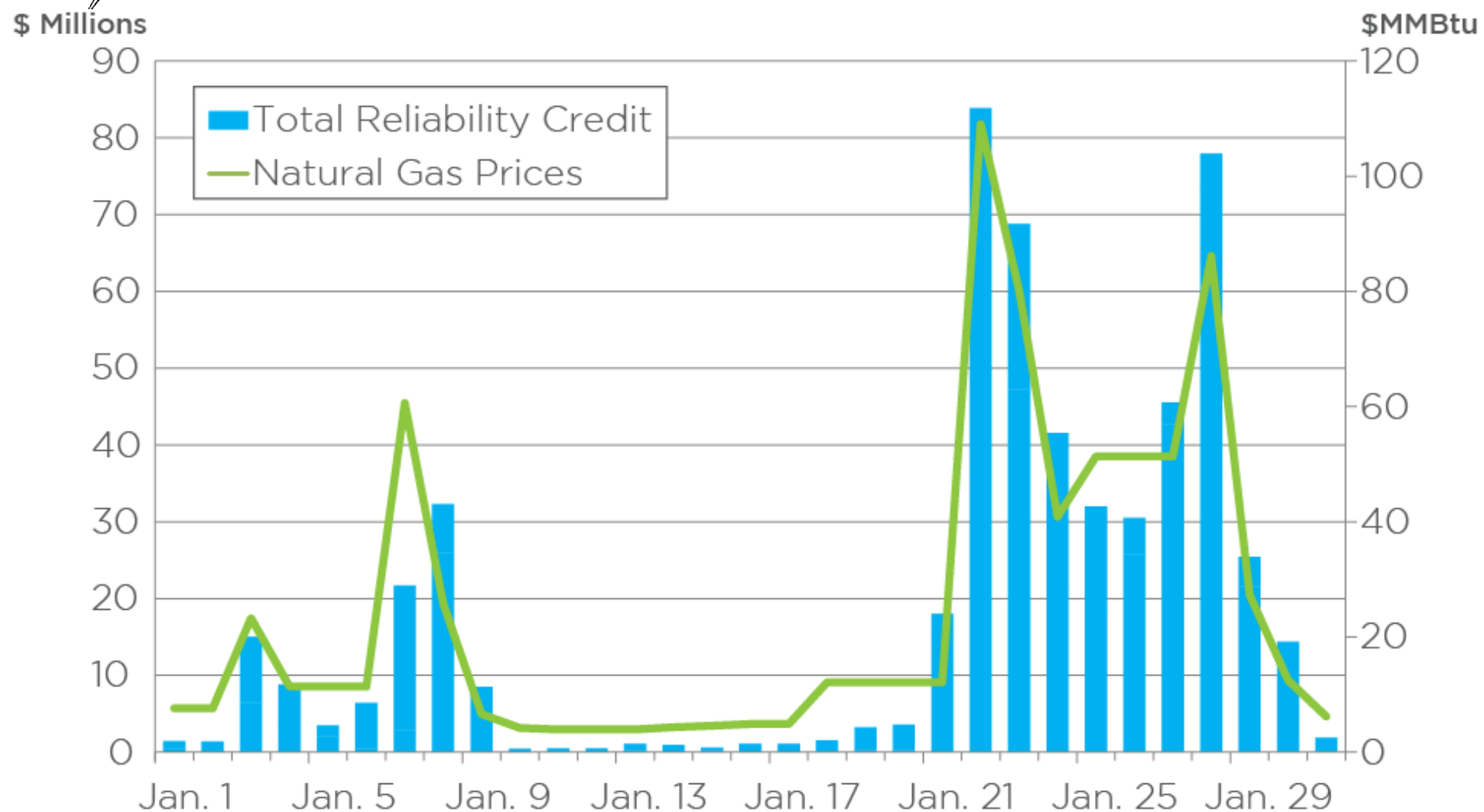


Generator Cost Recovery Uplift Credits - January 2014

\$ Millions



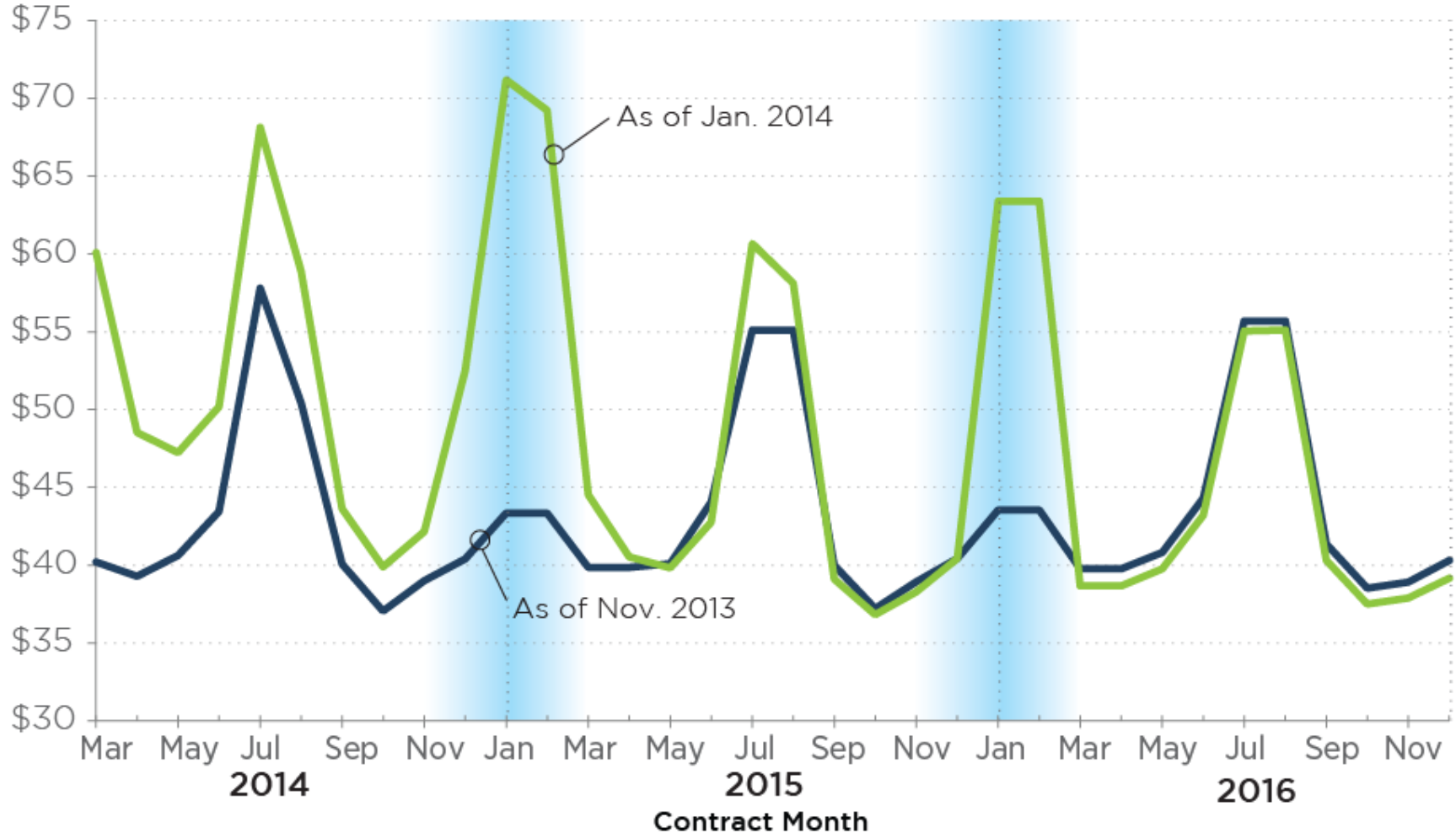
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Futures Price
(\$/MWh)

NYMEX Forward Curves for PJM Western Hub Monthly Peak Contract



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- Gas and electric days need better coordination
 - FERC has stepped in
- Conservative scheduling by operators will suppress prices
 - Market clearing prices need to account for this
- Interchange from neighboring areas must be handled better
 - Limit the ability for interchange to crash market clearing prices
- Uplift cost allocation is being discussed.

- Generation performance must improve!
 - Effort underway to redefine what capacity is in PJM.
 - New definition will require additional resource flexibility and availability with higher penalties.

Performance
Incentives /
Penalties

Operational
Availability
and Flexibility

Fuel Security