Flexible Demand Resources

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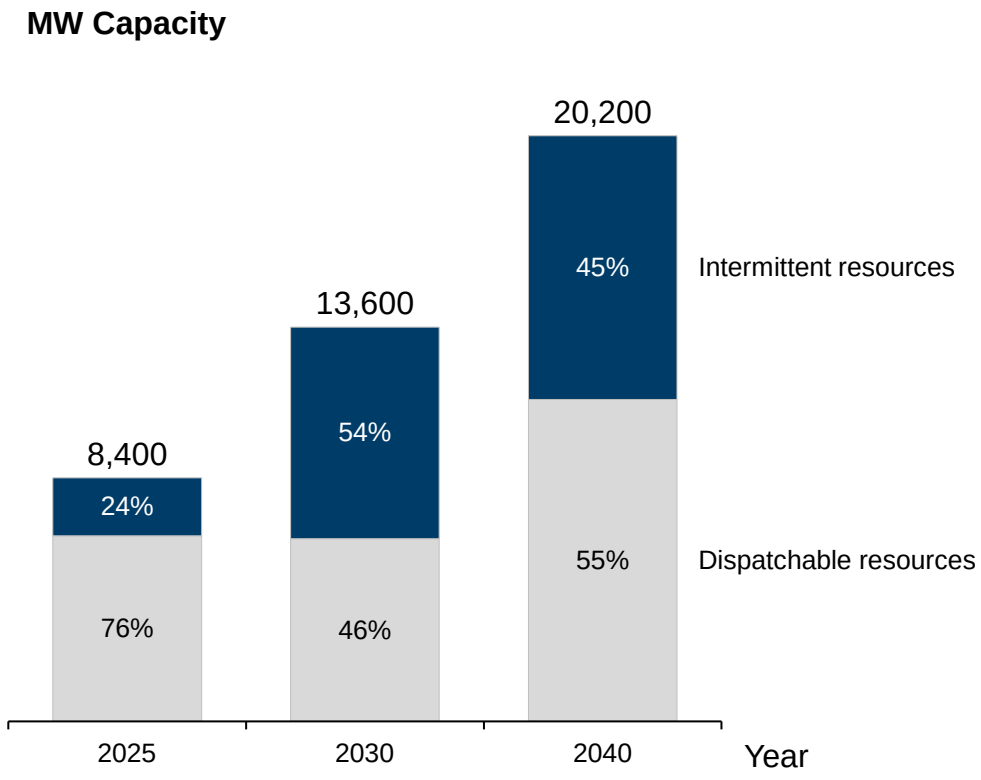
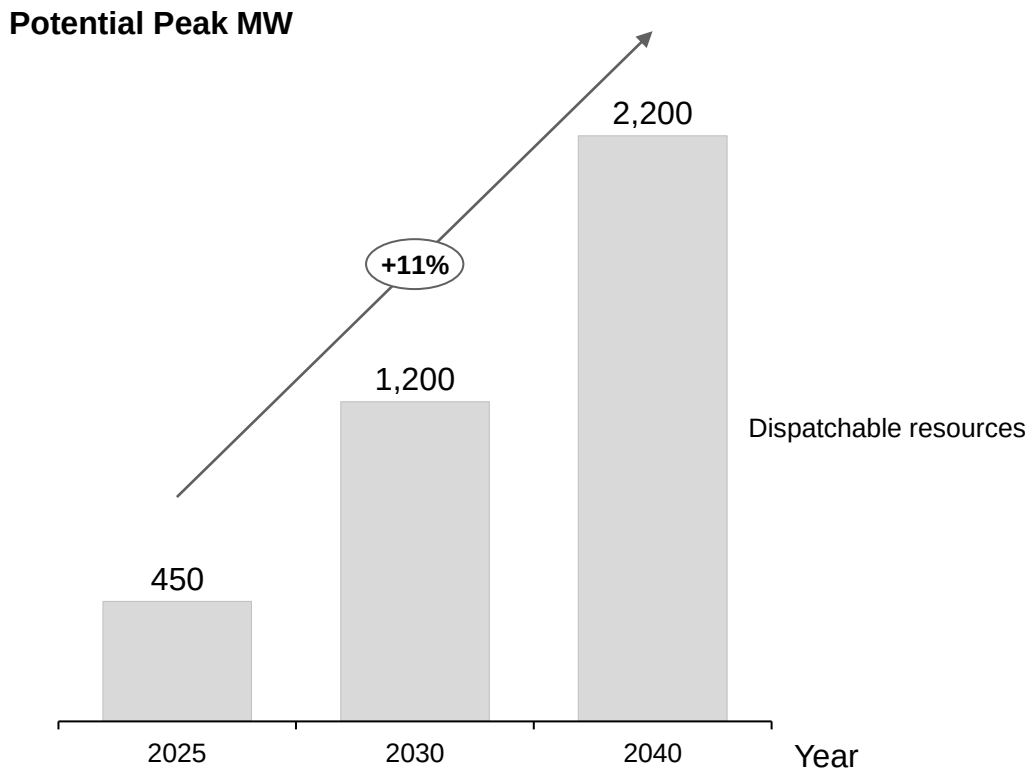
To meet NYS CLCPA goals, there will be a shift in the supply mix towards less dispatchability

Shift in supply mix towards *less* dispatchable resources



Shift in demand mix towards *more* dispatchable resources



Sources: Zone J supply mix from NYISO (includes fossil, import, storage, HQ imports); Demand mix from Con Edison forecasting and analysis (includes storage, electric vehicles, HVAC & heat pumps, solar)

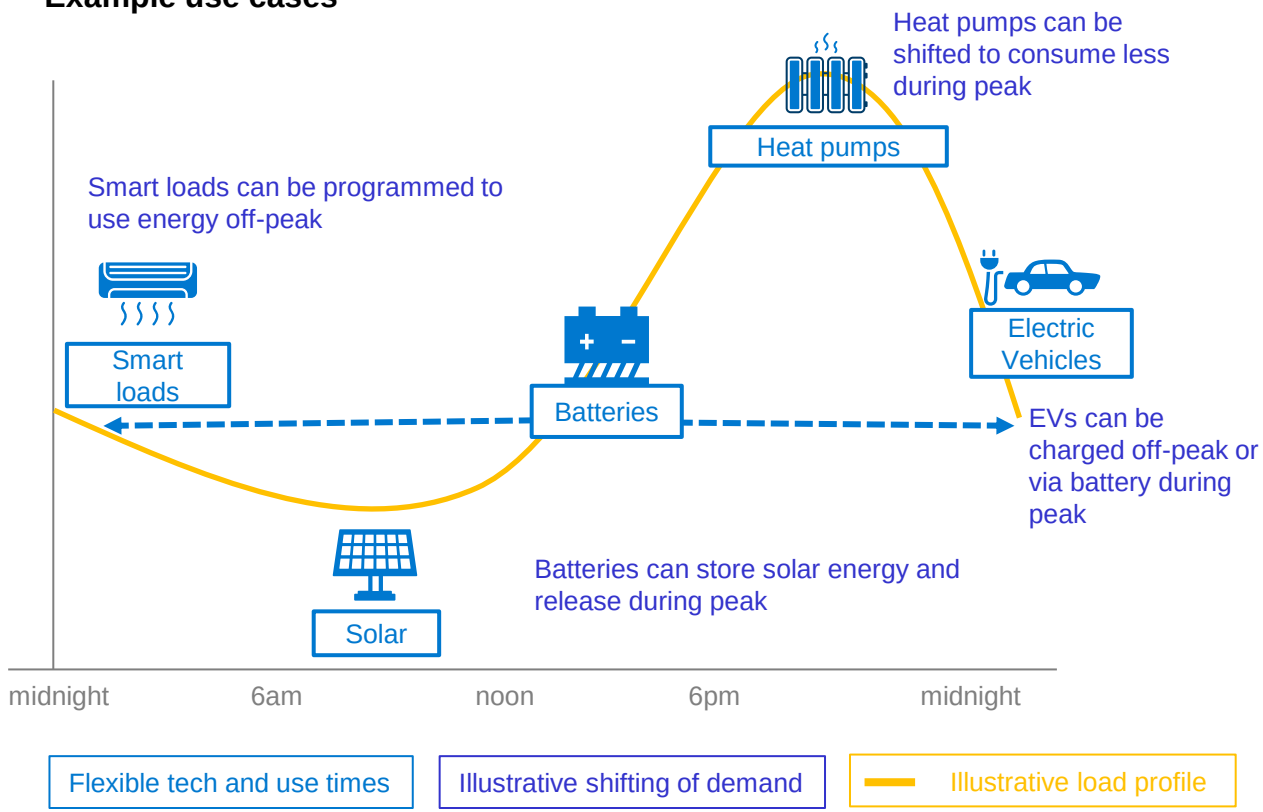
Flexible demand can support the clean energy transition in a technically feasible and cost-efficient way

Flexible demand can support clean energy transition through:

- **Load balancing**
- **Increasing efficiency**
- **Optimizing usage**
- **Reducing costs**

Portfolio of key flexible demand technologies will provide a spectrum of capabilities

Example use cases



Key obstacle

The market and technologies for flexible demand are nascent, and technologies still face financial and other barriers to adoption

1. Nascent technologies
   - Technologies, such as wholesale or long duration storage and Electric Vehicle / Charger V2G, are still advancing

2. Nascent market
   - Market and compensation structures to incentivize and “unlock flexibility” need to be developed

3. Advancing viability
   - Developers and aggregators likely need incentives to be viable at this time as well as other support to address other barriers

Not incorporating flexible demand could limit NYS' ability to transition to clean energy reliably and cost-effectively

Benefits of incorporating flexible demand:

- Unlock value for customers in terms of reducing need for dispatchable emissions free resources
- Enable wholesale market participation and promote more efficient dispatch stack

Consequences of not incorporating flexible demand:

- Greater difficulty in achieving long-term CLCPA goals and sustaining reliability through transition
- Higher costs associated to meet dispatchable emission free resource need

Team Challenge

Regarding Grid Modernization and New York's climate, health and equity commitments, a critical obstacle to collectively address in 12 months is....

Develop a knowledge base to inform the development of policies and programs that will support flexible demand resources necessary for the overall energy system

- Benchmark existing flexible demand programs
- Define key attributes that will support flexibility
- Evaluate enabling technologies and services

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