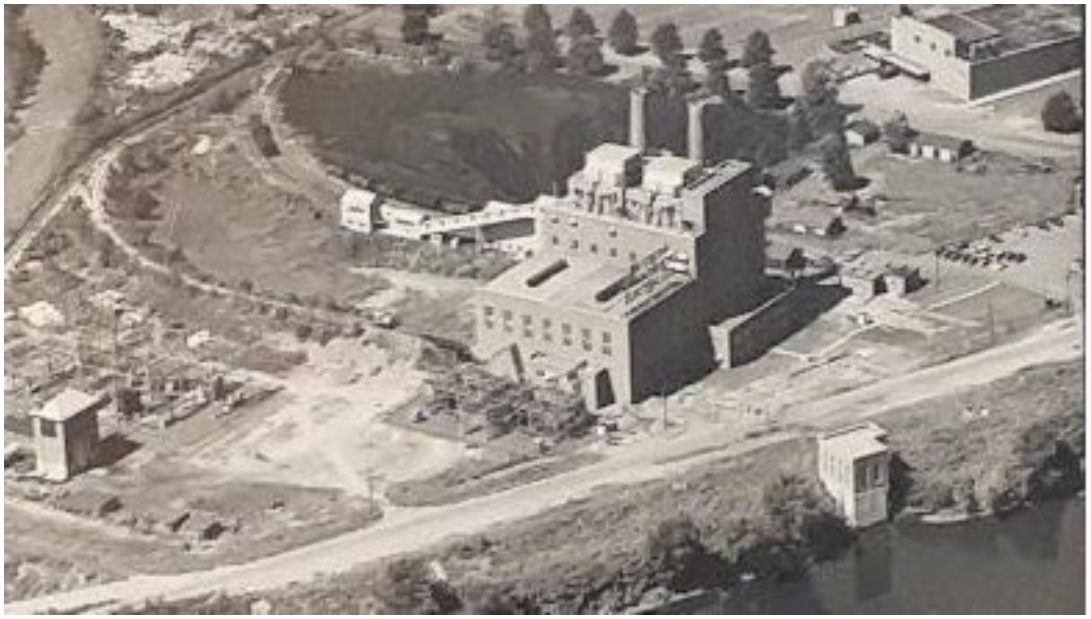
Redevelopment of West Springfield Station

Station can "transition" to help ensure local grid reliability and reduce peak prices

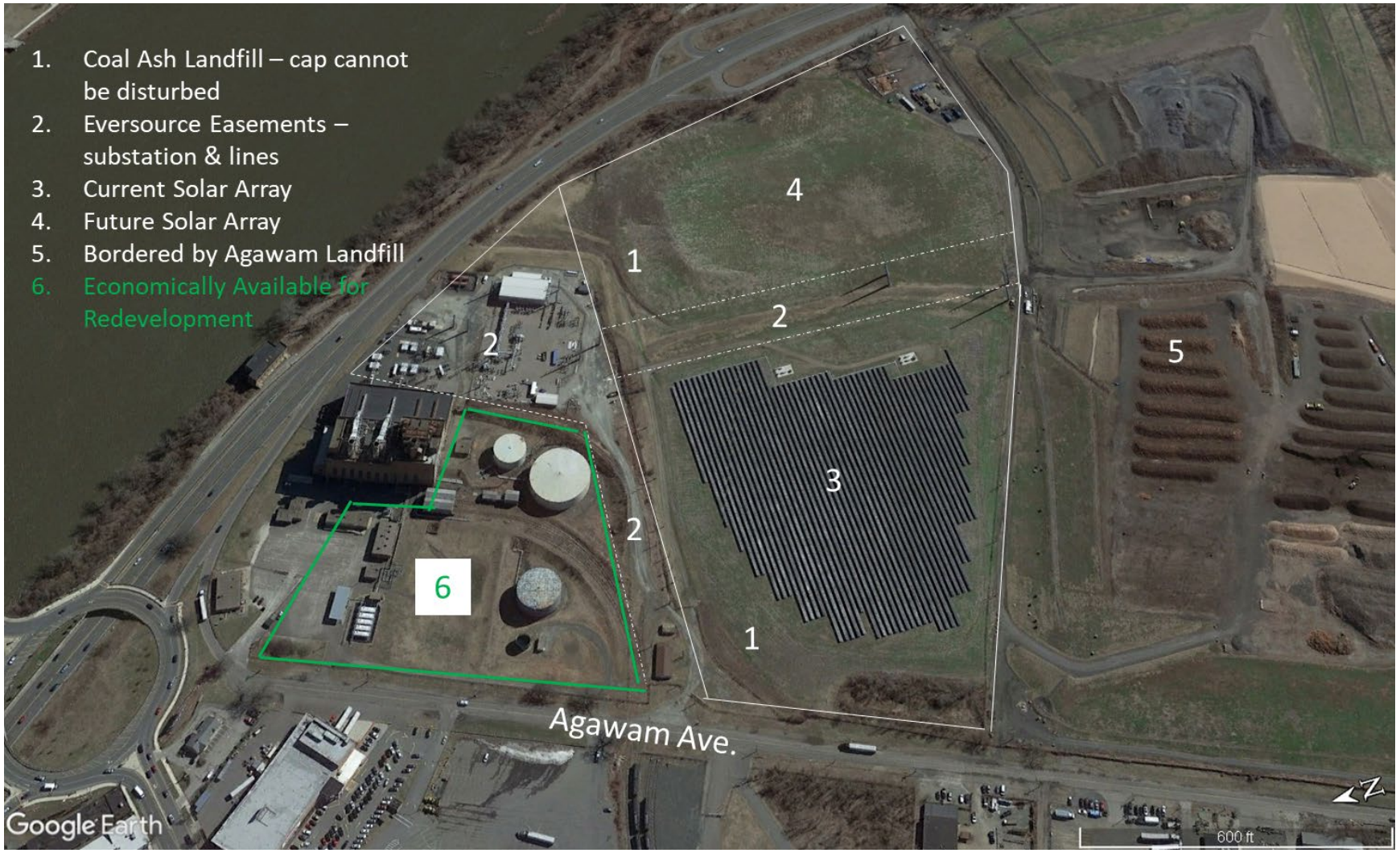


- 1949 Coal fired Units 1 & 2 48 MW each
- 1957 Coal fired Unit 3 107 MW
- 1960s converted to heavy fuel oil
- 1969 small "jet" added 20 MW
- 1990s natural gas available
- 2002 Units 1 & 2 replaced with "aeroderivative" combustion turbines
- 2021 Unit 3 retired
- 2021 Redevelopment begins
- 2022 Units 1 & 2 and the jet deactivated

- As the industrial economy evolved away from heavy power use the station increasingly became needed only for peak energy use periods and eventually only for reliability
- The station's electrical interconnection to the New England grid and existing infrastructure makes it an advantageous location for energy transition resources

Power Station Area Today

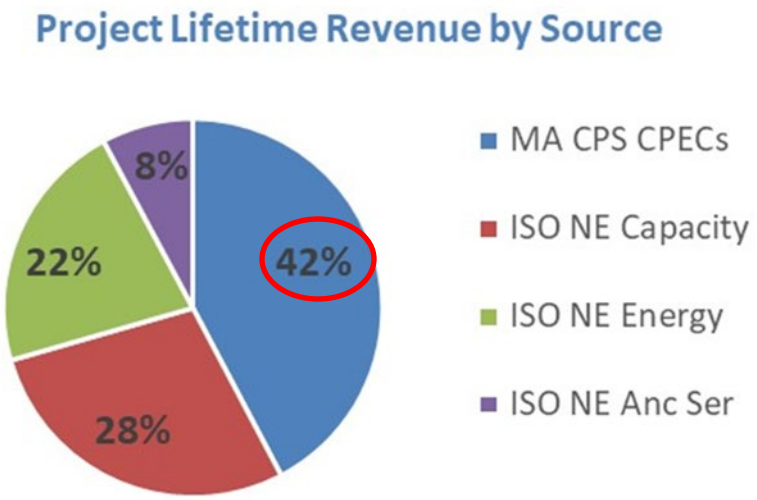
Relatively small area available for redevelopment, but sufficient for up to 150 MW



West Springfield BESS as a concept

Site has the potential for 45 MW of batteries without major alterations to the site

- Evaluation of site and interconnection(s)
  - Power flow analysis
- Initial phase 20 MW – 80 MWh.
  - Commercial operation date (COD) as early as 2027
  - Interconnection will be via West Springfield existing 115kV equipment.
- Project revenues sources
  - Massachusetts Clean Peak Standard (CPS) program
  - ISO NE wholesale market
- Proposed BESS to be located on un-needed parking & out building areas.
- Current BESS choice is Powin's Centipede Stack 750E.
- Phased development approach can be used - modularity ideal for irregular areas

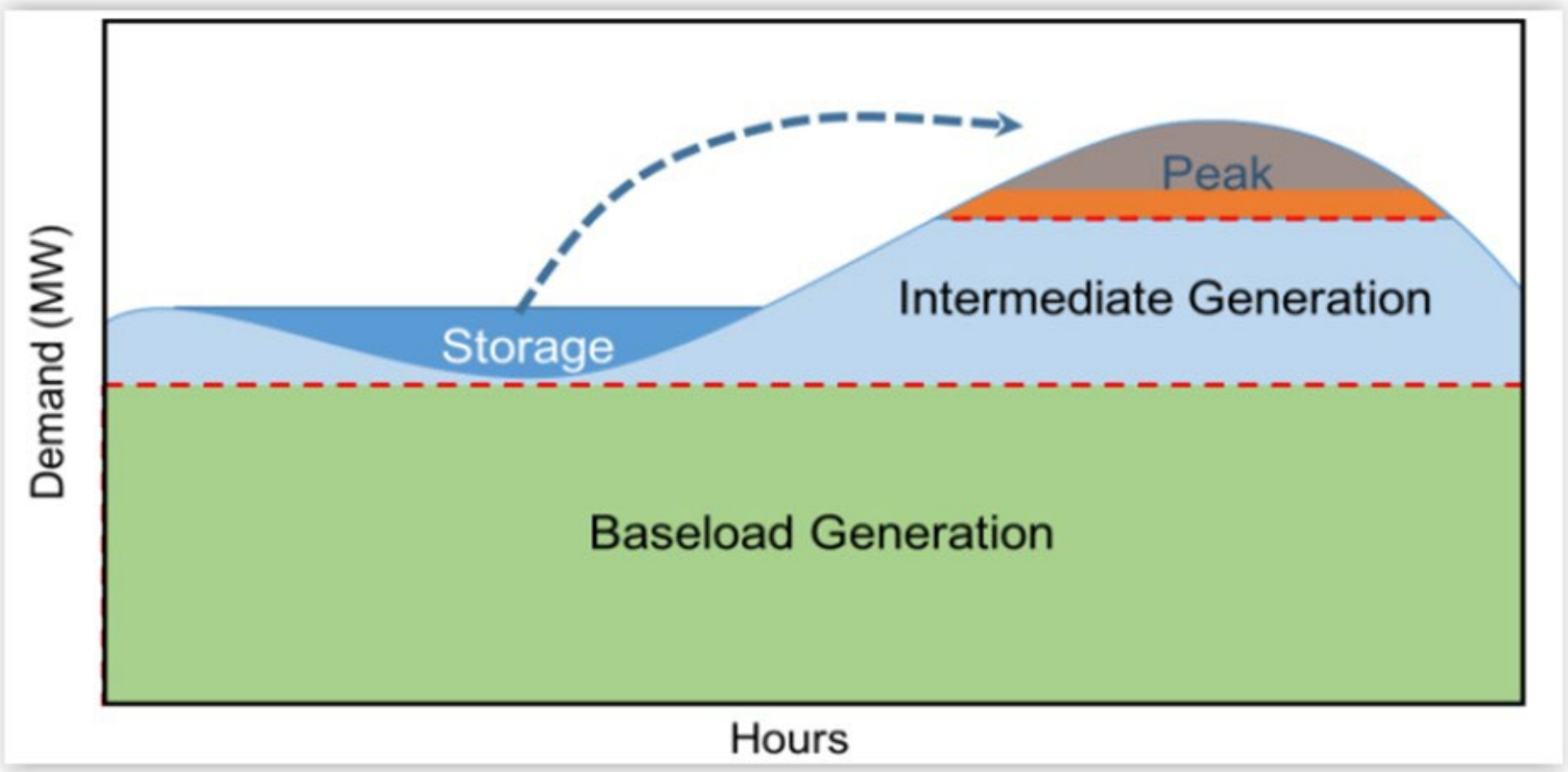


Project Thesis

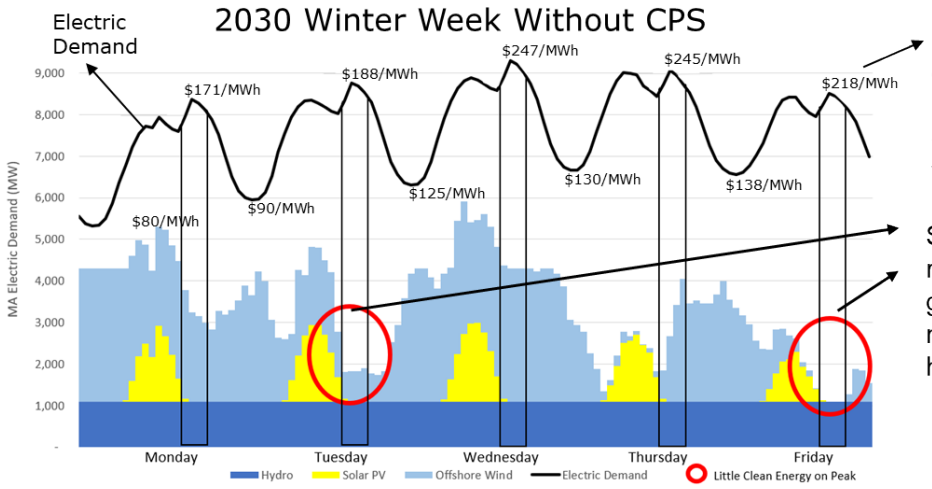
Project will serve the Massachusetts ***Clean Peak Standard (CPS)*** program, a first in the nation program to deliver low-cost renewable energy when energy market prices are the highest

Periods of the greatest solar or wind energy are not the periods of the highest energy use or cost

The CPS program incentivizes battery projects to shift solar and wind energy from the non-peak hours when it is generated to the peak hours when it is needed the most



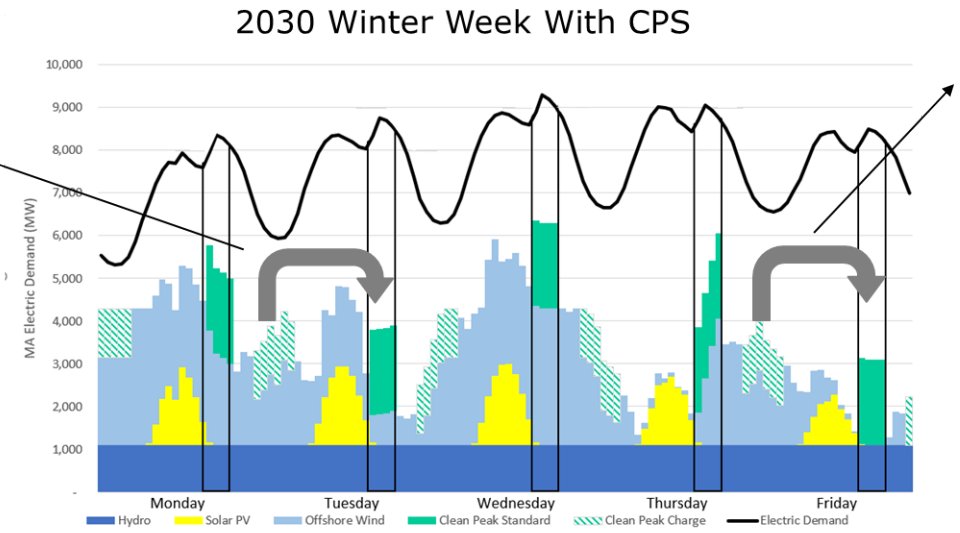
Benefits of the Clean Peak Standard



Pricing differentials reflect higher oil and gas use to meet peak

Significant renewable generation, but not during peak hours

Production profile for 1,090 MW Hydro, 3,200 MW Offshore Wind, 5,000 MW Solar PV



Opportunity to shift clean energy to peak periods through storage

CPS shifted wind energy generated overnight when prices and demand are lower to evening peak when demand is high

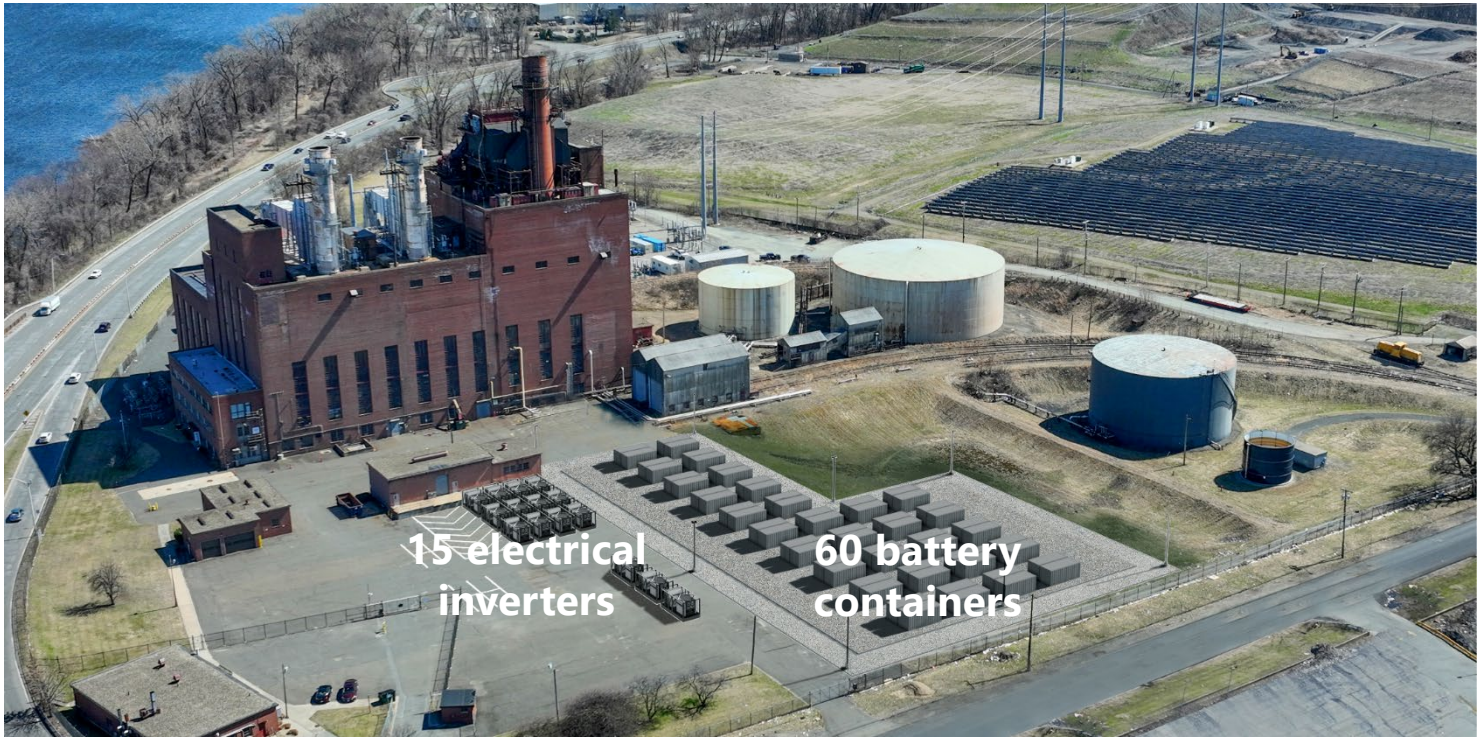
Production profile for 1,090 MW Hydro, 3,200 MW Offshore Wind, 5,000 MW Solar PV

Redevelopment Potential

Former coal yard, now oil & water tanks, can be repurposed to host BESS

Project Description

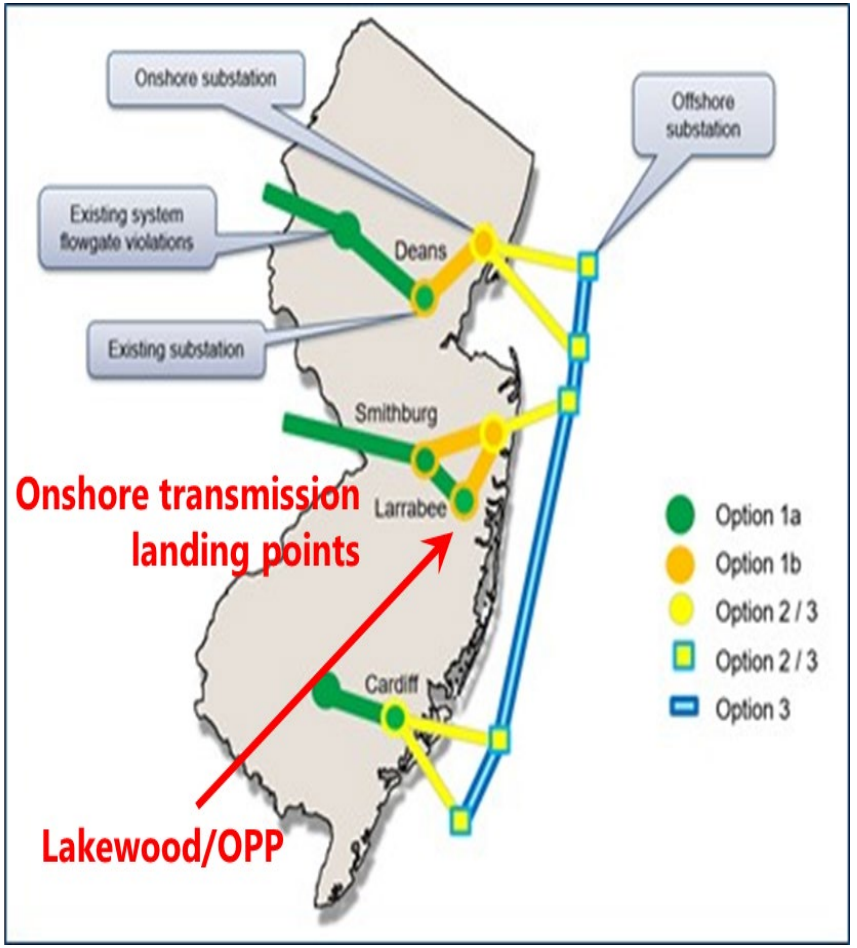
45 MW – 180 MWh (4-hour duration) to supply MA Clean Peak Standard program



- Battery containers set on concrete pads; containers are fully enclosed, but cannot be entered
- Batteries are lithium iron phosphate (LFP) technology
- Interconnection will be via existing transformer (formerly that for Unit 2)
- Minimal site work except for crushed stone and concrete pads

Revenue targets for Lakewood/OPP storage project

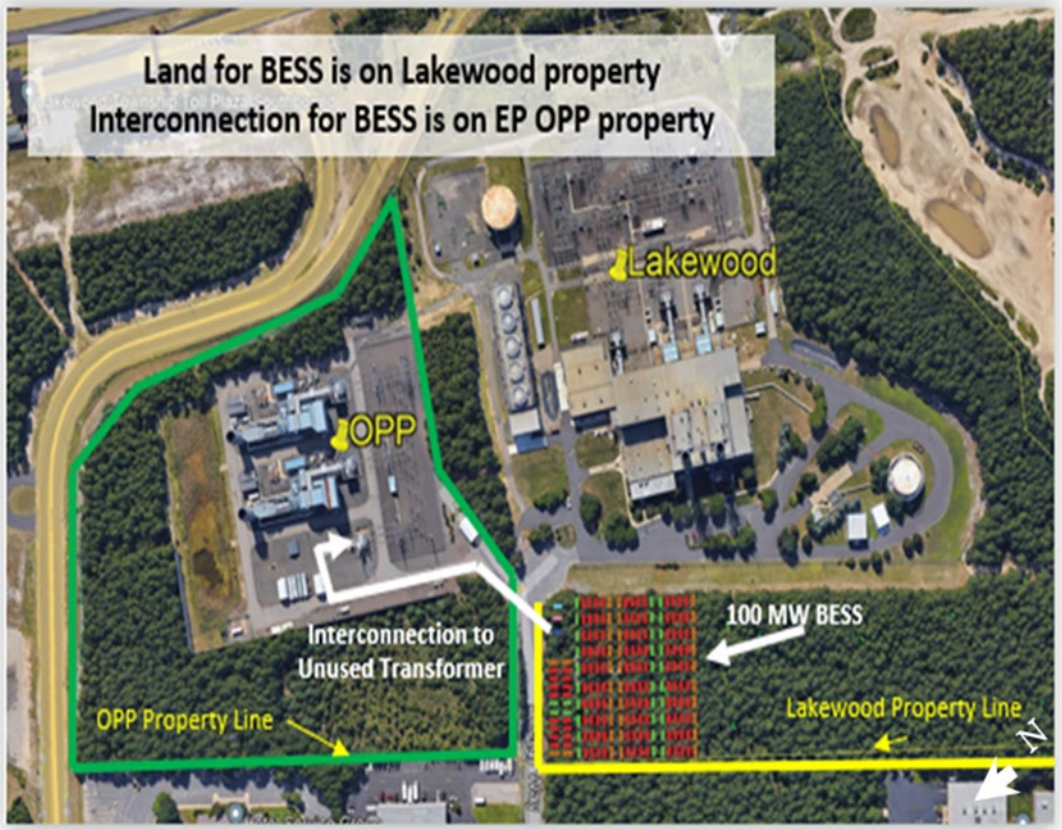
New Jersey is contracting 7,500 MW of offshore wind 2027 – 2035



Lakewood/OPP

Strong state policies, favorable site location and evolving revenue program

- 170 MW – 680 MWh BESS
  - Interconnection application filed March ‘22
  - Targeting ‘27/’28 COD
- Stricter emissions regulations pressuring thermal resources
- Long term EMAAC capacity revenues are strong
- Strong state goals
  - 100% carbon neutral by ‘50
  - 2000 MW of energy storage by ‘30
  - Ongoing stakeholder process
- New entry policies focused on renewables
- Storage procurement regulation expected in June 2025
- Potential political risks in the medium term, as next governor (2026) could soften progressive energy policies



Rock Springs, Maryland

Progressive goals and political stability increase likelihood of a successful state incentive program

- 300MW/1,200MWh queue position
  - Targeting ‘27/’28 COD
- MAAC capacity revenues forecasted to remain strong
- Progressive clean energy targets
  - DEP to adopt a zero emissions by ‘45 plan, with emissions reduced by 60% by ‘31
- Storage targets of 750 MW by ‘27, 3,000 MW by ‘33
  - Legislation requires energy storage program by July ‘25