

Power Trends 2017

New York Independent System Operator (NYISO)

Market Metrics, State of The Grid, Challenges & Opportunities

Environmental Advisory Council

May 19, 2017



A Tale of Two Grids

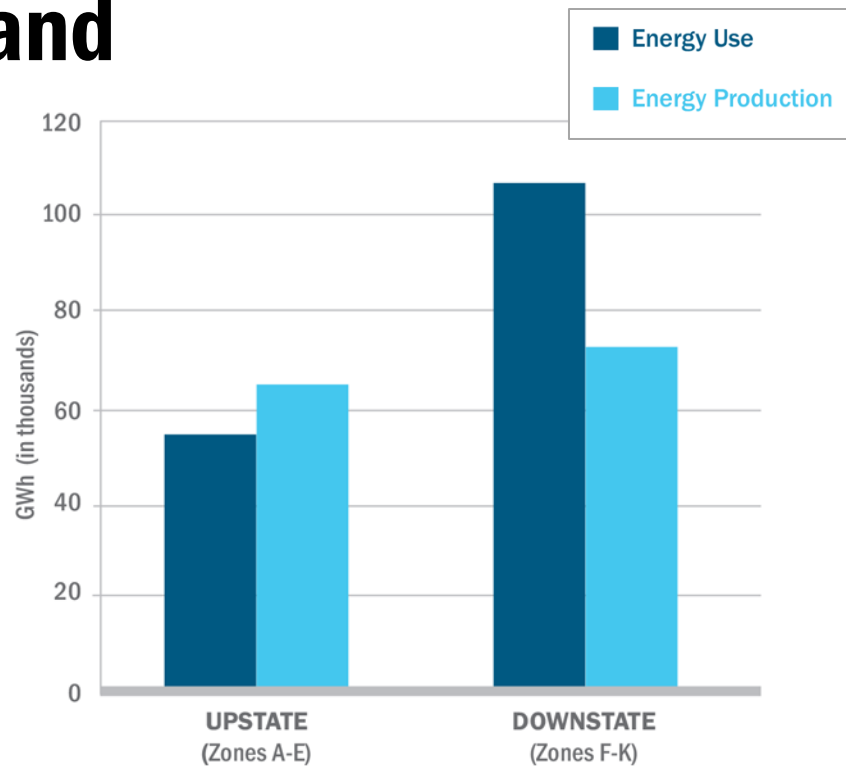


“The emerging story of the New York electric system is a tale of two grids — a tale of clean energy abundance and surplus generating capacity upstate and fossil-fuel dependence and high demand downstate.”

Power Trends 2017

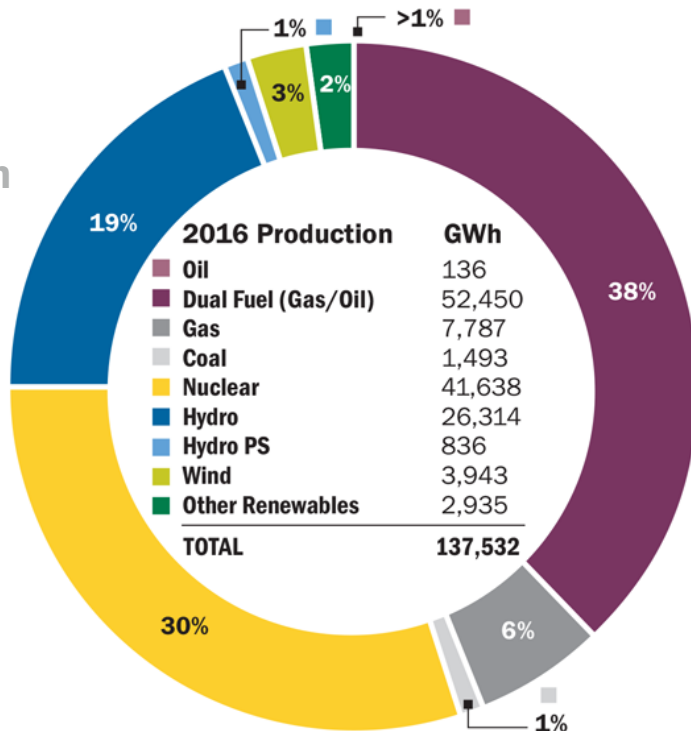
Regional Supply & Demand

- Downstate (New York City, Long Island, and Hudson Valley) annually uses 66% of the NY's electricity
- Downstate power plants generate only 53% of the electricity produced in NY

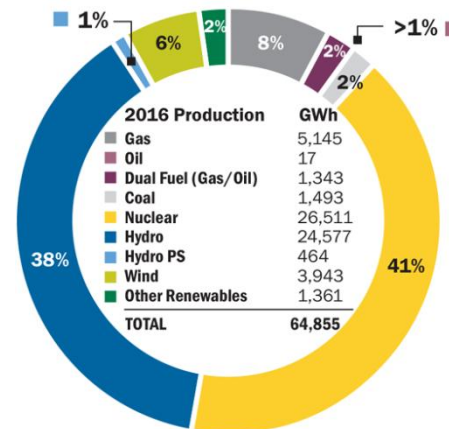


Fuel Mix – Energy Production

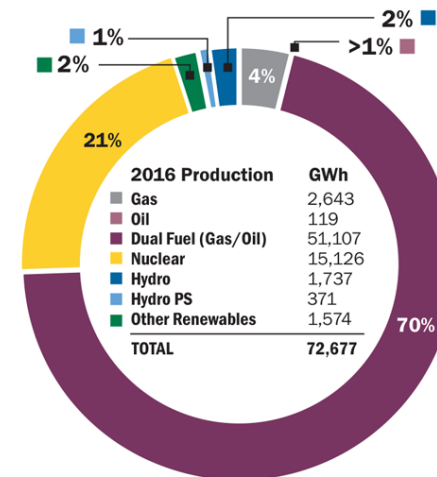
New York
Statewide
Energy
Production
by Fuel
Source:
2016



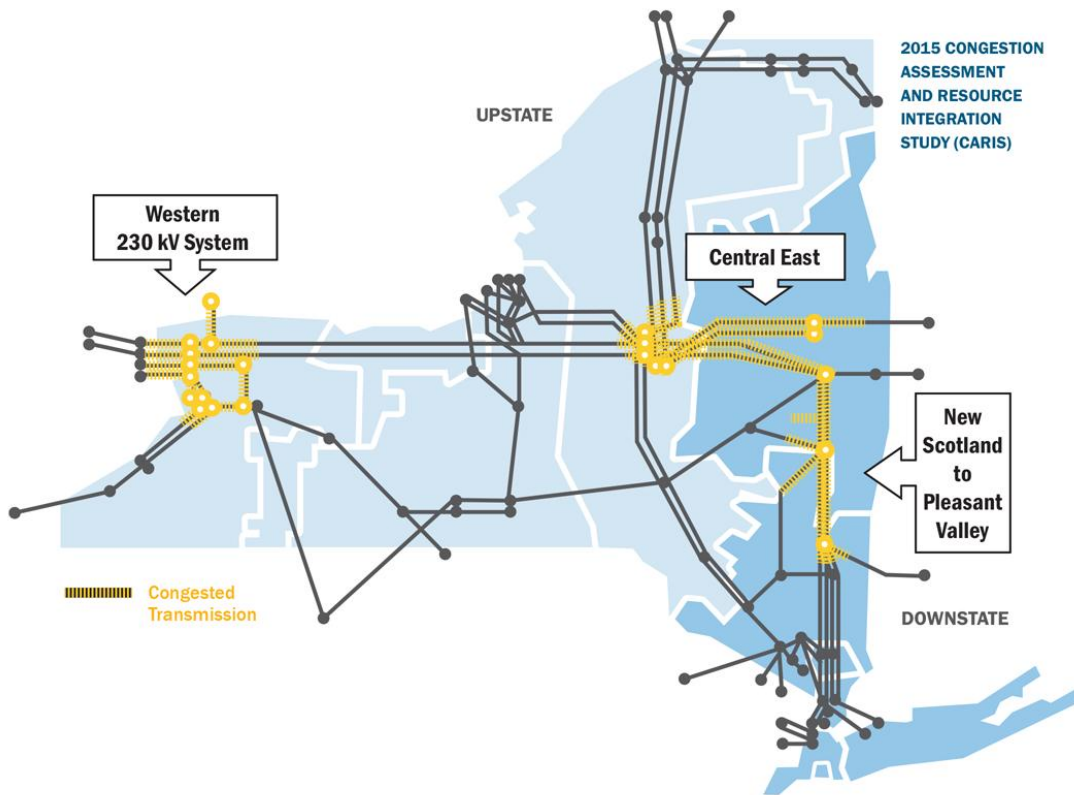
Upstate
(Zones A-E)
Energy
Production
by Fuel
Source:
2016



Downstate
(Zones F-K)
Energy
Production
by Fuel
Source:
2016

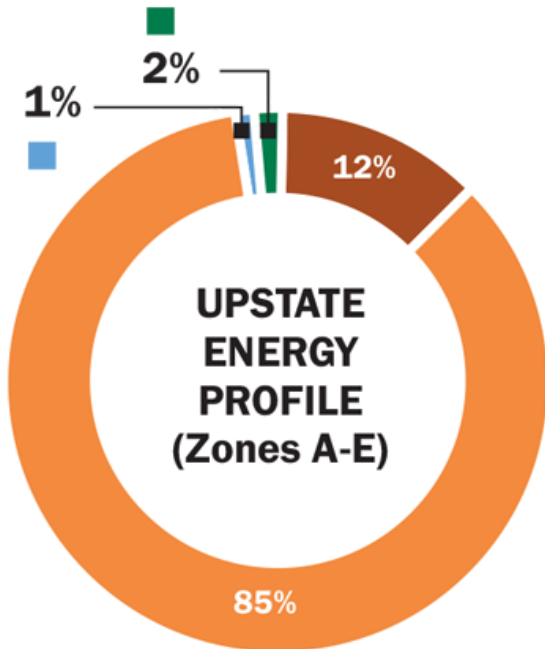


Transmission Congestion

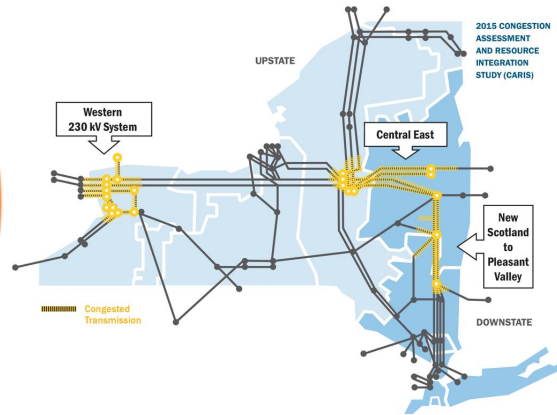


- The most congested elements of NY's transmission system include:
 - All or parts of the high-voltage transmission path from Oneida County through Capital Region (Central East)
 - South to the Lower Hudson Valley (New Scotland — Pleasant Valley)
 - The 230-kilovolt system in Western New York (Western 230kV).

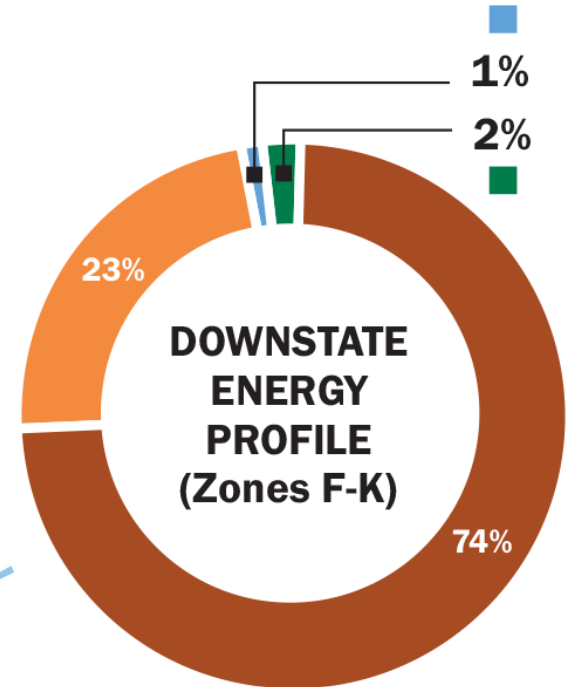
Regional Fuel Mix



Energy Production Profile by Fuel Source: 2016

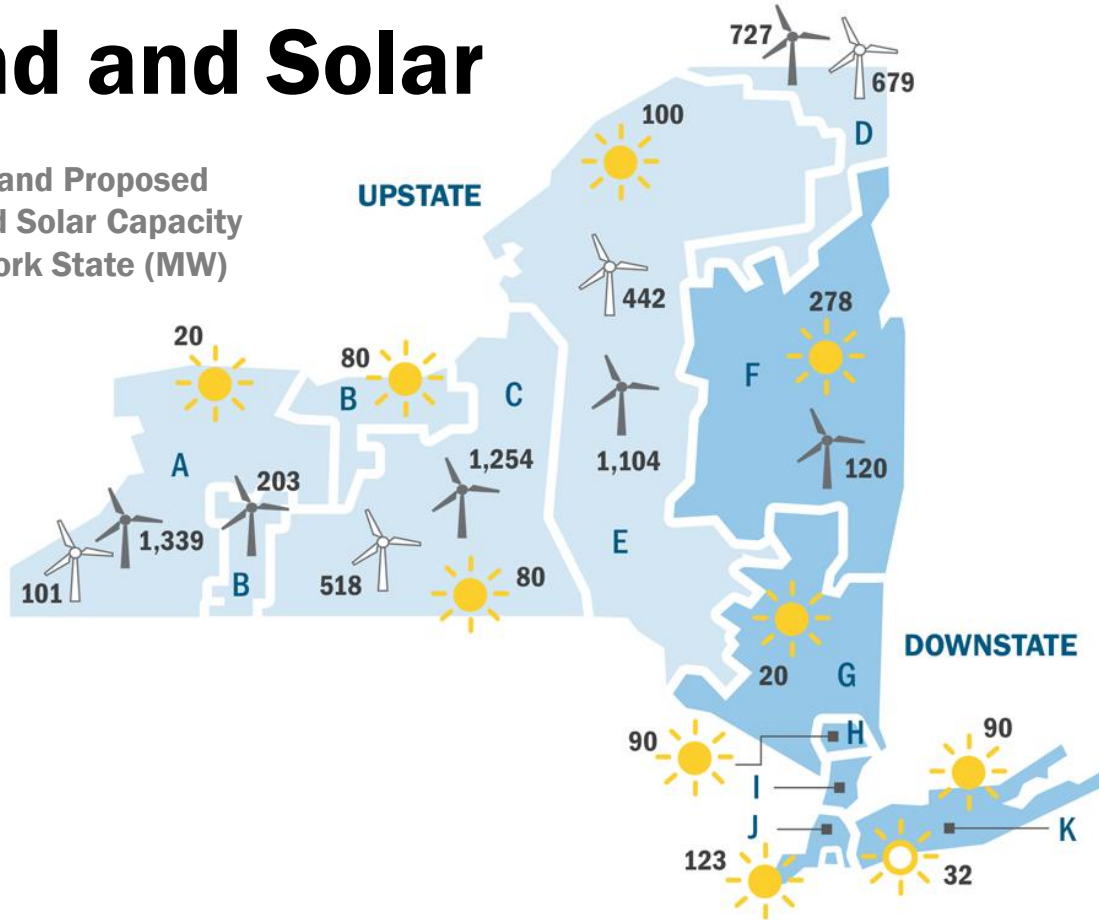



- Fossil Fuel
- Zero Emission
- Hydro PS
- Other Renewables



Wind and Solar

Existing and Proposed
Wind and Solar Capacity
in New York State (MW)



 Existing wind 1,827 MW

 Proposed wind 4,807 MW

 Existing solar 32 MW

 Proposed solar 881 MW