

# Energy Production and Delivery

## Wholesale Energy Market



### Supply: Generation of Energy



Sources for energy generation: Dual Fuel (Gas/Oil), Gas, Oil, Nuclear, Hydro, Pumped Hydro, Wind, Solar, and other Renewables, Energy Storage Resources (ESR) and Imports into the NY Control Area



### High Voltage Transmission Network

Transmission Owners (TOs) own, operate, and maintain facilities used in the transmission of wholesale energy.



### NYISO's Role:

Operates the wholesale energy market to economically dispatch generation and controls the transmission of power across the high-voltage transmission network



Step-up transformers  
Convert electricity to high voltages for transmission over large distances.



NYISO oversees:

765 kV  
500 kV  
345 kV  
230 kV  
115 kV

## Local Distribution System



Demand Side Resources:  
Load Reduction offered as generation to the grid

### Load Serving Entities (LSEs):

Purchase wholesale power in order to serve retail customers

Could be an investor-owned utility, public power authority, municipal electric system, or electric cooperative



Step-down transformers  
Convert electricity to lower voltages for retail use.

### Distribution Network



Distribution System: TOs distribute power across the lower voltage transmission networks to retail consumers.

### Load: Retail Customers

Electricity reaches retail customers, such as schools, houses, factories, and commercial buildings.

