

# Gold Book Forecast

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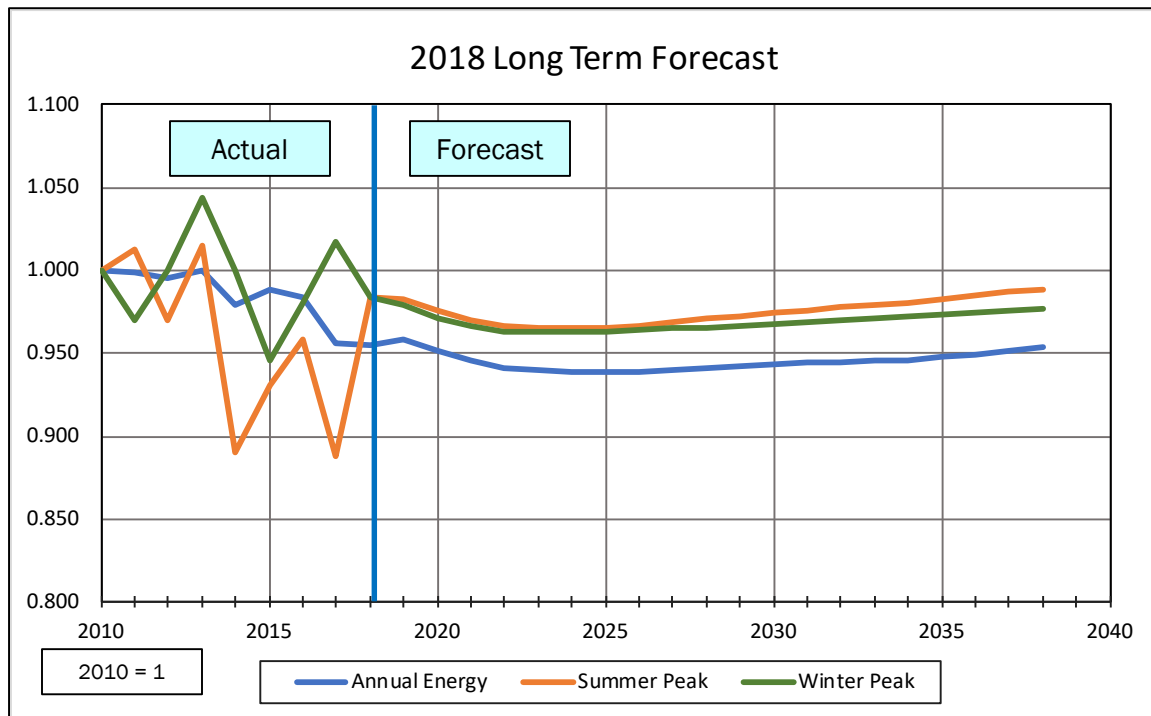
DER Workshop

November 7, 2018

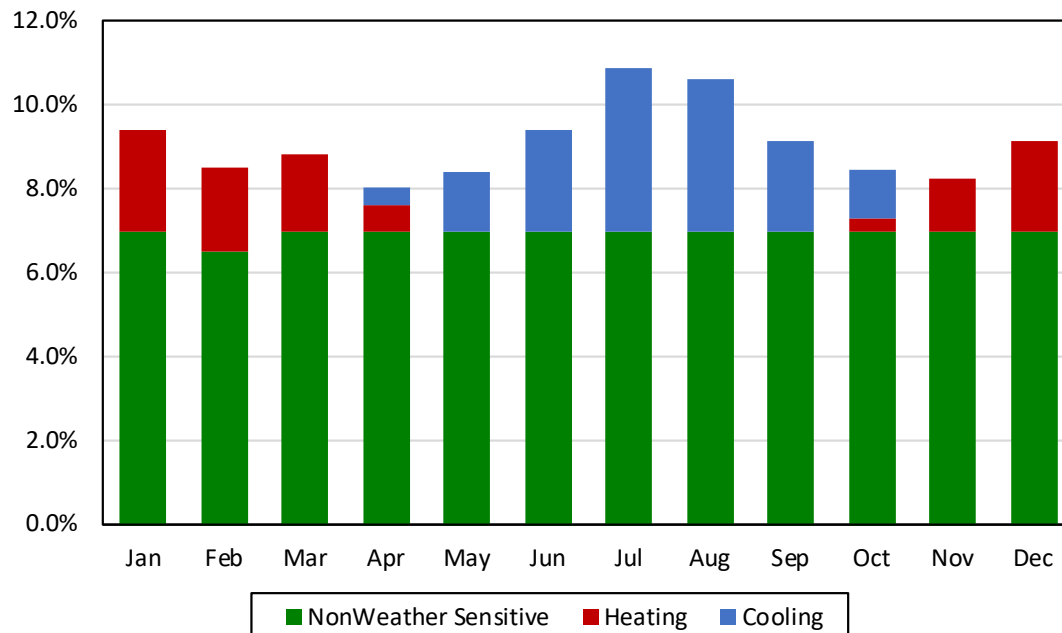
# Long Term Forecast

## ■ End-use Method

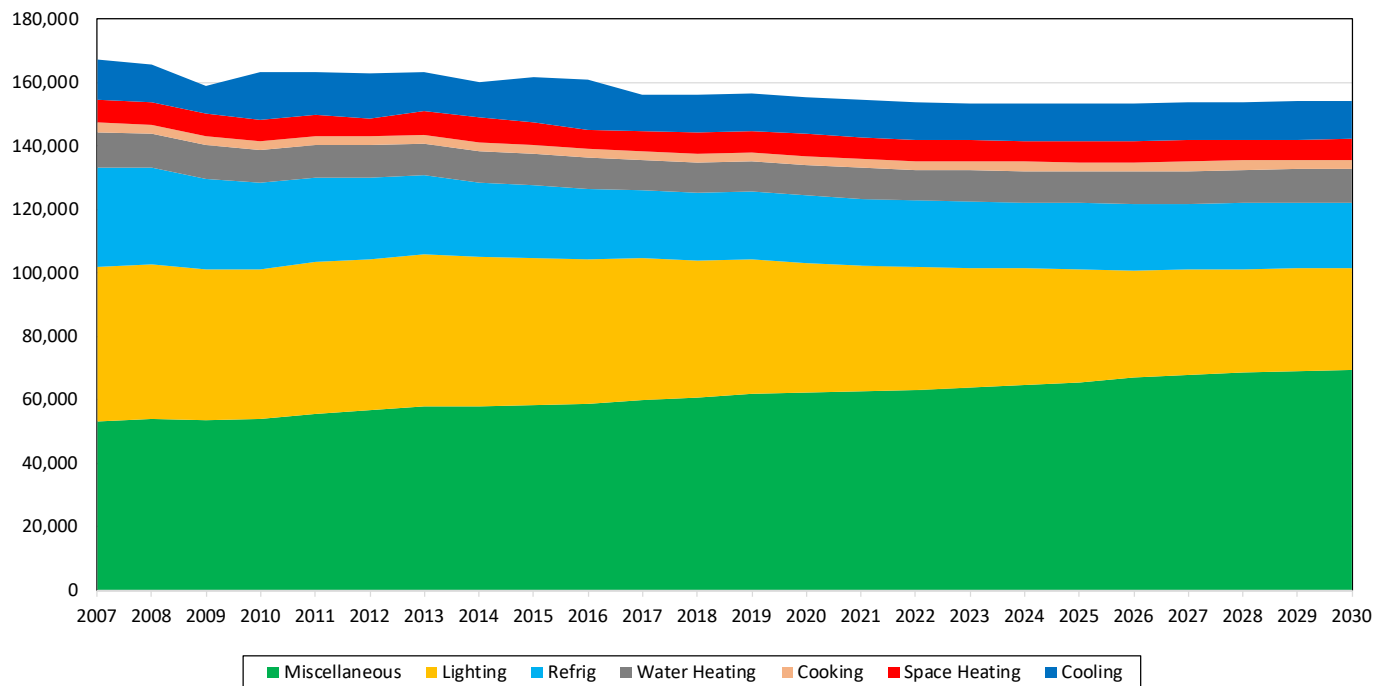
- Sectors: Residential, Commercial, Industrial & Other
- End-uses & technology trends in each sector
  - *Heating, cooling, lighting, HVAC and several others*
- Explicit forecasts for Solar PV, Electric Vehicles, and other Distributed Energy Resources, which do not participate in wholesale markets
- Forecast drivers include economic trends, efficiency and utilization trends for each sector and end use
  - *Lighting technology trends will decrease usage*
  - *Electric vehicles and trend to electrification of heating will increase usage*
- *Separate impacts for annual energy & seasonal peaks*
- *Additional DER such as storage can be included in future forecasts*



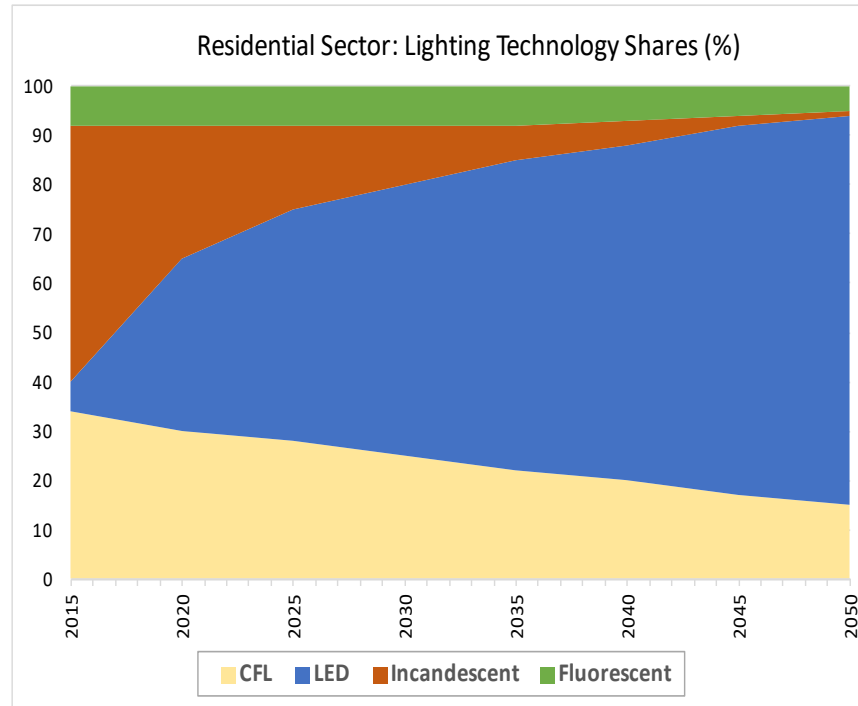
## NYCA Monthly Energy Shares by End Use



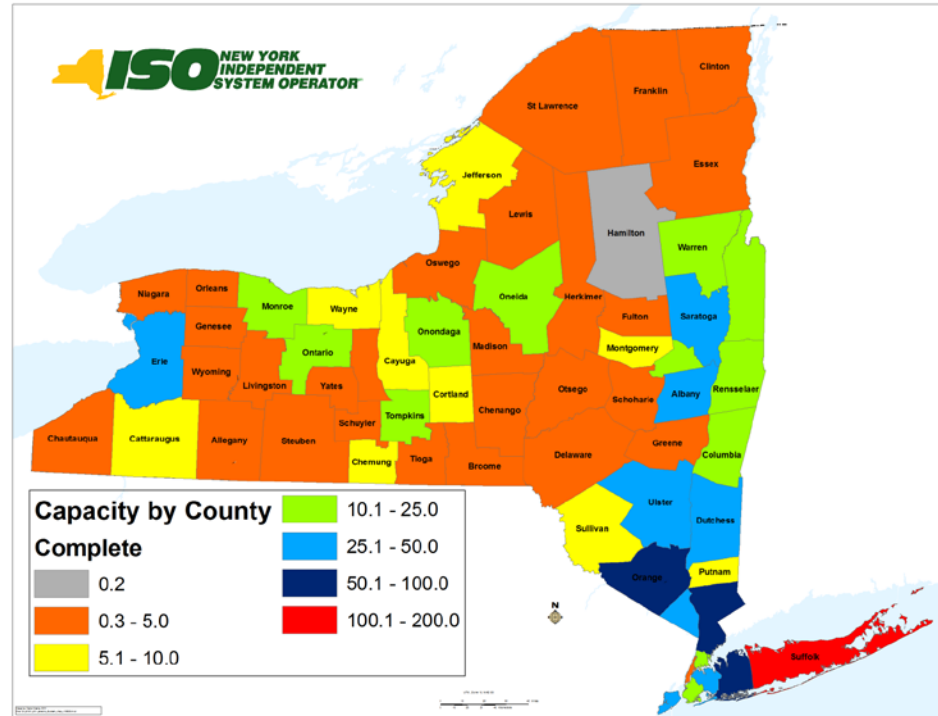
NYCA End-Use Energy Forecast (GWh)  
2007 - 2030

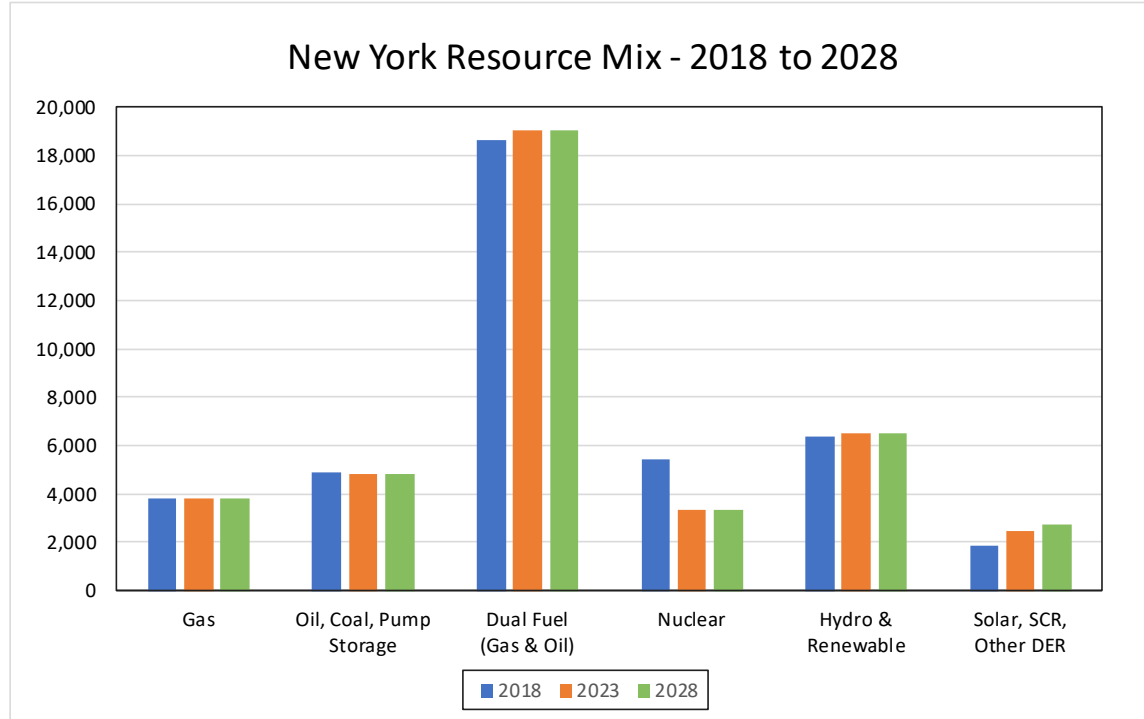


# Continued Decline in Lighting Energy Usage is Expected as Lighting Technology Shares Move from CFLs to LED



# County-Level Approach Is Used for Solar PV & Electric Vehicles





Notes:

1. Source: 2018 Gold Book.
2. Does not include imports from external areas.
3. SCRs are included with other behind-the-meter resources.



# NYISO Interconnection Queue

- **Active Small Generator Interconnection Requests as of September 30, 2018**
  - 73 Interconnection Requests (IRs) for a total of 1,315 MW
  - Of 73 IRs:
    - 16 IRs in Feasibility Study stage
    - 40 IRs in System Impact Study stage
    - 11 IRs in Facility Study stage
    - 6 IRs in IA negotiation stage, completed IA, and/or under construction
  - Of 1,315 MW:
    - Energy Storage – 104 MW (ROS – 64 MW, GHI – 20 MW, & K – 20 MW)
    - Fuel Cell – 40 MW
    - Hydro – 18 MW
    - Natural Gas – 4 MW
    - Solar – 1,053 MW (ROS – 793 MW, GHI – 230 MW, & K – 30 MW)
    - Solid Waste – 19 MW
    - Wind – 78 MW (all in ROS)

# Questions?

We are here to help. Let us know if we can add anything.

# The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the bulk power system



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