

# New York's Energy Efficiency and Renewable Energy Resource Potential Study

A Look at the Results and How They Have  
Been Used

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## Study Objectives

- Assess potential for renewable & efficiency technologies
- 5, 10 and 20 year horizons (2007, 2012, 2022)
- Statewide and for 5 key load zones

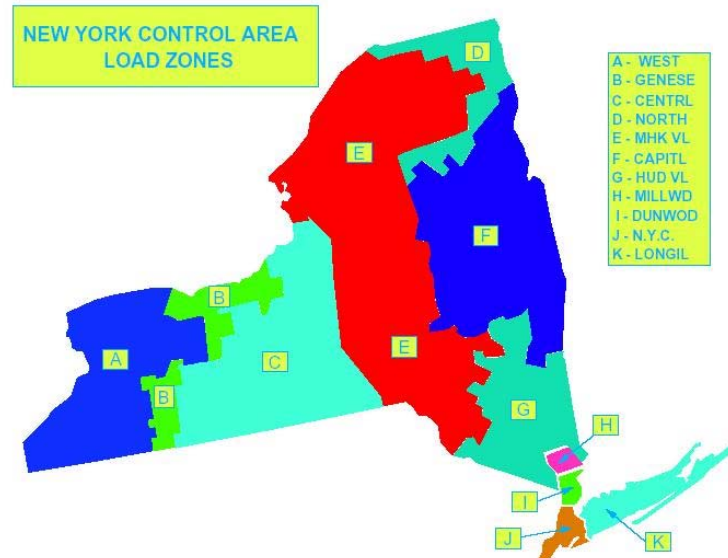
Capital

Hudson Valley

Long Island

New York City

West



## Study Scope

### EFFICIENCY TECHNOLOGIES

- End-use efficiency improvements in buildings with no degradation in energy service level or quality
- Residential, commercial and industrial sectors
- Currently available and emerging technologies
- No fuel switching
- No load shifting, curtailment or interruption

# Technologies and Practices Examined in the Efficiency Potential Analysis

## Residential Sector

- Number of Technologies: 50
- Markets: New construction, retail product sales, retrofit
- End Uses: Cooling, lighting, space heating, water heating
- Market Segments: 2 building types (single family, multifamily)

# Technologies and Practices Examined in the Efficiency Potential Analysis

## Commercial Sector

- Number of Technologies: 87
- Markets: New construction, renovation, remodel/replacement, retrofit
- End Uses: Cooling, exterior lighting, interior lighting, office equipment, refrigeration, space heating, water heating, whole building, miscellaneous
- Market Segments: 9 building types (education, grocery, health, lodging, office, restaurant, retail, warehouse, other)

# Technologies and Practices Examined in the Efficiency Potential Analysis

## Industrial Sector

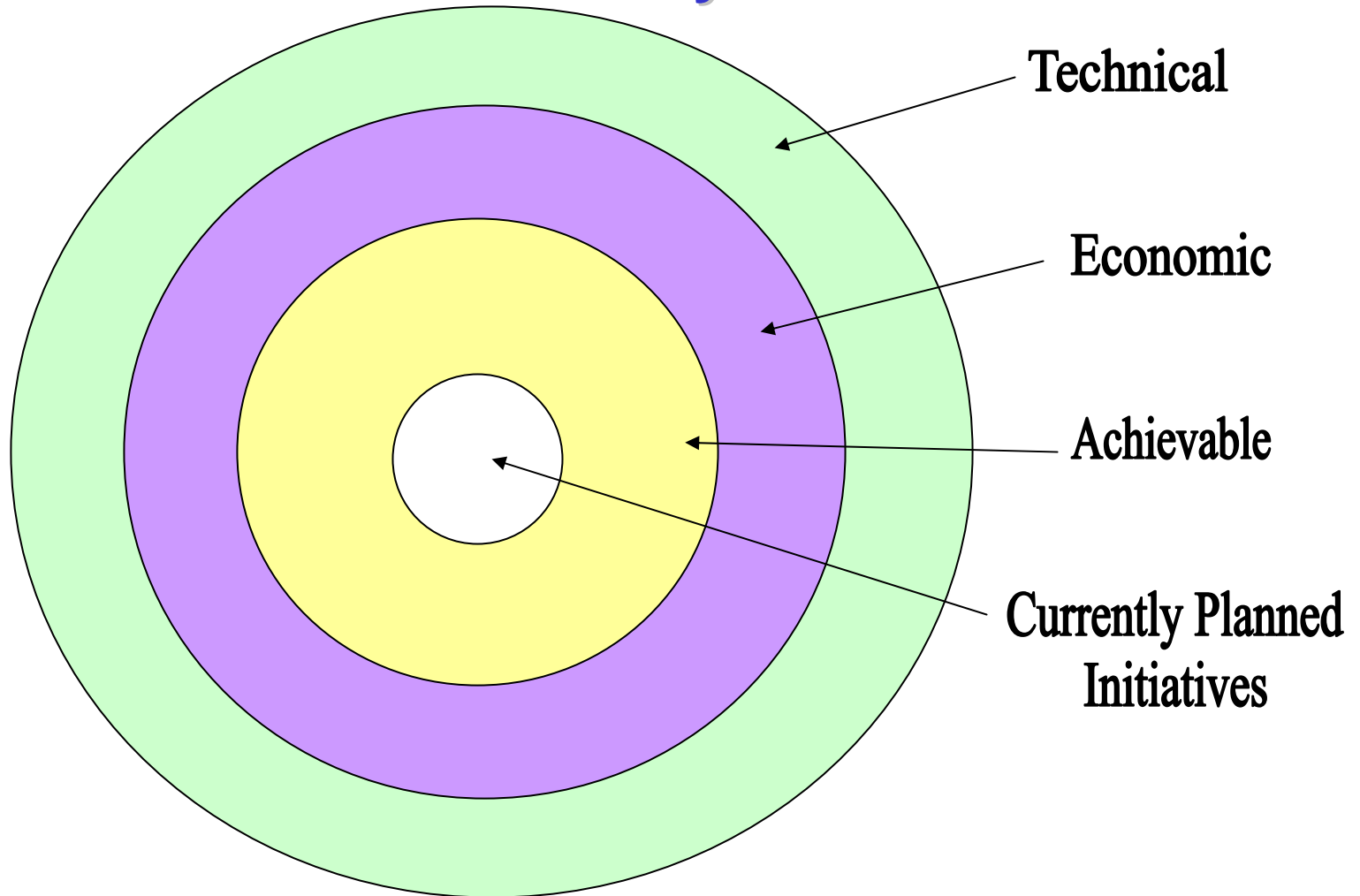
- Number of Technologies: 39
- Markets: New construction, process overhaul/replacement retrofit
- End Uses: Motor systems, lighting, HVAC, industry-specific processes
- Market Segments: 4 industry sectors (manufacturing, agriculture, mining, construction, 22 specific industries)

## Study Scope

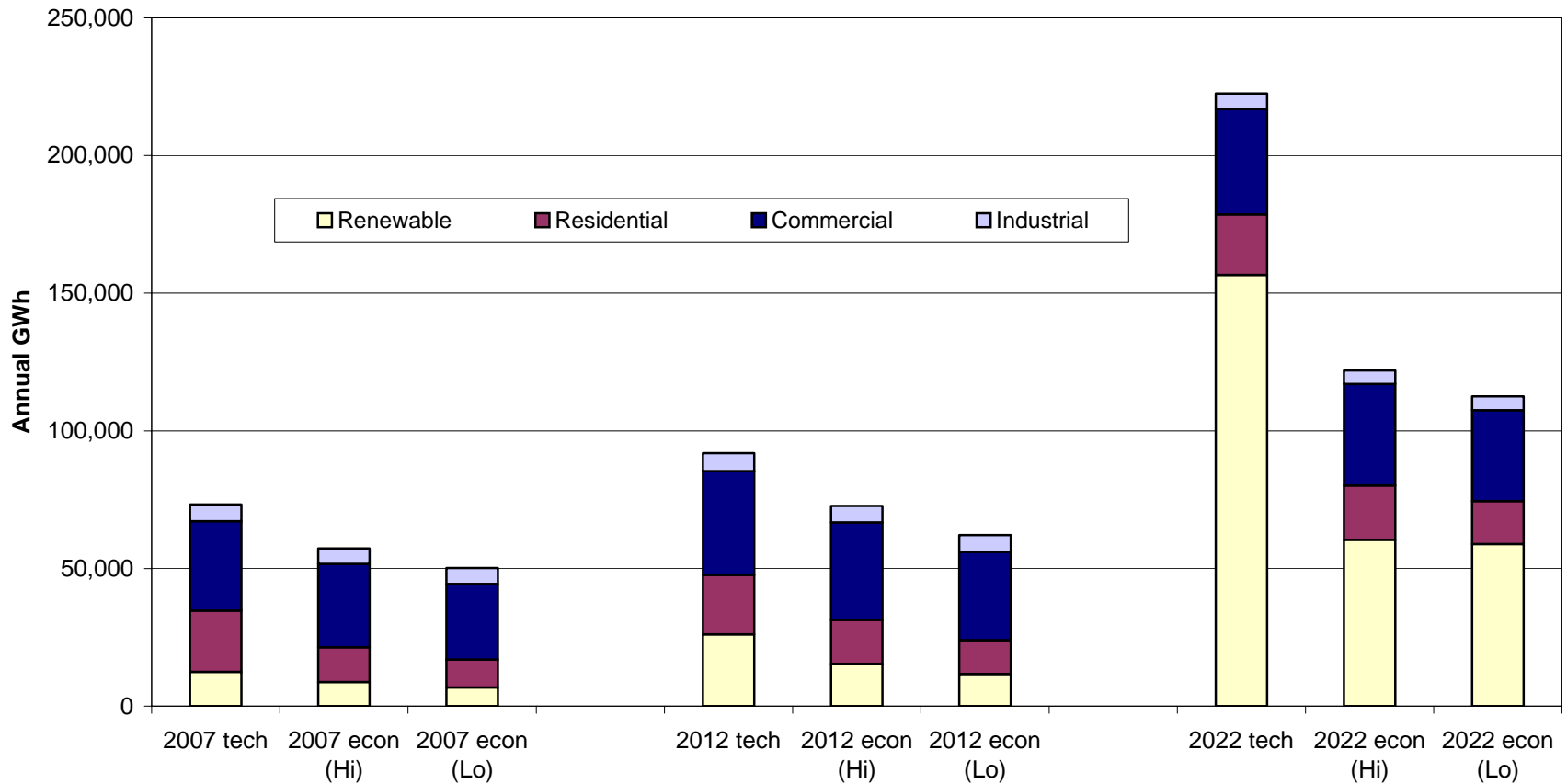
### RENEWABLE TECHNOLOGIES

- Biomass
- Fuel Cell
- Hydropower
- Landfill Gas
- Municipal Solid Waste
- Photovoltaic
- Solar Thermal
- Windpower

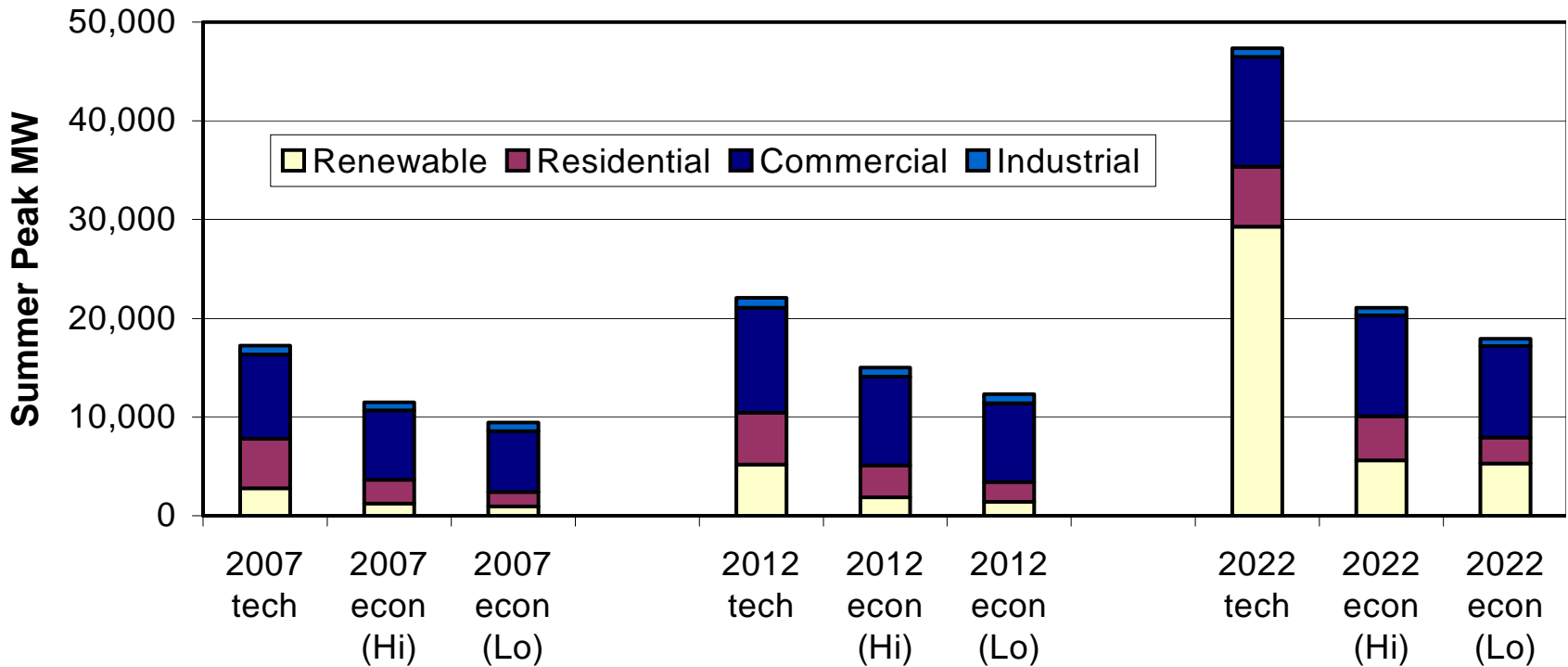
# Scenarios Analyzed



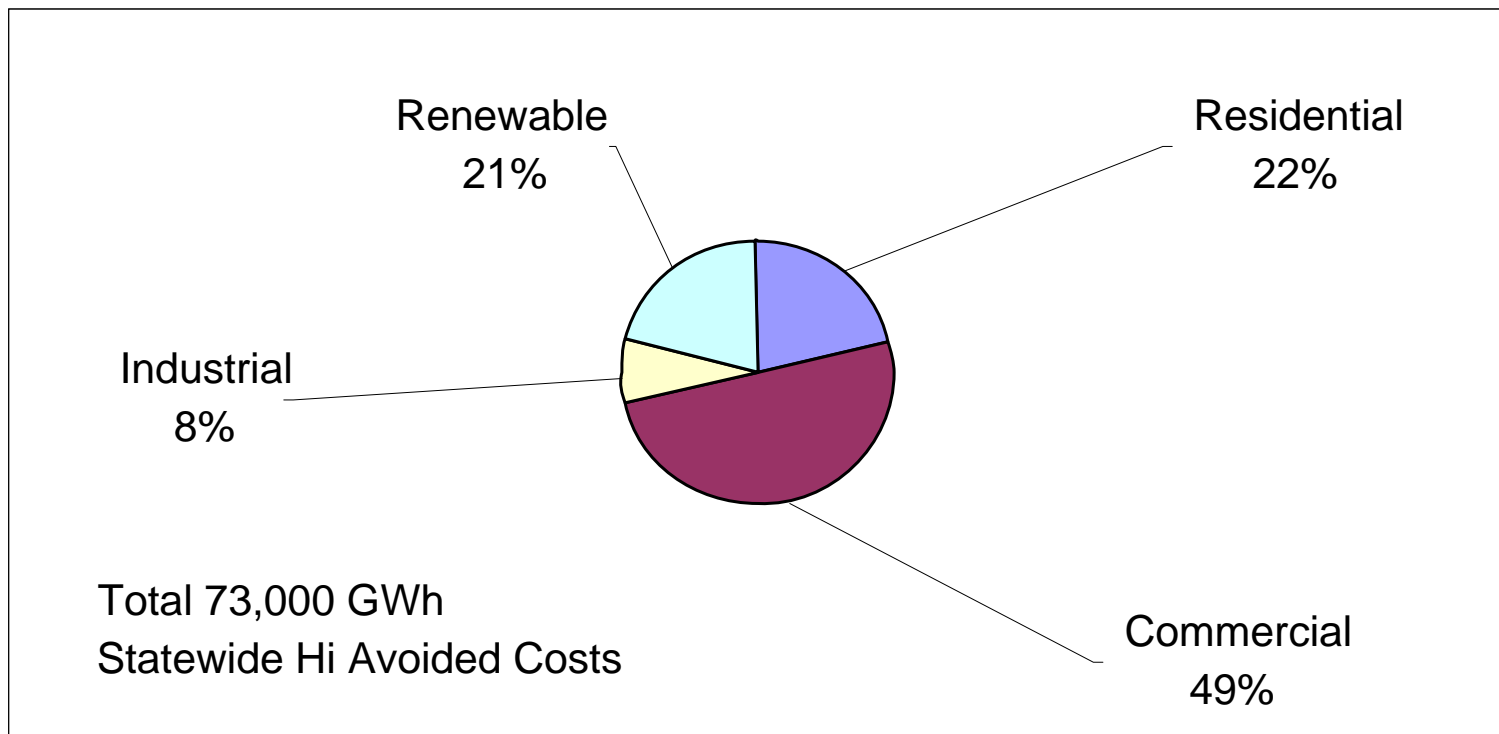
# Technical and Economic Potential for Electric Energy Efficiency and Renewable Generation in New York (Annual GWh)



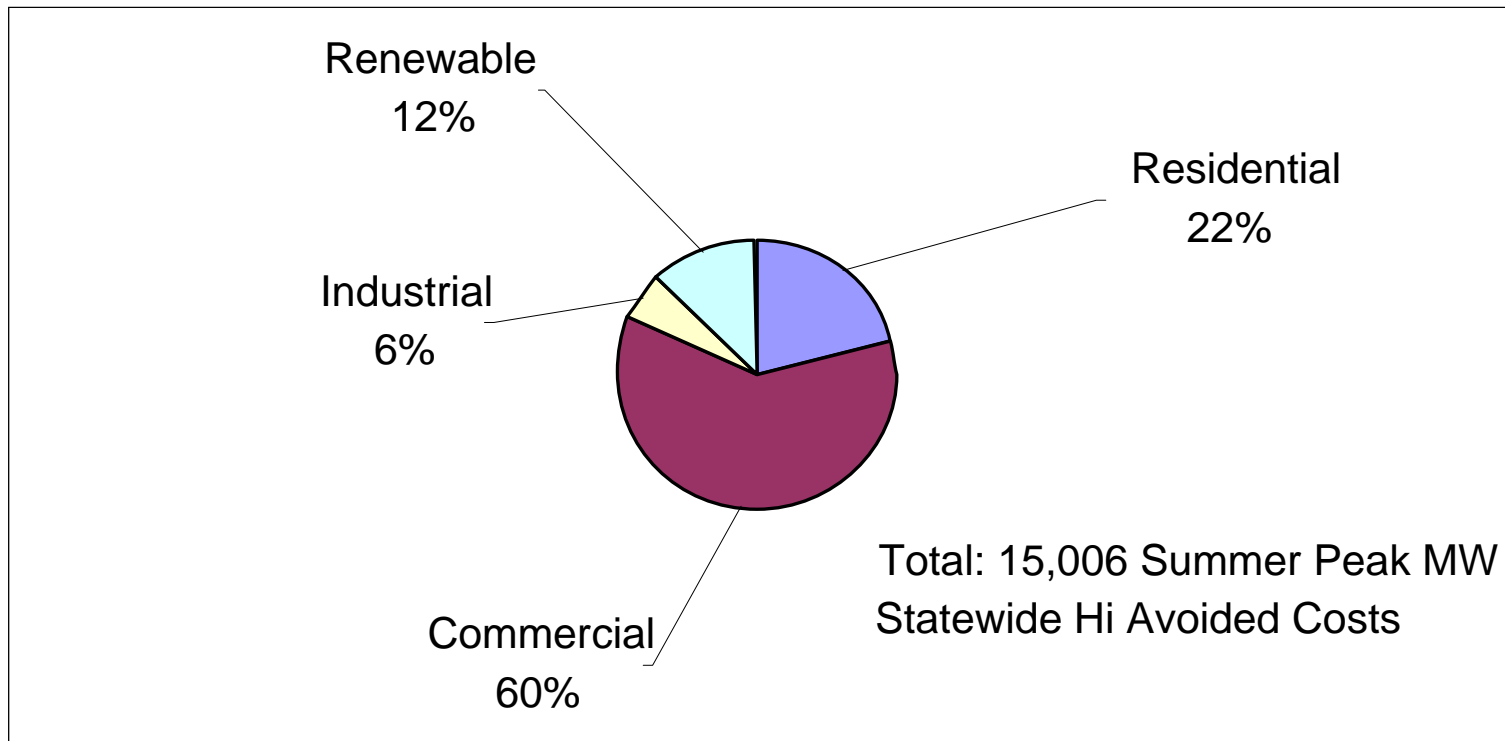
# Technical and Economic Potential for Electric Capacity Savings from Efficiency and Renewables in New York (Summer Peak MW Reductions)



## Statewide Economic Electric Energy Efficiency and Renewable Generation Potential in 2012 (% total by Sector)



## 2012 Statewide Economic Electric Capacity Savings Potential (% of Total by Sector)



## How Have the Report Results Been Used?

- Energy Planning (2002 State Energy Plan)
- Renewable Portfolio Standard Proceeding
- New York Energy \$mart<sup>SM</sup> Program planning and design
- Efficiency Portfolio Standard Proceeding
- Utility Rate Case Proceedings