



LONDON  
ECONOMICS

## LEI Semi-Annual Regional Market Update and 10-year Energy and Capacity Price Forecast

New York

*2<sup>nd</sup> Quarter 2022*

717 Atlantic Avenue, Suite 1A  
Boston, Massachusetts 02111  
Tel: (617) 933-7200  
Fax: (617) 933-7201

390 Bay Street, Suite 1702  
Toronto, Ontario M5H 2Y2  
Tel: (416) 643-6610  
Fax: (416) 643-6611

[www.londoneconomicspress.com](http://www.londoneconomicspress.com)

### Description of Report

*London Economics International LLC (LEI) provides semi-annual regional market updates and 10-year energy price forecasts for major markets in North America and around the world. In addition to providing price projections, the reports highlight major developments in each of the regions as well as the underlying structural dynamics. LEI also provides more detailed regional market price forecasts tailored to a client's individual needs, including longer time horizons and forecasting of plant-specific revenues or the impact of structural or market design changes.*

### Disclaimer

*The contents of this report do not constitute investment advice. The provision of analysis by LEI does not obviate the need for an investor to make further appropriate inquiries as to the accuracy of the information included therein, and to undertake his/her own analysis and due diligence. This report is not intended to be a complete and exhaustive analysis of all the factors impacting the regional market. LEI, its officers, employees, and affiliates make no representations, warranties, or recommendations.*

# Table of contents

- 1 MARKET OVERVIEW AND RECENT DEVELOPMENTS .....4**
- 1.1 MARKET OVERVIEW .....4
- 1.2 NYCA TRANSMISSION SYSTEM .....6
- 1.3 NEW YORK POLICY MANDATES .....8
  - 1.3.1 *Climate Leadership and Community Protection Act* ..... 9
  - 1.3.2 *Clean Energy Standard*..... 10
  - 1.3.3 *Peaker Rule: Ozone Season NOx Emission Limits*..... 11
  - 1.3.4 *NYS Accelerated Renewable Energy Growth and Community Benefit Act* ..... 11
  - 1.3.5 *New York City Residual Oil Elimination*..... 12
  - 1.3.6 *New York City Local Law 97*..... 12
- 1.4 RECENT DEVELOPMENTS .....14
  - 1.4.1 *Renewable Energy Standard procurements* ..... 15
  - 1.4.2 *Offshore wind procurements*..... 15
  - 1.4.3 *Long Island public policy need for delivery of offshore wind* ..... 16
  - 1.4.4 *Tier 4 RECs Solicitation* ..... 16
  - 1.4.5 *Capacity market changes: end of “buyer-side mitigation” for clean energy resources and capacity market accreditation* ..... 17
  - 1.4.6 *Gas ban and electrification for new buildings*..... 18
  - 1.4.7 *Integration of distributed energy resources (“DER”)*..... 19
  - 1.4.8 *Transmission and distribution upgrades* ..... 20
- 2 MODELING ASSUMPTIONS .....21**
- 2.1 MARKET TOPOLOGY .....21
- 2.2 FUEL PRICE PROJECTIONS.....22
  - 2.2.1 *Natural gas*..... 23
  - 2.2.2 *Oil* ..... 24
- 2.3 CARBON EMISSION COSTS .....24
- 2.4 IMPORT AND EXPORT FLOWS .....25
- 2.5 SUPPLY .....27
  - 2.5.1 *Renewable generation*..... 27
  - 2.5.2 *Storage resources*..... 28
  - 2.5.3 *New entry*..... 28
  - 2.5.4 *Retirements* ..... 30
- 2.6 HYDROLOGY .....30
- 2.7 DEMAND .....31
  - 2.7.1 *Supply demand balance*..... 33
- 2.8 TRANSMISSION SYSTEM.....35
- 2.9 CAPACITY MARKET DEMAND CURVE .....36
- 3 10-YEAR PRICE FORECAST .....37**
- 3.1 ENERGY MARKET PRICES.....37
- 3.2 IMPLIED MARKET HEAT RATES.....38
- 3.3 CAPACITY MARKET PRICES .....38
- 4 APPENDIX A: OVERVIEW OF FORECASTING METHODOLOGY .....40**
- 5 APPENDIX B: INTRODUCTION TO LEI AND ITS WORK IN NYISO.....41**

## List of figures

FIGURE 1. INSTALLED CAPACITY AND GENERATION BY TECHNOLOGY TYPE .....	5
FIGURE 2. INSTALLED CAPACITY AND GENERATION BY OWNER.....	6
FIGURE 3. NYCA TRANSMISSION INTERFACES .....	6
FIGURE 4. SUMMARY OF NEW YORK’S POLICY MANDATES.....	8
FIGURE 5. SUMMARY OF RECENT DEVELOPMENTS AND MARKET IMPACT .....	14
FIGURE 6. AGGREGATED NYISO ZONES.....	21
FIGURE 7. NYISO CAPACITY ZONES.....	22
FIGURE 8. FOSSIL FUEL PRICE PROJECTIONS (NOMINAL \$/MMBTU AND \$/BBL) .....	23
FIGURE 9. CARBON ALLOWANCE PRICES (NOMINAL \$/TON).....	25
FIGURE 10. EXTERNAL TRANSFER LIMITS.....	26
FIGURE 11. MODELED ANNUAL IMPORTS AND EXPORTS (GWH) .....	26
FIGURE 12. ADDITIONAL RENEWABLE GENERATION AND INSTALLED CAPACITY PORTFOLIO BY 2030 .....	28
FIGURE 13. GROSS COST OF NEW ENTRY (CONE) FOR COMBINED CYCLE AND SIMPLE CYCLE GT IN DIFFERENT ZONES OF NEW YORK .....	29
FIGURE 14. NEW GENERATION ENTRY OVER MODELING HORIZON (NAMEPLATE CAPACITY, MW) .....	29
FIGURE 15. GENERATION RETIREMENT OVER MODELING HORIZON (NAMEPLATE CAPACITY, MW).....	30
FIGURE 16. AVERAGE MONTHLY HYDROELECTRIC ENERGY GENERATION FOR ENTIRE CONVENTIONAL HYDROELECTRIC FLEET IN NEW YORK UNDER TYPICAL CONDITIONS (GWH/MONTH).....	31
FIGURE 17. FORECAST NET ENERGY AND PEAK DEMAND IN NEW YORK .....	32
FIGURE 18. IMPACT OF BTM SOLAR GENERATION ON NET LOAD .....	33
FIGURE 19. CAPACITY MARKET LOCALITY PARAMETERS (2022-2023).....	34
FIGURE 20. PROJECTED STATEWIDE DEMAND-SUPPLY BALANCE FOR LEI’S BASE CASE.....	35
FIGURE 21. 2020-2021 ICAP SPOT AUCTION DEMAND CURVES .....	36
FIGURE 22. FORECAST ENERGY MARKET PRICES IN NYISO (NOMINAL \$/MWH).....	37
FIGURE 23. FORECAST IMPLIED MARKET HEAT RATES (BTU/KWH) .....	38
FIGURE 24. FORECAST ANNUAL AVERAGE CAPACITY MARKET PRICES IN UCAP TERMS (NOMINAL \$/KW-MONTH) .....	39
FIGURE 25. POOLMOD’S TWO-STAGE PROCESS.....	40