

The background features a dark blue gradient with faint, light blue technical diagrams. On the left side, there is a large circular scale with numerical markings from 140 to 260 in increments of 10. Several circular diagrams with arrows and dashed lines are scattered across the background, suggesting a technical or scientific context.

CITIZENS AGAINST WIND TURBINES IN LAKE ERIE

TECH PRESENTATION

TRUE COST OF LAKE ERIE OFF-SHORE WIND

NEW YORK'S CLIMATE LEADERSHIP AND COMMUNITY PROTECTION ACT (CLCPA)

GOAL OF 70% OF NY'S ELECTRICITY PROVIDED FROM RENEWABLE ENERGY SOURCES BY 2030 (70X30)¹

1- PSC Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard.

TRUE COST OF LAKE ERIE OFF-SHORE WIND

WESTERN NEW YORK GENERATION CAPACITY

- WESTERN NY CURRENTLY HAS AN OVERCAPACITY OF ELECTRICITY
- WESTERN NY ELECTRICITY IS MADE-UP OF 90% RENEWABLE GENERATION²

² – Primarily from the New York Power Authority Niagara Hydro Facility

TRUE COST OF LAKE ERIE OFF-SHORE WIND

COST OF OFF-SHORE WIND GENERATION

- DEVELOPMENT COST OF OFF-SHORE WIND GENERATION **\$6,041/KW⁴**
- DEVELOPMENT COST FOR THE CLCLA RECOMMENDED 9,000 MW OF OFF-SHORE WIND GENERATION **\$54 BILLION.**

TRUE COST OF LAKE ERIE OFF-SHORE WIND

LEVELIZED COST OF ELECTRICITY (LCOE) OF OFF-SHORE WIND GENERATION

- MEASURE OF THE OVERALL COMPETITIVENESS OF VARIOUS GENERATION TECHNOLOGIES
- OFF-SHORE WIND LCOE IS \$136.51/MWH⁵

TRUE COST OF LAKE ERIE OFF-SHORE WIND

LCOE OF OFF-SHORE WIND GENERATION COMPARED TO CURRENT REGIONAL PRICING

- CURRENT WHOLESALE COST OF ELECTRICITY IN WESTERN NEW YORK \$35.60⁶
- OFF-SHORE WIND GENERATION IS 380% HIGHER THAN THE CURRENT
- WILL HAVE A SIGNIFICANT IMPACT ON ELECTRIC RATES

6 – New York State Independent System operator (NYISO) regional wholesale price.

TRUE COST OF LAKE ERIE OFF-SHORE WIND

OFF-SHORE WIND GENERATION CAPACITY FACTOR

- OFF-SHORE WIND GENERATION IS INTERMITTENT
- EIA REPORTED CAPACITY FACTOR 44%⁷
- NYISO REPORTED CAPACITY FACTOR 26%⁸
- REQUIRES 4 TIMES THE NUMBER OF WIND TURBINES TO MEET THE GENERATION CAPACITY

7 – US Energy Information Administration – Levelized Cost of New Generation Resources – March 2022

8 – New York State Independent System Operator Power Trends 2019

TRUE COST OF LAKE ERIE OFF-SHORE WIND

OFF-SHORE WIND GENERATION RELIABILITY

- OFF-SHORE WIND GENERATION DEGRADES AT A RATE OF 4.2% PER YEAR
- AT THE END OF 10 YEARS THE CAPABILITY OF THE WIND TURBINE IS ONLY 58% OF ORIGINAL CAPABILITY
- TURBINE WILL REQUIRE SIGNIFICANT UPGRADING AND AUGMENTATION AT A SIGNIFICANT COST IN \$10'S OF BILLIONS OF DOLLARS
- AVAILABILITY OF REPLACEMENT PARTS IS UNCERTAIN
- AT THIS POINT THE DEVELOPER WILL LIKELY SELL OR ABANDON THE PROJECT

TRUE COST OF LAKE ERIE OFF-SHORE WIND

TRANSMISSION CONSTRAINTS

- LOAD POCKET IS IN NEW YORK CITY
- SIGNIFICANT TRANSMISSION AND DISTRIBUTION WORK REQUIRED TO SUPPLY POWER TO NEW YORK CITY
- TRANSMISSION AND DISTRIBUTION WORK ESTIMATED AT \$6.8 BILLION³

TRUE COST OF LAKE ERIE OFF-SHORE WIND

OFF-SHORE WIND GENERATION ECONOMIC IMPACTS

- COST TO GENERATE AND DELIVER OFF-SHORE WIND GENERATION IS \$60.8 BILLION
- COST MUST BE BORNE BY RATE PAYERS AND TAXPAYERS
- LIKELY TO INCREASE ELECTRIC RATES BY 500%
- COSTS OF OFF-SHORE WIND WILL EXCEED CORRESPONDING BENEFITS BY A FACTOR OF 3
- THE MORE OFF-SHORE WIND THAT IS ADDED TO THE ELECTRIC SUPPLY MIX THE GREATER THE NET ECONOMIC COST TO SOCIETY