



# CEO Report

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July 24, 2019

# JULY 2019 BOARD MEETING STRATEGIC / SIGNIFICANT ITEMS

## FOR BOARD POLICY DISCUSSION:

- Update on State's Clean Energy Goals
- Review of Board Policy on Regionally Comparable Rates
- Review of Board Policy on Resource Planning, Energy Efficiency and Renewable Energy

## FOR APPROVAL:

- Tariff changes relating to the Value of Distributed Energy Resources

## FOR COMMITTEE:

- Review of Board Policy on Staffing and Employment
- Update on the T&D Capital Budget and FEMA Projects
- Review of Energy Efficiency Programs
- Review of the 2019 Utility 2.0 Filing and Proposals



# LONG ISLAND WELCOMES TWO NEW SOLAR FARMS

## Kings Park Solar Project:

- 4MW Solar Farm
- NextEra
- Kings Parks, NY
- Re-uses former landfill
- Ribbon Cutting: June 19, 2019

## Riverhead Solar Project:

- 20MW Solar Farm
- sPower (AES and AIMCo)
- Calverton, NY
- Ribbon Cutting: July 23, 2019

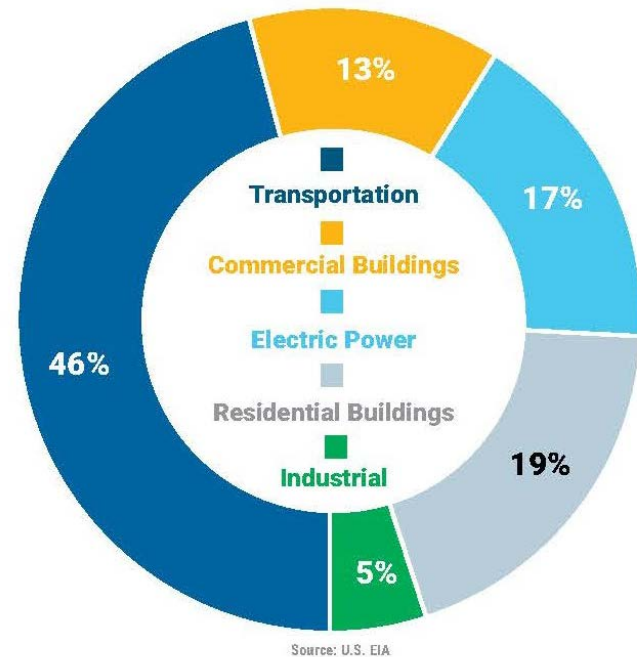
## Kings Park Solar Project Ribbon Cutting June 19, 2019



# CLIMATE LEADERSHIP AND COMMUNITY PROTECTION ACT OF 2019

- 60% reduction statewide greenhouse gas emissions by 2030
- Carbon neutral statewide by 2050
- Achieving targets will likely require significant beneficial electrification of transportation and heating

NY Carbon Emissions by Sector



# NEW YORK'S ELECTRIC POWER GOALS

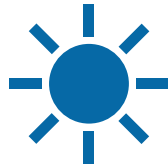
## 100% X 2040

New York's power grid will be 100% carbon neutral by 2040



### 70% X 2030

70 percent of electricity generated in New York to come from renewable energy by 2030



### 6,000 MW X 2025

Deploy 6,000 MW of distributed solar by 2025



### 9,000 MW X 2035

New York aims to develop 9,000 MW of offshore wind by 2035



### 3,000 MW X 2030

Energy storage target of 3,000 megawatts by 2030 to store clean & renewable energy



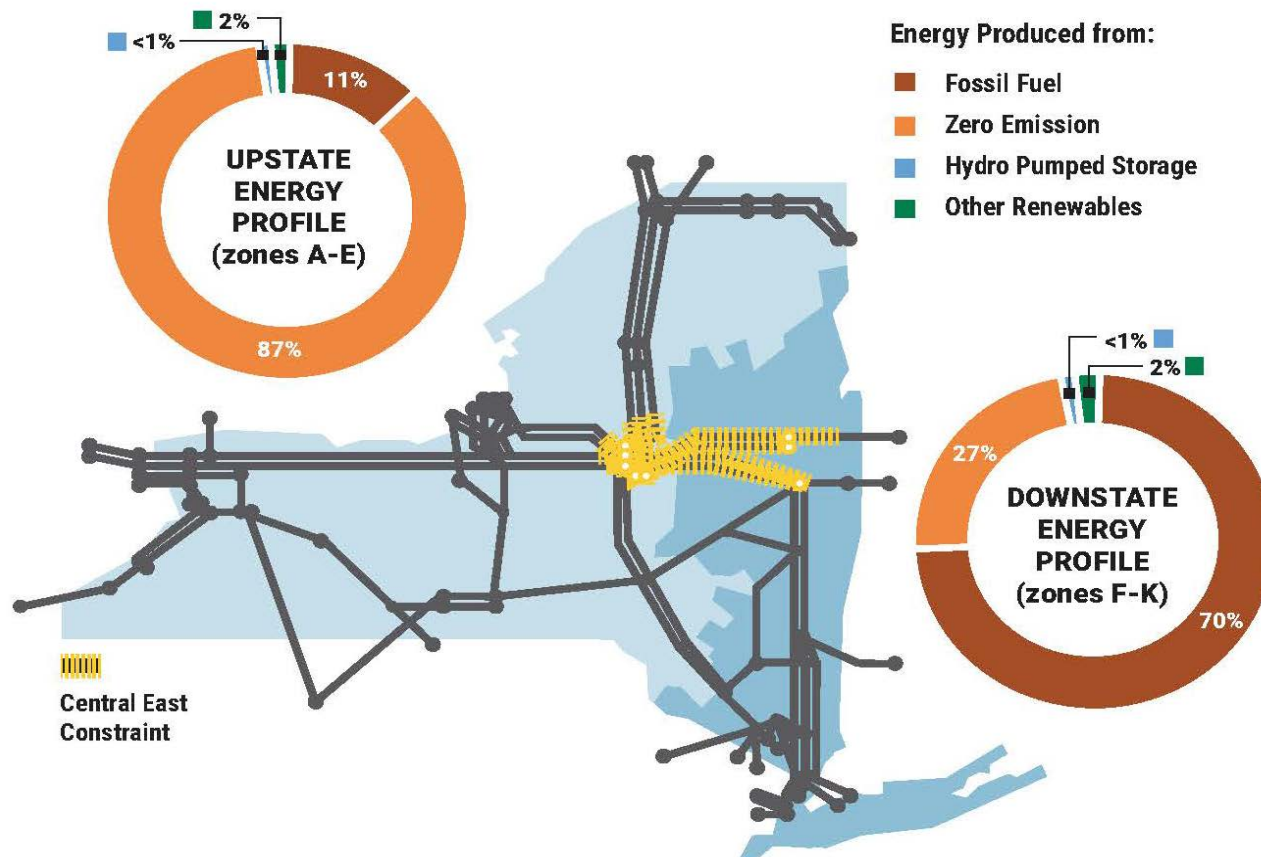
# 52% DECLINE IN NYS ELECTRIC CO<sub>2</sub> EMISSIONS SINCE 1999

- CO<sub>2</sub> emissions from the New York electric sector
- 1999: 57.6 million metric tons
- 2016 (most recent data): 27.7 million metric tons, a 52% reduction



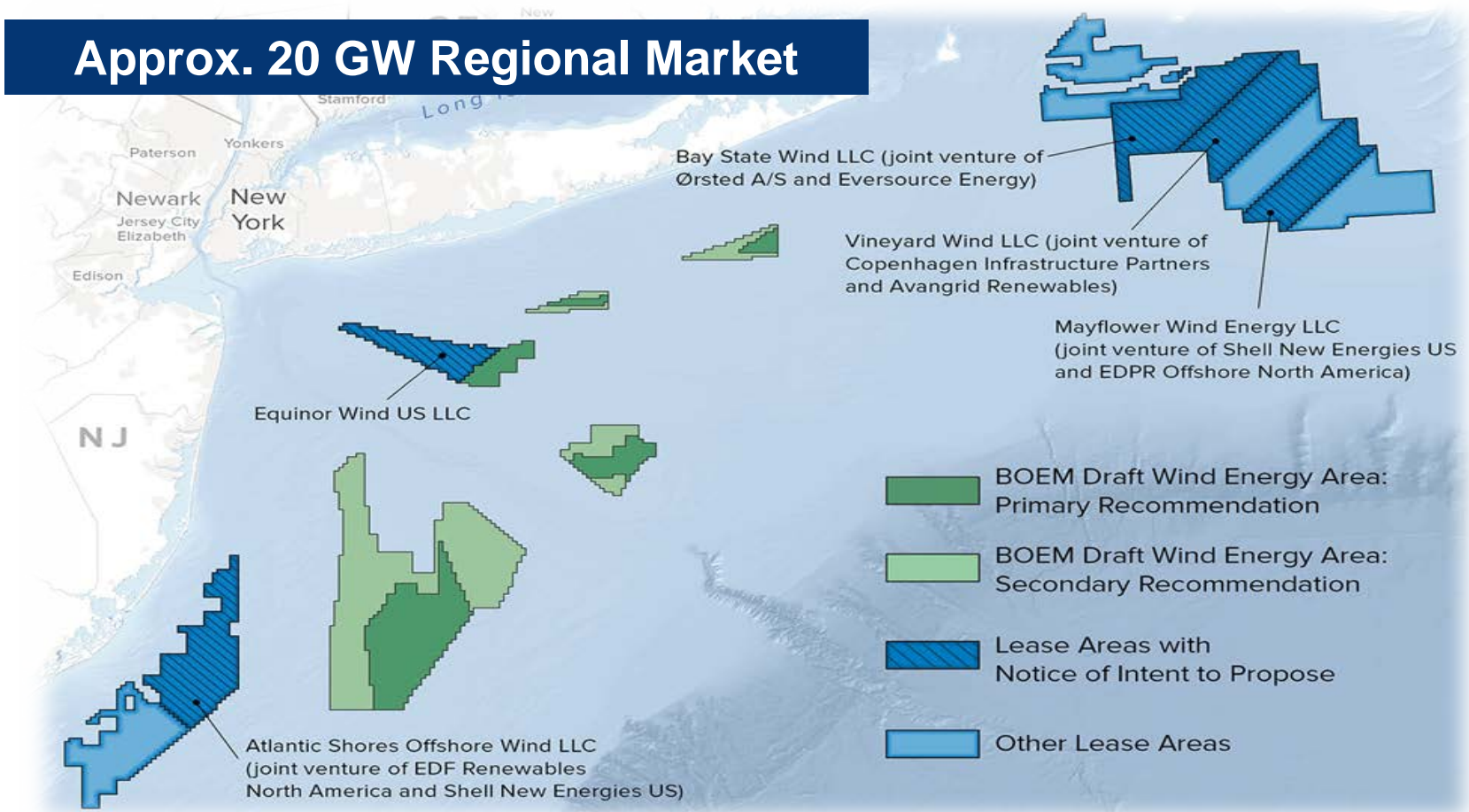
Sources: U.S. EPA, U.S. EIA

# HOW MUCH OF THE STATE'S NEW CLEAN ENERGY WILL COME FROM UPSTATE?



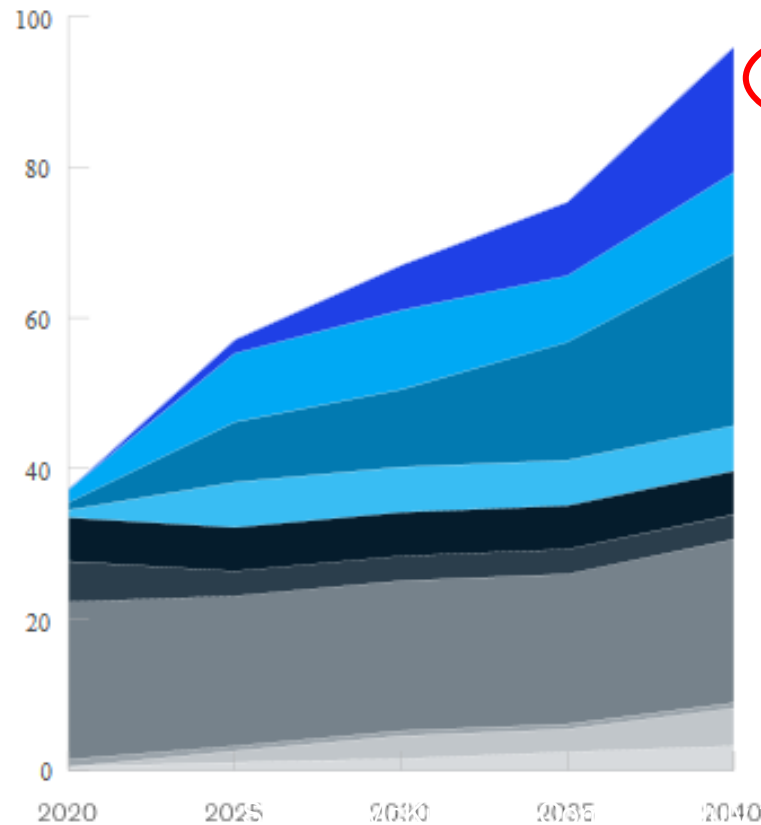
# OFFSHORE WIND IS THE LARGEST SOURCE OF DOWNSTATE CLEAN ENERGY

**Approx. 20 GW Regional Market**

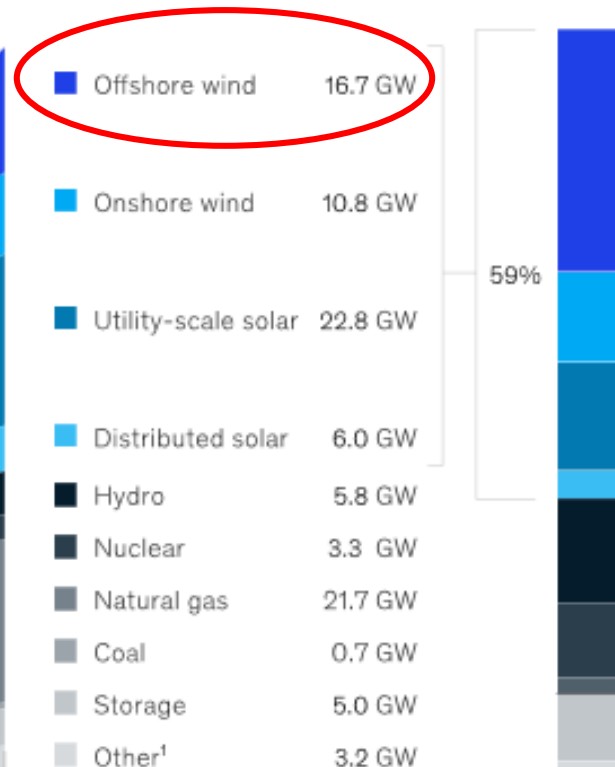


# NEW YORK OFFSHORE WIND GENERATION COULD REACH 17 GW BY 2040

Projected generation capacity 2020–40,  
gigawatt (GW)



Projected generation capacity 2040



# GOVERNOR CUOMO AWARDS 1.7GW OF OFFSHORE WIND

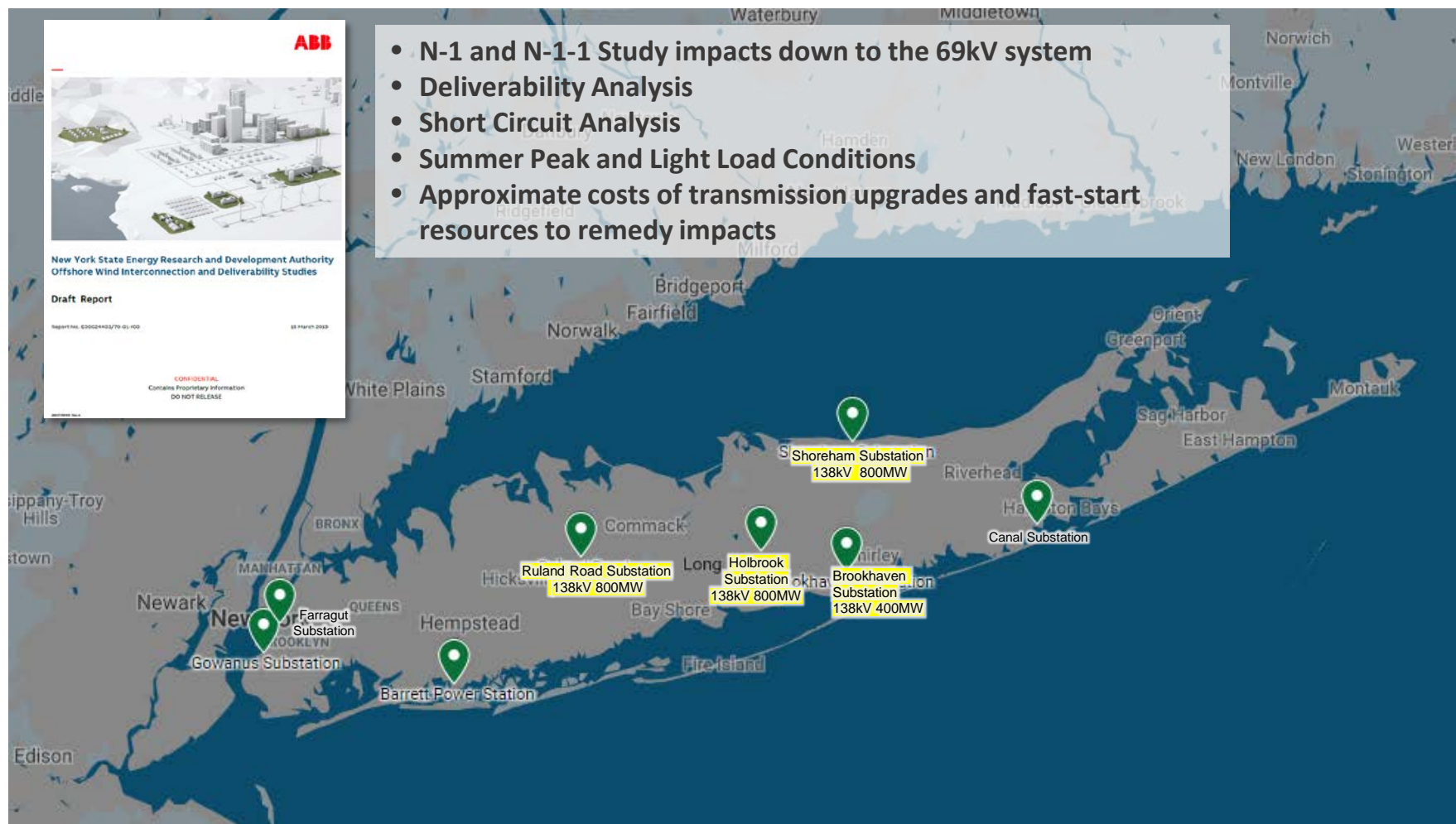
- Single largest offshore wind award in United States history
- Project one: **880MW** Sunrise Wind developed by Orsted. Connects to Long Island.
- Project two: **816MW** Empire Wind developed by Equinor. Connects to NYC.
- Projects due to be complete in 2024.



# LIPA/NYSERDA STUDY OF LONG ISLAND GRID FOR OFFSHORE WIND



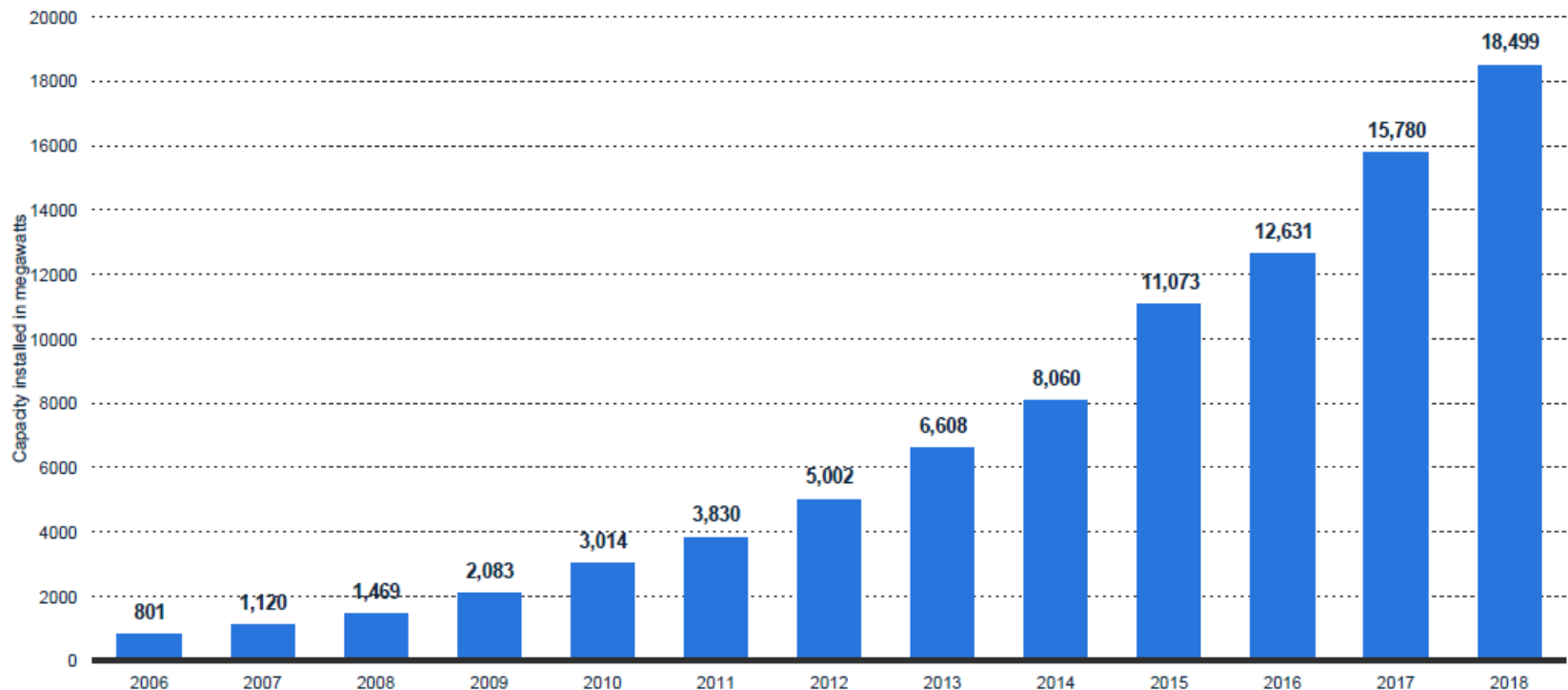
- N-1 and N-1-1 Study impacts down to the 69kV system
- Deliverability Analysis
- Short Circuit Analysis
- Summer Peak and Light Load Conditions
- Approximate costs of transmission upgrades and fast-start resources to remedy impacts



# EUROPE'S BOOMING OFFSHORE MARKET

Cumulative European offshore wind power capacity installations from 2006 to 2018 (in megawatts)

Cumulative offshore wind power capacity installations in Europe 2006-2018



# OFFSHORE WIND COST WILL CONTINUE TO DECLINE

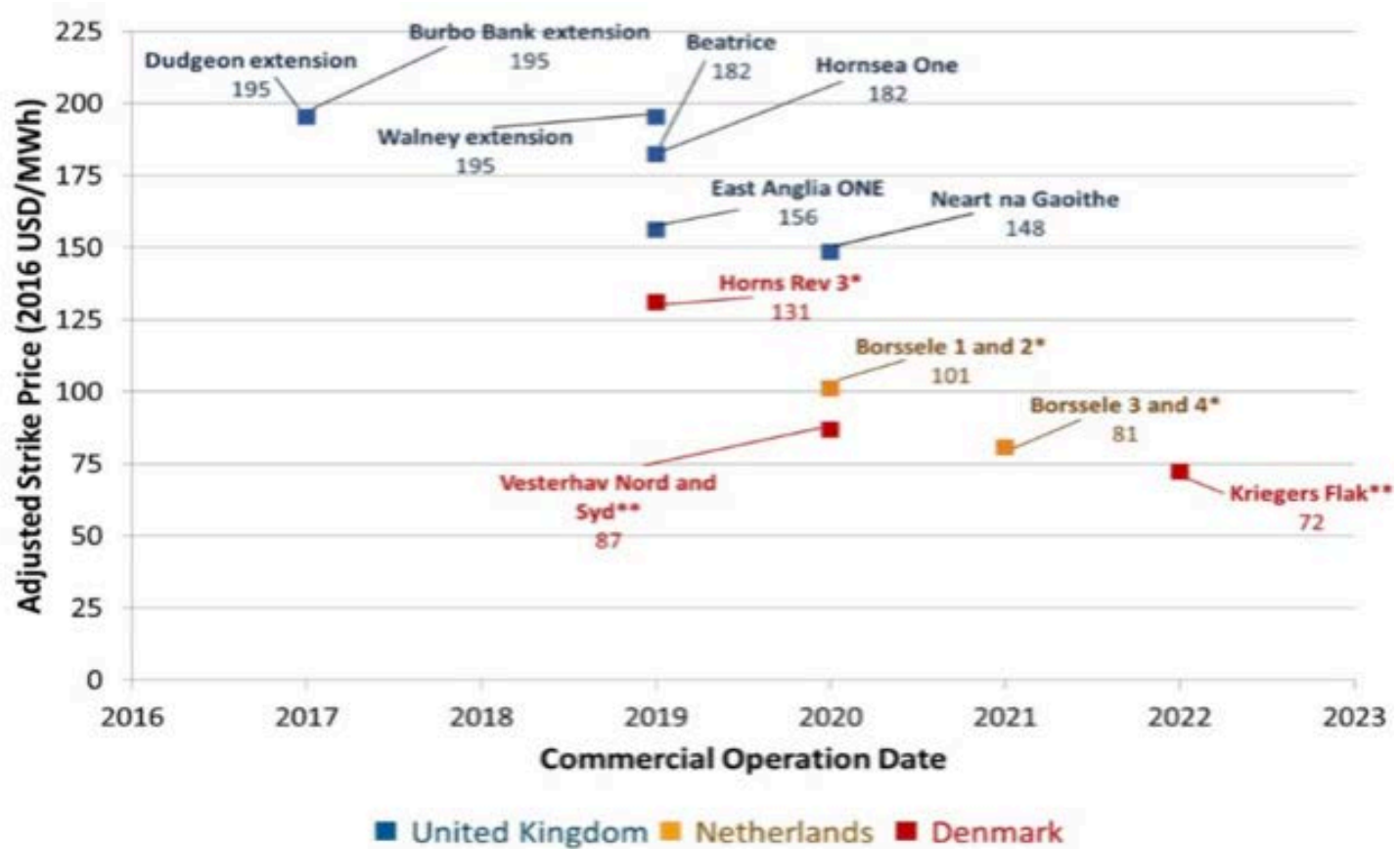
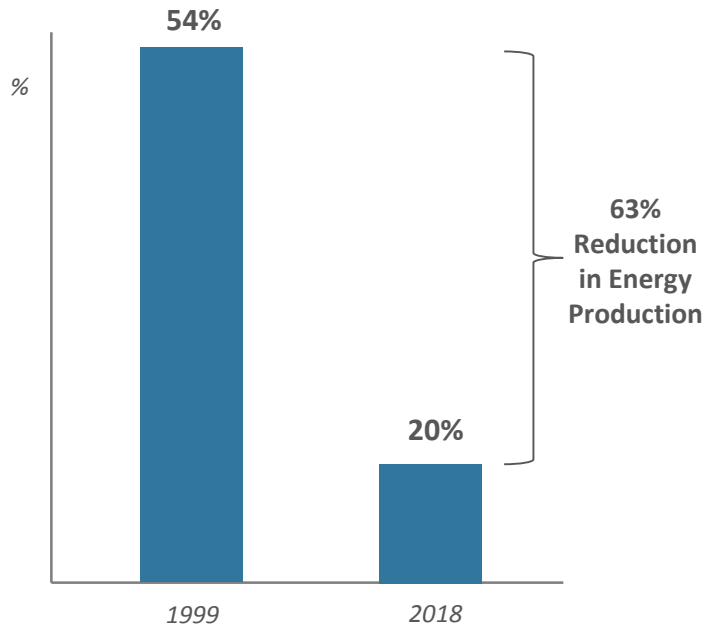


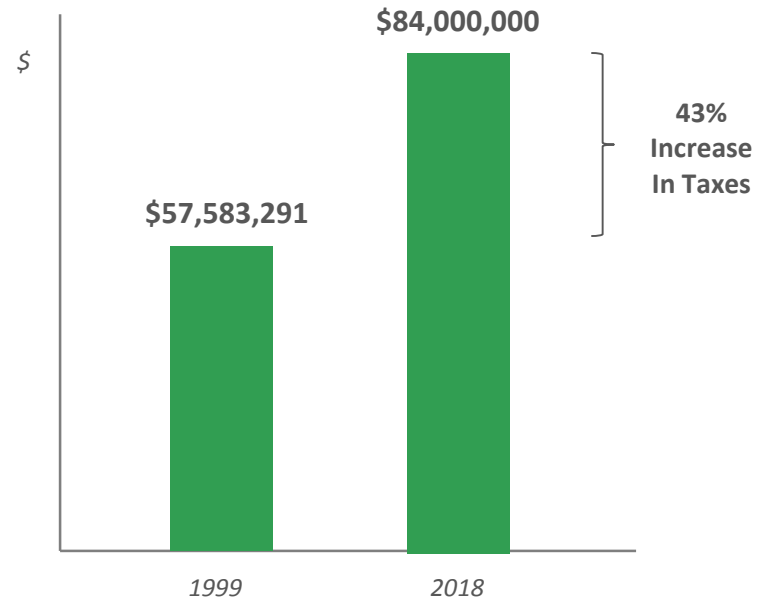
Figure 1. Recent strike prices of European offshore wind winning tenders adjusted to U.S. dollars with grid cost, development cost, and contract length adders

# NORTHPORT PLANT TAX BURDEN IS UNSUSTAINABLE





*Northport Plant Energy Production  
Down 63% Since 1999  
(Plant Capacity Factor)*



*Northport Plant Taxes Are  
Up 43% Since 1999*



# NORTHPORT TAXES COMPARED TO OTHER PLANTS

|   |   |  |  |
|---|---|--|--|
|    |    |    |   |
| <b>NORTHPORT</b><br>Northport, NY   | <b>BOWLINE</b><br>West Haverstraw, NY   | <b>CAITHNESS</b><br>Yaphank, NY  | <b>INDIAN POINT</b><br>Buchanan, NY  |
| <b>ANNUAL TAXES</b><br><b>\$84 MILLION</b>  | <b>ANNUAL TAXES</b><br><b>\$3 MILLION</b>   | <b>ANNUAL TAXES</b><br><b>\$10 MILLION</b>   | <b>ANNUAL TAXES</b><br><b>\$32 MILLION</b>   |
| <ul style="list-style-type: none"> <li>• 50-Years-Old</li> <li>• Homes Powered: 290,000</li> <li>• Runs at 20% Capacity</li> <li>• Antiquated technology</li> </ul> | <ul style="list-style-type: none"> <li>• 47-Years-Old</li> <li>• Homes Powered: 130,000</li> <li>• Runs at 12% Capacity</li> <li>• Antiquated technology</li> </ul> | <ul style="list-style-type: none"> <li>• 9-Years-Old</li> <li>• Homes Powered: 270,000</li> <li>• Runs at 85% Capacity</li> <li>• Modern, fuel-efficient technology</li> </ul> | <ul style="list-style-type: none"> <li>• 49-Years-Old</li> <li>• Homes Powered: 1,790,000</li> <li>• Runs at 91% Capacity</li> <li>• Antiquated, nuclear technology</li> </ul> |

# AGE OF NORTHPORT POWER PLANT AT CONTRACT EXPIRATION IN APRIL 2028

