

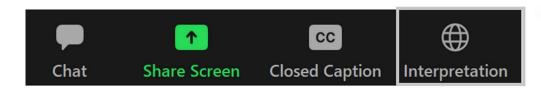
# Thank you for joining us! The presentation will start at 6:30.

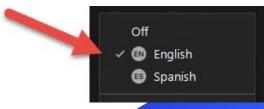
## Interpretación

Está disponible interpretación en idioma español durante esta reunión. En los controles de la reunión en la barra de herramientas ubicada en la parte inferior de la pantalla, oprima el icono Interpretation (interpretación) (globo pequeño) y después sobre el idioma que quiere escuchar.

## Interpretation

Spanish interpretation is available during this meeting. In your meeting controls on the toolbar at the bottom of the screen, click the Interpretation icon (the small globe) and click the language that you would like to hear.





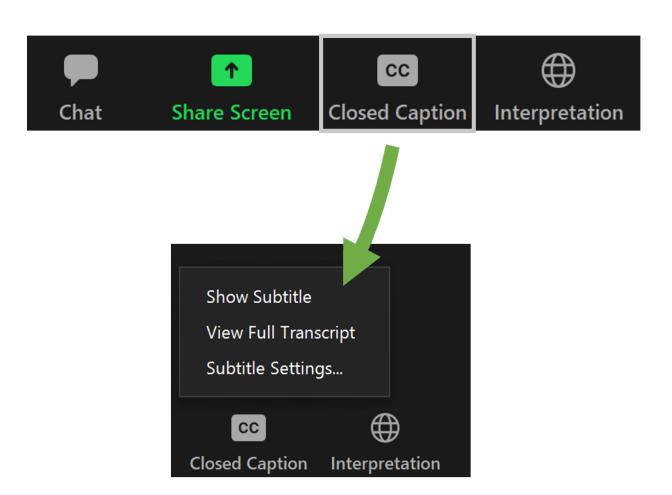
## Captioning

You can view closed captions by clicking the **Closed Caption** icon on the toolbar at the bottom of your screen and selecting from the options offered.

Show Subtitle will display a caption at the bottom of the screen.

View Full Transcript will display the meeting's audio transcription in a window to the right.

To adjust the size of the text, click the upward arrow next to **Start Video / Stop Video**. Click **Video Settings** then **Accessibility**. Move the slider to adjust the caption size.





## Participating in the meeting – Questions and Answers

## In Person



- During the Q&A session, in-person participants should raise your hand if you would like to comment
- A member of the project team will come to you with a microphone to give your remarks

## Virtually (in Zoom)



- Use the Zoom Q&A feature
- Type your questions in at any point during the meeting
- A member of the project team will read your question and direct it to the appropriate team member for an answer



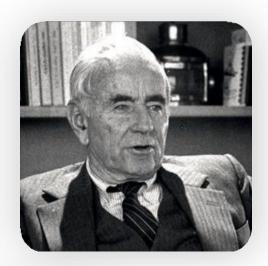
## Graham Tyson – Vice President Operations, Crowley Wind Services



## Crowley Profile

- Founded in San Francisco in 1892
- Headquarters in Jacksonville FL
- Third generation of family ownership/leadership
- Strong community partner in over 20 states and over 20 countries
- Leading industry efforts in sustainability, including nation's first all-electric tug boat under construction
- Over \$3 billion in annual revenues
- Over 7,000 employees worldwide
- 170 vessels owned and/or operated
- Other assets include: terminals, warehouses, tank farms, office buildings, trucks, trailers, containers, chassis, cranes and other specialized vehicles









#### Crowley Purpose and Values

#### BRAVELY ADVANCING WHAT'S POSSIBLE TO ELEVATE PEOPLE AND PLANET



#### Integrity

We built our name on doing what is right. As our company evolves to meet a changing world, integrity remains our North Star



#### **Sustainability**

Sustainability starts with our people and practices, and extends to our solutions, partners and the entire planet.

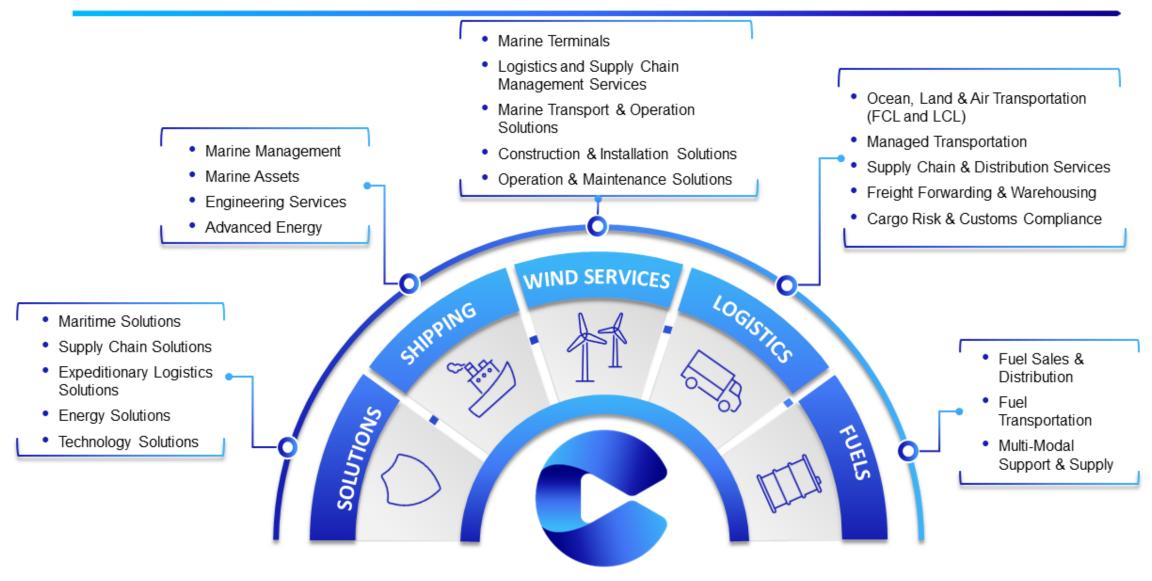


#### **Drive**

We are passionate about progress. Through constant innovation and investments in the future, we deliver exceptional experiences.



#### Lines of Business







#### Offshore Wind and Salem

#### Why Offshore Wind?

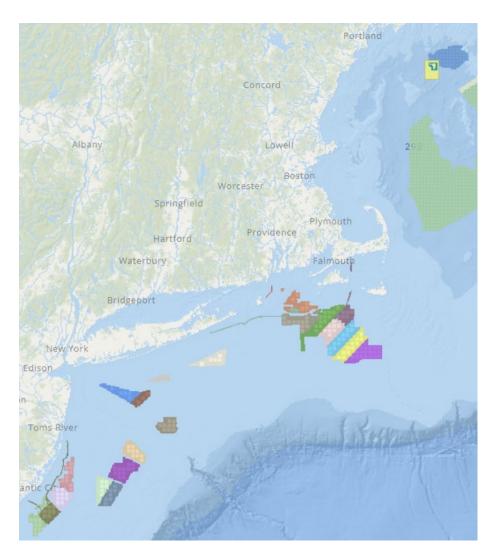
- Clean, Renewable Energy
- High, consistent winds offshore
- Economies of scale
- Global experience

#### Why New England?

- Shallow waters, strong winds
- High Demand from MA, RI, CT
- Existing Infrastructure
- Powerful workforce

#### Why Salem?

- Natural Harbor with no restrictions
- Footprint Site was underutilized
- Strong workforce in the region
- Central to near term and long term projects











# Terminal Operations



# Salem Offshore Wind Terminal



## **Operations**

- Staging and for the wind turbine components (blades, towers, nacelles)
- Components will be delivered to new wharf
- Transferred to the shore and either Laydown A or B
- Components will be stored until assembled for offshore installation
- Slow movement expensive equipment & materials

## **Wind Turbine Generator Components**





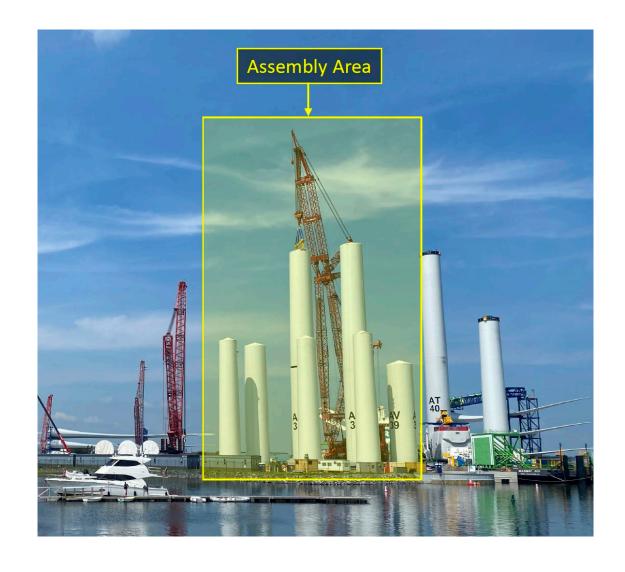








## **Pre-Assembly and Loadout**







# AVANGRID

Greg Dolan, Ports Manager

Pat Johnson, Manager, US Offshore External Affairs

Chris Hardy, Outreach Manager

OFFSHORE WIND 11/15/2023

## Avangrid Renewables Offshore Wind:

Part of Iberdrola Group's Global Offshore Wind Portfolio EUROPE **WIKINGER - 350 MW, COD 2017 ST BRIEUC - 496 MW, COD 2023** BALTIC EAGLE - 476 MW, COD 2024 **INDANKER – 300 MW, COD 2026 USA** SWEDEN - (8 projects) ~ 3.6 GW, COD >2029 **POLAND** - up to 1.5 GW, COD >2027 VINEYARD 1 - 806 MW. COD 2024 (1) PARK CITY - 804 MW **UK & IRELAND COMMONWEALTH - 1200 MW WODS -** 194 MW, COD 2014 KITTY HAWK - 3.5 GW **EA ONE -** 714 MW, COD 2020 **EA HUB -** 3.1 GW, COD 2026/27 MARRAM WIND - 3 GW, COD 2032 CAMPION WIND - 2 GW, COD 2032 MACHAIRWIND - 2 GW, COD 2032 **APAC** Ireland - 3 GW, COD 2029/30 **JAPAN -** 1.8 GW, COD 2029 **TAIWAN** – up to 1.2 GW, COD 2029 BRAZIL PHILLIPPINES - up to 3.5 GW, COD >2030 Origination phase Operational Construction Pre-FID Development Origination

1,200 MW of operational assets, 1,800 MW under construction, and a global pipeline of more than 35,000 MW to deliver growth beyond 2025

## **Avangrid Company Profile**

#### Networks business with renewables working to enable the energy transition



Present in 24 U.S. States

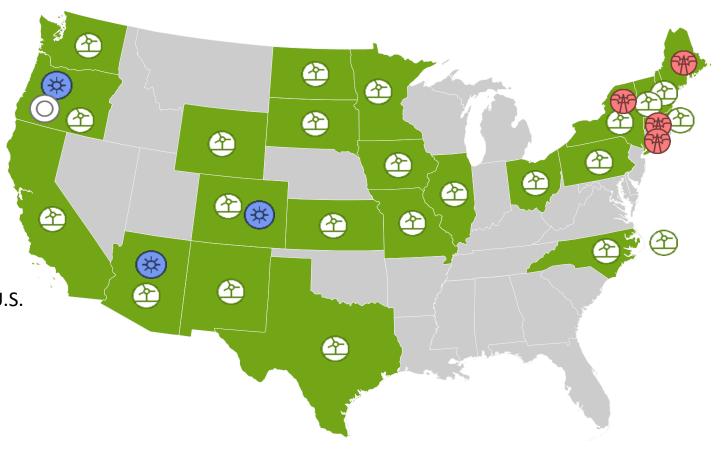
8 Utilities in NY, CT, ME & MA

3.3M Customers, 7M+ Population Served

**3rd-Largest** Onshore Renewables Operator in the U.S.

First Mover in Offshore Wind

**+\$40B** in Assets and **+7,500** Employees





## **Offshore Wind Projects**

Vineyard Wind 1 (800 MW)

- Under construction
- Lease Area OCS-A 0501
- 50% ownership

Park City Wind (800+ MW)

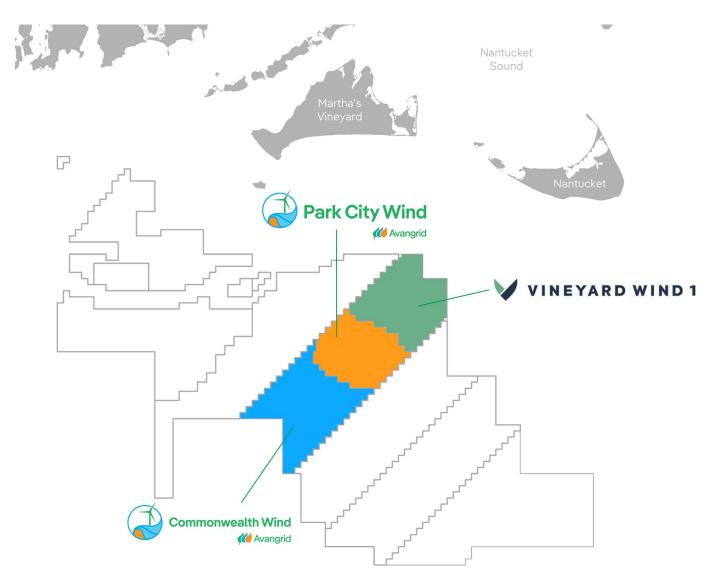
- In development
- Lease Area OCS-A 0534
- 100% ownership

Commonwealth Wind (1,200+ MW)

- In development
- Lease Area OCS-A 0534
- 100% ownership

Kitty Hawk Wind (2,500 MW)

- In development
- Lease Area OCS-A 0508 (NC/VA)
- 100% ownership





## Our projects create permanent, local jobs and provide economic benefits

1.1M

homes powered by Vineyard Wind 1 and Commonwealth Wind

**8M+** 

MWh of clean generation per year (~15% of MA demand)

~3.2M

tons of GHG emissions reduced per year

**JOB CREATION** 

~25,000

job-years supported during construction<sup>1,2</sup>

900+

sustained jobs during 30-year operations<sup>2</sup>

For each \$1 million invested in offshore wind farms...



...2 FTE jobs are created in Massachusetts

**ECONOMIC BENEFITS** 

~\$3.1B

est. spend in MA

\$22B

impact on MA GDP<sup>3</sup>

\$50M

in commitments for workforce, supply chain, communities, and innovation



<sup>&</sup>lt;sup>1</sup> One job for one year

<sup>&</sup>lt;sup>2</sup> Estimated impacts of Avangrid in MA for 2022 – 2025 including direct, indirect and induced effects of investments, based on analysis by PricewaterhouseCoopers.

<sup>&</sup>lt;sup>3</sup> Vineyard Wind 1, Commonwealth Wind and MA portion of Park City Wind; includes construction and 30 yr operations

## Vineyard Wind 1 (MA):

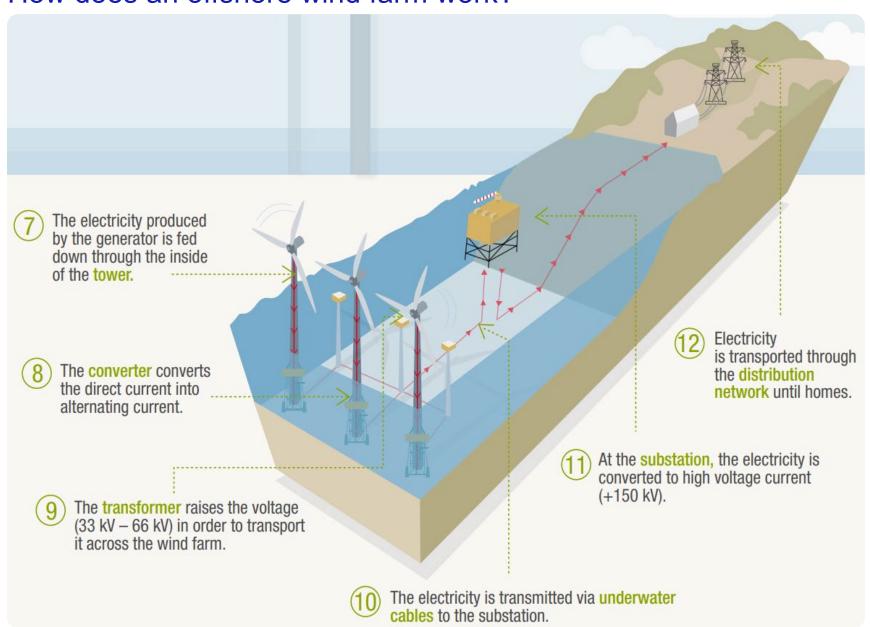
Joint Venture, Avangrid Renewables & Copenhagen Infrastructure Partners



#### **KEY PROJECT FACTS** Installed • 800MW Capacity · Vineyard Wind, a joint venture, 50% Avangrid Renewables and 50% Copenhagen Developer Infrastructure Partners • OCS-A 0501 lease area 15 miles South of Martha's Vineyard & Site and Nantucket Location Wind speed of 9-10m/s • Water depths of approximately 35-58m Massachusetts utilities: 20 Years // 800MW PPA **Technology** • GE 220m – 13.6MW Haliade-X Turbines State & Federal permitting completed **Permitting** and Grid • Record of Decision issued May 2021 Connection • Interconnection at Barnstable (Hyannis), MA Financial Close achieved September 2021 **Status** Currently in the installation phase with First power expected this year and COD 2024



#### How does an offshore wind farm work?





## Offshore Wind Major Packages (Scopes)

#### An offshore wind project consists of seven major packages (scopes) – five offshore and two onshore

Offshore packages have two main scopes of work:

- Product supply
- Transportation and Installation (T&I)



**Wind Turbine Generators (WTGs)** 



**Foundations** 



Electrical Service Platform (Offshore Substation)



**Array Cables** 



**Offshore Export Cable** 



**Onshore Substation** 

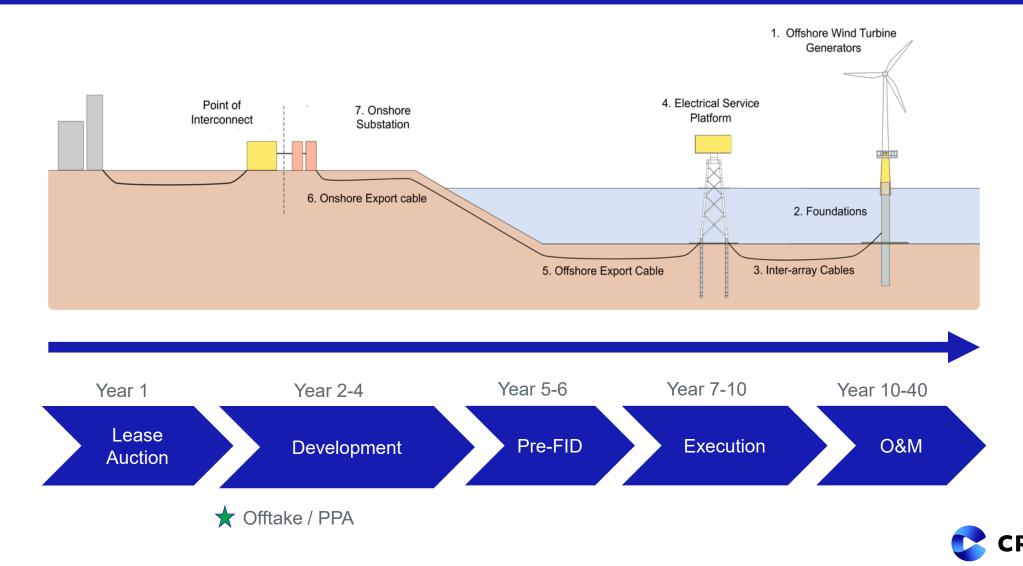


**Onshore Export Cable** 



## Offshore Wind Development Life Cycle

#### Key investment decisions taken 3-5 years in advance require experience and expertise



Benefits and Engagement in the Community

## **Public Benefits of Salem Offshore Wind Terminal**

#### ECONOMIC INVESTMENT and JOBS

- Tax agreement with City of Salem
- Community Benefits agreement
- 150 jobs during construction; at least 8 jobs direct to Crowley and 20-30 jobs during busy periods
- Up to 150 positions from tenants, contractors during projects
- Career training with Salem High School CTE, other schools

#### COMMUNITY DEVELOPMENT

- Improved landscaping at the perimeter of the site
- Public Point access at southwest corner of the site
- Derby Connector Public access
- Mission for the Designated Port Area that is consistent with the city's harbor master plan









Entering
through the
Gate into the
Point Access
Location



 View from Salem Ferry boat dock

## Discussion – Q&A



## **Contact us**

Salem Offshore Wind Terminal

www.salemoffshorewind.com

info@salemoffshorewind.com

