



## Atlantic Shores Offshore Wind Projects

# Project Construction

### Installation of Foundations

- Delivery of foundation (monopile, piled jacket, or suction jacket) to the site by vessel.
- *Monopiles*: Installed using a hydraulic impact hammer and/or drilling techniques.
- *Piled Jacket*: Support piles are installed using same methods as monopiles. Once the piles are in place, the jacket structure is secured to the piles.
- *Suction Jacket*: A suction bucket is typically a hollow steel cylinder that is capped at the upper end; the open end of the bucket faces downward into the seabed.
- *Gravity Base*: A gravity foundation is stable simply by virtue of its weight and design and requires no piles or suction buckets.

### Installation of Wind Turbine Generators (WTG)

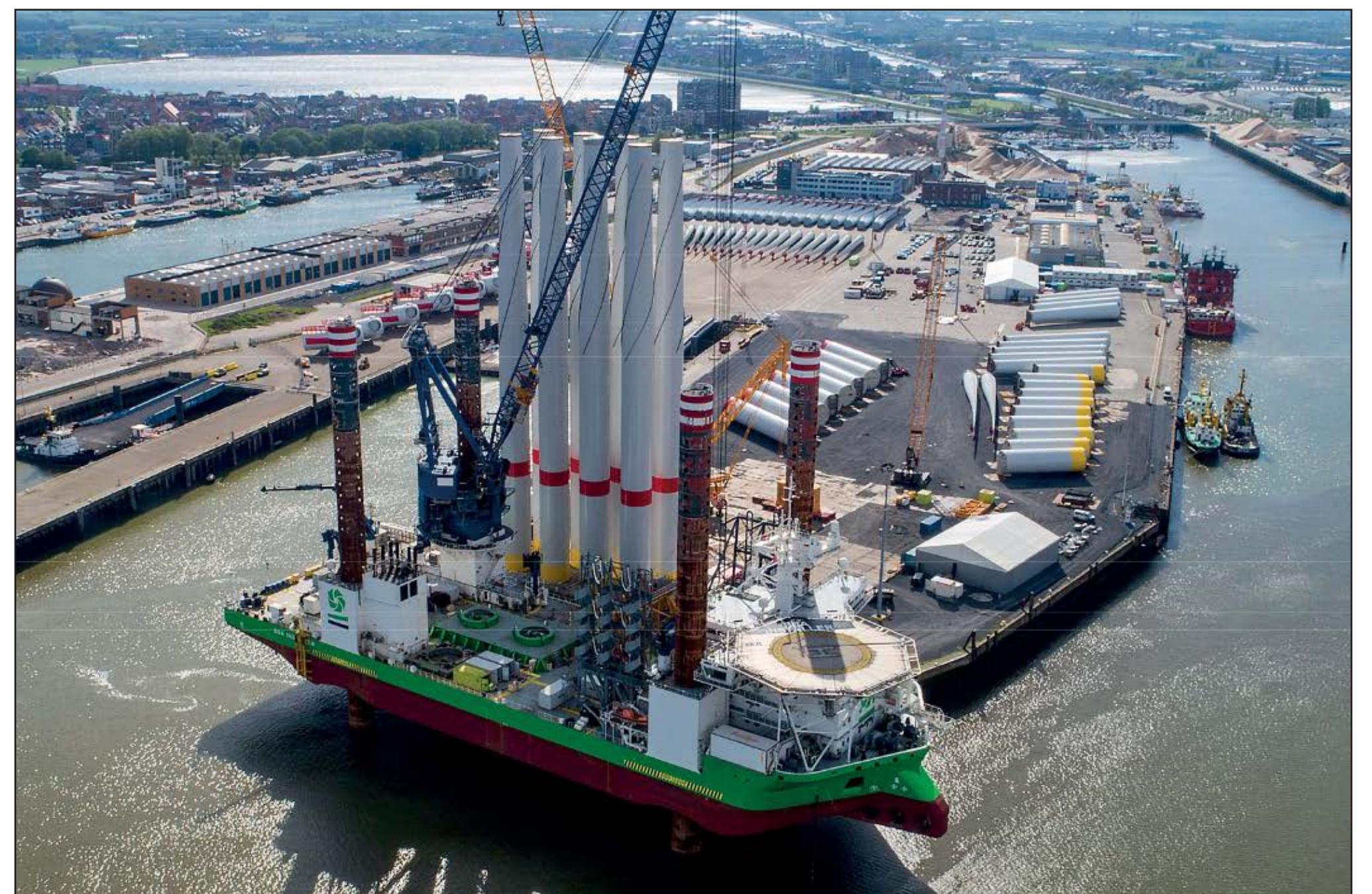
- Turbines will be transported to the site, either pre-assembled or in sections.
- If pre-assembled, a heavy-lift vessel will lift the turbine onto the foundation and secure it in place.
- If transported in sections, the tower will be secured first to the foundation, then the nacelle will be placed on top of the tower and secured, then each blade will be attached to the nacelle.
- Once installation is complete, the turbine will be connected to the inter-array cables and follow a process of testing and commissioning prior to becoming operational.

### Cable Laying

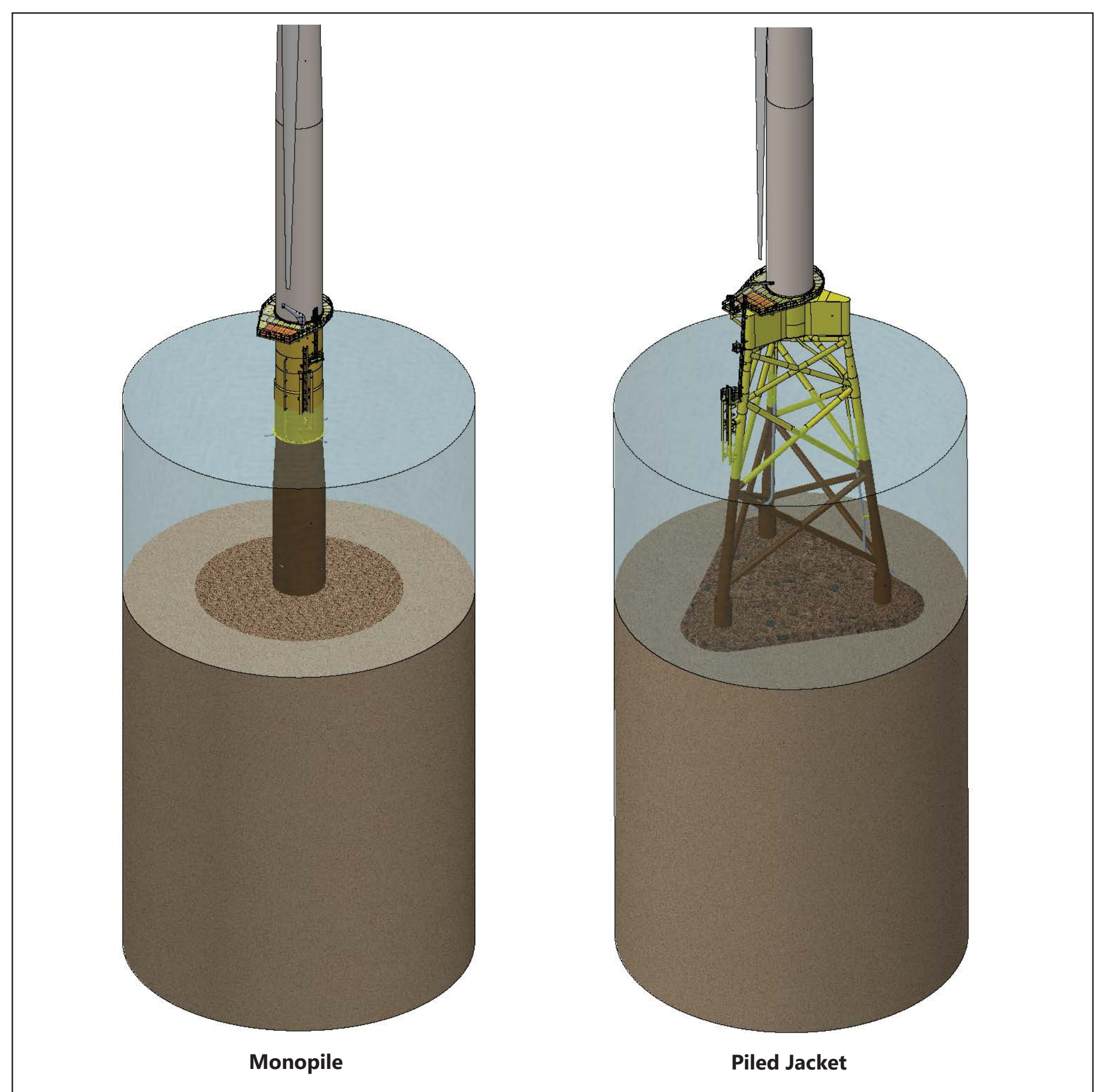
- The target burial depth is 5 to 6.6 feet (1.5 to 2 meters) beneath the seabed.
- Cables installed using a jet to discharge seawater to create a trench, a tool towed behind the installation vessel to simultaneously open the seabed and lay the cable, or by laying the cable and following with a tool to embed the cable.
- Installation methods for these options include jet plowing or trenching, mechanical plowing, and free-lay and post-lay burial.
- Cable protection options under consideration include rock armor, rock bags, concrete mattresses, and protective half-shells.



Installation of WTG Component using Jack-Up Vessel Crane



Transport of WTG Components via Jack-Up Vessel



Piled Foundations