# The Basics

- Distance from Block Island: ~ 3 miles
- Distance from RI mainland: ~ 16 miles
- Distance between turbines: ½ mile
- Distance from 1st turbine to last: 2 miles
- Water depths: 75-90ft

# Turbines

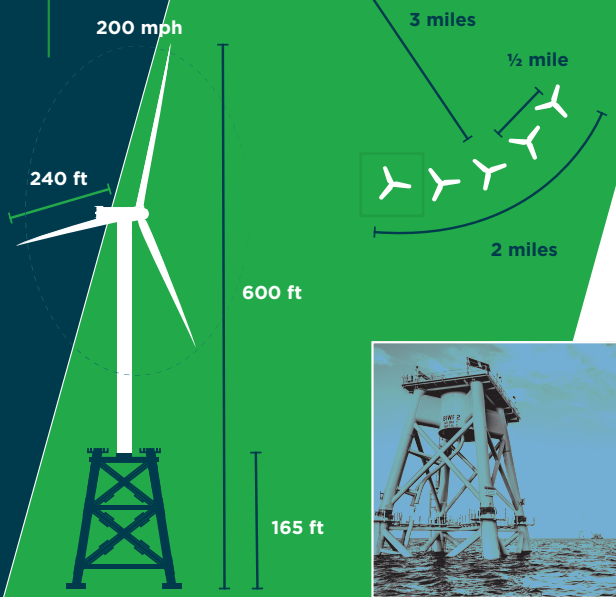
- 5 GE Haliade 150-6MW offshore wind turbines
- Combined capacity of 30 megawatts
- BIWF will produce enough energy to power 17,000 homes.
- Turbine Height: 600 ft tall when the tip of the blade is at its highest point - that's nearly 2x the height of the statue of liberty.
- Blade Length: 240 ft
- Blade tip speed: ~ 200 mph

# Foundations

- Fabricated in Louisiana and Rhode Island, the steel foundations were installed offshore in the summer of 2015.
- Weight: Over 1,500 tons
- Height from sea floor to top of foundation: 145-165 feet
- Height above water: 70 feet

# Transmission Cable

- The wind turbines are connected to each other and to substations on land by a series of cables.
- In total, the cables measure close to 30 miles long and weigh over 3,000 tons.




GE Haliade 150-6MW offshore wind turbine

NORTH AMERICA'S FIRST OFFSHORE **WIND FARM**

dwwind.com

# Glad you asked.

## How many wind turbines are there?

A total of five.

## Where will they be located?

The turbines are arranged in a radial array approximately 3 miles southeast of Block Island and 16 miles south of the Rhode Island mainland.

## How far apart?

Each turbine is spaced about 0.5 miles (0.8 km) apart for a total length of 2 miles (3.2 km) from the northernmost WTG to the southernmost WTG.

## How fast do the blades spin?

The blades spin in a range of 4 to 11.5 revolutions per minute.

## How deep is that water?

The water depths range from 75 to 95 feet.

## How are the turbines secured to the ocean floor?

The turbines are secured with jacket foundations, a steel latticework frame that's attached by driving piles deep into the ocean bottom.

## How big are the turbines?

When the blade is at its highest point, they're 600 feet tall. The turbine tower with the nacelle will stand approximately 290 feet high.

## How much energy will the BIWF provide?

The five turbines have a total generating capacity of 30 MW and will produce approximately 125,500 MW-hours each year once fully operational, supplying enough energy to power about 17,000 Rhode Island households.

## Where will the energy go?

The energy will go from the turbines to Block Island, with any extra energy sent to the mainland grid.

## How much wind does it take to make energy?

The turbines will start spinning and generating power at wind speeds from any direction of about 6.7 mph (3 m/s).

## What happens when the wind changes direction?

The turbines are constantly sensing their environment, and are able to rotate 360 degrees to directly face the wind, optimizing the wind power production.

## What if there's a hurricane?

The wind farm will remain in operation! The turbines and their foundations have been tested to withstand the worst weather conditions we could see at the site. When the wind reaches very high speeds the nacelles and blades will pivot away from the wind to minimize resistance.

## What happens in extreme temperatures?

The turbines have built-in climate control systems that will cool the turbines down in very hot temperatures and keep the turbines from accumulating ice and snow in very cold temperatures.

## Will the area surrounding the wind farm be closed off?

After installation is finished, the waters surrounding the BIWF will be free to navigate.