NJ PACT STAKEHOLDER SESSION

# BALANCING RESOURCE PROTECTION & CLEAN ENERGY PRIORITIES

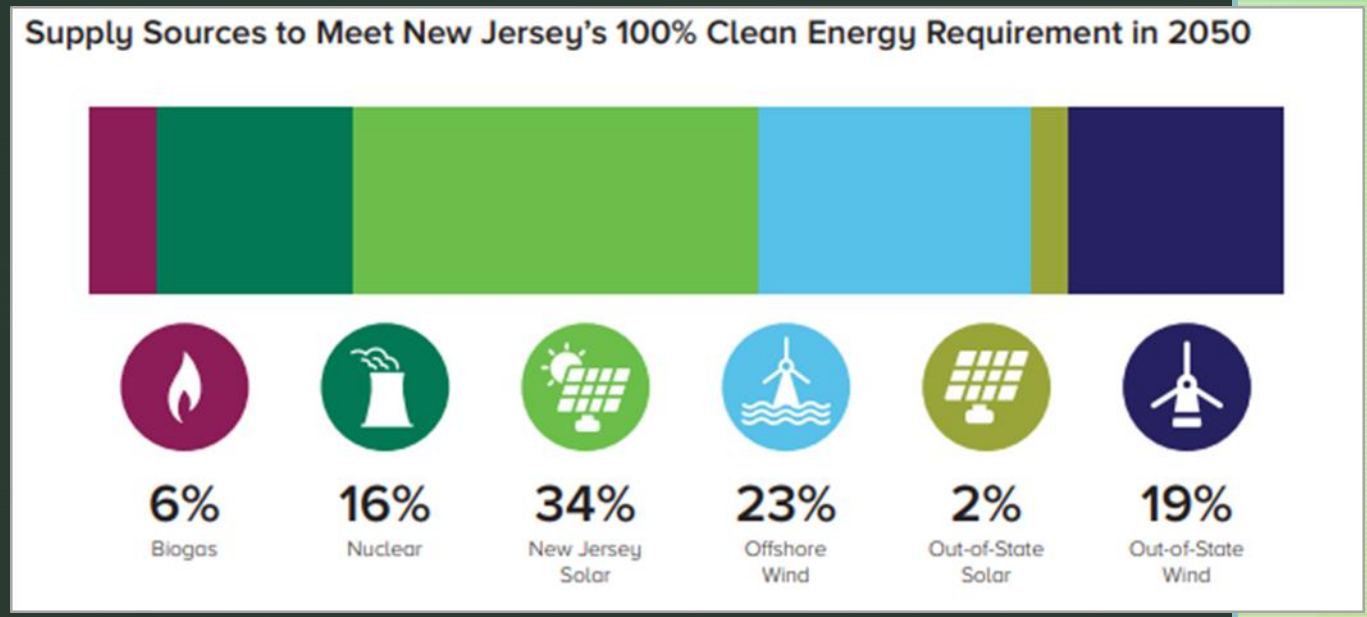
New Jersey Department of Environmental Protection
17 September 2020

# OBJECTIVE:

**To find innovative ways to balance the promotion and encouragement of responsible siting and use of renewable energy sources and green building design with the preservation and protection of New Jersey's valuable natural resources and open spaces.**

# ENERGY MASTER PLAN MANDATES:

- 50% Renewable Portfolio Standard by 2030.
- 100% Clean Energy by 2050.
- EMP modeling projects that NJ electric demand will increase from approximately 75 million MWh in 2020 to 168 million MWh in 2050.
- The Global Warming Response Act (GWRA) mandates the reduction of statewide GHG to 1990 levels by 2020 with a further reduction of 80 percent below 2006 emission levels no later than 2050.



# ENERGY MASTER PLAN:

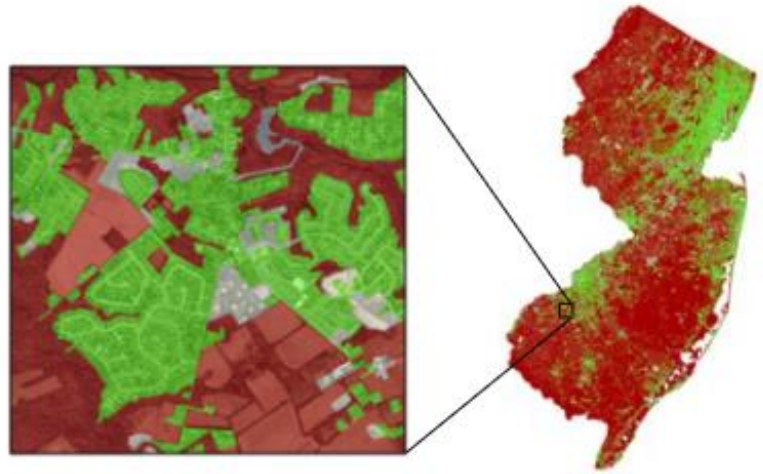
**Released in January 2020 and outlines 7 key strategies to reach the Administration's goal of 100% clean energy by 2050**

- Reducing Energy Consumption & Emissions from the Transportation Sector
- Accelerating Deployment of Renewable Energy and Distributed Energy Resources
- Maximizing Energy Efficiency and Conservation, and Reducing Peak Demand
- Reducing Energy Consumption and Emissions from the Building Sector
- Decarbonizing and Modernizing NJ's Energy System
- Supporting Community Energy Planning & Action in Underserved Communities
- Expand the Clean Energy Innovation Economy

# Energy Master Plan Goals (Solar)

- Integrated Energy Plan (IEP) modeling suggests goals of installing 5.2 GWs of Solar PV by 2025, 12.2 GWs by 2030 and 17.2 GW of solar by 2035 (p.124).
- Roughly 950 MW of new solar capacity needed annually
- For context, NJ has installed an average of 320 MW annually over the last 5 years
- Continue to grow NJ's Community Solar Program
- Transition to a successor solar incentive program
- Maximize solar rooftop and community solar development in urban and low-and-moderate income communities using the local workforce

| Solar Siting Designation | Acreage | Sq. Mi | % Total |
|---|---|---|---|
| Preferred | 1,355,375.11 | 2,117.75 | 29% |
| Not-Preferred | 3,000,569.36 | 4,688.40 | 63% |
| Indeterminate | 398,262.04 | 622.29 | 8% |
| TOTAL | 4,754,206.51 | 7,428.44 | 100% |



# Energy Master Plan Goals (Solar)

- The NJDEP's 2017 Solar Siting Analysis Update identifies and differentiates between locations where the Department would encourage solar installations from those where the Department would discourage solar installations based on their land use type.
- NJ PACT proposal will comport with these goals.

# DISCUSSION: SOLAR

## Question 1: Challenges

What challenges exist with respect to installing solar panels on rooftops of new and existing commercial or industrial buildings and parking lots?

How can such challenges be overcome?

# DISCUSSION: SOLAR

## Question 2: Rules and Policies

**How can NJDEP rules and policies be improved to encourage and provide additional flexibility for solar projects particularly on rooftops and over parking lots?**

**What concerns do you have about solar development from a resource impact perspective?**

# DISCUSSION: SOLAR

## Question 3: Floating Solar

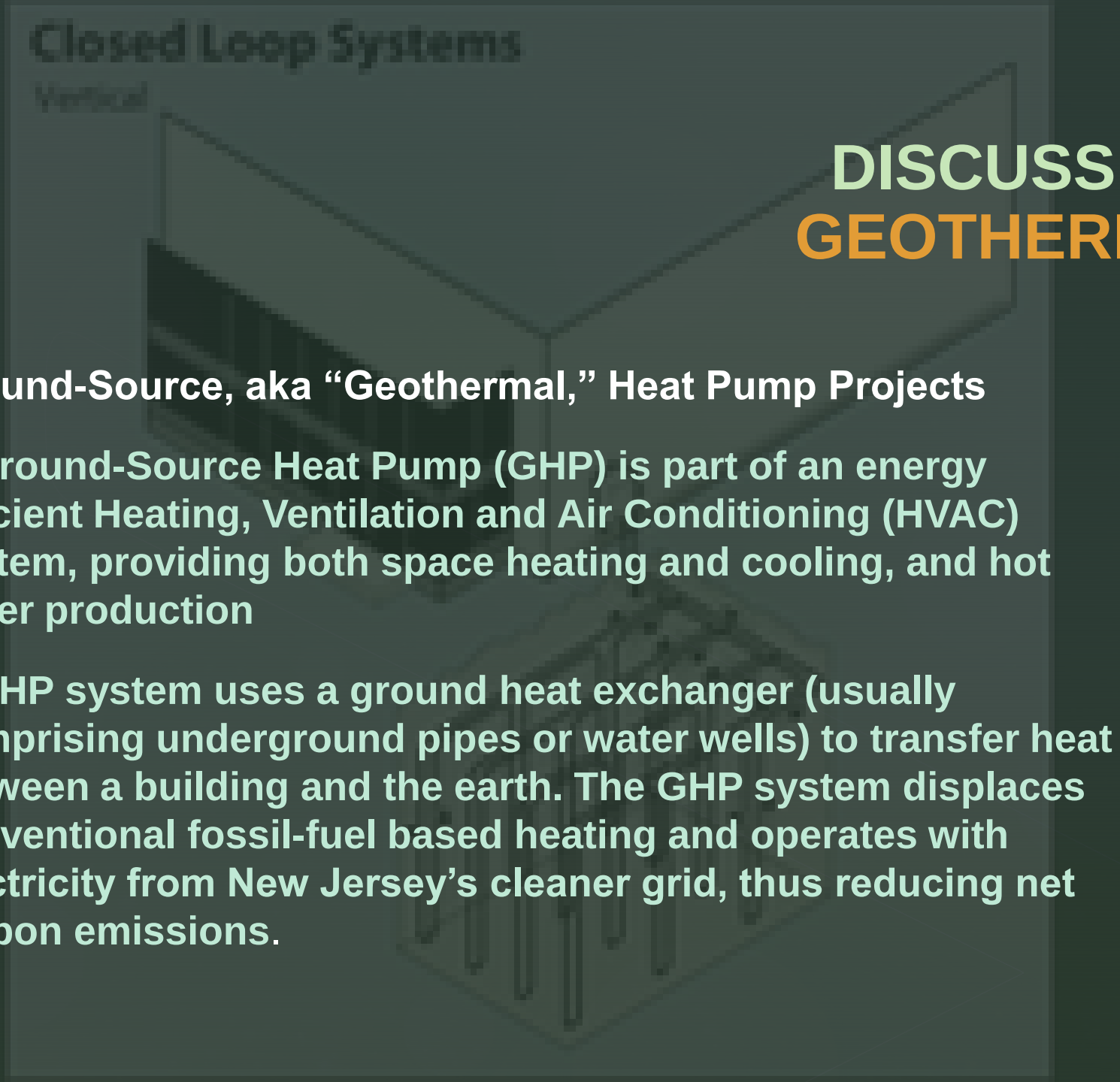
What are the advantages and disadvantages to placing floating solar arrays over bodies of water?

How can we balance the protection of the aquatic and surrounding ecosystem with the generation of renewable energy?

# DISCUSSION: SOLAR

## Question 4: Decommissioning

**What decommissioning standards should be incorporated into the rules for solar panels and other renewable energy sources?**




# DISCUSSION: GEOTHERMAL

**Ground-Source, aka "Geothermal," Heat Pump Projects**

A Ground-Source Heat Pump (GHP) is part of an energy efficient Heating, Ventilation and Air Conditioning (HVAC) system, providing both space heating and cooling, and hot water production

A GHP system uses a ground heat exchanger (usually comprising underground pipes or water wells) to transfer heat between a building and the earth. The GHP system displaces conventional fossil-fuel based heating and operates with electricity from New Jersey's cleaner grid, thus reducing net carbon emissions.

# DISCUSSION: GEOTHERMAL

## Question 5: Rules and Policies

How can NJDEP rules and policies be improved to encourage and provide additional flexibility for geothermal projects?

What concerns do you have about geothermal development from a resource impact perspective?

# DISCUSSION:
# GREEN BUILDING

A “green” building is a building that, in its design, construction, or operation, reduces or eliminates negative environmental impacts, reduces the carbon footprint, and can create positive impacts on our climate and natural environment.

“Green building” also refers to the application of processes that are environmentally responsible and resource-efficient throughout a building's life-cycle: from planning to design, construction, operation, maintenance, renovation, and demolition.

# DISCUSSION: GREEN BUILDING

## Question 6: Current Green Building Practices

What kinds of green building materials or energy efficiency/conservation strategies do you currently incorporate into your projects?

What can be done to promote the use of these strategies and materials, or make other strategies and materials more feasible?

What can be done to promote the incorporation of electric vehicle charging stations?

# DISCUSSION: GREEN BUILDING

## Question 7: Utilizing Roof Space

What deterrents exist in constructing blue, green, and white roofs? How can these deterrents be overcome?

What do other strategies do to incorporate more vegetation into the urban environment or reduce the heat island effect?

# DISCUSSION:
# GREEN BUILDING

## Question 8: Coordination

**How can State agencies (DEP/BPU/DCA) better coordinate and harmonize policies on these topics?**

# DISCUSSION: VEGETATION

## Question 9: Vegetation Preservation

What incentives would you like to see in order to promote the retention and planting of trees, vegetation, and forested areas?

What types of standards should be considered?

# Energy Master Plan Goals (Wind)

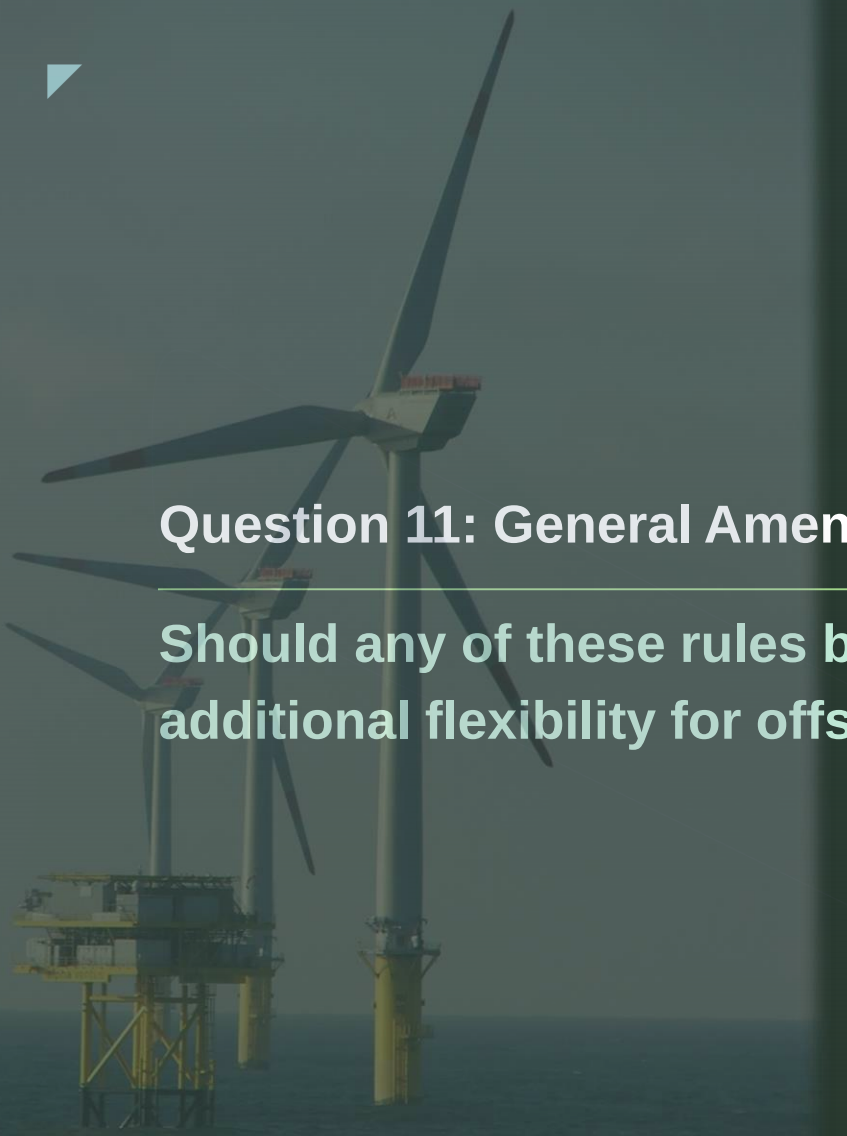
- Develop 7,500 MW of offshore wind energy generation by 2035
  - *Expanded from 3,500 MW to 7,500 MW through Executive Order #92

- Develop the offshore wind supply chain and support the industry through port infrastructure development and inter-regional collaboration.

# DISCUSSION: OFFSHORE WIND

## Question 10: DEP Rules

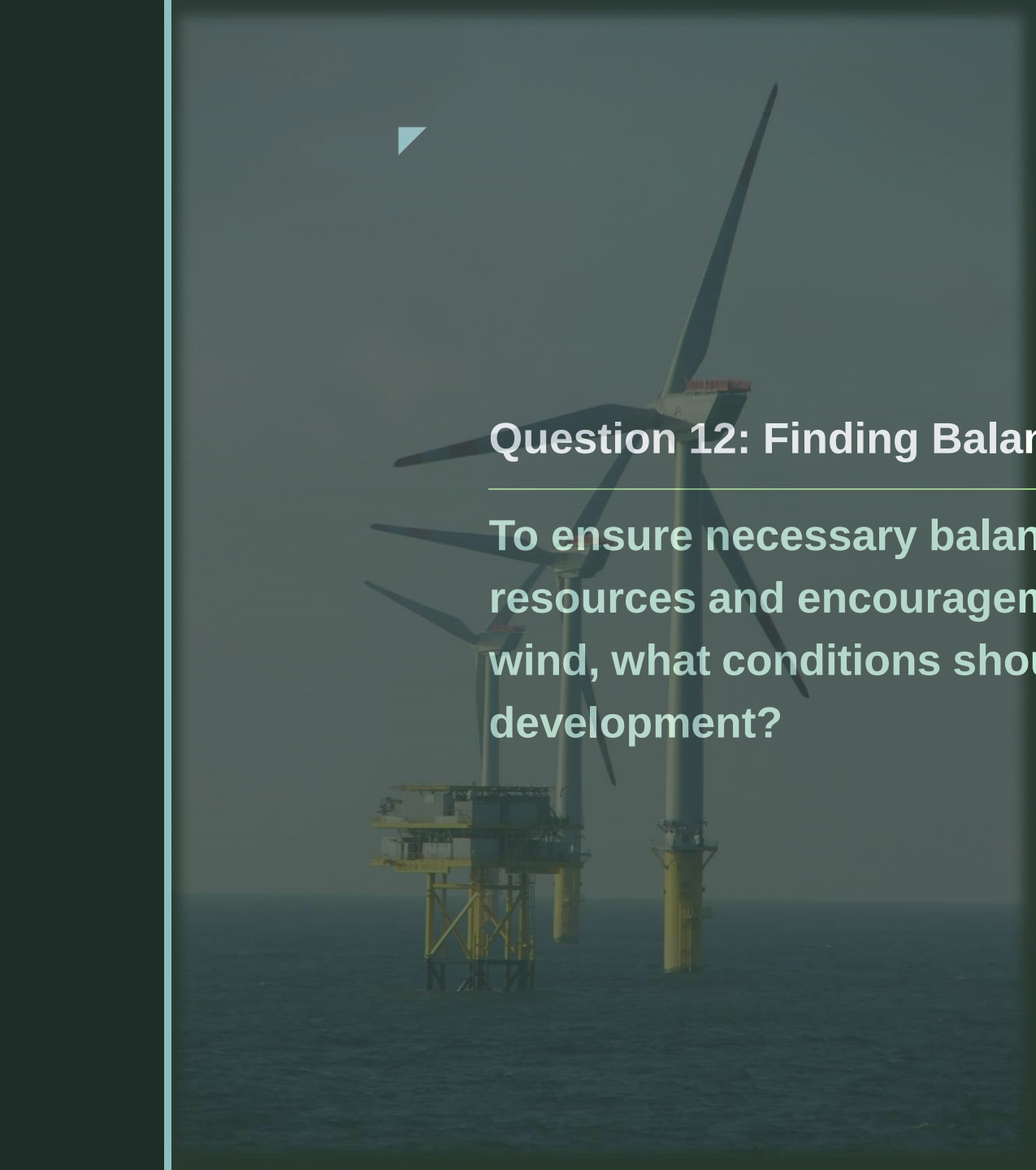
**Which regulations are you concerned about being implicated in the development of offshore wind?**



# DISCUSSION: OFFSHORE WIND

## Question 11: General Amendments

**Should any of these rules be changed or modified to provide additional flexibility for offshore wind projects?**



# DISCUSSION: OFFSHORE WIND

## Question 12: Finding Balance

To ensure necessary balance between protection of critical resources and encouragement of renewal energy such as wind, what conditions should be placed on this type of development?

# DISCUSSION: OTHER SOURCES

## Question 13: Other Renewable Sources

Are there other sources of renewable energy that NJDEP should consider and encourage?

# DISCUSSION: OTHER

## Question 14: Other Amendments

**What other amendments to the FHACA, CZM, and FWW rules could be made to allow for flexibility or encouragement of renewable energy, green building design, and energy conservation in projects?**

# OPEN FORUM:

## Discussion of New Topics and Ideas

# THANK YOU

**Please contact us to share additional comments or concerns at:**

**jill.aspinwall@dep.nj.gov**

**Or**

**Submit comments to the NJPACT webpage through the survey tab at https://www.surveymonkey.com/r/B8FQQDW**