



Offshore Wind Stakeholder Role Play

Introduction

The coastal town of “Breezy” is a popular tourist destination, bustling industrial hub, and military home base. Recently, the community has started growing rapidly, and has emphasized clean, renewable energy as it grows. The community needs to explore options for adding electricity generation facilities to support increasing local demand. One of the opportunities being considered is a proposal from a developer to build a new state-of-the-art offshore wind farm more than 20 miles off the coast of Breezy. You understand that developing renewable resources is a way to meet the growing electricity needs of your area, but you and your fellow stakeholders are curious about the impacts an offshore wind farm might have on the community. In particular, how might this development affect tourism, fishing resources, a military base in the area, and the surrounding natural environment? You and other stakeholders have been invited to present your perspectives at a public forum. Based on your research, followed by a panel presentation, your stakeholder team will vote on whether to support moving forward with building the floating offshore wind farm.

Key Questions

- Should an offshore wind farm be built off the small coastal town of Breezy? Why or why not?
- Why consider offshore wind over other energy development projects? What are its unique advantages? What are the benefits and risks of this technology?
- Is this mainly to replace or expand types of energy production? Both?

Procedure

1. Read the Key Questions above.
2. If you haven't already, read the informational text about offshore wind. As you read, fill in the graphic organizer on page 49, “Advantages and Disadvantages of Offshore Wind”. Your teacher may provide a list of approved internet resources to use to strengthen your knowledge, if needed.
3. Your teacher will assign you one of the Stakeholder Roles. Use the organizer on the bottom of page 49, “Developing a Position on Offshore Wind,” to articulate your role's perspective on an installing an offshore wind farm off the coast of Breezy.
4. Form small groups of 2-4 people with stakeholders that have similar perspectives to your own. Your teacher may choose to assign you to these groups.
5. In your first meeting, work with like-minded stakeholders to develop a unified voice or vision for offshore wind in Breezy. Fill in the “First Stakeholder Gathering” chart as you work.

Stakeholder Role Descriptions

FISHERMAN

There is a deep and long history of fishing off the coast of Breezy. Fishing provides many jobs for local community members and fish for the restaurants in town popular with local community members and visiting tourists from out-of-town.

1. What are the potential impacts on local fish populations?
2. Will offshore wind installation reduce access to fishing areas?

MILITARY BASE OFFICIAL

There is an established and active military base located five miles from the town of Breezy. Much of the work and research is focused in the offshore area near the base. Many of the service members live locally in Breezy and frequent the local shops and restaurants.

1. What are the potential security issues that may arise from developing offshore nearby?
2. Will the development impact including military operations and testing?

DEVELOPER

As the developer of the wind farm project, you must create a plan that details the advantages of establishing a wind farm in your particular area. You must also be able to answer questions from those groups that might oppose the wind farm. It is important as the developer that you understand the “big picture” of the positive and negative impacts of developing the wind farm.

1. What are the economic and environmental benefits to the community of developing the wind farm?
2. What are the disadvantages? How will potential risks be minimized?
3. How will the environment be protected during the construction, operation, and maintenance of the wind farm?
4. How will the utility and its customers benefit from the addition of the wind farm?

INVESTOR

An investor is someone who uses his/her/their money to finance a project, in order to make money later. A developer has approached you with a proposal to build an offshore wind farm near the coastal town of Breezy. As an investor, you are interested in paying money now to build the wind farm, with the idea that you will earn money later as the wind farm becomes productive. You need to determine the costs, risks, earning potential, and benefits of investing in the wind farm. You have concerns about this offshore wind project.

1. Is the proposed project large enough to be viable and financially successful?
2. How reliable is this technology? What are the risks?

ENVIRONMENTALIST/NATURALIST

You are very concerned with protecting the environment. You would like to know how offshore wind energy impacts the environment during the manufacture, installation, maintenance, and removal of the wind turbines. You would like to know how wind turbines might affect birds, animals, and marine life in your area compared to other energy facilities, and have heard in the past of wind turbines having impacts on marine life. You are also concerned about pollution, climate change, and how electricity generation contributes to climate effects.

1. How would the manufacture and installation of offshore wind affect the local environment?
 - a. What impacts might there be to local beaches?
 - b. Are underground power cables safe?
 - c. How would the operation of the wind turbines affect the surrounding environment and the flora and fauna in the area?
2. Would the amount of electricity generated by the wind turbines be enough to offset the “cost” to the environment?
 - a. How does wind electricity generation compare to other options (natural gas, coal, solar) with carbon emissions?
 - b. How much will the development help to reduce or offset carbon emissions?

COUNTY COMMISSIONER / TOWN MAYOR / LOCAL POLITICIAN

The County Commission manages the public services of the community and determines how to pay for them. The County Commission is an elected political group and must take into consideration all political sides of the issue (jobs, taxes, revenue, etc.). You must consider the impacts on the community if the wind farm will be developed in the area.

1. What impacts would the wind farm have on the need to provide local services?
2. What economic impacts would it have on the local community and taxes?
3. What political impact would supporting the wind farm have on your community?
4. Will development have any negative consequences on the local economy, such as on tourism or fishing?
5. Will offshore wind increase energy security and self-sufficiency?

UTILITY COMPANY REPRESENTATIVE / ENERGY INDUSTRY REPRESENTATIVE

You are an employee of the local utility company and are responsible for making sure that your utility has the necessary capacity to provide electricity to all of your customers. There is increased demand for electricity in your community, and you know you must secure reliable sources of additional generation in the near future. Development of this energy source provides a great way to diversify energy sources. You would be the main purchaser of electricity from the wind farm.

1. How much will this help reduce carbon emissions?
2. How expensive would the electricity be from the wind farm?
3. How predictable is the electricity generation from the wind farm?
4. How reliable is the equipment on the wind farm? What happens if one turbine goes down temporarily?
5. Will there be additional costs to the utility company that might be passed along to consumers?

SITE PLANNER / METEOROLOGIST / GEOLOGIST

As a site planner and scientist, you are responsible for assessing any natural hazards that could negatively impact the development and operation of the floating offshore wind farm. In particular, you have the background knowledge and expertise in the areas of meteorology and geology needed to understand and address these risks.

1. What are the potential dangers and strategies for addressing the potential risks from hurricanes, strong winds and storms.
2. What strategies are being used to reduce the risks from natural hazards?

TOWN RESIDENT CONSUMER/NEIGHBOR

You live near the beach. You have heard that large wind turbines generate a great deal of noise and could be visible or obstruct your view of the coastal scenery and wildlife. You are aware that there have been predictions of blackouts in the near future in your area because of a lack of electricity capacity. You are also wondering how the price of electricity in your area might be affected if a wind farm is installed.

1. Will there be any visual impacts?
2. Will this help to reduce rolling blackouts?
3. What are the potential impacts on local beaches, wildlife, and the ocean?
4. How would local long-term electricity rates be affected by the development of a wind farm?
5. Will this development be good or bad for the environment?

Advantages and Disadvantages of Offshore Wind

Advantages	Disadvantages

Developing a Position on Offshore Wind

Use the table below to record your thoughts and ideas about your stakeholder's questions, concerns and perspective.

Questions – What does your stakeholder care about most?	Perspectives – What perspectives are most important to your stakeholder?

First Stakeholder Gathering

Meet with other stakeholders that are the same as you to discuss your questions, concerns and perspectives and record your ideas in the chart below.

Your Stakeholder Group _____
Notes from your conversation with your same stakeholder team:

Second Stakeholder Gathering

Meet with other stakeholders that are different from you to discuss your questions, concerns, and perspectives and record your ideas in the chart below.

Stakeholder	Notes
Fisherman	
Military Base Official	
Developer	
Investor	
Environmentalist/Naturalist	
County Commissioner	
Utility Representative	
Site Planner	
Town Resident	

As a group, vote on whether to recommend building the offshore wind farm.

Nominate a representative to share your findings and recommendation for the offshore wind farm. Representatives will be the ones to share decisions with the whole class.