

NEWS BREAK

Article: **Using waves, this Oregon town will power thousands of homes**

Section: **NW, C1**

Sunday's News Break selects an article from **Sunday, November 24, 2024** of The Seattle Times print replica for an in-depth reading of the news. Read the selected article and answer the attached study questions.

You are encouraged to modify this lesson to fit the needs of your students. For example, some teachers might use this as a take-home assignment and others might read and answer the questions in a small group or larger, class discussion.

****Please be sure to preview all NIE content before using it in your classroom to ensure it is appropriate for your students.***

Standards:

CCSS.ELA-Literacy.RI.4.1

- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

CCSS.ELA-Literacy.RI.4.2

- Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Objectives:

Students will learn about a new energy technology being tested, using wave energy. They will learn about how this energy differs from fossil fuels, solar and wind power. They will talk about the potential environmental impacts of wave energy and how it might impact climate change. Students will also discuss the role of government in supporting renewal energy sources and how they can work with private companies to accelerate the development. They will also talk about how the local communities might be impacted by developing energy-based projects, both positively and negatively.

Pre-Reading Discussion:



- What do you think the article will be about, using this picture?
- Are there any clues? What can you infer?

Vocabulary Building:

Read this sentence, what do you think the highlighted words mean using *context clues*? A **context clue** is a word or words that are hints and refers to the sources of information outside of words that readers may use to predict the identities and meanings of unknown words.

At a moment when large offshore wind projects are encountering public resistance, a **nascent** ocean industry is showing promise.

Nascent Guess:

Nascent Definition:

Comprehension Questions:

1. At a moment when large offshore wind projects are encountering public resistance, a nascent ocean industry is showing promise: _____. It's coming to life in Newport, a rainy coastal town of nearly 10,500 people located a few hours south of Portland.
2. Home to fishing operators and researchers, Newport attracts tourists and retirees with what three popular spots?

3. If you ask anyone at the lively bay front about a wave energy project, they probably don't know much about it. And yet right off the coast, a \$100 million effort with funding from the Energy Department aims to convert the power of waves into _____ and help catch up to Europe in developing this new technology.
4. The buoylike contraptions, located several miles offshore, will deliver up to 20 megawatts of energy — enough to power what?
5. As federal officials look to shift America's electricity grid away from fossil fuels, they are seeking alternatives to solar and wind. Why?
6. Waves — constant and full of _____ — have emerged as a promising option.
7. And because wave energy projects are relatively unobtrusive, they're far less controversial than _____, which has generated fierce opposition on both U.S. coasts.
8. In September, the Biden administration announced up to \$112.5 million would go toward developing wave energy converters, the largest federal investment in what?
9. There's enough energy in the waves off America's coasts to power what?
10. Spanning 2.65 square miles and located 7 miles out from shore, the _____ test site is expected to be a "game changer for marine energy."
11. Under the water, subsea connectors are waiting to be plugged in like extension cords to wave energy converters developed by teams around the world. With deep-sea offshore testing, companies will research what variables?
12. PacWave, a project of _____, represents a necessary step for commercializing wave energy, experts said.
13. While wind turbines have converged into the three-blade turbine shape, there are many types of wave energy converters in development, turning the motion of the wave into _____ in different ways.
14. But all of these devices use the _____ or orbital motion of a wave to generate an electrical current, explained PacWave chief scientist Burke Hales, in the same way that turbines use rotations to generate a current.
15. The cables carrying the electricity are buried under the seafloor, running _____ miles diagonal to the shoreline to avoid a rocky reef. On land, an operating site measures the energy output and sends the energy to the Central Lincoln power utility.
16. When deciding where to locate the project, Newport won out. Why?
17. It took years of outreach and many town hall meetings for Batten, who now serves as a senior adviser to the OSU provost, and Kaety Jacobson, Lincoln County commissioner and a fisherman's daughter, to cement their _____ with the community.
18. The PacWave site could represent a loss of hundreds of thousands of dollars for the fleet every crabbing season, he said. On the navigation

system in his boat, he pointed to a map that showed he had previously crabbed in the area that was now off-limits. But the operators agreed to give it up for the sake of the _____.

19. Eder, a representative of the fishing community during the process, said that the agreement with Oregon State was a show of goodwill from the fishing community, whose members care about what two main things?

Class Discussion Questions:

- What surprised (or stood out to) you in the article?
- At first, I thought _____, but now I think _____?
- What things did you already know from prior experience?

Energy and Environment

1. **Energy Sources:** How does wave energy compare to traditional energy sources like fossil fuels and renewable sources like solar and wind?
2. **Environmental Impact:** What are the potential environmental impacts of wave energy, both positive and negative?
3. **Climate Change:** How can renewable energy sources like wave energy contribute to mitigating climate change?

Technology and Innovation

5. **Technological Challenges:** What are some of the technological challenges associated with developing and deploying wave energy technology?

Government and Policy

7. **Government Role:** What role should the government play in supporting the development and deployment of renewable energy technologies?
8. **Regulatory Framework:** What regulations and policies are necessary to promote the responsible development of wave energy?
9. **Public-Private Partnerships:** How can public-private partnerships accelerate the development and commercialization of wave energy?

Community and Equity

10. **Community Impact:** How might the development of wave energy projects impact local communities, both positively and negatively?
11. **Equity and Justice:** How can we ensure that the benefits of renewable energy are distributed equitably across different communities?

News Break is posted to the Web on Tuesday. Please share this NIE News Break program with other teachers. To sign-up for the print replica for your class,

please [register online](#) or call 206/652-6290 or toll-free 1-888/775-2655.
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