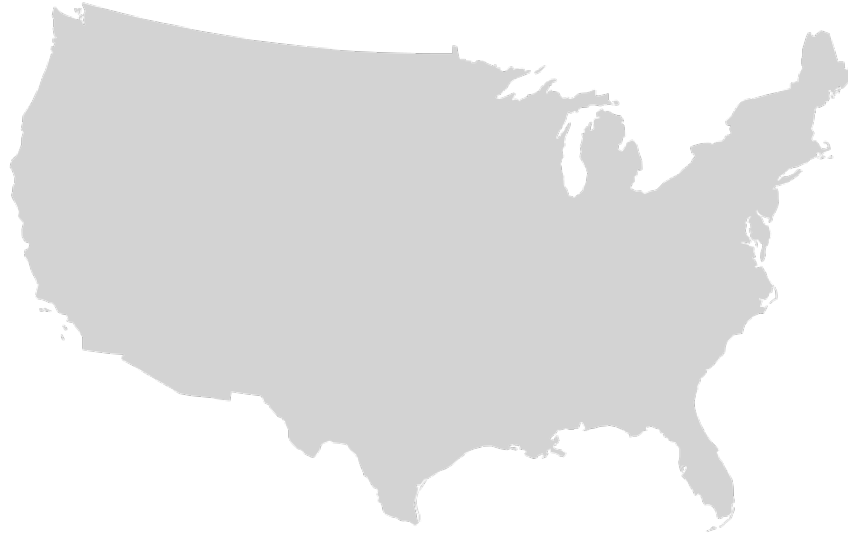


Round: 2B
Time: 4 minutes
Category: Technology

1. On the map, please circle two (2) areas where offshore wind is most powerful for wind energy production. (4 pts)



2. What are two (2) current industry methods for offshore wind turbine support structures? (4 pts)
3. Name and explain one (1) economic benefit of offshore wind turbine energy. (3 pts)
4. Name and explain one (1) marine environmental benefit of offshore wind turbine energy. (3 pts)
5. Explain the greatest legal barrier to offshore energy. (3 pts)
6. Name and explain one (1) physical barrier to offshore energy. (3 pts)

ANSWER

Round: 2B

Time: 4 minutes

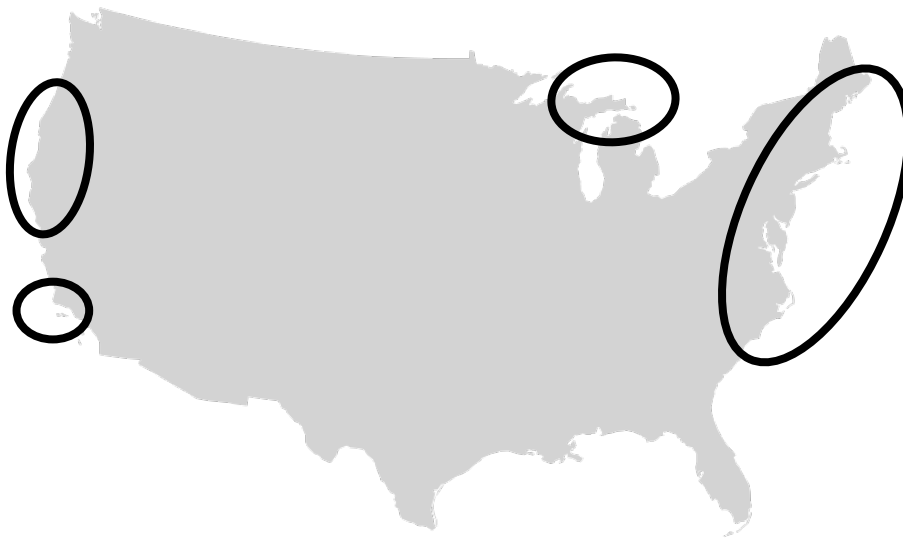
Category: Technology

ANSWER

ANSWER

1. On the map, please circle two (2) areas where offshore wind is most powerful for wind energy production.

Accept 2 circles ONLY within the circles below, do not provide circles. Note that circling Florida or the Gulf Coast is incorrect; 2 pts each; total 4 pts



2. What are two (2) current industry methods for offshore wind turbine support structures?

Any two (2) of the following (2pts each; 4 pts total):

- Monopoles
- Gravity-based
- Floating platforms

3. Name and explain one (1) economic benefit of offshore wind turbine energy.

3 pts for any ONE of the following:

- Increase in jobs due to manufacturing, installation, and maintenance
- Potential lower energy costs
- Lower health care costs from reduced rates of emissions-induced asthma

4. Name and explain one (1) marine environmental benefit of offshore wind turbine energy.

3 pts for any ONE of the following:

- Reduction in CO₂ emission would reduce ocean acidification
- Reduction in CO₂ emission could help mitigate climate change
- Physical structure would create vertical habitat

5. Explain the greatest legal barrier to offshore energy.
Equipment for offshore projects will cross multiple jurisdictions (1 pt), requiring permitting and approval from multiple agencies (2 pts)
6. Name and explain one (1) physical barrier to offshore energy.
3 pts for any ONE of the following:
- *Water depth*
 - *distance from shore*
 - *hurricanes*
 - *waves*
 - *weather can all damage equipment or limit deployment*

Reference: <http://www.nrel.gov/wind/pdfs/40745.pdf>

Map from Wikimedia Commons user Lokal_Profil