

Denmark to make artificial clean-energy island

15th March, 2021



Image: Danish Energy Agency

Denmark has come up with a practical idea to help its clean energy needs. The Scandinavian nation intends to build an artificial island 80km off its western coast in the North Sea. It is expected to be in full operation by 2033. It

hopes the ambitious project will end Denmark's reliance on fossil fuels within the next three decades. Denmark is currently Europe's largest oil-producing country, so a move towards 100 per cent clean energy and the end of oil production will provide a huge boost for its green credentials. Jacob Ostergaard, a professor of electric power and energy, described the project as, "a cornerstone in the green transition which will help facilitate the reduction of Danish CO2 emissions".

The island will be roughly the size of 18 football fields. It is projected to cost around \$34 billion to construct. Much of the energy generated will come from wind farms. These will produce enough electricity to power three million households in Denmark and help make the country carbon neutral. The professor explained that the island had enormous potential to create a greener, cleaner Europe. He said: "In the North Sea, we have tremendous potential for offshore wind, about 180 giga-watts in total. That means we can actually shut down all European coal-fired power plants." Professor Ostergaard added: "It's a Danish initiative, but this, at least with time, is going to be an international effort."

Sources: hypebeast.com / bgr.com / slashgear.com

Writing

All countries with coastlines should build artificial energy islands. Discuss.

Chat

Talk about these words from the article.

practical idea / energy / artificial / island / ambitious / fossil fuels / oil production / football fields / wind farms / electricity / potential / offshore / coal / international

True / False

- a) Denmark will build an artificial energy island 80k long. T / F
- b) Denmark's artificial island will be up and running by 2023. T / F
- c) Denmark hopes to end its reliance on fossil fuels within three decades. T / F
- d) The artificial island will cost around \$34 billion. T / F
- e) The island will be able to provide energy for three million homes. T / F
- f) A professor said the island has the potential to create a greener world. T / F
- g) A professor said coal-fired power plants could shut down in Europe. T / F
- h) A professor said the island is a European effort. T / F

Synonym Match

(The words in **bold** are from the news article.)

- | | |
|----------------------|-----------------|
| 1. practical | a. endeavour |
| 2. artificial | b. dependence |
| 3. ambitious | c. possibility |
| 4. reliance | d. challenging |
| 5. move | e. huge |
| 6. construct | f. realistic |
| 7. potential | g. plan |
| 8. tremendous | h. shift |
| 9. initiative | i. manufactured |
| 10. effort | j. erect |

Discussion – Student A

- a) What do you think of clean energy?
- b) How clean is the energy you use?
- c) What do you think of the artificial clean-energy island?
- d) What clean energies does your country have?
- e) What do you think of fossil fuels?
- f) What are the best clean energies?
- g) How damaging is the use of oil?
- h) What do you do to reduce your CO2 emissions?

Phrase Match

- | | |
|---------------------------------------|-----------------------------|
| 1. Denmark has come | a. neutral |
| 2. 80km off | b. clean energy |
| 3. end Denmark's reliance | c. plants |
| 4. a move towards 100 per cent | d. 18 football fields |
| 5. facilitate the reduction of Danish | e. wind |
| 6. roughly the size of | f. up with a practical idea |
| 7. wind | g. CO2 emissions |
| 8. make the country carbon | h. its western coast |
| 9. tremendous potential for offshore | i. farms |
| 10. coal-fired power | j. on fossil fuels |

Discussion – Student B

- What do you think about what you read?
- What do you think of wind farms?
- How much energy does your household produce?
- How would carbon neutrality change the world?
- What do you think of coal?
- What three adjectives best describe this story?
- What will energy supply look like in 100 years from now?
- What questions would you like to ask the professor?

Spelling

- come up with a acrailptc idea
- build an iatiaclfr island
- the tsbiaomui project
- Denmark's lnireeca on fossil fuels
- a cornerstone in the green otinarntis
- CO2 imssesnio
- It is ectperojd to cost around \$34 billion
- power three million osohedhlus
- carbon nratleu
- we have usmrnodeet potential
- hoseofrf wind
- It's a Danish intvaitiie

Answers – Synonym Match

<u>1.</u> f	<u>2.</u> i	<u>3.</u> d	<u>4.</u> b	<u>5.</u> h
<u>6.</u> j	<u>7.</u> c	<u>8.</u> e	<u>9.</u> g	<u>10.</u> a

Role Play

Role A – Wind Power

You think wind power is the best form of energy. Tell the others three reasons why. Tell them what is wrong with their forms of energy. Also, tell the others which is the worst of these (and why): nuclear power, geothermal power or fossil fuels.

Role B – Nuclear Power

You think nuclear power is the best form of energy. Tell the others three reasons why. Tell them what is wrong with their forms of energy. Also, tell the others which is the worst of these (and why): wind power, geothermal power or fossil fuels.

Role C – Geothermal Power

You think geothermal power is the best form of energy. Tell the others three reasons why. Tell them what is wrong with their forms of energy. Also, tell the others which is the worst of these (and why): nuclear power, wind power or fossil fuels.

Role D – Fossil Fuels

You think fossil fuels are the best form of energy. Tell the others three reasons why. Tell them what is wrong with their forms of energy. Also, tell the others which is the worst of these (and why): nuclear power, geothermal power or wind power.

Speaking – Energy

Rank these with your partner. Put the best at the top. Change partners often and share your rankings.

- | | |
|----------------|---------------|
| • Geothermal | • Wind farms |
| • Hydropower | • Solar |
| • Nuclear | • Tidal power |
| • Fossil fuels | • Biofuels |

Answers – True False

a	F	b	F	c	T	d	T	e	T	f	F	g	T	h	F
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Answers to Phrase Match and Spelling are in the text.