

## Tags

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## Heat Frontline video

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<http://physics.hpa.edu/physics/apenvsci/videos/heat/>

- 1 What river is China planning to divert that will cause conflict with India?
- 2 Why did Brashears go back to that specific site to take the photo, and what did he see? What possible explanations are there for this? Take both sides of the climate crisis argument in your answer.
- 3 What was so surprising in the 1958 movie? Was this common knowledge? How can you tell?
- 4 How did the cheapness of energy influence public opinion?
- 5 Is the climate crisis an energy issue, a tree issue, an albedo issue, or a permafrost issue?
- 6 What happened at Kyoto? What was the most embarrassing part? Why did the US behave so?
- 7 Why would China's growth outweigh any changes the US might make to change carbon emissions?
- 8 What is Geely? Where? What model is their biggest seller? Is this scary? Why? What did their director say?
- 9 How many coal fired power plants does China create every week?
- 10 Dr. Ling Wen says 30% growth over 5 years. What is the doubling rate for this? (recall the rule of 70). Why is his line "if we can" so scary? What are his responsibilities, in what order?
- 11 In what year will India's population exceed that of China? Why?
- 12 What is the third largest contributor to greenhouse gases? Where?
- 13 What reduction in CO<sub>2</sub> did the Indian guy say they could do by 2050? What is the growth rate? What did Sunita Narain say about this? Why is this not sustainable?
- 14 What did Pachauri say? What are his reasons?
- 15 What did the US negotiators say? Why is this unfair? What did China say?
- 16 Google Senator Inhofe, and find out why he is a global warming skeptic. Where does

his money come from?

16 This video was filmed in 2008. What was the position of each candidate?

17 What did Jeffrey Sachs say?

18 How many tons of coal are mined in the powder river basin each day?

19 The director of the West Virginia power plant (Charlie Powell) says: "we produce 1300 megawatts of power every hour". It is clear he does not know as much about electricity as you do. What is wrong with his statement?

20 How many pounds of Coal power your TV for one hour? What percentage of power in the US comes from Coal?

21 Analyze the term "clean coal" from both sides of the argument. What are the motives of each side and why?

22 Senators Byrd and McConnell represent which states? What is their bias?

23 What is IGCC? Where is it located? Has it been tested? Where would they inject the ground? Why is this dangerous? Are we "carbon capture ready"? Where would this be tested first, and why is it problematic? If pipelines were used, why would these be dangerous?

24 How many tons of CO<sub>2</sub> does the US emit every day?

25 The US is called the "Saudi Arabia of Coal". Why?

26 What is the second largest emitter of greenhouse gases? Now list the top three in order.

27 What are CAFE standards, and what does it stand for? What happened in the last few years to the CAFE standards? When were they created, and track the mpg numbers since then. How did auto manufacturers get around the CAFE standards since the Ford Explorer came out?

27 What is John Dingell's motive? Why? Where is he from? Why did he block seat belts? Is his responsibility only to his 800,000 citizens or to the country, or the planet as a whole?

28 What MPG is the terminator seeking for California? By when? Jerry Brown is next in the video. What is his job now?

29 In the 1970's all cars in the US came in two flavors: "49 state" or "CA". Why?

30 What pressure was put on the EPA in December 2007? Who was in office then?

31 What is the clean air act?

32 Who was the EPA administrator during the Bush administration? What did he do? What do you think about his actions?

33 What was the target of the CA emissions standards?

34 What is Hibernia owned by Exxon? How much oil did it pump since coming into operation? At 80 million bbl/day, how many days of global oil supply did it provide?

35 How did the Exxon lady defend their lack of investment in renewable resources?

36 Dan Kammen says what? Where does he work?

37 How much did Exxon make in the year of the movie? How much did they invest in renewable energy? Explain.

38 It has been said that if you drive a Prius hybrid with fuel from the tar sand of Canada, it's the equivalent of driving a Hummer. Why?

39 During the 2008 video, they state that oil is at \$90/bbl. What is it today?

40 The car companies were working on a diesel-electric hybrid: what happened and why?

41 What did Toyota build, and why? How long is their advantage now?

42 Do you believe the lady from GM? Explain.

43 What happened to the Chevy Volt in the Photo Shoot?

44 Is corn ethanol really a green solution? Who is pushing corn ethanol and why?

45 Why does Dan Kammen say corn is not a good biofuel?

46 Explain the three sources of bio-ethanol: corn, cellulosic and sugar cane. Brazil produces which of these?

47 How does Amy's statement about small interests resonate with Senator Dingell's actions earlier in the film?

48 Compare renewable energy in Germany to the US.

49 How does the smart grid fit into the renewable energy solution?

50 T. Boone Pickens sold his oil investments and moved into wind farms in Texas. Check into this on wikipedia to see how he's doing now (2018).

51 About 150,000 megawatts of power is what Pickens plans on installing, which would be worth how much per year? 24 hours per day, 365 days per year, sell the power for

\$0.10 per kWh. 131.4 billion dollars per year? If his ROI is 7 years, and the turbines last 17 years, how much money will his company make overall?

52 Why is nuclear energy getting a fresh look?

53 Who became president after this video?

54 What is the difference between Navy nuclear power plants and commercial industrial power plants?

55 How is nuclear waste storage involved in this problem?

56 Explain cap and trade, and the plus and minus for this proposal.

57 How has the flood of natural gas from Fracking impacted the coal industry?

58. Why is natural gas better than coal for this? (think of the types of power plants that use each)

59. Coal has pollution impacts that natural gas does not. Explain.

60 What was the most compelling part of this video for you?