

Kilowatt Ours[®]

A PLAN TO RE-ENERGIZE AMERICA

COMMUNITY SCREENING TALKING POINTS FOR PRESENTERS

BEFORE THE FILM

- Introduce yourself, the film and your organization.
- Show the film and tell them there will be a discussion after the film

IMMEDIATELY AFTER THE FILM

- Filmmaker Jeff Barrie issued a challenge to us, the audience, to reduce our energy use by 25% or more in every home, school and business and begin using renewable power. Here are some things you can do today to get involved in the solution:
- Kilowatt Ours offers many resources and tools to help you begin saving energy on their website. On the website you can join the email list for monthly energy tips and access the “Kilowatt Counter” tool which allows you to track your electricity usage and savings on a monthly basis. Visit www.KilowattOurs.org (Remind audience that “Ours” does not have an “H”) and click on the link “Start Saving Energy”
- There is a reception table on the way out where you can learn more about Kilowatt Ours and their initiatives, sign up for their mailing list, and get a DVD. You can also sign up using one of the forms we will pass around [*Enlist helpers to pass out forms*]. Please return completed forms to the reception table on your way out.
- Kilowatt Ours is a project of Trust for the Future, a non-profit 501(c) (3) organization. Your donations help bring the message of this film to a wider audience including schools, neighborhood associations and communities nationwide. We offer the Kilowatt Ours DVD with a donation of \$25 or more.

LEAD A DISCUSSION

You are not expected to be an energy expert to present a Kilowatt Ours screening in your community. Instead of having a Q&A after the film, you can moderate a discussion and let the audience come up with their own ideas and answers. Here are some discussion questions and some ideas and answers from Kilowatt Ours.

1. Where does your electricity come from? (How is your electricity generated?)

Electricity is sold to consumers by a local distributor/utility (such as Nashville Electric Service) which buys it from a producer/supplier (such as Tennessee Valley Authority). Some producers, such as Austin Energy, also sell electricity to the consumers. The producer may build coal and nuclear power plants, dams for hydropower, or solar, wind, or methane gas facilities. In the United States approximately 52% of the electricity consumed is produced from coal and 20% from nuclear power.

2. What is Austin Energy and what does it do?

Austin Energy is the nation’s 9th largest public-owned electric utility. The company both produces and sells electricity to the consumers, and has created the top performing renewable energy program and a comprehensive residential and commercial energy

efficiency program. They have built a “conservation power plant”, which in essence has replaced the equivalent of one conventional power plant.

3. (a) Why do you think the energy issue is important NOW? (b) How does it affect you?

(a) *The problems related to energy production are having an increasingly negative impact.*

Some related problems are air and water pollution; limited energy supply; rising energy costs; global climate change; destruction of mountains, forests, streams and wildlife; toxic waste; human health problems such as asthma, mercury contamination, and higher cancer rates; cultural impacts; and rising consumption.

(b) *The more we consume, the more we need to produce, and the more we will feel the impacts. We are all affected, directly or indirectly, by all of these consequences. HOW?*

4. Why do Americans today use so much electricity?

One main reason is that Americans have so many more electrical appliances and devices (such as hand lotion warmers, TVs, and air conditioners) than they did in the past. Other reasons include our inefficient buildings and population increase.

5. Why do children suffer the impacts of our reliance on coal more so than adults?

Pound for pound, children breathe in twice the amount of air in each breath while their lungs are still developing. Therefore, they breathe in more pollutants during their crucial and vulnerable growth period of life. Electricity use is one of the root causes for air pollution.

The more that we waste and the more that we do inefficiently with the way we generate our power, then the more particulate pollution and ozone pollution we have. Hence the more death and disease we see, including what happens with the asthma burden in our children.

6. How is electricity produced from uranium ore?

Uranium ore is mined from the earth, where it is harmless as long as it is in its natural state. It is processed into yellow cake uranium fuel, leaving behind huge piles of radioactive mill tailings. Before it can be used to produce electricity, the mineral must be enriched in a plant, which produces tons of radioactive waste that is stored indefinitely on-site. The enriched uranium is processed further before going to the power plants as fuel used in the fission process, which releases energy to boil water, spin turbines, and finally produce electricity. After the fuel is used in the process, radioactive waste is leftover, which humans world-wide do not know what to do with.

7. (a) What is energy efficiency? (b) Give two examples of energy efficiency.

(a) *Energy efficiency involves the use of technology that requires less energy to perform the same function.*

(b) *For example, a compact fluorescent light bulb uses less energy to produce the same amount of light as an incandescent light bulb. Other examples are: adding insulation, sealing leaks, installing an adjustable thermostat, installing ceiling fans, buying Energy Star products, and installing a geothermal system.*

8. (a) What is green power? (b) Is nuclear power a form of green power?

(a) *Green power is energy generated from renewable, nonpolluting energy sources, such as solar, wind, methane and geothermal power.*

(b) *Nuclear power is a form of power that is highly debated. Some people consider it a green power source. However, it does produce emissions and large amounts of extremely toxic radioactive waste which humans do not know how to dispose of safely.*

9. Why are both energy efficiency and green power necessary to become a net-zero nation? (Step 1 and Step 2)

In order for green power to be feasible and effective on a broad scale, we need to first reduce our energy consumption by becoming much more energy efficient.

10. Why is replacing light bulbs such an effective way to save energy?

Incandescent light bulbs are very inefficient. Only about 10% of the total electricity they use is actually converted into producing light; the other 90% is converted into heat, which is wasted energy. Compact fluorescent lights (CFLs), on the other hand, convert about 75% of the electricity they use to produce light, only wasting about 25% on heat. CFLs also last much longer than incandescent bulbs, so do not need to be replaced as often. Replacing incandescent light bulbs with CFLs is relatively cheap and easy to do, pays off quickly, and saves a large amount of energy for the amount of investment.

11. What is meant by Energy Star?

Energy Star is a program that labels appliances identified by the US Environmental Protection Agency and the Department of Energy as the most energy-efficient products in their classes. The program compares appliances with similar characteristics. (www.energystar.gov)

12. How are companies and governments around the country saving energy and money?

Developers in Savannah, Georgia and Detroit, Michigan and Sumner County Schools in Tennessee are using geothermal systems; Smith Middle School in North Carolina and Toyota USA Headquarters in California are using daylighting techniques; Sullivan County Department of Education in Tennessee upgraded all of its school buildings; the city of Birmingham, Alabama and the state of Kentucky switched all street lights to LEDs; the state of California passed emissions legislation; and many states have implemented Renewable Portfolio Standards.

13. What can your organization or business do to save energy?

Your organization or business can do some of the same things you can do at home. Your business has a budget for maintenance and may be able to do more, like replace windows, upgrade lighting, or even install a geothermal system. Organizations and businesses save much more by just turning off computers and lights when not in use!

14. Why does recycling save energy?

Recycling aluminum and steel cans especially saves a great deal of energy because Americans use so many cans, and so much energy is required to produce them. Making aluminum from recycled aluminum scrap takes only 4% of the energy that it takes to make it from bauxite ore. Right now, recycling of aluminum cans saves about 11.5 billion kilowatt-hours, which is enough electricity to light a city the size of Pittsburgh for six years! (www.iea.doe.gov) Recycling other materials, such as plastic, paper, cardboard and glass, saves energy as well.

16. How are businesses around the country using green power?

A hog farm in Iowa installed a wind turbine; a dairy farm in Iowa uses a methane digester; Taco Burrito King in Chicago heats its water with a solar system; the World's Largest Laundromat in Illinois uses a solar hot water system; St. Francis Winery and the FedEx Distribution Center in California use solar systems to generate electricity.

17. How can you take action on Step 2: "Use green power"?

Once you are more energy efficient, you can do even more by buying blocks of green power with your savings each month. Just contact your local electric utility to find out how to sign up and support green power!!

18. How can you reduce your energy use at home by 25%?! (Kilowatt Ours Challenge)

“Kilowatt Ours” suggests the top ten steps to reducing your energy bill. You can find these steps at www.kilowattours.org. Also try some of the easy energy-saving actions in the Kilowatt Ours Challenge (Activity 6). A few low-cost things to do are: turn off appliances and lights, adjust the thermostat, dress appropriately indoors (instead of blasting the air or heat!), close windows and doors when heat or air-conditioning is on, use fans instead of air-conditioning, replace light bulbs, seal cracks with caulk, seal ducts with sealant, get new “used” appliances that are rated as Energy Star, add insulation, lower the water heater temperature, take shorter showers, and dry your clothes outside on a clothesline.

19. Can you think of anything else you can do to be part of the solution to the energy issue?

Some ideas are: Learn more and share your knowledge with others; conduct a home energy assessment; conduct a school energy assessment; organize a screening of “Kilowatt Ours” in your community; write letters to your elected officials to let them know you care about this issue; start an energy conservation campaign at your school; make a presentation to your school board or PTA/PTO.

20. Why is the film called *Kilowatt* “OURS” rather than *Kilowatt* “HOURS”?

The filmmaker is using a play on words to communicate the message that we each play a crucial role in energy issues. We have choices to make about our energy use and impact, and our individual actions DO make a difference.

Additional discussion ideas

1. The film shows toxic slurry waste spill from 2000 that was 30 times greater than the 1989 Exxon Valdez oil spill. In 2008 was an even larger spill in Kingston TN. Yet few people heard about it. Why not?
2. Discuss the advantages and disadvantages of five different sources of energy.
3. Explain global climate change. Do you think it needs to be addressed? How?
4. What do you think is the solution to our energy issues?
5. Explain energy efficiency and how it is part of the solution.
6. Explain green power and why it is, or is not, part of the solution.
7. If technologies such as geothermal heat pumps and daylighting are so effective, why doesn't everyone use them?
8. Discuss the advantages and disadvantages of nuclear power.
9. Discuss the connection between our energy use and human health.
10. Research and discuss three success stories of energy efficiency or green power from your region, or another region of the country.