“Your planet is due for an oil change!”
The “EARTH: The Operators’ Manual” project: PBS broadcasts, online/YouTube videos & social media

GEOFF HAINES-STILES
ghs@passporttoknowledge.com

NSF
earth
PBS
EARTH–The Operators' Manual

Welcome news.

Most Americans Want Scientists, Not Politicians, to Lead Climate Debate
www.reuters.com

The latest results from an ongoing Yale/George Mason study indicate that Americans want experts to explain how human activities are altering the climate By Elizabeth McGowan, SolveClimate News WASHINGTON—Americans

1,670 Impressions · 1.44% Feedback

Monday at 9:42am · Like · Comment · Share

17 people like this.

View all 7 comments

Sharon Angell Magliulo I believe this survey does not give a good cross section of American's views. I believe the majority of Americans have no idea about what climate change is. Most don't give a hoot. Most don't care about the environment.

18 hours ago · Unlike · 1 person

EARTH–The Operators' Manual Sharon, we'll be addressing this shortly. Stay tuned.

7 hours ago · Like

Write a comment...

How farmers are clean power pioneers
www.gigaom.com

When it comes to adopting new technologies, particularly

Do you agree w/ the above commenter and the many who rebutted the writer's methodology and arguments, or w/ the author? What food choices do you make?
with RICHARD ALLEY
Program 1:
EARTH: The Operators’ Manual
(Streaming online at: earththeoperatorsmanual.com)

Program 2:
POWERING THE PLANET

Program 3:
ENERGY QUEST USA

Sunday April 22, Earth Day
16:00 Eastern - 17:00

CHECK LOCAL LISTINGS!!!
Lightbulbs in the Desert
“Grow Your Own”
“Yes, In My BackYard”
“Look Before Your Leap”
The New Empire of CleanTech
Toilets and the SMART GRID
Avoid The Energy Abyss
Laboratories of Low-Carbon Living
WIN $100,000!

Help Lola defeat Fort Scott, Pittsburg, Parsons & Chanute!

#3 ENERGY QUEST USA
Richard Alley on “wood and whales” & sustainability & the “Earth Jigsaw” - a few pieces missing, lots known!

interviews:

Dan Yergin (“THE QUEST”)
Shirley Jackson, RPI/EX-NRC
Sen. Lisa Murkowski
Rep. Earl Blumenauer
David Crane (NRG)
and many more...

including Nancy Jackson
PBS World
Earth: The Operators’ Manual
4/23 – 9am ET, 3pm ET, 8pm ET
4/24 – 1am ET (10pm PT on 4/23)
4/27 – 5am ET, 11am ET

Energy Quest USA
4/27 – 9am ET, 3pm ET, 8pm ET
4/28 – 1am ET (10pm PT on 4/27)

Powering the Planet
4/27 – 10am ET, 4pm ET, 6pm ET, 9pm ET
4/28 – 2am ET (11pm PT on 4/27)

NY, LA, Philadelphia, Dallas, Boston, Phoenix, Tampa, Cleveland, St. Louis, Salt Lake City, Milwaukee, Cincinnati, San Atonio, West Palm, Norfolk, ABQ, Louisville, Jacksonville, Buffalo, New Orleans, Little Rock, Albany, Knoxville, Ft. Myers, Lexington KY, Roanoke, Tucson, Des Moines, Spokane, Omaha, Portland ME, Rochester NY, Carbondale, Champaign, Cedar Rapids, Burlington VT, Davenport
YouTube

“It’s Us”

http://www.youtube.com/watch?v=jc8mUI_cMKk

All full-length programs, segments, and bonus features
Non broadcast “Energy Heroes”
Robbyn Lewis
German Vasquez
Gwen Holdmann
Admiral Titley, and more...

all “share-able”
Now... key messages:

Rolling up our sleeves – The climate debate has made Americans feel paralyzed by uncertainty, distraction and helplessness. ETOM's message is that Americans are already rolling up their sleeves and taking control of their energy future.

It's all about practical – An "Operators' Manual" is, above all, about what works. We're about people working together to find practical, economical and even fun ways to move the Big Ball forward toward sustainable energy.

We're not red or blue, we're Americans – ETOM is not about pushing an ideology, business or political agenda. It’s about advancing the all-American values of saving a buck, tackling problems head on, working together in our communities and looking out for the future of our kids and our country.
At the end of the day, I have friends who have said to me how can you sleep at night when you're not changing people's mind on climate?

My response is, "How are you doing with your attempt to change people's mind on climate?" It's a long, hard slog and we should continue the attempt. However, at the end of the day the atmosphere doesn't care one whit what people think. The atmosphere cares what people do. And so what the Climate and Energy Project is going to continue to stay focused on is what people do.

We can reduce emissions in real time. Why people do it, as long as they do it, doesn't matter to us.
Q1: Is Earth's climate changing?

ANSWER: Yes. No one has the faintest idea about this, but it is certain that the Earth's climate is changing. Since the beginning of the Industrial Revolution, the Earth's atmosphere has warmed by about 0.75°C. The amount of carbon dioxide and other greenhouse gases in the atmosphere has increased substantially, and this increase is almost certain to cause a further warming of the Earth. There will be an associated change in the distribution of rain, with many regions becoming dryer and some becoming wetter. Temperature changes may also make the Earth's climate more unstable, with more frequent extreme events such as hurricanes.

Q8: Are there tipping points for ice sheets or other parts of the climate system?

ANSWER: Quite possibly. Transferring an ice cube from your freezer to your glass of iced tea is surely a tipping point for the ice cube. If the climate becomes too warm, an ice sheet will melt unless you can get it back in the “freezer” in a hurry, and if the faster flow lowers the upper surface of the ice sheet into warmer air, more melting can result, lowering the surface more. At many times in the past, ice sheets have been “well-behaved,” changing slowly in response to changing climate, but sometimes large and rapid ice-sheet changes have occurred and huge ice sheets have disappeared completely.

The climate may have other tipping points as well. As discussed in the next question, the currents in the North Atlantic have changed rapidly in the past, affecting climate in widespread regions. And too much climate change might cause a rapid shift in large ecosystems, such as the Brazilian rain forest.

Richard Alley, flying out toward the coast of New Zealand’s South Island, tracing the route of the advancing Franz Josef Glacier—the result of falling levels of CO2 and colder temperatures some 20,000 years ago. Photo by ART HOWARD.
Now, we’re closing in on seven billion of us...

…and Earth’s population is headed toward 10 billion.

**The Growing Population**

This can be additional narration about the direction of population growth and the effects it will have on our resources. This can be additional narration about the direction of population growth and the effects it will have on our resources.
For Educators
After the program airs April 10th, find enriching tools you can use in your classroom.

After EARTH: The Operators’ Manual debuts on PBS (April 10, 2011) educators can find segments of the program available for download, with rights to use them in class with students through April 10, 2012.

We’ll provide TEACHER TIPS suggesting ways to use the videos in class, HANDS-ON ACTIVITIES relating to each clip, correlated SCIENCE STANDARDS, and segments of the ANNOTATED SCRIPT with links to additional background and more extensive information. Scientific and technical terms are defined in the GLOSSARY.

Downloadable segments will include:

TEASE AND TITLES (02:32)
A short introduction to the twin issues of climate change and sustainable energy, and to program host, Richard Alley.

HUMANS & ENERGY (04:44)
How we use energy today, and what sources we use, and why in the future a growing population needs more, clean energy. Included are case studies of a Brazilian family living off the grid (like 1.5 billion world-wide), how rapidly-urbanizing China needs more energy to function, and the impact of industrial development on the environment.

CO2 & THE ATMOSPHERE (09:03)
How the warming effects of carbon dioxide were studied by the US Air Force immediately after World War 2, and why the varying orbit of Earth around the Sun drove the cycle of the Ice Ages. Alley demonstrates, through the history of the Franz Josef Glacier in New Zealand, that orbital variations (aka “natural variation”) alone did not make things cooler or warmer: that took the feedback effect of falling and rising levels of CO2.

CO2 IN THE ICE CORE RECORD (03:01)
Studying ice cores at the National Ice Core Lab, Alley shows how ancient ice traps records of Earth’s past climate. Over 400,000 years, and even longer, levels of carbon dioxide have risen and fallen from about 180 parts per million to 280, colder in the Ice Ages, warmer in interglacial periods. Today, however, for the first time in more than 400,000 years, CO2 is at 390 parts per million and continuing to rise at 2ppm per year.

IT’S US (02:41)
But how do we know today’s levels of CO2 are caused by humans using fossil fuel? In a closely-argued, step-by-step explanation, Richard shows that by using physics and chemistry we can analyze the “flavors” of carbon in Earth’s atmosphere to detect the clear signature of humans burning fossil fuels rather than the
Relaunch in next 2-3 weeks
Your annual energy bills are 87% higher than similar efficient homes. You could save $1,090 per year by making your home more efficient.

- **$1,266 per year** - Efficient
- **$2,356 per year** - You
- **$2,130 per year** - Average

**Your Energy Rating**
- GOOD: Efficient
- FAIR: Room for Improvement
- POOR: High Energy User
- VERY POOR: Energy Hog

**Your Energy Lifestyle**
- Driving: See how your car stacks up
- Air Travel: Understand your impact
- Your Diet: What you eat matters

**Solar Savings Estimate**
Leasing a solar system could save you $216 per year and $7,946 over 20 years.

<table>
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<th>YOU ELECTRICAL BILL</th>
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<tr>
<td>Before</td>
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**Energy Saving Ideas**
- Buy a Refrigerator
- Recycle Your Refrigerator
- Buy a Clothes Washer

Learn more
WIDGETS & API

Add a WattzOn widget to your website or blog to improve the experience for your visitors. Want a more customized integration? Use our APIs to integrate WattzOn data and features into your website.

Hybrid Car Widget
Would driving a hybrid really make a difference?
- Compare your car to available hybrids
- See fuel cost and carbon comparison

Diet and Energy Widget
How much energy is consumed to create the food I eat?
- Choose your diet
- See the energy consumed

Rebates Widget
Place a helpful rebate finder on your website or blog.
- Lookup Rebates for any US Zipcode
- No coding necessary

Rebates Center API
Lets programmers access WattzOn data.
- Lookup Rebates for any US Zipcode
- Get results in XML or JSON format
- API Documentation

How I Compare Widget
See how your home’s energy and bills compare to similar homes near you.
- Compares to similar local homes
- Leverages DOE LBL Labs data and analytics

Solar Home Widget
How much could solar panels save me?
- Get an estimate of costs and saving
- See financing alternatives
How I Compare Widget

Ann Arbor, MI
Your energy bills are 45% higher than similar efficient homes.

|$ Spent | CO₂ |
---|---|---|
$2,400 | $2,947 |

How to save »
Start over »

<div id="wattzon-compare-widget-wrap">

Powered by WattzOn
Get this widget »

<copy code="wattzon-compare-widget-wrap"
To copy, click the box above and press "Ctrl C".
To paste the code on your site press "Ctrl V".
By using our widget you agree to the terms of use

/configure this widget
Select a Color Style:
Width px (170-300) 200
Show Advanced Settings
RESET DEFAULT SETTINGS
COPY CODE TO CLIPBOARD
COPY CODE TO CLIPBOARD

Home > Widgets and API > How I Compare Widget
REBATES & TAX CREDITS

86 Incentives found in Morristown, NJ  |  Zip code 07960  |  SEARCH

FIND YOUR REBATES

Appliances (11)
- Clothes Washers & Dryers (3)
- Dishwashers (2)
- Refrigerators & Freezers (3)

Renewable Energy (15)
- Solar Electricity (7)
- Solar Hot Water (4)
- Wind Turbines (3)
- Geothermal (3)

Heating & Cooling (16)
- Air Conditioners & Fans (4)
- Boilers (3)
- Furnaces (5)
- Heat Pumps (3)
- Solar Heating System (1)

Sealing Air Leaks (2)
- Weatherization (1)

Insulation (2)

Windows & Doors (2)
- Roofs (1)
- Hot Water Heating (3)
- Energy Audits & Evaluations (2)
- Loan (4)
- Tax Incentive (20)
- Home Energy Retrofit (1)
- Manufactured Home (1)

A wide variety of energy efficiency rebates, tax credits, tax incentives and free services are available from the US federal government, Department of Energy (DOE), state and local governments, utility companies (gas and electric utilities, water utilities) as well as from manufacturers, retailers and service providers. These include Energy Star rebates, appliance rebate programs, energy efficiency tax rebates, water heater rebates, solar rebates and tax incentives, cash for appliances, and much more.

Please contact the rebate/incentive/service providers directly for detailed information and specific eligibility requirements.
Driving a hybrid, you would spend $1,827 less each year on gasoline.

- Gasoline: $2,727
- CO₂: $900

Driving a hybrid, you would create 9,950 lbs less each year of carbon.

- Gasoline: 14,851 lbs
- CO₂: 4,901 lbs

Powered by WattzOn
Get this widget »
Watch Parties
Nominate your “Energy Hero”
Let Educators know
Join the Conversation
Review and blog
Throw tomatoes...
Thanks to Tamara and Scott!

Richard Alley next week... 3/27. Please invite any who missed this call!
“Your planet is due for an oil change!”