

# Cool-Cities Messages 2009

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I have excluded messages that were relevant only for the time in which they were sent.

Some of the links may no longer work.

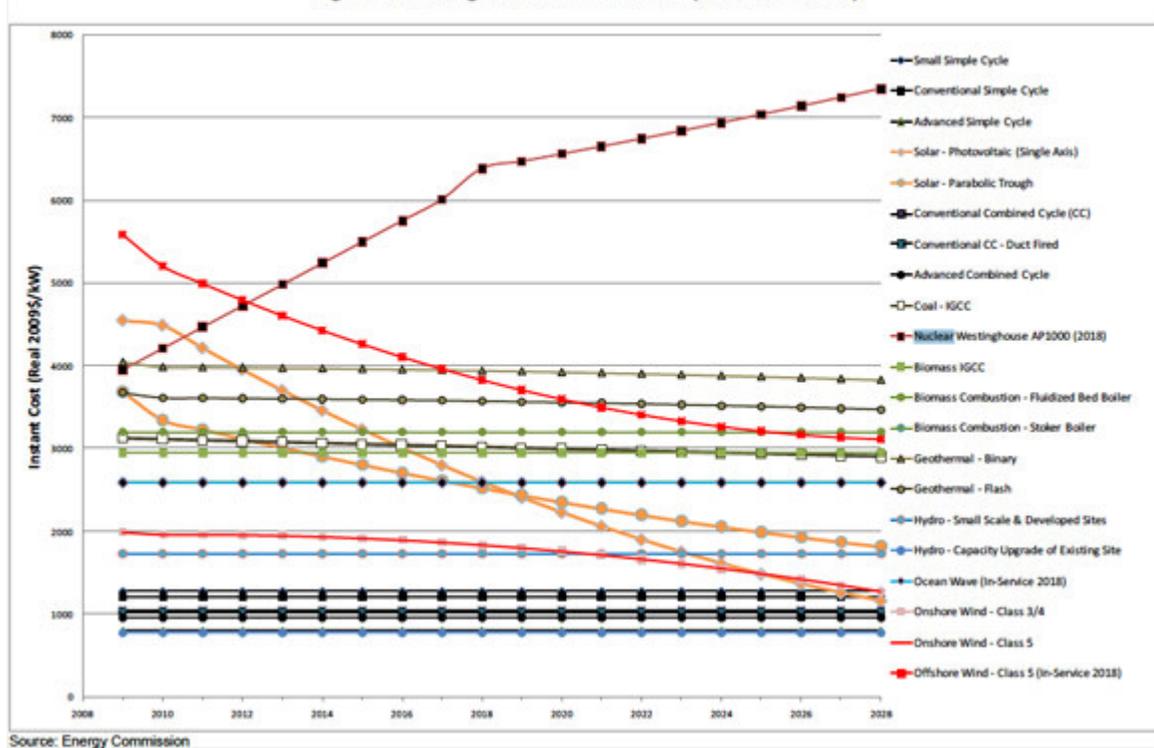
- 6 Mar 2009: The March 2009 issue of Physics Today has a very informative article “Physics in the oil sands of Alberta”. I have sent a letter to the editor about the article, which you can read at <http://www.roperld.com/science/minerals/CanadaOilSands.htm>.
- 25 Mar 2009: Recommended reading: [The Big Takeover by Matt Tiabbi in RollingStone](#)
- 27 Mar 2009: Good simple explanation of how solar cells work: <http://cs.sbccc.edu/physics/solar/sciencesegment/>
- 16 Apr 2009: Article in Roanoke Times about how the DEeP-REceSSION has effected recycling: <http://www.roanoke.com/news/roanoke/wb/201114>
- 2 Jun 2009: This is certainly a great day. Sean McGinnis reports that Virginia Tech has adopted a 14 point Climate Action Commitment and Sustainability Plan which calls for, among other things, to pursue LEED Silver certification or better for all new buildings and renovations, a 35 percent recycle rate by 2012, specific targets for reductions in greenhouse gas emissions, reductions in electric usage, improvements in transportation efficiency, and many other measurable sustainability goals. Details are here <http://www.vtnews.vt.edu/story.php?relyear=2009&itemno=469>
- 16 Jun 2009: Take a look at [Virginia Tech’s sustainability web page](#).
- 23 Jun 2009: Here is a new resource from the US Mayors - the 2009 Best Practices guide on greenhouse gas emissions. It features both large and small cities and tells what they have done to reduce their carbon footprint. <http://usmayors.org/pressreleases/uploads/ClimateBestPractices061209.pdf>
- 1 Jul 2009: Some of you may be interested in the fact that today the solar-hot-water system was completed for my apartment house on the corner of Broce Drive & Progress Street, installed by Baseline Solar Solutions (Pat Bixler & Chris Roberts). If you drive by you will see it facing Broce Drive. A web page about it is at <http://www.roperld.com/science/solarhotwaterapartmenthouse.htm>.
- 13 Jul 2009: For those who have not seen it, the 2008 baseline emissions report from Charlottesville is quite interesting. It can be found here: <http://www.charlottesville.org/Index.aspx?page=2142>. The study included the University of Virginia, which is very important in the results. The role of electricity in emissions is very pronounced, as it is in our region. See p. 28 tells the tale.
- 15 Jul 2009: Pew Center on Global Climate Change about the American Clean Energy and Security Act 2009: <http://www.pewclimate.org/acesa>
- 15 Jul 2009: Climate change 'will cause civilisation to collapse' This is the stark warning from the biggest single report to look at the future of the planet – obtained by The Independent on Sunday ahead of its official publication next month. Backed by a diverse range of leading organisations such as the World Bank, the US Army, and the Rockefeller Foundation, the 2009 State of the Future report runs to 6,700 pages and draws on contributions from 2,700 experts around the globe. Story at: <http://www.independent.co.uk/environment/climate-change/the-planets-future-climate-change-will-cause-civilisation-to-collapse-1742759.html>

- 17 Jul 2009: Climate denial Crock of the Week: <http://www.youtube.com/user/greenman3610>.
- 31 Jul 2009: SCIENCE / ENVIRONMENT | July 30, 2009 [By Degrees: White Roofs Catch On as Energy Cost Cutters](#) by FELICITY BARRINGER Some homeowners are embracing so-called "cool roofs" that reflect heat as an affordable tool against climate change. Art Rosenfeld mentioned in the NYT articles about white roofs is a graduate of Virginia Tech Physics Dept.
- 31 Jul 2009: Have you seen the Hybrid Center from the Union of Concerned Scientists yet? It's a great place to really learn about what today's hybrids could do for you, and also what you can do to make sure tomorrow's hybrids are best for our planet and pocketbooks. Click on this URL and give it a look: <http://www.hybridcenter.org> . Want more than just information? Do you want to help get cleaner, more efficient cars, trucks, and SUVs on our roads? Sign up for the Driving Change Network monthly newsletter and learn all the latest news about advanced vehicle technology, connect with hybrid car owners and other clean vehicle enthusiasts, and learn how you can help drive the advanced vehicle market in the cleanest, most efficient direction. Click here to sign up: [http://www.hybridcenter.org/driving\\_change/drchangesignup.html](http://www.hybridcenter.org/driving_change/drchangesignup.html)
- 12 Aug 2009: Check out the [GoodGuide rating of safe, healthy and green products](#). I just used <http://www.goodguide.com> to create a list of best products to keep in my shopping bag. It is very easy to create your list. I learned about GoodGuide from Daniel Goleman's book *Ecological Intelligence*, which is the Virginia Tech book for freshman this year. That book also will be recommended by Sustainable Blacksburg for everyone in Blacksburg to read. Daniel Goleman will be the keynote speaker for Blacksburg's & Virginia Tech's Sustainability Week on 11 October.
- 14 Aug 2009: [Energy efficiency investments can provide up to one-half of the needed greenhouse gas emissions reduction. Negawatt power](#) is the idea of creating incentives to reduce demand for electricity to ease the load at peak times or alleviate the need to build more generation plants. [Federal tax credits for energy efficiency](#) is one such incentive.
- 15 Aug 2009: [Oklahoma University pledges to use only 100% renewable energy by 2013](#). Woodward OK, near where the mentioned wind farms are being built, is 45 miles from my home town of [Arnett OK](#).
- 18 Aug 2009: Transition Town Movement: <http://www.transitiontowns.org/> <http://transitionnetwork.org/Primer/TransitionInitiativesPrimer.pdf> (51 pages). I would say that Blacksburg, if effect, is already a Transition Town.
- 23 Aug 2009: I am half way through reading the book [The End of the Long Summer: Why We Must Remake Our Civilization to Survive on a Volatile Earth](#) by Dianne Dumanoski on my Kindle. I highly recommend it.
- 16 Sep 2009: [Paris is preparing to launch electric-vehicle sharing program](#).
- 19 Sep 2009: I highly recommend that you study [The 5 most important data sets of climate science](#). It refers to several very interesting animations: [Glacial Cycles from 420,000 years before present \(ybp\)](#) (Shows the 4 Major Ice Ages of about 100,000 years each and many Minor Ice Ages in between.) The Earth will probably move into the next 100,000-year Major Ice Age within the next 1000 years or less, after we have "burned" the Earth with Global Warming. See my web page [Energy, Global Warming and the Next Major Ice Age](#); [Daily Arctic sea ice concentration from 1 January 2003 through March 2009](#); [Daily Arctic sea ice concentration for the last 21 days \(updated daily\)](#); [Daily Antarctic sea ice concentration from 1 January 2003 through March 2009](#); [Daily Antarctic sea ice concentration for the last 21 days \(updated daily\)](#)
- 21 Sep 2009: [Americans eat too much sugar](#): "Recently, the [American Heart Association](#) suggested that women limit sugar intake to 100 calories, or 6 teaspoons a day, and that men

should limit their consumption to 150 calories, or 9 teaspoons. To put those numbers in perspective, one 12-ounce can of cola has 130 calories, or 8 teaspoons. Americans are currently taking in an average of 22 teaspoons of sugar per day...”

- 28 Sep 2009: What do you think about Blacksburg residents becoming part of <http://veggietrader.com/> for next growing season?
- 11 Oct 2009: I just revised my iron depletion web page to include recycling: <http://www.roperld.com/science/minerals/iron.htm> . It indicates that, with current knowledge about iron-ore reserves, available iron for making items will peak at about year 2100 and fall off fairly rapidly after then. Humans will have taken concentrated iron-ore deposits and scattered them across the surface of the earth.
- 12 Oct 2009: I just revised my bauxite depletion web page to include recycling: <http://www.roperld.com/science/minerals/bauxite.htm> . Bauxite is the major ore for making aluminum.
- 19 Oct 2009: Here is a web page about [The Discovery of Global Warming](#) by Spencer Weart of the American Institute of Physics. It supplements his [much shorter book of the same title](#).
- 19 Oct 2009: [World-stress clock](#)
- 22 Oct 2009: I do not put much faith in economic models accurately predicting the future. But since opponents of ameliorating climate change due to global warming use them, proponents have to use them, also. See [Will Cap and Trade Wreck the Economy?](#) The calculation heavily involves [Gross Domestic Product \(GDP\)](#) which should be replaced by [Genuine Progress Indicator \(GPI\)](#).
- 10 Nov 2009: [Solar power from space](#) . I am not advocating this, just reporting it. It bears watching.
- 12 Nov 2009: Cost of power system, including nuclear: <http://evworld.com/currents.cfm?jid=47>

Figure 3: Average Instant Cost Trend (Real 2009 \$/kW)



Source: Energy Commission

- 12 Nov 2009: Read about Vehicle to Grid: [http://www.designnews.com/article/387964-Could\\_Car\\_Batteries\\_Back\\_up\\_Our\\_Electrical\\_Grid\\_.php](http://www.designnews.com/article/387964-Could_Car_Batteries_Back_up_Our_Electrical_Grid_.php); [V2G-101: A text about Vehicle-to-Grid, the technology which enables a future of clean and efficient electric-powered transportation](#)
- 13 Nov 2009: [recycling disposable diapers](#)
- 23 Nov 2009: Agricultural Imperialism: [Countries growing food for themselves in other countries](#)
- 2 Dec 2009: [7 things to know about Global Warming](#)
- 7 Dec 2009: [Review](#) of a recent article, "A Plan for a Sustainable Future - How to get all energy from wind, water and solar power by 2030" in Scientific American. For those who like mathematics, I just revised the web page [The Hyperbolic Tangent World](#).
- 14 Dec 2009: Electrification Roadmap: <http://www.electrificationcoalition.org/> . You can download a pdf file of this book or order a free copy of it at the website. It is an excellent plan for the future of transportation. The [Electification Roadmap](#) has inspired an [E-lympian Cities concept](#).
- 24 Dec 2009: [Low Carbon Diet: A 30 Day Program to Lose 5000 Pounds](#)
- 25 Dec 2009: [Renewables Global Status Report 2009 Update](#)
- 25 Dec 2009: Small changes can make a big difference for climate change, says a new study from Michigan State University. (See: <http://behavioralwedge.msu.edu/>) When looking at the combined impact from individual actions, like driving more smoothly or buying a better water heater, the expected reduced carbon emissions are staggering! In fact, these everyday decisions can reduce household emissions in the United States by 20 percent, which is more than the total national emissions of France. The report analyzed technologies that currently exist and are all ready to use such as weatherization and fuel efficient cars, which together have a combined potential reduction of 123 million tons of CO2. The Center for a New American Dream can be your first step towards adopting low emissions lifestyle changes by helping you break your bottled water habit <http://www.newdream.org/water/index.php> , think more carbon consciously <https://www.newdream.org/c3/> , and simplify your consumption <http://www.newdream.org/publications/index.php> .
- 27 Dec 2009: I just did a [rare-earths depletion/recycling study](#). This might also interest you: <http://www.roperld.com/science/biofuelsfromalgae.htm>; <http://www.roperld.com/science/worldrenewableenergy.htm>; <http://www.roperld.com/science/worldwind.htm>; <http://www.roperld.com/science/minerals/CanadaOilSands.htm>; <http://www.roperld.com/science/currencysystems.htm>
- 30 Dec 2009: I now have a web page that summarizes the renewable-energy calculations I have done; It contains links to the web pages for different renewable energies. <http://www.roperld.com/science/worldrenewableenergy.htm>