



DOHA - SAVE THE PLANET

FROM GLOBAL WARMING *DOGMA* AT COP-18

**THE SUN IS THE MAIN DRIVER OF CLIMATE CHANGE.
NOT YOU. NOT CO₂.**

Executive Summary -The Doha COP-18 “Damage Aid” Deception

Climate change global warming crisis “cult” misleads governments, terrorizes citizens, and wastes resources say Friends of Science. Carbon dioxide reduction and ‘damage aid’ are more forms of “Kyoto Carbon Kleptomania” based on incomplete science and inaccurate computer models. The rush to renewable energy that is not market ready or reliable has forced millions into fuel poverty, hunger and nations into bankruptcy.

FACTS – The UN Climate Change predictions are:

1. **Incomplete.** The UN/IPCC reports exclude the overwhelming scientific evidence that the sun is the main driver of climate change. Not CO₂.
2. **Inaccurate.** Climate Change prediction models done on computer have been wildly inaccurate.
3. **Based on assumption.** Some UN/IPCC –allied scientists have assumed that CO₂ drives temperature – but this has not been scientifically proven. For the past 16 years, despite a rise in CO₂, the UK Met Office reports there has been **no global warming**.
4. **Out of context.** Global temperatures only began being recorded in the late 1880’s. Geological evidence dates back at least 500 million years. In context, today’s climate and weather are perfectly normal.
5. **Wasting resources. Fear of CO₂ emissions has lead to a “rush to renewable.”** But ‘renewables’ like wind and solar are unreliable energy producers that require conventional back-up. It’s not ‘free’ energy at all.
6. **Factually incorrect.** The climate change crisis cult has made people believe that carbon dioxide (CO₂) is a toxic gas in large quantity that threatens human life. In fact, CO₂ is the essence of life. **CO₂ is a trace element in the atmosphere– occurring at about 0.04%.**
7. **Economically devastating.** Citizens of Western nations have been plunged into fuel poverty in the UK, Ontario, Spain, and California as extreme ‘carbon reduction’ measures were enacted.
8. **Based on one-sided research.** Billions are spent on climate change research; very little is spent on understanding more significant modifying natural factors like the sun.
9. **Rife with conflicts of interests.** Agenda-driven ENGO’s have invaded the UN Climate organizations at all levels; scientists have been co-opted to be ‘climate witnesses.
10. **Environmentally destructive & expensive.** \$1 trillion dollars spent in a decade on ‘carbon reduction’ – biofuels take up valuable food crops, and have no net positive production of fuel. “Renewables” wastefully consume energy resources for limited power.



CHALLENGE THE 'CONSENSUS'

THE SUN IS THE MAIN DRIVER OF CLIMATE CHANGE. NOT YOU. NOT CO₂.

At a Glance- Our Position

Since 1992 the United Nations Framework Convention on Climate Change (UNFCCC) and the related UN Climate Change Panel, the Intergovernmental Panel on Climate Change (IPCC) have issued reports claiming that human use of fossil fuels was causing Catastrophic Global Warming. In particular, carbon dioxide (CO₂) released through fossil fuel use by humans was cited as the cause. This resulted in a global frenzy of exotic efforts to 'reduce carbon emissions' and 'stop global warming.' People were made to feel guilty. Questioning 'global warming' was heresy.

Yet, the vast body of scientific evidence that the sun is the main driver of climate change has never been included in the IPCC reviews.

Friends of Science have spent the past decade reviewing peer-reviewed papers on climate change.

The scientific evidence shows that the sun is the main driver of climate change. Not CO₂.

*It's time to **STOP THE WANTON WASTE OF RESOURCES** on useless carbon reduction policies or so-called 'damage aid' that enrich clever investors and carbon traders while impoverishing average citizens and taxpayers.*

COVER: A CORONAL MASS EJECTION

OUR STAR, the Sun, makes up 99% of all the mass in the Solar System. ...The Sun is mostly hydrogen (its main fuel) and helium, and radiates charged particles called solar wind across the Solar System. Phenomena such as solar flares and sunspots are evidence of the Sun's strong magnetic field, which changes on a roughly 11-year cycle and has increased

throughout the 20th century causing climate change..

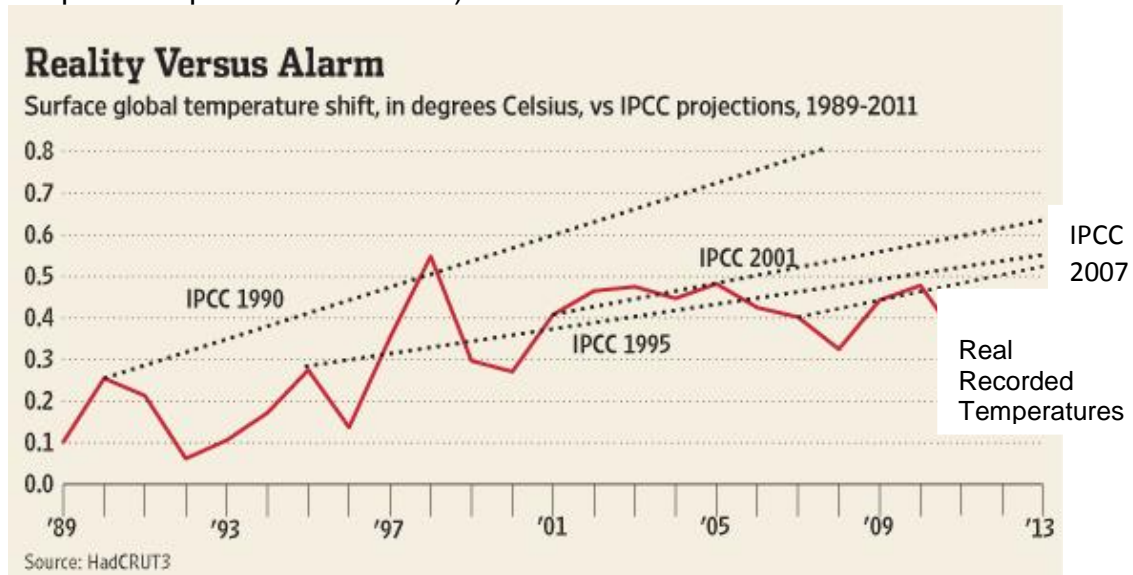
[HTTP://WWW.BBC.CO.UK/SCIENCE/SPACE/SOLARSYSTEM/SUN AND PLANETS/SUN](http://www.bbc.co.uk/science/space/solarsystem/sun_and_planets/sun)

THE DOHA DECEPTION

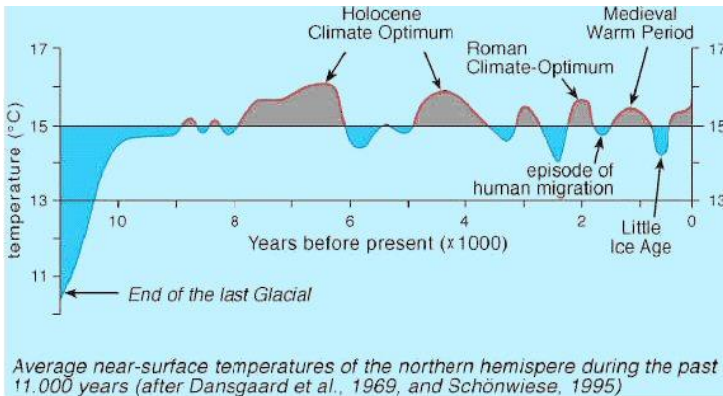
CLIMATE CHANGE CRISIS “CULT” MISLEADS GOVERNMENTS, TERRORIZES CITIZENS, & WASTES RESOURCESⁱ (SEE END NOTE FOR REFERENCES)

FACTS – The UN Climate Change predictions are:

1. **Incomplete.** The UN/IPCC reports exclude the overwhelming scientific evidence that the sun is the main driver of climate change. Not CO₂.
2. **Inaccurate.** Climate Change prediction models done on computer have been wildly inaccurate; when accurate data is entered about actual recent temperatures, the computer models cannot accurately ‘hind-cast’ (calculate temperature patterns in reverse).



- a. Real temperatures in red; IPCC predictions in dotted lines.
3. **Based on assumption.** Some UN/IPCC –allied scientists have assumed that CO₂ drives temperature – but this has not been scientifically proven. For the past 16 years, despite a rise in CO₂, the UK Met Office reports there has been **no global warming**.
 4. **Out of context.** Global temperatures began being recorded in the late 1880's. But historic human records of temperature change date back centuries and geological evidence dates back at least 500 million years. In context, today's climate and weather are perfectly normal.



5. **Wasting resources. Fear of CO₂ emissions has led to a “rush to renewable.”** But ‘renewables’ like wind and solar are unreliable energy producers. They require 24/7 back-up power generation by gas-fired plants. This is wasteful and very expensive for no energy benefit. **It’s not ‘free’ energy at all.**
6. **Factually incorrect.** The climate change crisis cult has made people believe that carbon dioxide (CO₂) is a toxic gas in large quantity that threatens human life. In fact, CO₂ is the essence of life - without it there would be no oxygen. **CO₂ is plant food, and more CO₂ increases plant growth and crop yields. CO₂ is a trace element in the atmosphere— occurring at about 0.04%.**
7. **Economically devastating.** Citizens of Western nations have been plunged into fuel poverty in the UK, Ontario, Spain, and California as extreme ‘carbon reduction’ measures were enacted, driving consumer and business energy prices sky-high while doing zero for the environment (see point 5. Above). Clever investors get rich on carbon taxes/trades called ‘climate wealth’ while crushing consumers.
8. **Based on one-sided research.** Billions are spent on climate change research dedicated to the unproven theory of man-made global warming through use of fossil fuels; very little is spent on understanding more significant modifying natural factors like the sun, volcanoes, ocean currents etc.
9. **Rife with conflicts of interests.** Agenda-driven ENGO’s have invaded the UN Climate organizations at all levels; scientists have been co-opted to be ‘climate witnesses’, wealthy speculators lead the charge, capitalizing on carbon taxes, subsidies for renewable, and carbon trades at *your* expense.
10. **Environmentally destructive & expensive. \$1 trillion dollars spent in a decade on ‘carbon reduction’** – biofuels take up valuable food crops, and have no net positive production of fuel. “Renewables” wastefully consume energy resources for limited power generation in return, creating different kinds of pollutions, emission, and human/wildlife damage – and no net benefit.

'CLIMATE WEALTH' LEADS TO 'FUEL POVERTY'

"...the carbon market is based on the lack of delivery of an invisible substance to no one."

Conning the Climate by Mark Schapiro
Harper's Magazine, Feb. 2010

WHAT DOES A TRILLION DOLLARS LOOK LIKE?



\$10,000.

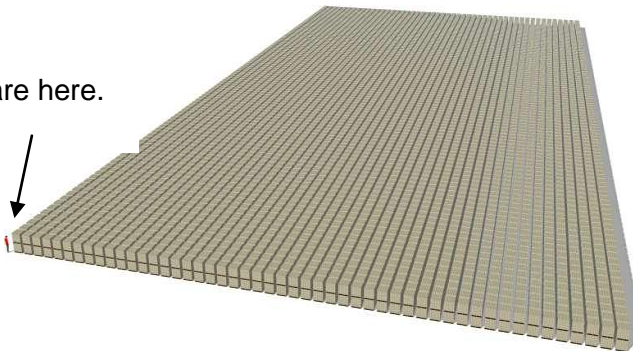
This is 100, \$100 bills.



\$100 million

A Trillion... \$1,000,000,000,000

You are here.



Since 2002 A TRILLION DOLLARS
has been wasted on carbon
reduction efforts world-wide.

These measures have not helped
the environment and are not
effective in reducing real
pollutants.

Carbon trading schemes have
made a few people rich on
'climate wealth' and pushed
millions of ordinary people into
"fuel poverty."

A trillion dollars wasted on windmills and solar panels could have brought electricity to about 600 million people in poverty that currently have no electricity and are poisoned by smoke from burning wood and dung in their huts. Providing electricity could double their life expectancies by reducing indoor pollution.



IS RENEWABLE SO DOABLE? Green Rent Seeking

Rent seekers coerce governments to give subsidies or tax benefits to them, rather than create new wealth.

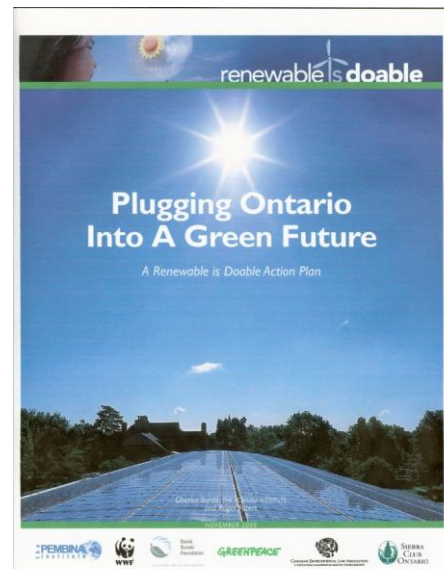
Rent seeking occurs in part because individuals and organizations can receive concentrated benefits through government action, while the costs are dispersed through the whole of society.

The rent seekers do more than just increase their share of the wealth; they destroy wealth.

A Spanish researcher showed [\[here\]](#) that for every green job created by taxpayer subsidy, another 2.2 jobs are lost in the real economy.

A paper, *Green Jobs Myths* [\[here\]](#) by researchers at the University of Illinois uncovers seven myths and realities associated with green jobs, and shows how special interest groups promote the idea of green jobs that will impoverish society.

Ontario's *Green Energy Act*, enacted in 2009, has created a rent seekers' paradise. Modeled on European legislation, it offers two kinds of feed-in tariffs: the FIT Program for projects over 10 kW and the microFIT program for projects 10 kW or less. The initial feed-in tariffs in August 2010 ranged from 13.5 ¢/kWh (cents per Kilowatt hour) for onshore wind to 80.2 ¢/kWh for rooftop solar, guaranteed for 20 years. These above-market rates are paid by all electricity consumers through a "global adjustment" that "provides both adequate supply and green energy" by accounting for "differences between the market price and rates paid to regulated and contracted generators."



In 2012 through September the average global adjustment was 5.05 ¢/kWh

To promote the GEA, the Ontario government helped set up the Ontario Sustainable Energy Association by providing funding from its own agencies, such as the Ministry of Agriculture, Food and Rural Affairs, the Trillium Foundation, and the Ministry of Energy and Infrastructure.

On its website [\[here\]](#) OSEA boasts of pushing hard for feed-in tariffs that charge "premium prices" for renewable energy.



Ontario Sustainable Energy Association

representing the power of communities

OSEA was a clever strategy on the part of the government, as its membership includes not only a few big wind developers and solar manufacturers (and not all of the ones doing business in Ontario), but many associations, community power groups and energy co-ops.

As a result, thousands of Ontarians have a stake in the GEA, making it difficult for a future government to dismantle.

In March 2012, the Ontario Energy Board published an electricity price forecast for the period December 2011 to December 2016 [[here](#)] that shows large customers facing a five-year increase of 36% to 48%, while residential consumers will be hit with price increases of 46% to 58%.

This will be during a period when electricity prices in competing US jurisdictions will be falling, due to increasing supplies of cheap shale gas.

The implication is obvious: due to green rent seeking, Ontario will become less competitive and relatively poorer. Another Canadian example of rent seeking is the \$1.35 billion Quest carbon capture and storage project, sponsored by Shell Canada, with partners Chevron Corp. and Marathon Oil Corp.

The three partners will put up only \$485 million of the cost, with the Alberta and federal governments contributing the rest.

The partners' share will be reduced to \$155 million through a two-for-one credit of the \$15/tonne that Alberta charges on large CO₂ emitters.

Within a week of announcing Quest's start, the president of Shell Canada was urging the federal and provincial governments to put a price on CO₂ – in order to justify CCS.

Prior to the Quest announcement, another consortium of TransAlta Corp., Enbridge Inc. and Capital Power Corp. cancelled their \$1.4 billion Pioneer CCS project, arguing that even with \$779 million in promised subsidies, future government policy was too uncertain to make the project viable.

Ian Cameron
Director, Friends of Science

Ontario's green-rent catastrophe was co-sponsored by these wealthy 'green' groups.

NOVEMBER 2008



HOW THE SUN AFFECTS CLIMATE

There are many studies that show a high degree of correlation between solar magnetic activity and temperatures over thousands of years. The evidence shows that solar activity explains 50% to 80% of the past climate change.

The IPCC ignores the overwhelming evidence of solar influences on climate. The total energy emitted by the Sun varies only a fraction of a percent, but the solar magnetic field has increased nine fold from 1890 to 1990.

About a century ago, it was found that the combined effect of axial precession, axial tilt and orbital eccentricity of the earth explains the occurrence and timing of the main Pleistocene Ice Ages.

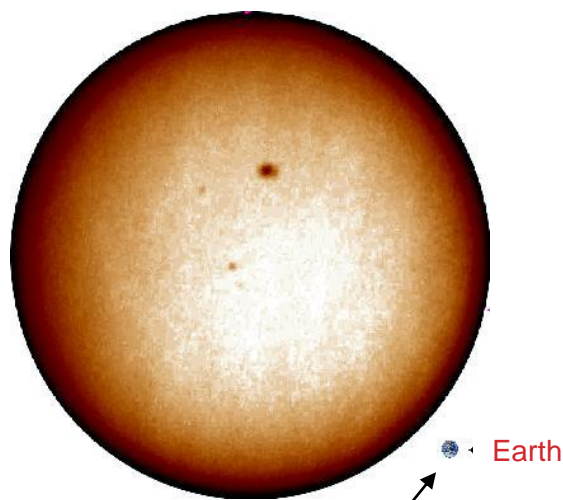
Dr. Svensmark's 2006 cloud chamber experiments indicated that cosmic rays (CR) act as a catalyst in making aerosols which can grow into cloud condensation nuclei. Water vapour condenses on these particles forming clouds.

This result was later confirmed by the CERN Cloud Experiment in Geneva in 2011. The amount of cosmic rays received in the atmosphere would be affected by modulation of the CR flow by the solar wind (a stream of charged particles from the Sun), thus varying cloud cover and surface temperature.

A 2010 study shows strong correlations between the amplitude of the semi-annual variation of the length of the day (LOD) and CR and sunspot numbers. Changes in wind circulation will change the LOD.

The correlations show the Sun can influence tropospheric zonal winds, so will also affect climate.

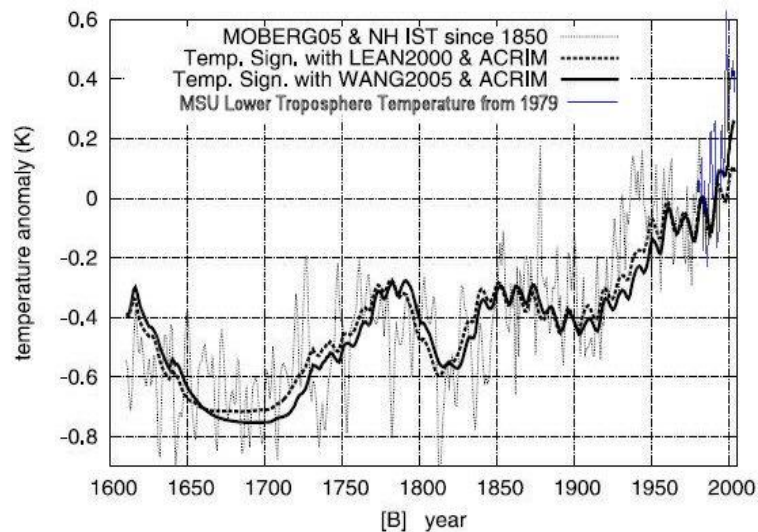
- Albert Jacobs – co-founder of Friends of Science reviews recent research that looks for the mechanisms by which solar forces affect climate. See his article “Natural Forces of a Changing Climate” [here](#), which includes many linked references.



You are here.

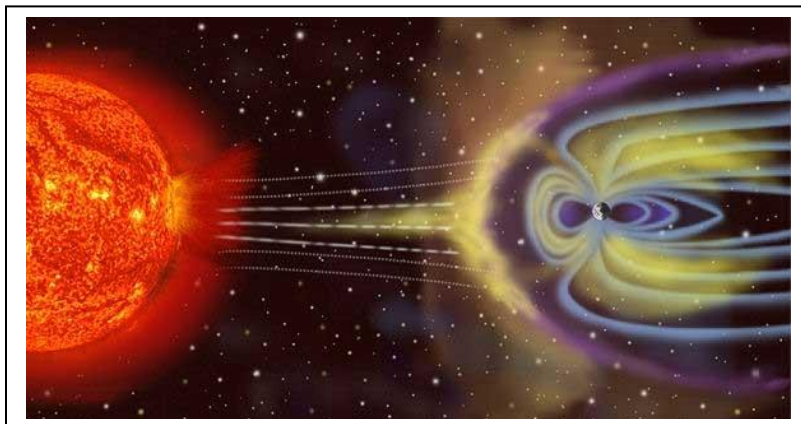
A study of solar impacts on 400 year of northern hemisphere temperatures shows good correlation. The two darker lines indicate solar intensity, and the lighter line is temperature proxies.

Northern Hemisphere Temperature vs Solar Irradiance 400 Years



The sun's magnetic activity has increased over the 20th century to a maximum in 1992 as shown [here](#), so most of the warming from 1975 to 2002 was likely natural.

The chart at this [link](#) shows excellent correlation between a temperature proxy (Oxygen18) and a solar proxy (Carbon14) over a period of 3000 years.



Visualization of earth trapped in a geomagnetic storm

HOTTER IN HANSEN'S WORLD DUE TO WRONG-WAY CORRECTIONS & MISSING "OCEANS" OF DATA

James Hansen is responsible for NASA's Goddard Institute for Space Studies (GISS) temperature index that is widely used by alarmists to 'prove' global warming.

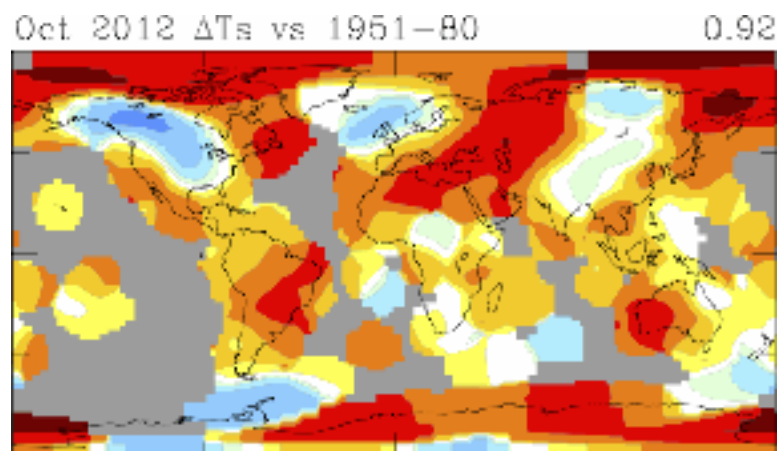
Urban development causes higher local temperatures. An increase in population near a rural temperature monitoring station can have a significant effect on measured temperatures.

Hansen applies an urban heat island correction in the wrong direction in 45% of the adjustment which increases the urban warming effect instead of eliminating it. See [here](#).

Studies by two teams of scientists show that properly correcting the temperature record for urban warming would reduce the temperature trend over land by half.

For the satellite era (since 1981) the temperature index generally uses surface weather stations for the land portion and satellite measured sea surface temperatures for the ocean portion of the index.

The GISS index greatly exaggerates the warming in the Arctic Ocean by replacing the satellite-based sea surface temperature measurements where there is seasonal sea ice with land temperatures.



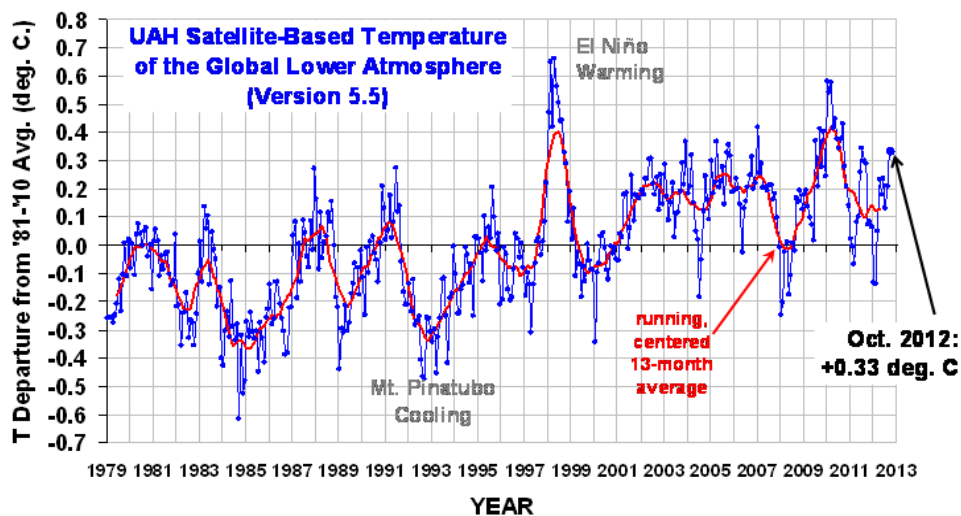
The land temperatures are extrapolated over the oceans up to 1200 km from the surface weather stations.

The GISS ocean-only warming trend in the Arctic, extrapolated from land measurements, **is 35 times greater than the satellite measured ocean warming trend.**

Hansen's trick of replacing measured sea surface temperatures with land measured temperatures in areas with seasonal sea ice caused a large warming bias in the global temperature trend.

Climate scientist Bob Tisdale says, **"They increased the trend of the global sea surface temperatures by about 42%."**

See our article [here](#) for graphs and further discussion.

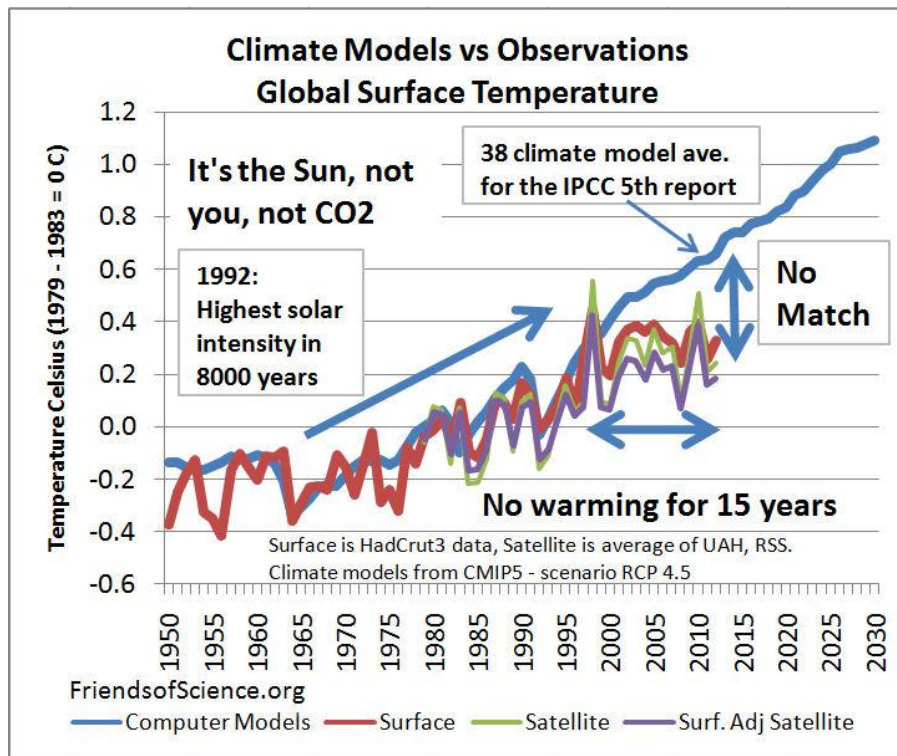


CLIMATE MODELS FOR THE FIFTH IPCC REPORT ARE A FARCE

The global warming scare is based on climate models that don't work. The models falsely assume all the warming from 1970 was caused by greenhouse gas emission and do not include any long-term natural causes of warming. The graph below shows the multi-model average of 38 climate models that will be used in the upcoming IPCC's fifth assessment report. The graph also shows the land and satellite temperature observations. The purple curve shows the satellite temperatures adjusted to surface condition. Global temperatures as measured by satellites have increased by 0.2 Celsius from 1980 to 2010, but the climate models mean increase is 0.6 Celsius.

The model average temperature increase from 1980 **is three times greater than the satellite observations so the forecasts are useless for making policy decisions.** The →

new climate model mean trend for the IPCC's fifth report is the same as the climate model mean trend used in the IPCC's fourth report. The climate modeler ignored the fact that there has been no warming for 15 years. They don't even try to match the historical record. See the "Computer Models Fail" section of our Climate Change Science essay [\[here\]](#) for further information.

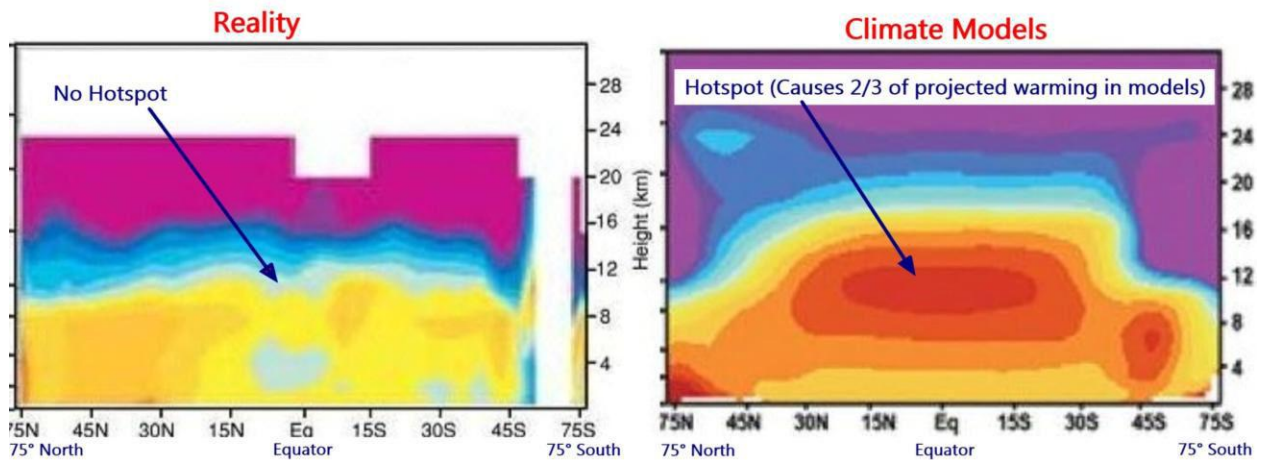


None of the climate model runs predicted there would be no temperatures rise for 15 years.

The direct greenhouse warming effect of CO₂ is small, only 0.5 C temperature increase since the start of the industrial revolution. The warming effect of extra CO₂ emissions declines with higher concentrations. The effect of a quantity of CO₂ emissions next year is less than the effect of the same amount 10 years ago. The IPCC amplifies the direct CO₂ warming effect by a factor of three, but satellite and balloon radiosonde data show that water vapor and cloud changes reduce the direct CO₂ effect.

The IPCC imagined amplification requires that the atmosphere about 10 km above the tropics warms twice as fast as the surface, but millions of weather balloons and satellite data shows no enhanced warming rate, proving the model assumptions wrong.

Atmospheric Warming 1979 - 1999



A technical paper published in August 2010 shows that the climate model temperature trends of the mid-troposphere from 1979 to 2009, using 57 runs from 23 climate models, are four times larger than observations from satellites and weather balloons.

The models predict enhanced warming in the upper atmosphere because the modellers expect the water vapour content to increase there. Computer simulations show that a change in water vapour at the altitude of the missing hotspot has 30 times greater effect on out-going radiation to space than the same change near the surface. But the water vapour amount at about 8 km altitude has declined by 13.5% from 1948 to 2011. The water vapour data and the temperature data contradict the climate models where water vapour changes have the greatest effect on global temperatures. See graph [here](#).

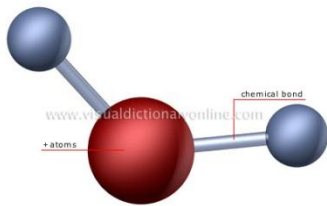
Most of the heat of the climate system is stored in the oceans. Heat accumulating in the climate system can be measured on a global scale from 2003 by the ARGO array of 3300 free-drifting floats that measure temperature and salinity in the ocean. The predicted warming trend of the top 700 m of the ocean from the GISS climate model from January 2003 is 5.6 times greater than the actual ARGO measured trend as shown in this [graph](#). The discrepancy of heat accumulation between the measurements and the climate models projections is enormous.

The global warming pattern predicted by climate models bears no resemblance to the measurements. The climate model sea surface warming trend at the equator from 1981 is 6 times greater than measured by satellites. See graph [here](#)

Ken Gregory Director, Friends of Science

CO₂ –DEADLY POISON OR GIVER OF LIFE ITSELF?

THE MOLECULE OF LIFE



1. *Early planetary atmosphere anoxic*

In the beginning the Earth's atmosphere contained no Oxygen but high volumes of CO₂, Water Vapour, and Nitrogen. Significant amounts of Methane (CH₄), Hydrogen Sulphide (H₂S) Nitrogen Oxides (NO_x) were also present as a result of extensive volcanic activity. The latter molecules are true pollutants since they will make you sick. The former are necessary to sustain life. CO₂ presently at 400 ppmv is close to its lowest atmospheric concentrations in the entirety of Geological History some 4.5 Billion years.

2. *Anoxic conditions reduced by CO₂ and cyanobacteria*

How did this essentially toxic early atmosphere become a source of life with Oxygen? Why? - Because of CO₂! In the early oceans 3.5 Billion years ago very primitive life forms, cyanobacteria, which were aquatic and photosynthetic, gradually became very abundant. Photosynthesis allowed the organisms to utilize sunlight to digest CO₂ converting it to cellulose and sugar molecules while releasing Oxygen (O₂), the breath of life for the Animal Kingdom. These organisms occurred in such massive quantities that they oxygenated the atmosphere to current oxygen levels. Therefore, without CO₂ and bacteria there would be no life on the planet.

3. *CO₂ levels 500m years ago >6000 ppmv*

It is now well established that CO₂ levels in the Cambrian, 500 million years ago were 17-25 times greater than our current 400 ppmv. According to current IPCC theory, doubling of CO₂ would be catastrophic yet all the geological evidence shows that in the Cambrian atmospheric levels of up to 10,000 ppmv were benign. How do we know

this? Because Cambrian Ocean environments were comparable to today's regarding temperature, salinity and so on.

Certain Lingulid brachiopods are still extant in today's oceans with essentially identical anatomy, physiology, and environmental preference. The Cambrian was the time of the great evolutionary explosion bringing forth the multitude of creatures with hard skeletons, and phyla still present in today's oceans, such as the famous fossils of the Burgess Shale, at Field BC and environs.

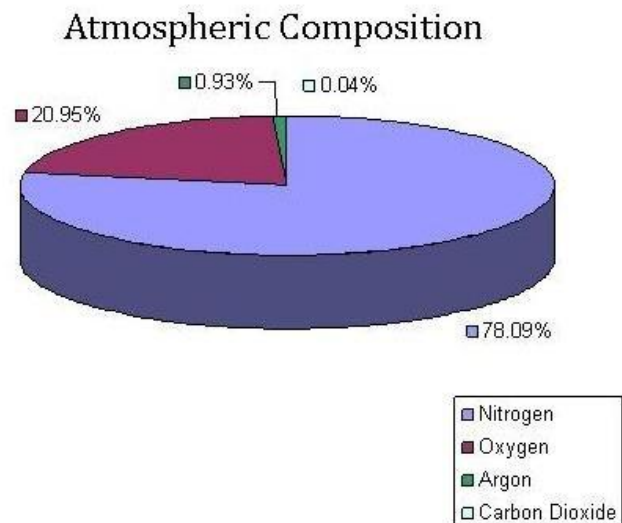
During the Palaeozoic Epoch the Continents were largely submerged by gigantic marine carbonate platforms so that oceans occupied up to 80% of the Worlds Surface. In order to construct such massive volumes of Carbonate in the ancient oceans the volume of atmospheric CO₂ must have been at very high levels, greater than 6,000 ppmv.

If the current theory of atmospheric warming were correct, temperatures would be so high and the ocean so acidic that the great Cambrian evolutionary explosion could not have happened. We would not be here!

Dr. Neil Hutton, Director, Friends of Science



Can you find the CO₂ molecule?



Ice Core Evidence

Ice core data over the last four ice ages conclusively show that temperatures have always gone up hundreds of years before CO₂ concentrations go up. Al Gore's movie implied the CO₂ caused the temperature change, but he got it reversed. CO₂ increased due to out-gassing from the warming oceans. Temperatures started dropping at the start of four ice ages while CO₂ level were increasing for 800 years. Temperatures started rising long before CO₂ started increasing at the end of four ice ages. None of the climate models include the natural forces that caused these temperature changes. See graph [here](#).

COMMON MISCONCEPTIONS ABOUT GLOBAL WARMING

MYTH 1: GLOBAL TEMPERATURES ARE RISING AT A RAPID, UNPRECEDENTED RATE.

FACT: The HadCRUT3 surface temperature index, produced by the Hadley Centre of the UK Met Office and the Climate Research Unit of the University of East Anglia, shows warming to 1878, cooling to 1911, warming to 1941, cooling to 1964, warming to 1998 and cooling through 2011. The warming rate from 1964 to 1998 was the same as the previous warming from 1911 to 1941. Satellites, weather balloons and ground stations all show cooling since 2001. The mild warming of 0.6 to 0.8 C over the 20th century is well within the natural variations recorded in the last millennium. The ground station network suffers from an uneven distribution across the globe; the stations are preferentially located in growing urban and industrial areas ("heat islands"), which show substantially higher readings than adjacent rural areas ("land use effects"). Two science teams have shown that correcting the surface temperature record for the effects of urban development would reduce the reported warming trend over land from 1980 by half. There has been no catastrophic warming recorded.

*The temperature index name HadCRUT3 is a combination of the sea surface temperature record from the Hadley Centre of the UK Met Office, and the land near surface temperature record from the Climate Research Unit of the University of East Anglia, UK. The name HadCRUT3 comes from the parts "Had" from Hadley Centre, "CRU" from Climate Research Unit, "T" from temperature, 3 is version number.

MYTH 2: THE "HOCKEY STICK" GRAPH PROVES THAT THE EARTH HAS EXPERIENCED A STEADY, VERY GRADUAL TEMPERATURE DECREASE FOR 1000 YEARS, THEN RECENTLY BEGAN A SUDDEN INCREASE.

FACT: Significant changes in climate have continually occurred throughout geologic time. For instance, the Medieval Warm Period, from around 1000 to 1200 AD (when the Vikings farmed on Greenland) was followed by a period known as the Little Ice Age. Since the end of the 17th Century the "average global temperature" has been rising at the low steady rate mentioned above; although from 1940 – 1970 temperatures actually dropped, leading to a Global Cooling scare.

The "hockey stick", a poster boy of both the UN's IPCC and Canada's Environment Department, ignores historical recorded climatic swings, and has now also been proven to be flawed and statistically unreliable as well. It is a computer construct and a faulty one at that.

MYTH 3: HUMAN PRODUCED CARBON DIOXIDE HAS INCREASED OVER THE LAST 100 YEARS, ADDING TO THE GREENHOUSE EFFECT, THUS CAUSING MOST OF THE EARTH'S WARMING OF THE LAST 100 YEARS.

FACT: Carbon dioxide levels have indeed changed for various reasons, human and otherwise, just as they have throughout geologic time. Since the beginning of the industrial revolution, the CO₂ content of the atmosphere has increased. The RATE of growth during this period has also increased from about 0.2% per year to the present rate of about 0.4% per year, which growth rate has now been constant for the past 25 years. However, there is no proof that CO₂ is the main driver of global warming. As measured in ice cores dated over many thousands of years, CO₂ levels move up and down AFTER the temperature has done so, and thus are the RESULT OF, NOT THE CAUSE of warming. Geological field work in recent sediments confirms this causal relationship. There is solid evidence that, as temperatures move up and down naturally and cyclically through solar radiation, orbital and galactic influences, the warming surface layers of the earth's oceans expel more CO₂ as a result.

MYTH 4: CO₂ IS THE MOST COMMON GREENHOUSE GAS.

FACT: Greenhouse gases form about 3% of the atmosphere by volume. They consist of varying amounts, (about 97%) of water vapour and clouds, with the remainder being gases like CO₂, CH₄, Ozone and N₂O, of which carbon dioxide is the largest amount. Hence, CO₂ constitutes about 0.039% of the atmosphere. While the minor gases are more effective as "greenhouse agents" than water vapour and clouds, the latter are overwhelming the effect by their sheer volume and – in the end – are thought to be responsible for 75% of the "Greenhouse effect". (See [here](#)) At current concentrations, a 3% change of water vapour in the atmosphere would have the same effect as a 100% change in CO₂.

Those attributing climate change to CO₂ rarely mention these important facts

MYTH 5: COMPUTER MODELS VERIFY THAT CO₂ INCREASES WILL CAUSE SIGNIFICANT GLOBAL WARMING.

FACT: The computer models assume that CO₂ is the primary climate driver, and that the Sun has an insignificant effect on climate. You cannot use the output of a model to verify or prove its initial assumption - that is circular reasoning and is illogical. Computer models can be made to roughly match the 20th century temperature rise by adjusting many input parameters and using strong positive feedbacks. They do not "prove" anything. Also, computer models predicting global warming are incapable of properly including the effects of the sun, cosmic rays and the clouds. The sun is a major cause of temperature variation on the earth surface as its received radiation changes all the time. This happens largely in cyclical fashion. The number and the lengths in time of sunspots can be correlated very closely with average temperatures on earth, e.g. the Little Ice Age and the Medieval Warm Period. Varying intensity of solar heat radiation affects the surface temperature of the oceans and the currents. Warmer

ocean water expels gases, some of which are CO₂. Solar radiation interferes with the cosmic ray flux, thus influencing the amount ionized nuclei which control cloud cover.

MYTH 6: THE UNITED NATIONS' INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC) HAS PROVEN THAT MAN-MADE CO₂ CAUSES GLOBAL WARMING

FACT: In a 1996 report by the UN on global warming, two statements were deleted from the final draft approved and accepted by a panel of scientists. Here they are:

- 1) “None of the studies cited above has shown clear evidence that we can attribute the observed climate changes to increases in greenhouse gases.”
- 2) “No study to date has positively attributed all or part of the climate change to man-made causes”

To the present day there is still no scientific proof that man-made CO₂ causes significant global warming.

MYTH 7: CO₂ IS A POLLUTANT.

FACT: This is absolutely not true. Nitrogen forms 80% of our atmosphere. We could not live in 100% nitrogen either. Carbon dioxide is no more a pollutant than nitrogen is. CO₂ is essential to life on earth. It is necessary for plant growth since increased CO₂ intake as a result of increased atmospheric concentration causes many trees and other plants to grow more vigorously. Unfortunately, the Canadian Government has included CO₂ with a number of truly toxic and noxious substances listed by the Environmental Protection Act, only as their means to politically control it.

MYTH 8: GLOBAL WARMING WILL CAUSE MORE STORMS AND OTHER WEATHER EXTREMES.

FACT: There is no scientific or statistical evidence whatsoever that supports such claims on a global scale. Regional variations may occur. Growing insurance and infrastructure repair costs, particularly in coastal areas, are sometimes claimed to be the result of increasing frequency and severity of storms, whereas in reality they are a function of increasing population density, escalating development value, and ever more media reporting.

MYTH 9: RECEDING GLACIERS AND THE CALVING OF ICE SHELVES ARE PROOF OF GLOBAL WARMING.

FACT: Glaciers have been receding and growing cyclically for hundreds of years. Recent glacier melting is a consequence of coming out of the very cool period of the Little Ice Age. Ice shelves have been breaking off for centuries. Scientists know of at least 33 periods of glaciers growing and then retreating. It's normal. Besides, changes to a glacier's extent are dependent as much on precipitation as on temperature.

MYTH 10: THE EARTH'S POLES ARE WARMING; POLAR ICE CAPS ARE BREAKING UP AND MELTING AND THE SEA LEVEL RISING.

FACT: The earth is variable. The Arctic Region had warmed from 1966 to 2005, due to cyclic events in the Pacific Ocean and soot from Asia darkening the ice, but there has been no warming since 2005. Current temperatures are the same as in 1943. The small Palmer Peninsula of Antarctica is getting warmer, while the main Antarctic continent is actually cooling. Ice cap thicknesses in both Greenland and Antarctica are increasing.

Sea level monitoring in the Pacific (Tuvalu) and Indian Oceans (Maldives) has shown no sign of any sea level rise

The Myths and Facts page is just one of 608 pages and articles on the Friends of Science website. It is just an introduction to the key points about climate change. For further information on climate science, use the left navigation menu item "Climate Science" which has 15 sections. This makes it easy to find the best articles on the topics that interest you. Example, "The Sun" section has 25 articles, the "Temperature History" section has 28 articles.

<http://www.friendsofscience.org/index.php?id=194>

Our most recent articles are;

<http://www.friendsofscience.org/index.php?id=393>

Friends of Science hosts luncheons featuring presentations from the world's top climate scientists (Journalist Donna Laframboise October 2012), issues press releases on current topics of interests, gives presentations to groups, submissions to governments and other outreach activities. We send climate science news and general interest climate news several times per month, and quarterly newsletters to our members.

<http://www.friendsofscience.org/index.php?id=605>

LOW ELEVATION TROPICAL ISLANDS HAVE GENERALLY NOT DECREASED IN SIZE WITH SEA LEVEL RISE BECAUSE THEY GROW WITH THE CORAL.

As sea level rises, more sand and coral rubble is added to the atoll by waves and wind. The result is that the atoll rises with the sea level.

Tide gauges show that there has been no sea level rise on Canada's West coast over the last 25 years, see graph [here](#)

GLACIAL & ICE CAP MELT – NORMAL

Glaciers have always been a source of fascination to people. So everybody thinks they can talk about them with some measure of understanding. A 2012 study estimates that glacier and ice cap melting has contributed 0.6 ± 0.2 mm/year to sea level rise. This is too small to justify any concern.

Some key parts of this understanding that are usually absent include:

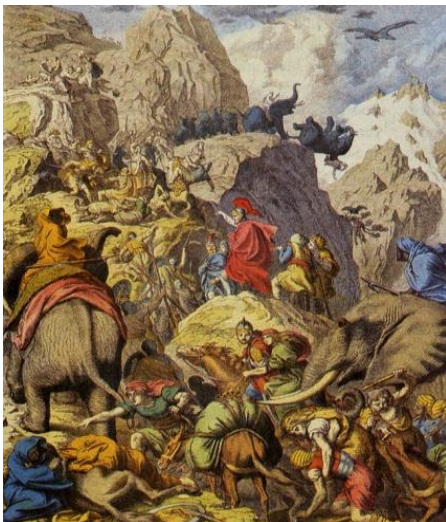
- glaciers are "living" things; they get fed at the top and excrete at the bottom. In the meantime they move downhill at "glacial speed" with spectacular icefalls and crevasses.
- The glacier's advance or retreat depends on the amount of snow precipitation. So a glacial retreat is as much a sign of drought as it is of temperature.
- Much of the arctic warming is due to black carbon (soot) from Asia, making ice darker. Soot likely account for 45 percent of the warming that has occurred in the Arctic during the last thirty years.
- Not much is happening to the 2 to >3 km thick ice cap that should worry us.

In the Antarctic, a strong circum-polar current erodes the shelves and the West-peninsula. A recent mass balance study shows that there has been some small losses from the peninsula and the western ice sheet and ice growth in the eastern ice sheet. The sea ice area anomaly around Antarctica has generally increased over the last 30 years, see graph [here](#).

* Mountain glaciers show a varied pattern of growth and retreat, which has historically been well-recorded in the Alps.

Across the world at present, some glaciers are growing, others are retreating. The retreating ones get most often reported.

Historical accounts are most often ignored; remember that Hannibal herded his elephants across the Alpine passes on his way to take Rome in 218 BC, at the beginning of the Roman Warm Period (~250 BC - 400 AD), one that may have been warmer than the Medieval Warm Period (MWP), let alone the current warm period.



ECONOMIES RUINED – MILLIONS FACING FUEL POVERTY DUE TO RESTRICTIVE ENERGY POLICIES AND WASTE OF RESOURCES ON CARBON REDUCTION SCHEMES

From an NPR-National Public Radio interview Jan 25, 2011 - Andrew Liveris, CEO of Dow Chemicals and author of "Make it in America" says "Well, I not only have high taxes, I have uncertain taxes. Right now, I have more regulations coming at me that are not fact-based, not science-based, not data-based... Energy policy - we've got lots of uncertainty in the energy policy regimen."



The cost of the California Cap and Trade scam is \$450 billion over 10 years. The cost of abating the 1 C° warming by measures as cost-ineffective as California's policies would be \$3,500 trillion, assuming 1 C climate sensitivity.



Britain plans to spend £250 billion on windmills and back-up generators by 2020 to reduce CO₂ emissions, but they cause more CO₂ emissions than electricity generation by gas-fired turbines only.



The wind power industry in Britain is costing over £1000 per year for every household. The number of households in fuel poverty in the UK is 6.3 million households, representing approximately 24% of all households.



In Germany from 2000 to 2007, wind power delivered only 17% of its rated capacity.



Biofuel policies caused 192,000 excess deaths from malnutrition and poverty in the developing world in 2010."

So, the first wheel falls off the global conspiracy on "man-made" climate change. The biofuels bubble has burst. The Gallagher Report has conceded that the drive to produce biofuels is driving up food prices. It admits that if the demented EU objective of servicing 10 per cent of transport with biofuel by 2020 is pursued, EU grain prices will rise by 15 per cent, sugar by 7 per cent and oil seed by 50 per cent , while 10.7 million people in India will be condemned to poverty. – Gerald Warner, The Telegraph July 7, 2008

EXTREME WEATHER AT AN ALL-TIME LOW

Contrary to alarmist hype reported in the main stream media, extreme weather events do not increase with warming.

Tropical hurricanes are powered by the sea surface temperature with the surrounding air uniformly warm and humid. Conventional storms outside of the tropics are powered by the temperature difference between colliding warm fronts and cold fronts. Greenhouse theory suggests that AGW should warm the Polar Regions the most resulting in a smaller temperature gradient and less powerful storms.

The sea surface temperature trend in the region of the storm path shows no warming trend since January 1935. The hurricane was not made more intense by a warming ocean. There was no warming. And it was not a hurricane when it made landfall. The post-tropical storm was strong due to colliding with a cold front from Canada. Cold air can't be blamed on global warming. See [here](#).

Scientists studying storm wind speed from 1951 to 2006 on the USA east coast found, "There was no clear trend in speed during the time period, although considerable season-to-season variability was present."

Studies of long term storminess show that storms were more intense during the Little Ice Age.

North American and global hurricane activity is near a 30-year low and is about 58% of the 1993 values. See graph [here](#).

The scientific evidence shows that there is currently less storminess than in cooler times, and that we should expect fewer and less intense storms with global warming

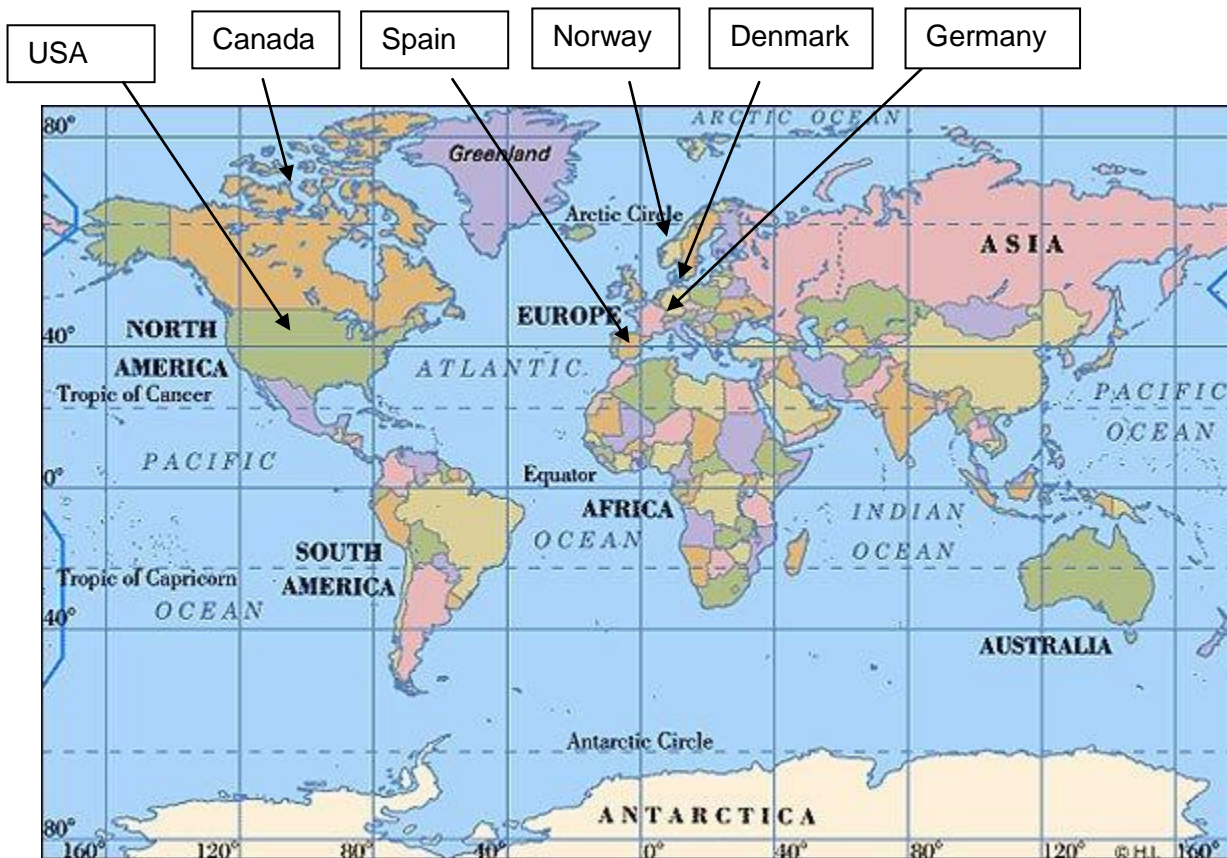
AND THEN THERE ARE THE UNEXPECTED NATURAL FORCES – VOLCANOES, OCEAN CURRENTS AND ATMOSPHERIC PRESSURE CENTERS



An amber sky reflects the ash after Mt. Tambora's blast in 1815 – resulting in 'The Year without Summer'.

WHAT DO GLOBAL CLIMATE CHANGE POLICIES MEAN TO CANADA AND ALBERTA

Canada is not Denmark, Germany, Norway, England or the US



Canada is the second largest country in the world, featuring sparse population, vast transportation challenges and a northern climate. Many of the policies discussed by tiny European countries with large, dense populations and access to French nuclear power are simply meaningless in the Canadian context and have no viable application.

Denmark is frequently cited as a model of renewable energy – yet Denmark (excluding Greenland) is just 43,094 km² and no location in Denmark is further from the coast than 52 km (32 mi) from the sea. Marine transport is the cheapest form of cargo freight.

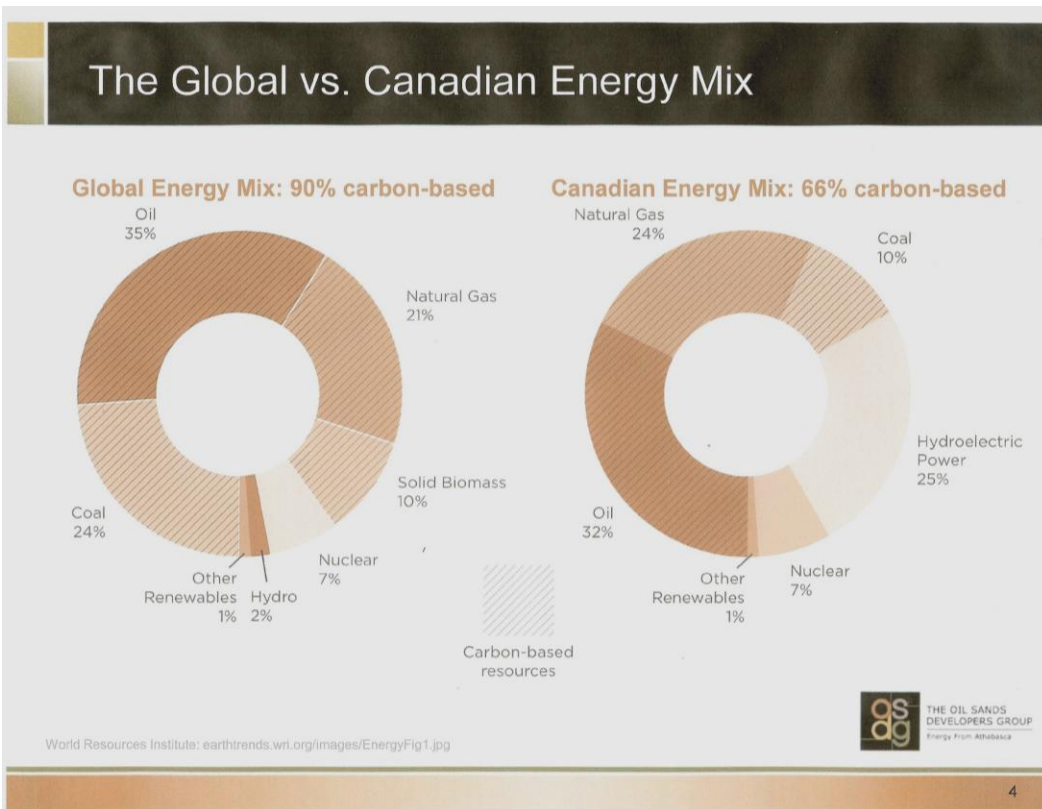
Canada is 9,984,670 km² and is some 5,591 km/3,000 miles across. Canada has fleets of semi-trailers, rail and airplanes delivering goods every day.

Consequently **there is no 'even-handed' climate change policy that can be applied to countries** with such vastly differing geographic, social, economic and industrial conditions – in particular the

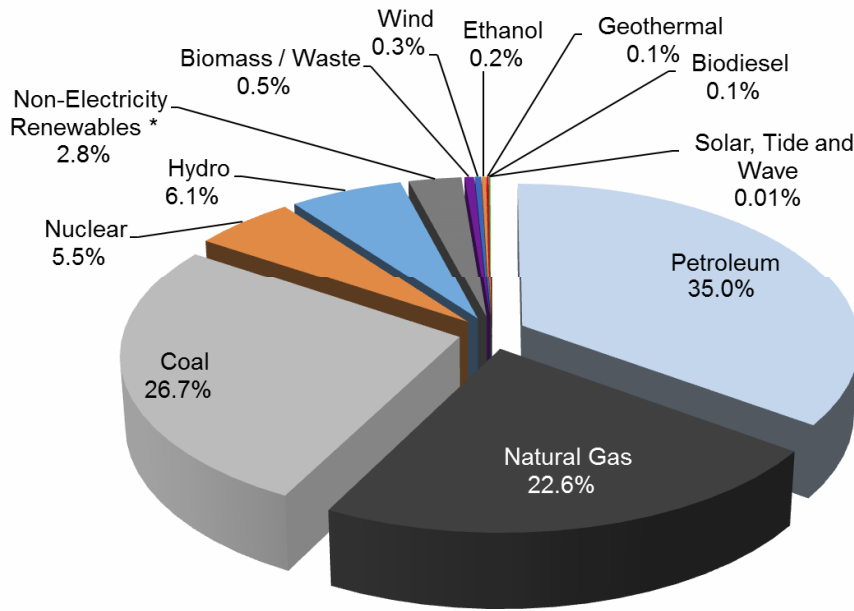
climate change emissions targets simply destroy industry, waste valuable human resources on tracking a 'carbon footprint' and do nothing for the environment.

Canadians and Albertans cannot afford to live with fuel poverty. Canadians have winter 6 months or more of the year and this nation needs reliable transportation of goods, services and people. As residents of a northern country, Canadians should not be punished with 'fuel poverty' by outsiders who will never face the challenge of long months of winter ranging from 0° C to -40 °C or more.

Despite our resource riches, Canada stands above most nations in terms of its energy source – not only are we rich in fossil fuels, we also have abundant hydro – meaning our energy mix is only 60% carbon based to begin with compared to 90% for the global average.

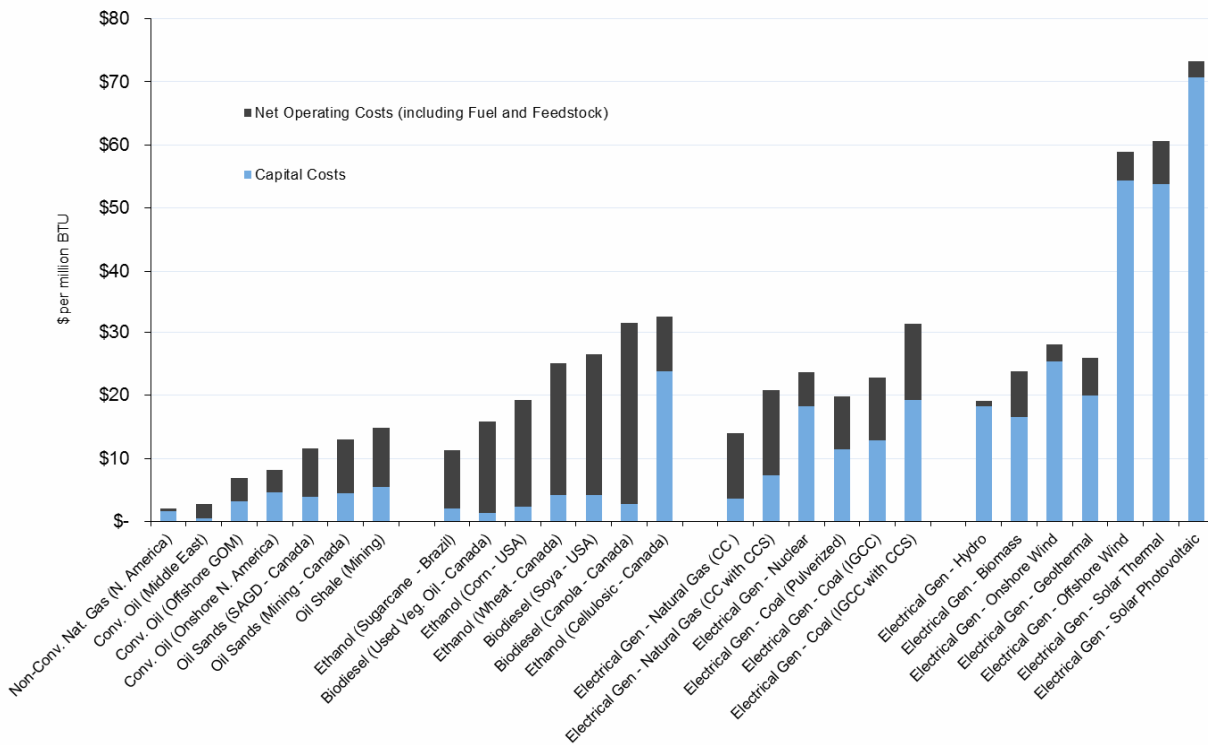


Global Energy Consumption by Source



THE ANSWER CAN'T BE A HEADLONG RUSH INTO 'RENEWABLE' ENERGY WHEN THOSE TECHNOLOGIES ARE SO UNRELIABLE AND EXPENSIVE – AND THE ACTUAL ENERGY GENERATED IS NOMINAL.

Total Cost of Energy (BTU) - Conventional and Alternative



Graphs: Alta Corp Capital January 2012

ADVOCATES FOR CLIMATE COMMON SENSE

The sun being the main driver of climate change, we can abandon Kyoto (as Canada has done) and dismantle the carbon trading markets and emissions reductions schemes of the past few decades.

These are wasting precious resources for no practical end.

Alternative energy options are in development around the world – and certainly some countries or some applications are ideally suited to take up part of the energy mix (i.e. solar panels or black Polyvinyl chloride (PVC) rooftop tanks for heating hot water tanks in sunny countries). Innovations in more energy efficient construction techniques continue to grow – from new polystyrofoam insulation to innovations in the age-old ‘straw-bale house’ – now constructed of pressed straw and fire-proofed.

Friends of Science advocate a calm and reasoned approach to energy use and the development of alternative energies. We advocate maintaining a strong Canadian economy and maximizing our resource development in environmentally qualitative ways – something that can only be done in countries where the economy is strong! Qualitative environmental management only happens in Western democracies where the finances exist to pay for reclamation and alternative energy innovation.

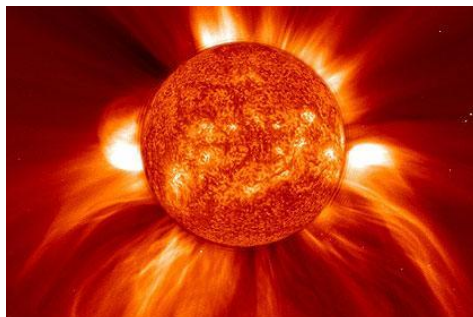
Canadians know more than most people of the world about adapting to inevitable climate change – global warming and cooling are historic facts of nature; the natural and scientific evidence is before our eyes.

**Common Sense must rule the day when it comes to climate talks.
Not hysteria. Not coercion. Not ‘damage aid’.
Not ‘green climate fund financing’ at the expense of our best
interests.**

SAVE THE PLANET FROM CLIMATE SCIENCE DOGMA.

The Sun is the main driver of climate change.

Not you. Not CO₂.





2003 – Friends of Science board meet to review and discuss peer-reviewed climate science papers.

ABOUT THE FRIENDS OF SCIENCE – BACKGROUND

Formed in 2002, Friends of Science Society is made up of mostly retired earth and atmospheric scientists, professional engineers and geologists. Over the past decade they have reviewed and compiled peer-reviewed papers on climate science. Based on their knowledge, research and the evidence, Friends of Science see the sun's solar cycles as the main drivers of climate change cycles, modified by various other natural forces like volcanoes, and ocean cycles like the North Atlantic Oscillation.

Like-minded citizens of all walks of life from around the world are members and supporters of the Friends of Science.

CHALLENGE THE 'CONSENSUS'

**THE SUN IS THE MAIN DRIVER OF CLIMATE
CHANGE.
NOT YOU. NOT CO2.**



Thank you for your thoughtful review of our position.

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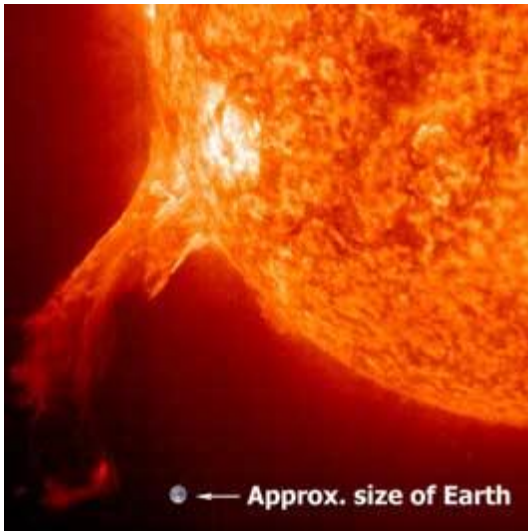
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<http://on.fb.me/xrOPC6>



ⁱ Notes:



1. Changes in solar activity correlates well with earth's temperature as shown in numerous studies. This [graph](#) shows a good correlation between 400 years of northern hemisphere temperatures and solar irradiance, which is used as a proxy for all solar changes. Note the low solar activity periods occurring during the Little Ice Age (Maunder Minimum 1645 to 1715 and the Dalton Minimum 1795 to 1825). Longer term, [here](#) is a correlation of a solar proxy to a temperature proxy for a period of 3000 years. See "Sun Activity Correlates with Temperature" [here](#).
2. Climate modellers have given up trying to match their models to the observations. They ignore that fact that there has been no warming for 15 years so their surface temperature projections greatly diverge from the measurements as shown [here](#). A primary reason the models fail is because they predict an enhanced warming rate in the upper atmosphere which does not appear in the measurements as shown [here](#) and [here](#). The latter graph shows the climate model temperature trends of the mid-troposphere, using 57 runs from 23 climate models, are four times larger than observations from satellites and weather balloons. Much of the earth's heat is stored in the oceans. The GISS climate model over estimates the ocean heat content warming trend of the top 700 m from 2003 by a factor of 6 compared to measurements from 3300 ARGO buoys as shown [here](#). The north to south pattern of climate change as measured by satellites bears no resemblance to the climate model projections. The climate model seas surface warming trend at the equator from 1982 is 6 times higher than that measured by satellites as shown [here](#). The graph [here](#) shows the northern hemisphere sea surface temperature measurements and the climate model hindcasts for the period 1910 to 1944. The actual temperature rise was 4.5 times greater than the modeled trend. The models cannot replicate the measurements because they do not include natural causes of climate change. See "Computer Models Fail" [here](#).
3. The UK's Daily Mail published a graph from the Met Office [here](#), showing no global warming for 16 years. The climate models assume that increasing temperatures would cause an increase in water vapour in the upper atmosphere, and fewer clouds, which would amplify the small direct warming effect from CO2. Radiosonde and satellite data shows that both of these assumptions are false. Upper atmosphere water vapour and clouds act to reduce the CO2-induced warming. See "Water Vapour Feedback" [here](#) and "Cloud feedback" [here](#).
4. The temperature and CO2 concentration history of the last 600 million years is shown [here](#). The Vostok ice core temperature record over the last 400,000 years is shown [here](#). The temperature history during the last 10,000 years is [here](#). See "Climate is Always Changing" [here](#).
5. An article [here](#) shows that wind power is a ludicrously inefficient and expensive way to generate electricity. A study of wind power in the Netherlands [here](#) shows that wind power cause extra fuel consumption instead of fuel saving, when compared to electricity production with modern high-efficiency gas turbines only. See "FoS Policies and Economics" [here](#).
6. The increase in CO2 emissions has caused increased crop yields and faster growing plants and forests, thereby greening the planet. Crop yields have increased about 16% due to more CO2. The chart [here](#) shows that a 50% increase in CO2 causes a 10% increase in wheat yields in wet conditions and a 23% increase in dry conditions. See "CO2 Greatly Increases Plant and Forest Growth" [here](#) and the FoS Climate Science>>CO2 and Plant Growth section [here](#).

7. A survey in 2011 shows that 6.3 million households in the United Kingdom, or 24% of all households were in fuel poverty due to rising energy costs, see [here](#). These households spend more than 10% of their incomes on home fuel use.
8. The US Government has spent \$79 billion from 1989 to 2009 on climate research and technology as shown [here](#). The 2010 budget request was 6.7 billion, see [here](#).
9. Donna Laframboise, author of “The Delinquent Teenager who was Mistaken for the World’s Top Climate Expert”, an exposé of the Intergovernmental Panel on Climate Change, presented her findings in Calgary at the Friends of Science 9th annual luncheon. Her presentation is [here](#). She finds that the 2007 IPCC report contains references to 5,587 non-peer-reviewed articles, including newspaper articles and Greenpeace propaganda documents. Two-thirds of chapters were authored by at least one scientist affiliated with the lobby group, The World Wildlife Fund.
10. The USA and the EU have instituted mandates and subsidies to stimulate the production of bio-fuels in a miss-guided effort to displace fossil fuels. The diversion of corn from food consumption to biofuels has increased food prices and poverty. A study [here](#) shows that biofuel production over 2004 level has resulted in 192,000 excess deaths from malnutrition and poverty in 2010 in developing countries. Ethanol added to gasoline reduces fuel efficiency. About 30% of the US corn crop is used to make ethanol, see [here](#). The mining of rare earth mineral used to manufacture the magnets for the wind turbines has caused an ecological catastrophe in northern China, see [here](#). Wind power has a huge land footprint because it is very dilute and intermittent. It requires extensive networks of roads, transmission lines and turbines. Wind turbines are very dangerous for the workers who must maintain them and for the public. Lumps of ice and broken blades get flung off them. One blade was flung into a house over 5 km away. Wind farm also deadly to bats and birds. Wind turbines at Altamont Pass, California were killing up to 4,000 birds annually, including over 1,000 raptors such as golden eagles, hawks, falcons and owls, see [here](#). Feed-in-tariffs in Ontario is costing consumers \$4 billion per year, with solar power costing 49 cents/kWhr, about 5 times the conventional rate, see [here](#).