

COSTLY MISINFORMED DIAGNOSIS

Coal-fired power plants keep Albertans from deadly fuel poverty.



Sept. 10, 2013

Rebutting the Health and Climate Claims in
"Costly Diagnosis" by the Pembina Institute

Heat-or-eat fuel poverty: *There are people dying, maybe more people die each year [of fuel poverty] than on the roads"*

Prof John Hills, UK <http://eprints.lse.ac.uk/39270/1/CASEReport69%28Isero%29.pdf>

@ Friends of Science Society 2013

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Costly Misinformed Diagnosis

CONTENTS

EXECUTIVE SUMMARY..... 4

A REPORT DESIGNED TO SCARE..... 6

 Pembina Institute Claimed Hundreds Die from Coal Use in Alberta and it Costs \$300 Million in Health Care Annually - McKittrick in Disbelief 8

PREMISED ON OUTDATED CLIMATE CHANGE FEARS 9

 No Global Warming Since 1997 – Despite a Rise in CO2 9

HOW MUCH CARBON DIOXIDE IS IN THE ATMOSPHERE? 13

MORE DEADLY & COSTLY CONSEQUENCES TO TAKING PEMBINA INSTITUTE’S ADVICE. 13

SHUTTING COAL PLANTS WILL CAUSE FUEL POVERTY...DEATHS AND INCREASED HEALTH AND SOCIAL COSTS..... 14

TO HEAT OR EAT: EUROPE’S FAILED CLIMATE POLICIES 15

 “My main aim is to warn Canadians about the European fiasco & its disastrous economic & societal consequences.” Dr. Benny Peiser 15

DR. PEISER EXPLAINED THAT FUEL POVERTY HAD HIT ACROSS THE EU..... 16

WHAT BEGAN AS CONSENSUS HAS ENDED IN CATASTROPHE..... 18

U.K. CITIZENS FACE INCREASING FUEL POVERTY..... 18

PROFESSOR HILLS’ RESEARCH..... 19

“FUEL POVERTY: THE PROBLEM AND ITS MEASUREMENT” 19

KEY FINDINGS: 19

GERMANY IS BUILDING 26 COAL PLANTS – WHY?..... 20

GLOBAL WARMING AND CLIMATE CHANGE – SCIENTIFIC EVIDENCE TABLED IN THE LEGISLATURE 24

GLOBAL WARMING SCARE BASED ON COMPUTER MODELS –..... 25

NOT RECORDED TEMPERATURES 25

ALBERTA NEEDS COAL AND GAS-FIRED PLANTS TO FACE A MORE LIKELY THREAT OF SOLAR HIBERNATION AND DROP IN TEMPERATURE..... 26

COAL PROVIDES RELIABLE, SAFE, COST-EFFICIENT POWER 27

SHOULD ALBERTA ACT ON SCIENTIFIC EXPERTISE OR ECO-ACTIVISM? 27

PEMBINA’S RECORD OF PERFORMANCE: 27

CAPE – CANADIAN ASSOC. OF PHYSICIANS FOR THE ENVIRONMENT..... 27

FURTHER PEMBINA INSTITUTE RECOMMENDATIONS TO REVIEW: 28

POSSIBLE CONFLICT OF INTEREST 28

CARBON RISKS AND E-S-G RATINGS THROUGH THE VOLUNTARY CARBON DISCLOSURE METHODS HAVE SKEWED THE INVESTMENT MARKET 29

BIG CARBON FOOTPRINT? 29

BUY SOME RENEWABLE ENERGY CERTIFICATES..... 29

FROM YOUR ACCOUNTING FIRM OR ...PEMBINA INSTITUTE..... 29

PEMBINA INSTITUTE AND BLUEARTH RENEWABLES 31

THE GLOBAL CARBON MARKET IS MASSIVE..... 32

WOULD LESS COAL AND MORE WIND POWER DAMAGE ALBERTA?..... 33

WIND – NOT SO CLEAN, GREEN OR FREE..... 34

IN SUMMARY 35

EXECUTIVE SUMMARY

Friends of Science have produced the report "Costly Misinformed Diagnosis" to rebut the misleading health and climate claims made in "Costly Diagnosis" - a report by the Pembina Institute which was released March 26, 2013.

The Pembina Institute report called for the early closure of coal plants in Alberta, claiming that hundreds die from coal and that \$300 million in health costs are caused by the use of coal.

At a recent forum on the matter June 10, 2013 in Calgary, **Redford government MLA Donna Kennedy-Glans** stated that when the "Costly Diagnosis" report came out, it "*caused quite a stir in our department.*"

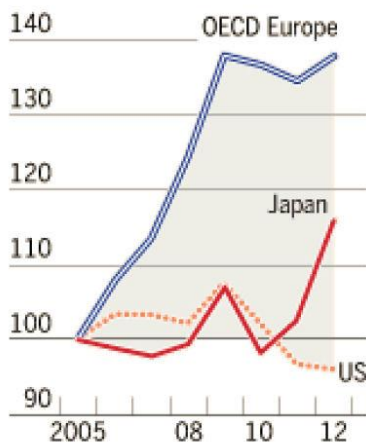
Upon a detailed review of the document, Friends of Science found that certain facts concerning coal were negatively misrepresented by the Pembina Institute. Pembina claimed coal-fired plants contributed 6% of all man-made particulate matter (PM 2.5) in Alberta. **In fact, coal-fired plants only contribute 0.4% of man-made PM 2.5 in Alberta during 2011**

Prof. Ross McKittrick, a world renowned economist evaluated the Pembina claims against StatsCan data. According to McKittrick, in Alberta, [coal-fired power plants generated](#) 1800 tonnes of fine particulate emissions in 2011. McKittrick found Pembina's modeling of deaths to be "...implausible, to say the least."

Friends of Science report "Costly Misinformed Diagnosis" deconstructs the Pembina Institute's misrepresentative claims. Friends of Science show that the health risks of high energy prices due to 'renewables' has greater health risks, evidenced in Britain and the EU where thousands have died due to 'heat-or-eat' fuel poverty.

Electricity prices

Rebased (2005 = 100)



Source: European Commission

Information from Dr. Benny Peiser, Director of the Global Warming Policy Foundation, UK and guest speaker of Friends of Science 10th Annual Luncheon May 14, 2013, provides insight into the terrible human suffering "**To Heat or Eat: Europe's Climate Policy Fiasco.**" In the EU, electricity prices have spiked to 37% higher than US par in 2005.

This material is supported with evidence from Professor Hill's study of the UK's fuel poverty's impacts which include fuel poverty's serious adverse human health implications, mental health trauma, stress, stunting of adolescent physical and emotional growth, isolation and death in the elderly, very young or infirm. **A million deaths in the UK have been blamed on fuel poverty;** thanks to the 'rush to renewables' that spiked energy prices. A main target in that rush was shutting cost-efficient, reliable coal plants.

Further, the Pembina Institute’s report is premised on shutting coal plants to ‘save the planet’ from global warming. Friends of Science provide evidence that global warming stopped 16 years ago and that Alberta coal plants offer reliable, safe, and inexpensive power production.

The Alberta government should reject the Pembina Institute’s “Costly Diagnosis” report for its misrepresentations and the inherent conflicts of interests of the Pembina Institute and its associations and links with TIDES Canada Initiatives “Clean Energy Canada.”

Solar scientists predict an imminent, long-term cooling in temperatures, as solar patterns parallel those prior a 500 year time of cold weather – consequently coal-fired plants will be a safe and more reliable form of energy for Albertans.

Friends of Science ask the Alberta government and federal authorities to maintain reliable, cost-efficient coal operations in Alberta.

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# Costly Misinformed Diagnosis

## REBUTTING THE HEALTH AND CLIMATE CLAIMS IN "COSTLY DIAGNOSIS" BY THE PEMBINA INSTITUTE

A REPORT DESIGNED TO SCARE

At a recent forum on the matter June 10, 2013 in Calgary, Redford government MLA Donna Kennedy-Glans stated that when the "Costly Diagnosis" report came out, it *"caused quite a stir in our department."*

"Costly Diagnosis" is a report released in March 2013, written by the Pembina Institute, making the plea for early shut-down of coal plants in Alberta.

Signatories included the Asthma Society of Canada, the Lung Association of Alberta, Canadian Physicians for the Environment (CAPE) an organization funded by TIDES Canada. TIDES Canada Initiatives is promoting a "Clean Energy Canada" program, attempting to influence the energy agenda in Canada from fossil fuels to 'clean' energy and renewables.

### PEMBINA CALLED FOR EARLY SHUT-DOWN OF COAL PLANTS IN ALBERTA

Pembina Institute's report been calls for the early shut-down of coal fired generators in Alberta. The Pembina Institute recently released a report "Costly Diagnosis" in which they claimed that Alberta coal-fired generators were causing deaths, asthma and millions of dollars in medical costs. Pembina claimed coal-fired plants contributed 6% of all man-made particulate matter (PM 2.5) in Alberta.

In fact, coal-fired plants only contribute 0.4% of man-made PM 2.5 in Alberta during 2011. There was a significant misrepresentation by Pembina Institute.

**Friends of Science** asked Dr. Ross McKittrick, world-renowned economist of the University of Guelph to review the Environment Canada information.

The data [here](#) shows that coal-fired plants in Alberta emitted 1,800 tonnes.

The total man-made emissions were **400,600 tonnes**.

**Pembina Institute omitted 369,500 tonnes of the man-made particulate emissions from their calculation.**

The major omissions were:

|              |                |
|--------------|----------------|
| Roads        | 223,100 tonnes |
| Construction | 129,900 tonnes |
| Agriculture  | 15,300 tonnes  |

**How can the Pembina Institute not consider driving on roads, construction and agriculture human activities?**

Clearly, there is a very large discrepancy between what the Pembina Institute reported and what Environment Canada actually reported. **Even residential fireplace PM 2.5 emissions of 3,400 tonnes are twice that of coal-fired power plants.**





## Pembina Institute Claimed Hundreds Die from Coal Use in Alberta and it Costs \$300 Million in Health Care Annually - McKitrick in Disbelief



Regarding the statistical health risks of coal as reported by Pembina, Friends of Science turned to expert economist [Dr. Ross McKitrick](#).

Ross McKitrick is a Professor of Economics at the University of Guelph where he specializes in environmental economics. He has published many studies on the economic analysis of pollution policy, economic growth and air pollution trends, climate policy options, the measurement of global warming, and statistical methods in paleoclimatology. His book *Economic Analysis of Environmental Policy* was published by the University of Toronto Press in 2010. He has also published numerous invited book chapters, newspaper and magazine essays and think tank reports. In 2003 his (coauthored) book *Taken By Storm: The Troubled Science, Policy and Politics of Global Warming* won the \$10,000 Donner Prize for the best book on Canadian Public Policy. Professor McKitrick has made invited academic presentations around the world and has testified before the US Congress and the Canadian Parliamentary Finance and Environment Committees. In 2006 he was one of 12 experts from around the world asked to brief a panel of the US National Academy of Sciences on paleoclimate reconstruction methodology.

"These are modeling studies," says Dr. McKitrick. "They don't track actual individuals. Before using such model predictions you need to ask if the numbers make sense, and here is where the problems start to arise."

According to McKitrick, in Alberta, [coal-fired power plants generated](#) 1800 tonnes of fine particulate emissions in 2011.

"It appears the Pembina clean-energy activists are attributing 1 death for every 18 tonnes," says McKitrick. "That same year in Alberta there were 3400 tonnes of fine particulate emissions from residential fireplaces, 7,000 tonnes from forest fires and 209,000 tonnes from driving on unpaved roads."

"So by their reasoning these sources caused about 12,200 deaths. Since there were only about 22,000 deaths from all causes in Alberta in 2011, the Pembina model attributes over half the annual deaths in the province to airborne fine particulates."

**"I find this implausible, to say the least," says McKitrick.**

## PREMISED ON OUTDATED CLIMATE CHANGE FEARS

"Costly Diagnosis" Foreward .... "In the year 2000, I introduced a course for undergraduate medical students called Ecosystem Health. .... The course outlined how the earth had warmed considerably over the past 30 years and that this warming is not a "normal fluctuation" in earth temperatures. Carbon dioxide levels had increased markedly and the theory was and is that this "greenhouse gas" would lead to a hotter earth... How do Canadians begin to save the world? We begin where we can win and make a big difference in reducing our carbon footprint. The abolition of coal in power generation is the one place to begin. "

John Howard, MD, FRCPC

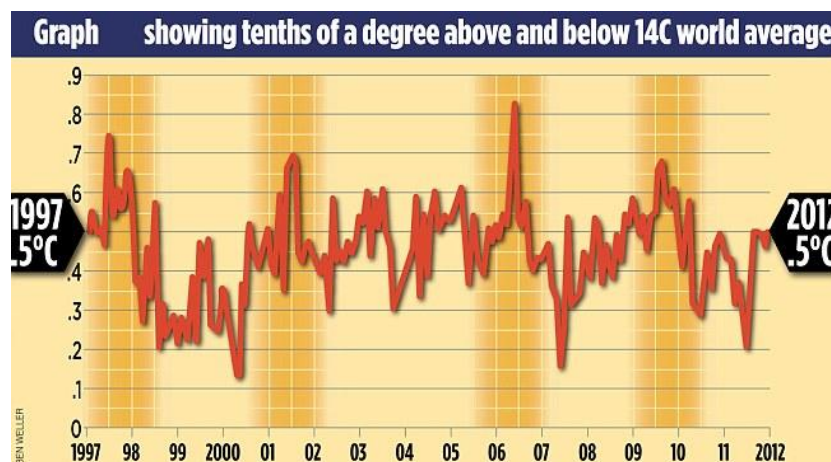
Chair, Canadian Association of Physicians for the Environment (CAPE)

Professor of Paediatrics and Medicine, Schulich School of Medicine, London, Ontario, Canada

### No Global Warming Since 1997 – Despite a Rise in CO2

Friends of Science are experts in climate science. The core group is made up of earth and atmospheric scientists who are members of provincial, federal and international professional science organizations. Based on scientific evidence, the sun is the main driver of climate change, not CO2.

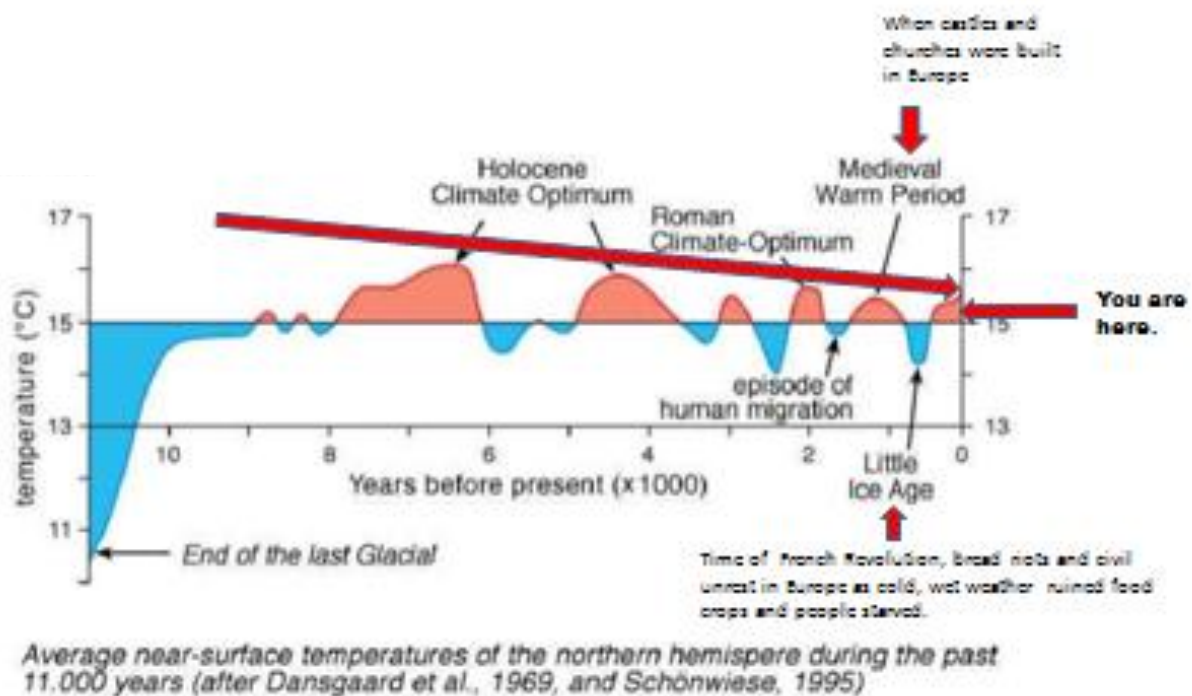
As reported by the Daily Mail in England on Oct. 13, 2012, the Met Office of the Hadley ... issued a report showing there has been **no global warming in 16 years**. Global warming had stopped for two years at the time Dr. Howard introduced his course on global warming and carbon dioxide.



<http://www.dailymail.co.uk/sciencetech/article-2217286/Global-warming-stopped-16-years-ago-reveals-Met-Office-report-quietly-released--chart-prove-it.html>

EARTH IS IN A GEOLOGIC COOLING TREND – RECENT CHANGES WITHIN NORMS

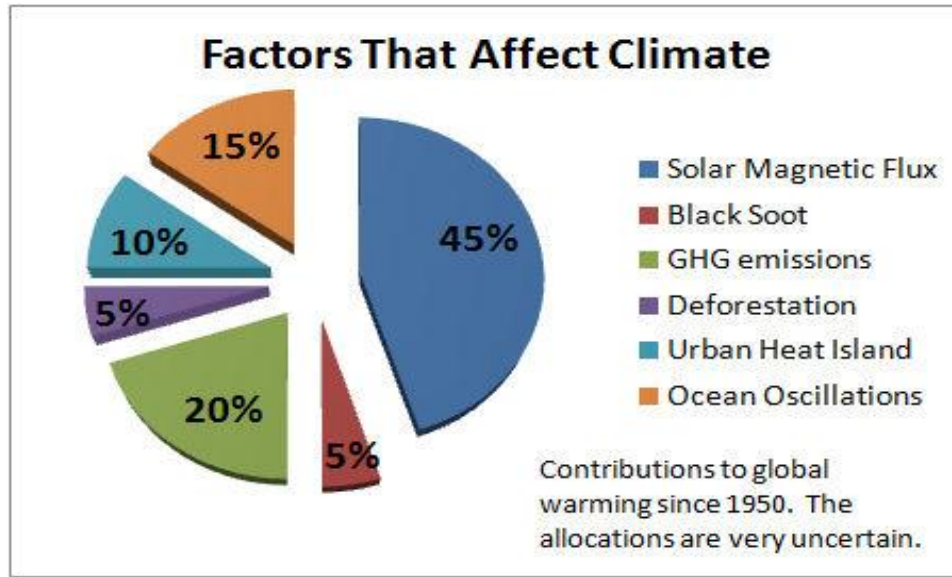
## Geologically, Earth is in a Cooling Trend



IPCC – Intergovernmental Panel on Climate Change evaluates the human-caused factors of climate change. The impact of the changing solar magnetic fields and cycles are not an integral part of IPCC climate analysis, yet most experts in this area find that climate change is **most** affected by the Sun – in other words, despite Dr. Howard’s desire for Canada to “save the world” by shutting down coal-fired plants, this will not have any significant effect.

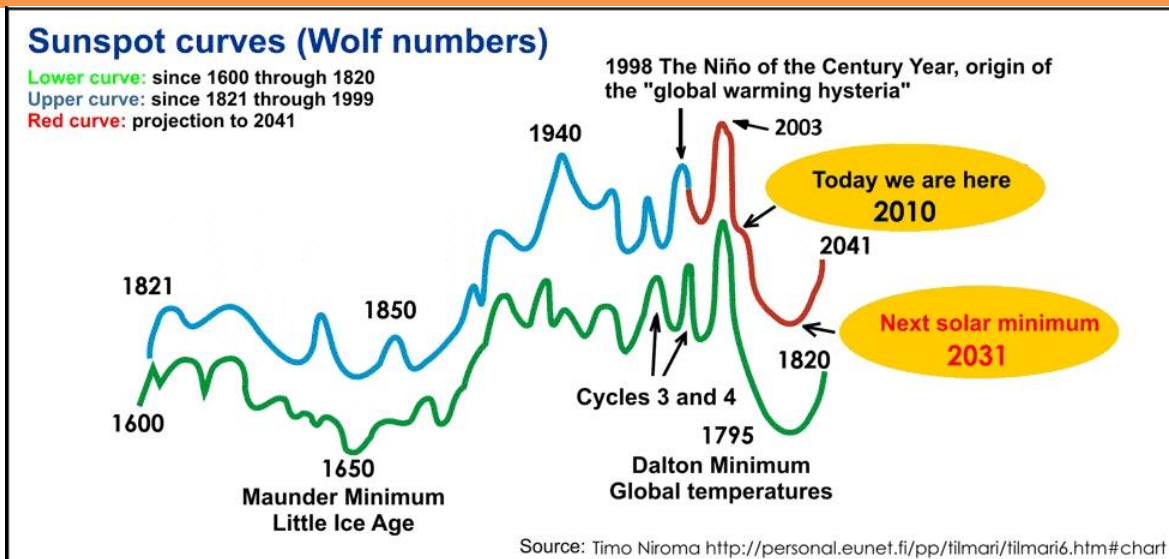
In any event, CO2 is a minor factor in climate change.

FACTORS THAT AFFECT CLIMATE CHANGE



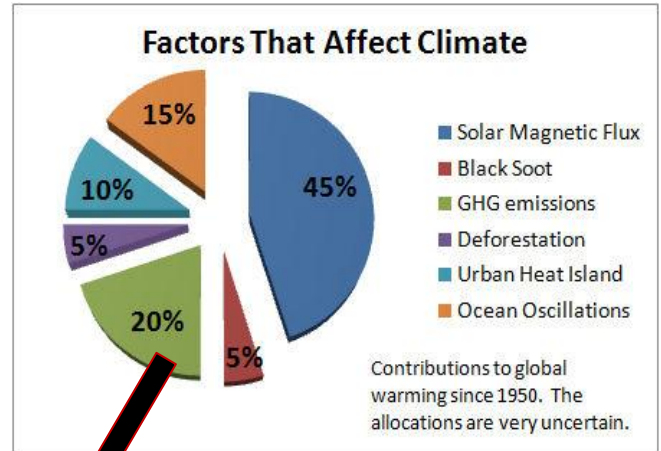
IPCC claims AGW causes 93% of last half 20<sup>th</sup> century warming, and predicts that double CO<sub>2</sub> causes 3 deg. C temperature rise. Actual data shows double CO<sub>2</sub> causes about 0.6 deg. C. Therefore, CO<sub>2</sub> cause 19%, GHG = 20%. UHI+Deforestation = 50% reported warming over land X 30% land fraction = 15%

VARIATIONS IN SOLAR ACTIVITY ARE SHOWN TO MIMIC CLIMATE HISTORICALLY AND CYCLICALLY



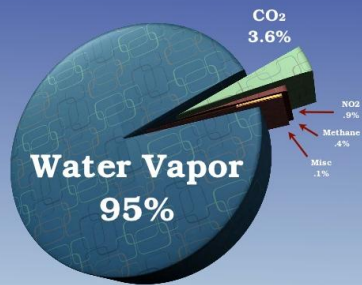
WATER VAPOR IS THE MOST IMPORTANT GREENHOUSE GAS – NOT CO2

*Water vapor is the most important greenhouse gas (GHG). CO2 makes agriculture more productive. CO2 is not a toxin.*



CO2 in Perspective —

What Are The Greenhouse Gases?



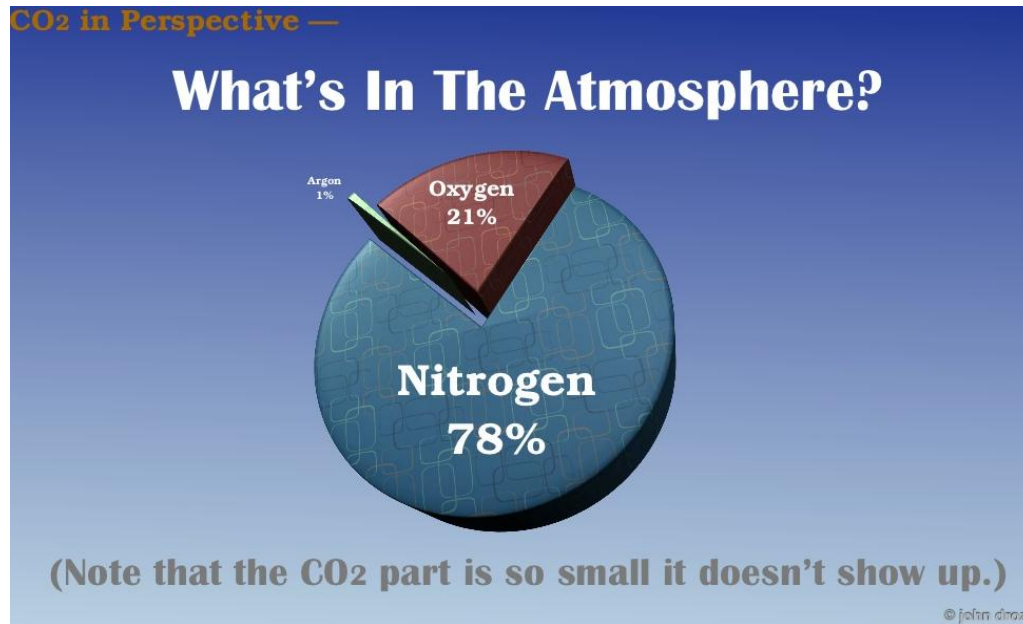
*Carbon dioxide (CO2) is a tiny part of the greenhouse gases on earth.*

Recent research has revealed that water vapor is the 'wild card' of global warming. Instead of increased CO2 warming the planet, the decreasing water vapor in the upper atmosphere of earth has led to a reduction in the theorized impact of carbon dioxide – CO2. It does not warm the upper atmosphere as expected, thus meaning that the greenhouse effect is much reduced.

Friends of Science director Ken Gregory has written a detailed paper on this phenomenon available [here](#).



## HOW MUCH CARBON DIOXIDE IS IN THE ATMOSPHERE?



Carbon dioxide is about 0.04% of the atmosphere or 4 molecules in 10,000. It does influence climate, but probably by only a fifth as much as suggested by the IPCC reports.

Consequently, Friends of Science dispute the Pembina Institute's claim that shutting coal-fired power generation plants in Alberta will in anyway contribute to a reduction in 'global warming' – which stopped in 1998.

**HOWEVER, THERE WILL BE OTHER MORE DEADLY AND COSTLY CONSEQUENCES TO TAKING PEMBINA INSTITUTE'S ADVICE.**

**JUST ASK THE UK AND EU.**

**Friends of Science did.**

TO HEAT OR EAT...

SHUTTING COAL PLANTS WILL CAUSE FUEL POVERTY...DEATHS AND INCREASED HEALTH AND SOCIAL COSTS

From a health and well-being perspective: living at low temperatures as a result of fuel poverty is likely to be a significant contributor not just to the excess winter deaths that occur each year (a total of 27,000 each year over the last decade in England and Wales), but to a much larger number of incidents of ill-health and demands on the National Health Service and a wider range of problems of social isolation and poor outcomes for young people. Prof. John Hills

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/48297/4662-getting-measure-fuel-pov-final-hills-rpt.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48297/4662-getting-measure-fuel-pov-final-hills-rpt.pdf)

On May 14, 2013 Dr. Benny Peiser of the UK Global Warming Policy Foundation addressed a crowd of some 200 people at Calgary's Metropolitan Center as guest speaker at the Friends of Science 10<sup>th</sup> Annual Luncheon.

The topic was "To Heat or Eat: Europe's Failed Climate Policies."

**"Celebrating 10 years of climate science insight"**

**The 10<sup>th</sup> Annual Friends of Science Luncheon**  
**To Heat or Eat: Europe's Climate Policy Fiasco**

**Featuring:**  
**Dr. Benny Peiser**  
 Author & Director of The Global Warming Policy Foundation, UK

*"My main aim is to warn Canadians about the European fiasco & its disastrous economic & social consequences."*

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## TO HEAT OR EAT: EUROPE'S FAILED CLIMATE POLICIES



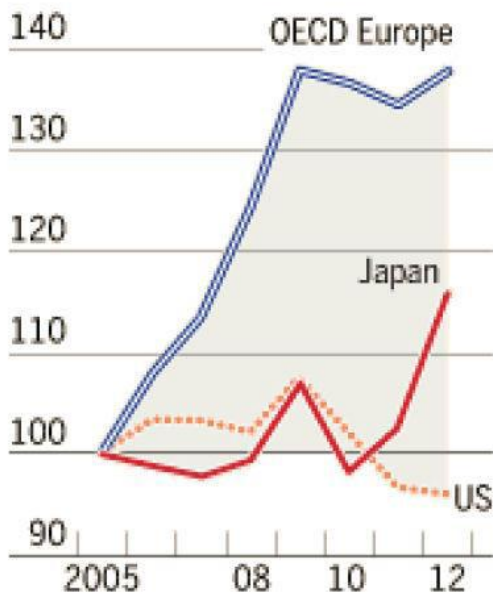
Dr Benny Peiser is the director of the Global Warming Policy Foundation (GWPF), an all-party and non-party European think tank based in London and chaired by Lord Lawson. He is the founder and editor (since 1997) of CCNet, the world's leading climate policy network and one of Europe's most influential climate policy analysts."

"My main aim is to warn Canadians about the European fiasco & its disastrous economic & societal consequences." Dr. Benny Peiser

<http://www.friendsofscience.org/index.php?id=653>

### Electricity prices

Rebased (2005 = 100)



Source: European Commission

SKYROCKETING ENERGY PRICES HAVE SENT UK AND EU TAXPAYERS INTO HEAT OR EAT POVERTY.

In Europe climate change policies are being abandoned; Germany has 26 coal plants in development; Spain is taxing renewable energy companies; EU countries are slashing subsidies for renewables. Energy prices in the EU have risen so high due to green policies that industry is fleeing.



## DR. PEISER EXPLAINED THAT FUEL POVERTY HAD HIT ACROSS THE EU



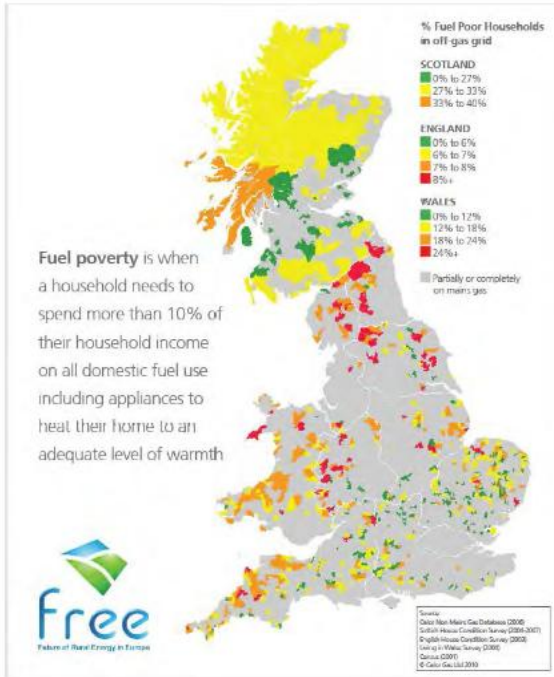
## EXCERPTS OF DR. PEISER'S SLIDE PRESENTATION FOLLOW

### Energy Poverty In Green Europe



Citizens of the most advanced civilizations on earth were reduced to scavenging in forests and carelessly clear cutting whatever wood they found to keep warm.

# UK Fuel Poverty



Fuel poverty is when a household needs to spend more than 10% of their household income on all domestic fuel use including appliances to heat their home to an adequate level of warmth

## 'National crisis': As many as 9 million families will be in fuel poverty by 2016

Advertorial Follow Wednesday, February 06, 2013

**Advertisement Feature**  
Unless the government acts quickly, the number of families in fuel poverty could increase by as much as 50% by 2016.

**METRO** News Sport Gully Pleasures Ents & Tech Life & Style  
UK World Weird Money

## Pensioners burn books for warmth

Tuesday 5 Jan 2010 0:12 GMT  
Share 1 Like

Hard-up pensioners have resorted to buying books from charity shops and burning them to keep warm.



Volunteers have reported that a large number of elderly customers are snapping up hardbacks as cheap fuel for their fires and stoves.  
Temperatures this week are forecast to plummet as low as -19°C in the Scottish Highlands, with the mercury falling to -17°C in London, -9°C in Birmingham and -7°C in Manchester as one of the coldest winters in years continues to bite.  
Workers at one charity shop in Swansea, in south Wales, described how the most vulnerable shoppers were seeking out thick books such as encyclopedias for a few pence because they were cheaper than coal.

By Miles Er  
What's  
Police warn of  
hopscotch gr

# The Telegraph

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HOME » NEWS » UK NEWS


## Half a million pensioners spend Christmas in bed

Half a million pensioners were thought to have spent Christmas in bed to keep warm, new figures have disclosed, as it emerged that more than a million are missing out on cold weather payments.



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## U.K. CITIZENS FACE INCREASING FUEL POVERTY

Posted October 18, 2011 |  [Print this page](#)

Fuel poverty in the United Kingdom is defined to be when a household spends 10 percent or more of median household income on energy for heating, hot water, lights, and appliances. According to official UK government figures, [one in five households](#) (5.5 million households) was affected by fuel poverty in 2009.[i] While the 2010 figure is expected to remain the same, the 2011 figure could be as much as one million households higher. Further, predictions indicate that the [average UK household could face fuel poverty by 2015](#).

One of the major factors behind increasing fuel poverty in the UK is government policies instituted to meet carbon stabilization targets, the most aggressive in the world. Britain has a legally binding carbon dioxide reduction target of [80 percent of 1990 levels by 2050](#). As a result of current measures and increasing fuel prices, industrial electricity prices in the UK are already among the highest of any industrialized country in the world.[ii] <sup>1</sup> *Excerpt from Institute for Energy Research, Washington, DC*

## WHAT BEGAN AS CONSENSUS HAS ENDED IN CATASTROPHE.

Climate Change Act 2008



Climate Change Act  
2008  
2008 CHAPTER 27

**Introduced by Labour Government and supported by**

- Conservative Party
- Liberal Democrats
- Scottish National Party
- Democratic Unionist Party
- 50 green NGOs
- Confederation of British Industry
- Trades Unions
- **Only 5 MPs voted against the Act**

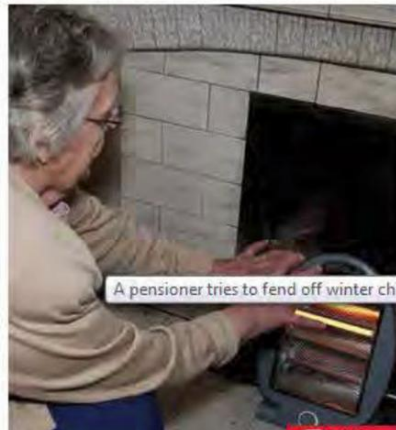
January 2013

Global Warming Policy Foundation

36

### NEWS

## 1M BRITS DEAD IN WINTER SCANDAL



A pensioner tries to fend off winter chills

3rd March 2013

By Alastair Grant

WINTER weather has killed a million Brits since the 1980s and will kill a million more by 2050, experts have warned.

Age support groups and doctors blame poor housing, high energy bills and pensioner poverty.

Many killed by the cold are elderly but the ill, vulnerable and very young also die.

A total of 973,000 people died due to winter weather from 1982/83 to 2011/12, Office of National Statistics data for England and Wales shows.

## PROFESSOR HILLS' RESEARCH

### "FUEL POVERTY: THE PROBLEM AND ITS MEASUREMENT"

#### KEY FINDINGS:

Key elements in the evidence include:

- There are specific health consequences of exposure to low temperatures and the drivers of fuel poverty are significant factors in determining the temperatures at which individuals live (Sections 2.5 and 3.2). **Health impacts caused by exposure to cold tend to relate to cardiovascular and respiratory problems** at temperatures below 12°C and 16°C respectively. Low temperatures are also associated with **diminished resistance to infections and the incidence of damp and mould in the home** (which are also associated with lower standards of energy efficiency). These effects are most important for the **youngest children and increase for the most elderly**.
- Most dramatically, the UK has a higher rate of '**excess winter deaths**' than other countries with colder climates (Section 3.3). While the number in England and Wales has fallen from around 40,000 per year in the 1970s to **around 27,000 per year in the last decade, this is comparable to more than ten times the number of transport-related deaths in 2009**.
- There is clear evidence of an **increased risk of cardiovascular-related death** following days when the maximum outdoor temperature falls below 20°C. Low indoor temperatures appear only to be part of the explanation, however. Expert opinion suggests that around **half of excess winter deaths may be attributable to indoor temperatures**

This problem is significantly greater for those living in the coldest quarter of homes than those in the warmest quarter of homes. Using this difference, recent analysis attributes about a fifth of excess winter deaths to living in cold homes. Even if only half of this is due to fuel poverty, that would still mean 2,700 deaths - more than the number who die on the roads - every year.

- Beyond each premature death, there will be **many more health-related incidents** and associated costs to the NHS.

Beyond physical health, the evidence we review suggests:

- There is a link between **low temperatures and poor mental health**, with those living at low temperatures more likely to be **stressed and subject to common mental disorders** (Section 3.4). The direction of causation is unclear, however.



- **Social isolation** amongst adults is associated with cold homes, while there appears to some association between cold homes, **truancy, negative impacts on educational attainment and risk of anti-social behaviour amongst adolescents** (Section 3.5).
- People with hard to heat properties may trade off other necessities to keep warm, at the most dramatic **facing a choice of 'heat or eat'** (with some evidence of reduced food spending at times of the very lowest temperatures by pensioners with the lowest incomes; see Sections 2.5 and 3.7).

All of these problems are very good reasons for trying to ensure that people can and do keep warm.

(Excerpt of Executive Summary of "Fuel Poverty: The Problem and its Measurement")

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## GERMANY IS BUILDING 26 COAL PLANTS – WHY?

Often touted as the green leader of European Climate Change, Dr. Peiser's presentation revealed that **Germany is going back to coal.**

Why?

The EU carbon market collapsed in the spring of 2013.

The carbon 'risk' factor of coal went from 34.90 euro per carbon unit in 2008 to just 3 euro in the spring of 2013.

Germany is burning 'brown coal' – said to be the more 'polluting' kind.

In a health conscious country like Germany, if coal use were a significant risk to human health, do you think they would be going back to coal? Is it health....or carbon risk that is the main factor in shutting down coal plants.

Carbon risk and the penalties and subsidies imposed because of it are the reason UK and EU citizens have been pushed into fuel poverty, not health concerns.

**Therefore, Alberta – a northern climate filled with modern industry – must maintain a reliable power grid.** Coal and natural gas are the answers for Alberta. Coal is the cheapest alternative – Alberta has lots of it, and we also have excellent, continuous improvement in coal operations and emissions reduction.

### Coal...or Wind Power...Exacerbate Asthma?

Since 2005 all coal fired power plants have used powdered coal technology which provides higher temperature and higher efficiency and as well prevents particulate matter emissions resulting in all coal fired power plants not only meeting but far exceeding Alberta air quality regulations.

Alberta coal fired power plants also have scrubbers and various other pollution control technologies in place. Ironically, increases in asthma in Alberta appear to correlate well with the institution of wind power in Alberta. Given the high particulate matter released by large farming operation here (often several sections (640 acres each) of cultivation) on dry prairie soil, compared to the small 45-100 acre farms in the rocky Canadian Shield soil of Ontario, it makes sense that wind turbines could only exacerbate airborne particulate matter in Alberta...and affect asthma sufferers.

Alberta was the first off the block with commercial wind farm back in 1993. For reasons of testing and developing possible new energy technologies, wind power did not come into prevalence as an alternate energy source based on climate change before 2005 and there was an increase in asthma after 2005.



BATTLE RIVER, ALBERTA

**PEMBINA'S COSTLY DIAGNOSIS HIGHLIGHTS MERCURY – ROSS MCKITRICK POINTS TO COMPACT FLUORESCENT LIGHTS**

**Alberta's coal plants do produce mercury.** Mercury can bio-accumulate in the food chain, is potentially toxic to humans and wildlife, can occur naturally and be transported by rainfall and dust clouds. An estimated 60 per cent of mercury entering the ecosystem globally comes from man-made sources. However, where are those man-made sources located?

Sources of man-made mercury emissions

- Asia– more than half of 7,000 tonnes
- Western Europe 500 tonnes
- North America 250 tonnes
- **Canada 4 tonnes.** Source: Environment Canada [2011](#)

**A cause-and-effect relationship between specific mercury emissions sources and mercury accumulation in one location has not been conclusively established.**

<http://environment.alberta.ca/documents/mercuryEmissionsFactsheet2005.pdf>

Since the 1970s, Canada has made significant [progress](#) in reducing domestic sources of anthropogenic mercury by approximately 90%. However, trans-boundary flows of mercury emissions are rising and now account for over 95% of mercury deposits in Canada according to Environment Canada. The eight coal-fired power plants in Alberta emitted 216 kg of mercury in 2011 according the [Environment Canada](#). This represents an 82% reduction since [2005](#). Mercury emissions from coal-fired plants are 38% of all emissions.

By contrast, curly compact fluorescent light bulbs can cause [significant risk](#) of personal mercury contamination risk if broken in the home and long-term risk if improperly disposed of in landfills.



## EXAMPLE OF RISING MERCURY POLLUTION FROM CURLY Q CFL LIGHT BULBS

**Compact fluorescent lighting in Wisconsin: elevated atmospheric emission and landfill deposition post-EISA implementation**

1. [John D Arendt](#) 2. [John F Katers](#) University of Wisconsin – Green Bay, Green Bay, USA

**Abstract**

The majority of states in the USA, including Wisconsin, have been affected by elevated air, soil and waterborne mercury levels. Health risks associated with mercury increase from the consumption of larger fish species, such as Walleye or Pike, which bio-accumulate mercury in muscle tissue. Federal legislation with the 2011 Mercury and Air Toxics Standards and the Wisconsin legislation on mercury, 2009 Wisconsin Act 44, continue to aim at lowering allowable levels of mercury emissions. Meanwhile, mercury-containing compact fluorescent lights (CFL) sales continue to grow as businesses and consumers move away from energy intensive incandescent light bulbs. An exchange in pollution media is occurring as airborne mercury emissions from coal-burning power plants, the largest anthropogenic source of mercury, are being reduced by lower energy demand and standards, while more universal solid waste containing mercury is generated each time a CFL is disposed. The treatment of CFLs as a 'universal waste' by the Environmental Protection Agency (EPA) led to the banning of non-household fluorescent bulbs from most municipal solid waste. Although the EPA encourages recycling of bulbs, industry currently recycles fluorescent lamps and CFLs at a rate of only 29%. Monitoring programs at the federal and state level have had only marginal success with industrial and business CFL recycling. The consumer recycling rate is even lower at only 2%. A projected increase in residential CFL use in Wisconsin owing to the ramifications of the Energy Independence and Security Act of 2007 will lead to elevated atmospheric mercury and landfill deposition in Wisconsin.

*Waste Manag Res July 2013 vol. 31*



## GLOBAL WARMING AND CLIMATE CHANGE – SCIENTIFIC EVIDENCE TABLED IN THE LEGISLATURE

Hansard October 25, 2011 makes for some very interesting reading with Anderson's question on the unlawful donations to the PC party but more importantly it shows the tabling of a geophysical report prepared by Norm Kalmanovitch – tabled by Paul Hinman <http://www.assembly.ab.ca/net/index.aspx?p=han&section=doc&fid=1>

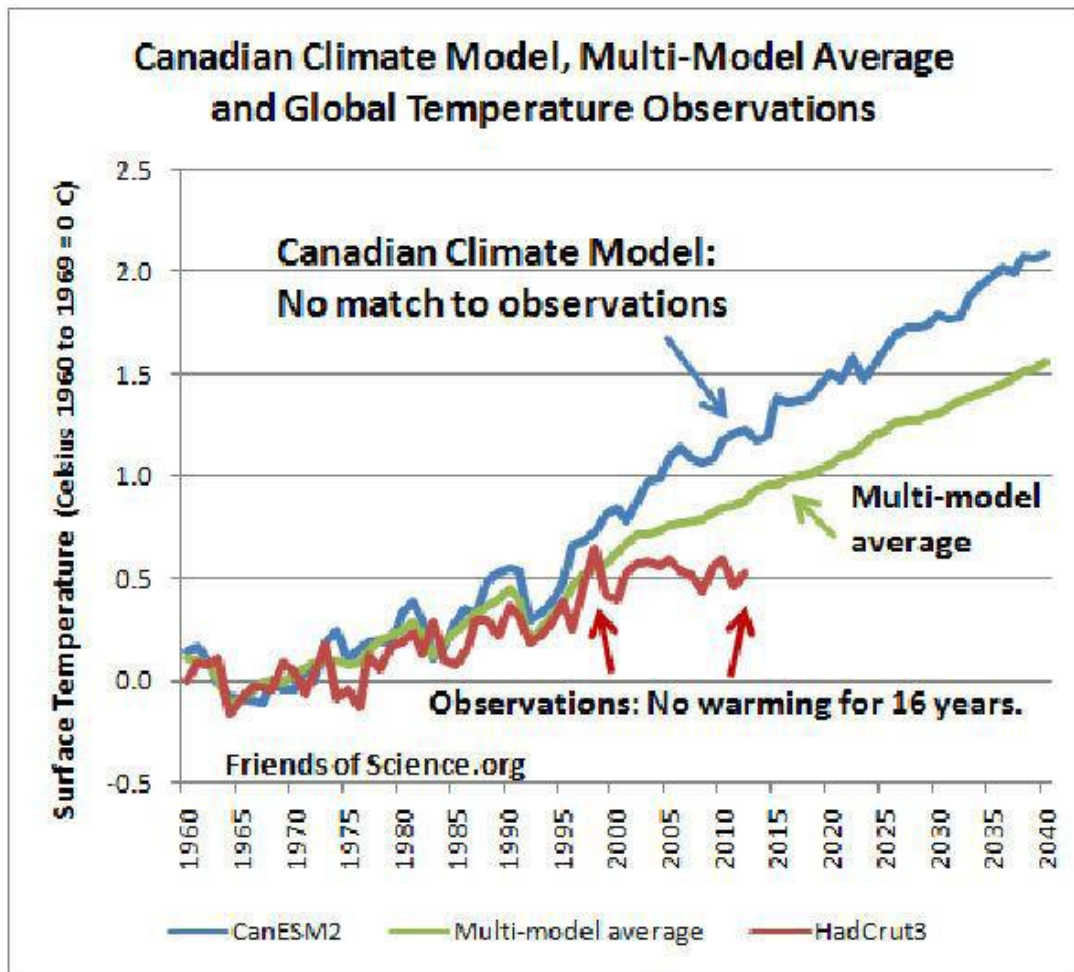
### Tabling Returns and Reports

The Speaker: The Hon. Member for Calgary-Glenmore.

Mr. Hinman: Thank you, Mr. Speaker. I rise to table the appropriate number of copies of a paper that I received from a very concerned Albertan. His name is Norman Kalmanovitch. He is a geophysicist engineer, and he's very concerned with what our governments are doing about global climate change. He's **compiled this report at great effort of his time to help people who are passing legislation to understand better how to address global climate change.**

I also have a second report that he's asked me to table. It is entitled Geophysical Submission to the Alberta Legislature on Global Temperatures and the Influence of CO2 Emissions from Burning Fossil Fuels on Global Temperatures. **I'd urge all Members of the Legislative Assembly to read these reports, that we might make better-informed decisions.**

Clearly the Alberta government has not read this material if they are considering the Pembina Institute's recommendations on closing coal plants in an effort to 'save the planet' from global warming.

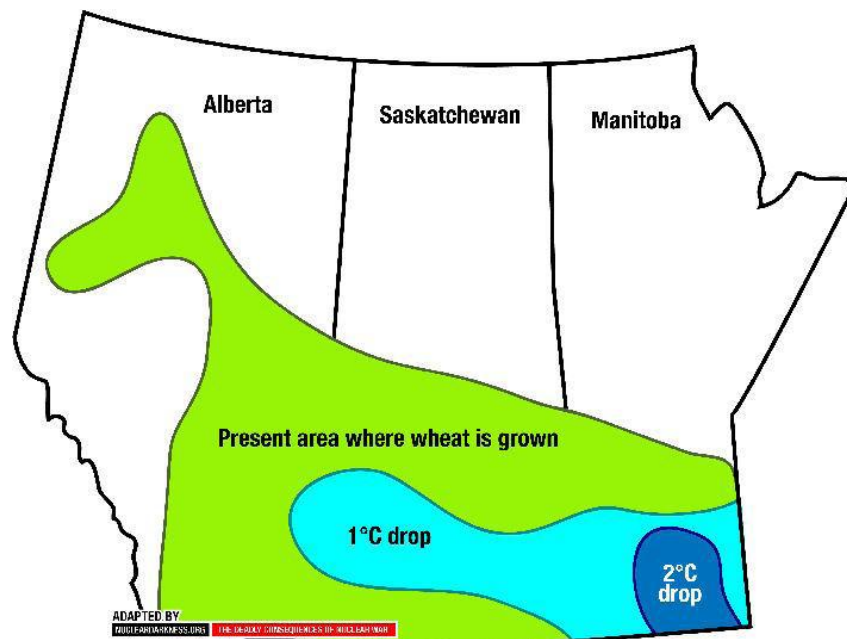


## GLOBAL WARMING SCARE BASED ON COMPUTER MODELS – NOT RECORDED TEMPERATURES

The Intergovernmental Panel on climate Change (IPCC) uses computers to model future climate patterns. Many different researchers use different data sets to create their own prediction. The green line in the above graph indicates an average projection of 38 climate models. The blue line is the Canadian climate model. It forecasts the most extreme warming for the 21st century of all models. With the model matched to the observations during the 1960s, the discrepancy between the model and 2012 average temperature is 0.71 Celsius. The red line shows an increasing discrepancy between the model results and the observed temperatures, rendering the temperature projections meaningless. There is no catastrophic global warming in progress. Temperatures have been effectively flat for 16 years.

## ALBERTA NEEDS COAL AND GAS-FIRED PLANTS TO FACE A MORE LIKELY THREAT OF SOLAR HIBERNATION AND DROP IN TEMPERATURE.

As noted by NASA and many solar scientists, the sun is now in cycle 24 and shows very little solar spot activity compared to previous cycles. This low activity parallels the "Dalton Minimum" of low solar activity that corresponded to the latter part of the "Little Ice Age" wherein temperatures were unusually low for five hundred years. In the event of a 1 or 2 degree drop in annual temperatures, Alberta and Canada would lose much of its productive crop land. Albertans must be prepared for anything – including global cooling. <http://www.forbes.com/sites/peterferrara/2013/05/26/to-the-horror-of-global-warming-alarmists-global-cooling-is-here/>



The above indicates crop areas affected by temperature drop.

The green is the current cultivated area. The light blue indicates the arable land remaining (vis a vis temp and growing season) if there was a 1 degree C drop in temperature; the dark blue area indicates the only arable land if a 2 degree C drop in temperature. You should be aware that such fluctuations (including warming) have happened many times in human and geologic history.

## COAL PROVIDES RELIABLE, SAFE, COST-EFFICIENT POWER



Genesee, Alberta

## SHOULD ALBERTA ACT ON SCIENTIFIC EXPERTISE OR ECO-ACTIVISM?

### PEMBINA’S RECORD OF PERFORMANCE:

**“Renewable is Doable”** – Pembina Institute wrote this program for Ontario, and due to high-profile advocacy from David Suzuki and other eco-activist organizations, Ontario accepted this plan. This led to the Green Energy Act which has virtually bankrupted Ontario citizens. Across rural Ontario, health problems from wind farm effects are skyrocketed and property values are crashing.

**“Costly Diagnosis”** – Pembina Institute, as noted by Dr. Ross McKittrick’s review earlier in this document, appear to have misrepresented key statistics.

### CAPE – CANADIAN ASSOC. OF PHYSICIANS FOR THE ENVIRONMENT

CAPE is signatory to the Pembina Institute’s “Costly Diagnosis” report calling for the early shut-down of coal-fired plants. It is worth noting that CAPE is funded by TIDES Canada and TIDES Canada is pushing a “Clean Energy Accord” through a subsidiary organization, trying to switch the political agenda on Canadian energy toward ‘renewables.’

## FURTHER PEMBINA INSTITUTE RECOMMENDATIONS TO REVIEW:

**“Better Future Fund”** – in British Columbia last year, Pembina Institute collaborated with the Suzuki Foundation and Organizing for Change to try and convince BC residents to buy into an increased carbon tax. They advocated that this carbon tax would provide schools and hospitals with much needed money.

Weeks after this campaign launch, the Pacific Carbon Trust scandal broke, revealing that schools and hospitals in BC were **already paying vast sums of carbon taxes to wealthy carbon traders.**

## POSSIBLE CONFLICT OF INTEREST

As the following screen shot indicates, Pembina Institute is working with TIDES Canada and Tides Canada Initiatives. TIDES Canada (a charity) is proposing a “Clean Energy Canada” accord and through a subsidiary called TIDES Canada Initiatives. In this they are pushing for ‘renewables’ to replace conventional fuels in Canada. Pembina has long been an advocate of ‘Greening the Grid” despite a torrent of information from Europe that such moves are economically and environmentally catastrophic. No matter what, Pembina Institute would appear to be biased in this discussion.



*Given the obvious working relationship between Pembina Institute and TIDES Canada and their Clean Energy Canada initiative, one can hardly term Pembina Institute to be an ‘honest broker’ in the “Costly Diagnosis” assessment.*

## CARBON RISKS AND E-S-G RATINGS THROUGH THE VOLUNTARY CARBON DISCLOSURE METHODS HAVE SKEWED THE INVESTMENT MARKET

Since the onset of the prevalence of the global warming/climate change theory, financial markets have been shifting. Accounting practices have been modified to incorporate speculative 'risks' for potential carbon taxes and points for perceived 'social license' through ethical, social or governance initiatives. Market evaluations of companies have been changed to reflect the 'carbon footprint' and companies have been encouraged to voluntarily submit a 'carbon disclosure' along with anecdotal 'climate change' reports from their region.

These subjective opinions have been aggregated by Accenture, an adviser to institutional investors.

Some \$78 trillion in global capital held by institutional investors has been steadily directed toward 'renewables' and away from conventional fossil fuels.

## BIG CARBON FOOTPRINT? BUY SOME RENEWABLE ENERGY CERTIFICATES. FROM YOUR ACCOUNTING FIRM OR ...PEMBINA INSTITUTE.

Pembina Institute was recently cited as having been paid some \$341,000 by the City of Calgary for what are reported in the press to be communications services about a GHG reduction plan.

Pembina noted in its defense that it works with many major corporations and banks on 'GHG reduction'. It is important to understand the forces at play in the 'low-carbon' world.

Most of the major industry players have simply been coerced into working with carbon emissions traders because the accountants of the major industries evaluate the likelihood of gaining or losing institutional investors based on how the corporation is evaluated on their carbon footprint.

One offset factor is deemed to be a company's Ethical, Social and Governance rating.

Many 'social venture' or 'mission-based' investment firms specifically seek out "ESG" companies with a low carbon footprint. TIDES Canada appears to be closely associated with such firms as Social Venture Investments, Renewal2 Partners, Endswell and others. TIDES is allied with the Pembina Institute.



“Renewable” advisors such as the Pembina Institute can help corporations and banks and funds become attractive to institutional investors, by *virtually* lowering their carbon footprint through carbon offsets.

Pembina is an environmental stakeholder to the TD Bank, for example. TD Bank recently went ‘carbon neutral.’ This often means a company or organization has not cut their carbon footprint per se, but has either invested in the purchase of carbon offsets...or in a renewable operation (like a wind farm).

Canadian banks got into carbon issues once the Rainforest Action Network published the 2008 “*Financing Global Warming – Canadian Banks and Fossil Fuels.*” **Global warming had stopped 10 years before this report was published, but the banking sector quickly fell into line with the eco-activist threats to ‘out’ them to consumers – corporations followed suit.**

To help corporations present their ‘climate change’ case to the public, the Carbon Disclosure workbook offers a handy template for CEOs to frame their annual report comments and public speeches.



**Climate change overview**

**“High-level statement on climate change and our organization’s business by the CEO or senior executive”**

**Statement of conformance with the requirements of CDSB’s Reporting Framework:**

- Climate Change Reporting Framework
- Regulations (eg UK GHG or other legislation)
- Others
- Exceptions (any activities or items that do not adhere to these frameworks)

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**Strategic analysis, risk and governance**

**Overview of how we believe climate change interacts with and affects our business strategy**

**Company strategy**  
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**Our challenges**  
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**High-level risk and opportunities**  
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**Governance of climate change issues, activities and impacts**  
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**Management actions**

**Actions we are taking in response to our strategic analysis of climate change**

**Our climate change plans:**  
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**Emissions reductions**  
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**Energy efficiency**  
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**Management of fuels**  
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**Greenhouse gas reduction targets**  
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**Goals and timescales**  
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**Activities and investments required**  
Pos es nullatis ut apenia dem haria del is

**Analysis of progress**  
Nequodis volorro in corepernat am et aut

**Future outlook**  
facest preperem laboribus venimusam quis

**Engagement with our stakeholders**  
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GHG reductions, carbon disclosure and methods of offsetting one's footprint are all complex matters that require expert help. However, in the process, there are possible conflicts of interest.

## PEMBINA INSTITUTE AND BLUEARTH RENEWABLES

BluEarth Renewables Ltd. is an Alberta incorporated developer of wind projects. It is presently trying to develop a purpose-built wind farm for the Alberta School Boards Commodities Purchasing Consortium.

BluEarth has a senior executive who was formerly executive director of Pembina Institute – Marlo Raynolds – and he is an advisor to TIDES Clean Energy Canada.

It would seem to be a conflict of interest to have the Pembina Institute advocating for additional wind energy projects in Alberta and condemning coal-fired power plants with misrepresentative information about the alleged health risks, when Pembina has been making community presentations on behalf of BluEarth Renewables, when senior people have such close connections to those pushing for renewable energy projects (BluEarth and TIDES Canada's "Clean Energy Canada").

According to Tim Weis of the Pembina Institute video about the time of his 2009 "Greening the Grid" report said *"Renewable energy has become the largest source of investment in the entire world. In 2008 it overtook the investment in coal, gas and nuclear combined. So renewable energy really is where the future of investment and technology is..."* <http://www.pembina.org/re/video>

This is mirrored by the view of Richard Branson in his Carbon War Room where he plans to make 'climate wealth'....off taxpayers as we have seen.

The fact that the Pembina Institute has written a condemnatory report on coal-fired plants at the same time as receiving funds from BluEarth Renewables, not to mention the other factors noted above, indicates some conflicts of interest in respect of "Costly Diagnosis."

The Pembina Institute's 2011 annual financial report shows that BluEarth Renewables Inc. contributed between \$10,000 and \$20,000 as a 'supporter.' Oddly 'Big Oil' companies including Shell Canada, Cenovus Energy, Suncor Energy and Talisman Energy, provide substantial funding to Pembina. Shell Canada Energy has donated over \$100,000 to Pembina despite the fact the Pembina's main goal is to destroy Alberta's oil and gas industry. The following may explain why.



## THE GLOBAL CARBON MARKET IS MASSIVE

The Carbon Disclosure Project says of itself "CDP has pioneered the only global system that collects information about corporate behavior on climate change and water scarcity, on behalf of market forces, including shareholders and purchasing corporations." CDP is a Rockefeller non-profit, not a government agency.

The Carbon Disclosure Project asks almost 6,000 of the world's largest companies to report on their climate change strategies, GHG emissions and energy use in the standardized investor CDP format. The CDP then reports to some 655 investors that combined hold assets of US\$ 78 TRILLION.

If you are a bank or a big corporation listed on the stock market, you want and need a good rating or you will not be able to attract investment – unless your accountant or a group like the Pembina Institute can assist you. <https://www.cdproject.net/en-US/Pages/HomePage.aspx>

CDP is an international, not-for-profit organization providing the only global system for companies and cities to measure, disclose, manage and share vital environmental information.

We work with market forces to motivate companies to disclose their impacts on the environment and natural resources and take action to reduce them. CDP now holds the largest collection globally of primary climate change, water and forest-risk information and puts these insights at the heart of strategic business, investment and policy decisions.

COMPANIES THAT DO NOT COMPLY WITH THE CDP'S 'VOLUNTARY' DISCLOSURE GET A 'COSTLY DIAGNOSIS' THEMSELVES – LOSING VALUABLE INVESTMENT RATINGS WITH INSTITUTIONAL INVESTORS.

## WOULD LESS COAL AND MORE WIND POWER DAMAGE ALBERTA?

### THE RELIABILITY OF THE GRID IS AT RISK

According to March 2013 stakeholder comments by ATCO Gas, wind power is too variable.

- While ATCO Power is in principle open to the idea of Wind participating in the merit order, we currently see no reasonable way to achieve this. While the AESO deemed the Wind Dispatch Pilot a success, ATCO would consider the results sobering. Even with significantly reduced restatement times we would consider the compliance subpar by orders of magnitude. **The simple fact remains that the wind regime is uncontrollable** and the only decision wind farm operators can make is to generate less than the current wind conditions permit.
- [http://www.aeso.ca/downloads/Phase 2 Wind Integration - ATCO Power.pdf](http://www.aeso.ca/downloads/Phase_2_Wind_Integration_-_ATCO_Power.pdf)

### TAXPAYERS MAY BE ON THE HOOK FOR MILLIONS MORE

According to EnMax, taxpayers may stand to lose millions of dollars:

- The AESO notes that, since wind generation does not offer into the merit order, higher amounts of wind energy will result in growing amounts of generation that acts as a price taker. **ENMAX would add that growing amounts of wind generation will also tend to reduce prices when the wind is blowing, reduce the predictability of net load, reduce the number of hours in which dispatchable generators are able to recover their fixed costs, increase the number of supply surplus hours, potentially cause base-load generation to curtail, and polarize energy prices, all while providing little capacity benefit to the system.** In ENMAX's view, something that should be included in the AESO's wind integration plan is a discussion of whether the current market design is sustainable in the face of much higher levels of non-dispatchable generation. ENMAX notes that high levels of wind power are becoming a significant concern in other markets; see, for example, the following article( dated February 27, 2013): **Surplus wind power could cost Ontario ratepayers up to \$200 million: IESO—Surplus wind power could cost Ontario ratepayers millions and compromise power system, says electricity system operator,** at [http://www.thestar.com/business/2013/02/26/surplus wind power could cost ontario rate payers up to 200 million ieso.html](http://www.thestar.com/business/2013/02/26/surplus_wind_power_could_cost_ontario_rate_payers_up_to_200_million_ieso.html)

Consequently, closing coal plants and moving to the 'clean' energy advocated by the Pembina Institute would put taxpayers at further risk of an unstable grid, increased costs, and heat-or-eat poverty as is the case in the UK and EU.

The Financial Post reports that Enmax Corp. is building a huge new natural gas-fired power station in Southern Alberta to boost the provincial grid's reliability after Alberta's aggressive expansion into wind energy made it vulnerable to power disruption. Taxpayers are on the hook for a \$2 billion gas plant. Excerpt: "Alberta turns to natural gas after wind lessens reliability"



WIND –

NOT SO CLEAN, GREEN OR FREE



"We now have so much windpower generation that we need to fall back on reliable sources of power," said Peter Hunt, an Enmax spokesman.

"The problem with wind power is that the wind doesn't blow all the time, so the greater percentage of the system depends on wind, the more vulnerable to disruption the system becomes when the wind stops blowing." - *FPost*

**DEADLY DIAGNOSIS for China's Neodymium Miners –Rare Earth required for Wind Turbine magnets is mined with no environmental management at all.**

Victims of the West's Obsession with 'Green' -Villagers Su Bairen, 69, and Yan Man Jia Hong, 74, stand on the edge of the six-mile-wide toxic lake in Baotou, China that has devastated their farmland and ruined the health of the people in their community. Read more: <http://www.dailymail.co.uk/home/moslive/article-1350811/In-China-true-cost-Britains-clean-green-wind-power-experiment-Pollution-disastrous-scale.html#ixzz2REA6HFNB> Follow us: @MailOnline on Twitter |

## IN SUMMARY

**Friends of Science** have offered an expert assessment of “Costly Diagnosis: Subsidizing Coal Power with Albertans’ Health” written by the Pembina Institute.

Expert commentator Dr. Ross McKittrick has shown the modeling of deaths based on statistics leads to improbable outcomes and that the statistics regarding PM 2.5 emissions were stated in a way that misrepresented the overwhelmingly large volumes of PM 2.5 from other man-made and natural sources – far, far greater than those of coal.

**Friends of Science** have demonstrated that the fundamental purpose of shutting down coal plants to ‘save the planet’ from global warming is unnecessary since global warming stopped 16 years ago.

**Friends of Science** have shown how carbon dioxide (CO<sub>2</sub>) is not a key factor in climate change or global warming. We have many more resources in this regard either on our web-site or by request.

**Friends of Science** have demonstrated the facts presented by their guest speaker Dr. Benny Peiser who this spring showed Calgarians that climate change policies in the UK and EU have failed miserably, decimated the economies and impoverished taxpayers – forcing people into ‘heat or eat’ poverty.

**We have shown that** Professor Hill’s assessment of fuel poverty leads to many **more health costs and deaths than emissions from coal plants – and that Germany, a country dedicated to health** – is returning to the reliable energy generated by coal-fired plants, and is building some 26 coal plants.

Finally we have shown that there are several questionable relationships or conflicts of interests in Pembina Institute’s presentation of “Costly Diagnosis.”

We request that the Alberta government reject “Costly Diagnosis” and question all policy papers and recommendations made by the Pembina Institute to date.

FRIENDS OF SCIENCE SOCIETY

September 10, 2013



## About Friends of Science

Friends of Science have spent a decade reviewing a broad spectrum of literature on climate change and have concluded the sun is the main driver of climate change, not carbon dioxide (CO<sub>2</sub>). The core group of the Friends of Science is made up of retired and active earth and atmospheric scientists. Membership is open to the public and available on-line.

Our web-site offers a wide selection of climate change science. Feel free to ask for specific information or to comment on our facebook page.

Friends of Science Society is funded by individual member donations; it is a registered non-profit society in Alberta. Friends of Science Society has a volunteer, unpaid board.

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