

## Comments to the Climate Legislative and Executive Workgroup

The Climate Legislative and Executive Workgroup is interested in hearing public views on approaches to reducing greenhouse gas emissions in Washington State.

Comments and suggestions (please write legibly):

Aberdeen, Washington is on the ocean. The ocean is being destroyed by the acid from carbon dioxide. CO<sub>2</sub> destroys our shell fish industry. Aberdeen is a big source for crab, clams, mussels. We got to stop climate change destroying the ocean.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: William F. Rimmer  
Affiliation:   
City or Zip: Aberdeen 98520

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Comments and suggestions (please write legibly):

Dear Governor + C.L.E.W.

I come today to encourage you that your job is to protect Citizens in your state. The long term harm of greenhouse gases will be the greatest harm the state faces, and I applaud your calling these work group sessions.

Extreme Extractions are currently being used to wreck havoc, and do untold damage to our states in the NW.

Please realize these issues cross state boundaries and those in Oregon are listening.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: Randy Baker-Kroff  
Affiliation: Fellowship of Reconciliation  
City or Zip: Salem OR 97301

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First, Nuclear Power does not produce more power than it uses - it is less than 30% efficient at its ~~best~~, and that is when it works perfectly, which it never does.  
Second, Nuclear waste causes <sup>ionized</sup> air pollution with Plutonium 239 at 1 ten billionth of a gram causing Lung cancer; Iodine 131 causing Thyroid cancer; Strontium 90 causing leukemia and other bone and blood cancers.  
Third, Fukushima, 3 Mile Island, Windscale, Chernobyl - just a single accident can cause the whole state to be contaminated for thousands of years.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: Jenny Drenker Jr  
Affiliation: .....  
City or Zip: Olympia WA 98502

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In the 1940s, in order to win World War II, the Hanford Works developed atomic weapons. The mess left behind has not begun to be cleaned up by the Federal government. Left to itself, the nuclear waste will decay to background level - IN ~~HAZARD~~ A BILLION YEARS.

To capitalize on the investment, and to assuage our collective guilt for the incineration of Hiroshima and Nagasaki, nuclear power plants were developed. Their present status is cooling ponds overflowing with spent nuclear fuel rods for which no effective treatment or long-term storage is yet possible. No state has been willing to accept the creation of their own Hanford to house a long-term depository.

It is unethical and irresponsible even to consider further expansion of the currently unsolvable problem of nuclear waste before we have even begun to address the legacy of the 1940s.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: ..... William P. Giddings, Ph.D., Professor Emeritus of Chemistry .....

Affiliation: .....

City or Zip: ..... Portland 97244 .....

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Washington State needs a green house gas tax  
with our industries here in our beautiful state.  
We need a carbon tax.  
Let us tax those industries that pollute our atmosphere with  
green house gases.

An air quality 'Emissions Inventory' keeps  
track of Green house gas emissions.

We Wa. State Dept. of Ecology has developed an  
emission inventory (EI) methodology to keep track  
of these green house gases. We must tax  
these industries that violate the GHG EI,  
those industries that pollute on a major level.

Let us use these GHG emissions  
taxes for better public transit. Let us help  
our bus, trolley, and train systems offset the GHG  
emissions of those that use their own vehicle for transportation.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: ..... John N. Brown .....  
Affiliation: ..... Climate Leaders Work Group .....  
City or Zip: ..... Olympia, WA 98502 .....

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Comments and suggestions (please write legibly):

The newest climate research demonstrates the need to redouble efforts to reduce greenhouse gases. I urge the CLEW and legislature to:

1. Design and implement Clean Fuel Standards
2. ~~Design~~ and implement a Carbon Tax
3. Eliminate all consumption of coal-generated electricity, including that produced in other states
4. Support aggressive expansion of clean energy and energy efficiency
5. Examine how clean energy promotes job creation
6. Recognize the impacts on public health of climate change.
7. Support Governor Inslee's Five Points, proposed at the Dec. 6 CLEW meeting.

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### Optional Information:

Name: Alan Hardcastle  
Affiliation: Self  
City or Zip: Olympia, WA

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Comments and suggestions (please write legibly):

CONTRARY TO SEN. ERICKSEN'S REMARKS, CARBON IS  
A PROBLEM AND AN ECONOMIC OPPORTUNITY LIES IN ITS  
MITIGATION - PLEASE CONTINUE THE WORK OF THIS  
GROUP TO FLESH OUT A PLAN TO INCREASE THE COST  
OF CARBON AND DECREASE THE COST OF RENEWABLE  
ENERGY

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: JEREMY SMITHSON  
Affiliation: SOLAR INSTALLERS OF WASHINGTON  
City or Zip: 98107

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Comments and suggestions (please write legibly):

Existence of hydro  $\neq$  "we're already green enough."

Existence of China  $\neq$  "USA shouldn't act alone."

We have the natural, cultural, intellectual resources to lead on this issue, and we are morally required to. The costs of inaction <sup>or inactivity</sup> will utterly dwarf the investment we can make now in conservation, green energy, urban design, and local business.

2 Additionally, USA cannot posture itself by attempting to reduce local emissions while serving as the major transport point for fossil fuel on the way to Asia; there must be a moratorium on new fossil fuel infrastructure while we determine what its effects are, and how it will shackle us long-term to an industry whose profits depend upon destroying our way of life, and a livable planet. We must look forward, and not back. Their free ride is over.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: E. Johnston

Affiliation: .....

City or Zip: 98112

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Comments and suggestions (please write legibly):

WE NEED A CARBON TAX

WE NEED LESS COAL, MORE SOLAR. ENERGY USE.

IN GERMANY THEY HAVE LESS SUN THAN WE DO BUT THEY HAVE THE MOST SOLAR PER CAPITA.

THEIR SYSTEM OFFERED HOME OWNER LOANS FOR SOLAR PANELS. THEY HAD BANKS OFFER LOW RATES & HAD ENERGY COMPANIES BUY BACK ELECTRICITY AT A HIGH RATE THAT MEANT THE HOMEOWNERS COULD PAY BACK THE LOANS. THEY NOW HAVE SOLAR THE EQUIVALENT OF 8 NUCLEAR POWER STATIONS. THE ELECTRICITY WAS PAID AT A RATE THAT TOOK INTO ACCOUNT THE COST OF BUILDING A NEW POWER STATION.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: ..... FLORENCE VINCENT .....

Affiliation: ..... 1-937 .....

City or Zip: ..... 98576 .....

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Comments and suggestions (please write legibly):

I urge strong policies and actions to reduce greenhouse gas emissions.  
I support a cap on carbon emissions with binding limits and an effective market mechanism to reduce emissions.  
I urge you to eliminate use of electricity generated by coal-powered facilities in other states.  
I urge a strong program to promote energy efficiency in new and existing buildings. Adopt the Architecture 2030 challenge. Provide financial assistance to low-income households to retrofit their homes. Promote on-site renewable energy generation. Subsidize renewable energy facilities.  
Promote and help finance mass transit, including light rail, \* high-speed rail between cities, electric buses, etc. Implement anti-idling laws.  
Do not allow shipments of equipment and supplies that support the fracking industry, such as proppants, through our ports and on port-trails.  
Divest from the fossil fuel industry and invest in clean energy.  
Do not allow coal to be shipped on trains or through our ports.  
Institute a carbon tax, fund renewable energy and energy efficient retrofits in all buildings.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: Barbara Scavizzi  
Affiliation: Northwest Eco Building Guild  
City or Zip: Olympia 98501

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Comments and suggestions (please write legibly):

I strongly support a policy + plan to have Washington State lead in research + development of renewable, safe, clean + efficient energy as well as reducing our GHg emissions. This will most likely improve our economy as well as our future. And, for the greenhouse gas issue, time has run out.

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### **Optional Information:**

Name: .....

Affiliation: .....

City or Zip: .....

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Comments and suggestions (please write legibly):

Man see means Thank-You for the decisions you will make.  
My name is Grace Ann Byrd, ~~of the~~ A member of Nisqually Indian Tribe of the Medicine Creek Treaty.  
I would like to see changes in the policies and actions to reflect reduction in Greenhouse gases and emissions, so the Treaty rights to Health and Wellness <sup>for all tribes</sup> can be ensured - not only for me, but that of my family, my People, our Ecosystem that sustains our Life.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: .....

Affiliation: .....

City or Zip: .....

Grace Byrd  
Nisqually  
Olympia WA 98513

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Comments and suggestions (please write legibly):

This is first & foremost a MORAL ISSUE.

Destruction of The climate & planet is IMMORAL-EVIL-  
SUICIDAL-STUPID

→ 100 mpg engines for cars - If we can build spaceships,  
we can build energy efficient cars  
+or CLEAN FUELS!

→ Solar panels on all new construction - smart city planning  
(Germany does it)

→ localized food production - no energy wasting - soil  
destroying mega-agriculture

→ NO COAL - NO NUCLEAR - NO MORE DIRTY FUEL that is poison for  
centuries

→ subsidized energy efficient upgrades for all homes.  
Instead of spending on coal terminal - spend on peoples' houses

THANK YOU BOB INSLEE FOR BEING HONEST about CLIMATE  
CHANGE

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: ..... Esther Kronenberg .....

Affiliation: ..... human .....

City or Zip: ..... Olympia 98502 .....

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Comments and suggestions (please write legibly):

There is NO COST TOO HIGH for HUMAN HEALTH.

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### Optional Information:

Name: Warren Kronenberg MD

Affiliation:

City or Zip: Olympia 98502

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Comments and suggestions (please write legibly):

My name is Laurel Nelson - King of Shelton Wa. I would like to comment in support of the Governor's efforts to reduce carbon emissions in Wa. I would also like to note with sadness that Olympia has lost a clean energy champion with the passing of Sam Garst. Please continue efforts for clean energy in his memory.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: Laurel Nelson - King

Affiliation: Self

City or Zip: Shelton, Wa.

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Comments and suggestions (please write legibly):

Global warming is the biggest threat the world faces. It is our duty to act now and choose our actions wisely. I encourage you to support the Democratic plan (at the very least). Please support tax credits for things like solar & wind power. And, tax (heavily) carbon producers to encourage change to renewable energy sources. One of the many things Washingtonians love about Washington is the environment (mountains, rivers, trees, ocean access, sagebrush steppe, etc.).

Please take a stand to protect it and the people who love it. Vote to keep fossil fuels in the ground. Find ways to sequester carbon (biochar, plant trees, etc.) & support those who do so. Thank you.

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### Optional Information:

Name: Kim Chisholm  
Affiliation: The Wolf College  
City or Zip: Puyallup

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Comments and suggestions (please write legibly):

Replace fossil fuels with  
only green sustainable power,  
like wind or solar.

No nuclear -  
Nuclear is killing  
our planet.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: ..... Marylea Coday .....  
Affiliation: ..... Olympia Movement for Justice & Peace .....  
City or Zip: ..... Olympia .....

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Comments and suggestions (please write legibly):

I support this approach to reducing carbon emissions in our state.

The City of Olympia has developed and implemented a multi-pronged approach to climate change that reduces emissions and prepares for effects of climate change.

The State of Washington should do both.

The LOTT sewage treatment plant downtown alone demonstrates the need to reduce emissions worldwide and to prepare for the effects (sea level rise) that are coming no matter what we do. It would cost > \$1 billion to relocate; it must be protected. It saves the entire N.

Thurston county metro region, including the State Capitol campus.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: Mark Foutch

Affiliation: self (former mayor, City of Olympia)

City or Zip: 98501

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We, the residents of WA. State, want to "Thank You" to our Gov. Inslee, for making these hearings on "Climate Legislation" open to the WA. State public.

Here in WA. State, we must implement carbon taxes. We must enforce these carbon taxes on coal fired power plants, in WA. State.

WA State has several mechanisms to enforce the carbon taxes, on carbon emissions. The WA. Dept of Ecology Air Program has been conducting an industry-wide Green house gas (GHG) emissions inventory. We can use this EI, to monitor GHG emissions. We can use this EI to tax the WA State industries that pollute with GHG.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: LISA RIENER  
Affiliation: OLYMPIAN ELIOT Neighborhood Assoc.  
City or Zip: 98502, OLYMPIA

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Comments and suggestions (please write legibly):

LET WA. STATE USE WIND ENERGY, SOLAR ENERGY,  
NOT COAL, FOR ENERGY.  
WE NEED TO PHASE-OUT COAL-FIRED POWER PLANTS.  
SOLAR ENERGY WILL BRING "SOLAR JOBS,"  
INSTALLATION OF SOLAR PANELS ACROSS OUR STATE.  
WE NEED JOBS.  
WE NEED SOLAR JOBS.  
WE NEED GOVERNMENT MANDATES TO  
MAKE SOLAR ENERGY SUCCEED.  
WE TAX ~~TAX~~ "WRITE OFFS" FOR SOLAR INSTALLATION.  
WE NEED A CARBON TAX FOR THIS  
INITIATIVE.  
WA. STATE IS A LEADER FOR THE USA.  
WA STATE MUST LEAD THE NATION IN THESE  
INITIATIVES, THESE CARBON TAXES.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: ..... LINDA SMOTE-SMITHE .....  
Affiliation: ..... NONE .....  
City or Zip: ..... MC CLEARY WA 98587 .....

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CONSIDERING THE FACTS THAT THE SUN DOESN'T ALWAYS SHINE & THE WIND DOESN'T ALWAYS BLOW, RETREVAL OF ENERGY FROM THESE SOURCES HAVE SOME OBVIOUS DRAWBACKS. FOR THAT REASON IT IS SUPRIZING TO ME THAT THEY RECEIVE THE LIONS SHARE OF ATTENTION WHEN ANOTHER SOURCE HAS NO SUCH DRAWBACK & SEEMS TO BE TREATED AS NONEXISTANT - LEFT UNNAMED IN IMADROMPTU LISTS.

IT SEEMS TO ME THAT IN WASHINGTON STATE WE ARE UNIQUELY POSITIONED TO TAKE ADVANTAGE OF THIS SOURCE SINCE VOLCANIC ACTIVITY IS SO CLOSE TO THE SURFACE. IT SHOULD BE CLEAR THAT I'M TALKING ABOUT GEOTHERMAL ENERGY. WITHOUT DRAWBACKS MENTIONED ABOVE THIS, IT SEEMS TO ME, IS WHERE THE FOCUS BELONGS.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name:

JAMES FRANK FRAZIER

Affiliation:

CITIZEN OF THE WORLD

City or Zip:

98597

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Comments and suggestions (please write legibly): *We need a carbon tax!*

*Our choice to fail to aggressively reduce greenhouse gases condemns our children + grandchildren to a future of great suffering. Imagine the chaos & pain created by "natural" greenhouse gas (really unnatural - the effects of the release of CO<sub>2</sub> + methane) disasters: droughts + consequent agricultural + food availability + cost crises; depths and disasters due to extreme weather events which will become more + more frequent; severe economic disruption; security issues both locally + across national borders; destruction of ocean life + its impact on seafood - due to ocean heating + acidification; flooding of coastal areas - where the majority of the world's population lives; the increased extinction of species which becomes a cascading disruption of the chain of life - and so much more.*

*The science is clear. The way forward is clear. The immediate decrease of greenhouse gases is the economic, health + moral imperative of our time - of all times.*

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: JANET E. DUECY  
Affiliation: self  
City or Zip: Seattle, 98144

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Comments and suggestions (please write legibly):

Support the practical plan proposed by the Dems:

- Develop renewable energy through aggressive tax credits (never nuclear)
- ~~For~~ solar, wind, and by-product fuel like biochar.
- Pass a carbon tax - its the only way to encourage the market in the right direction
- Eliminate coal use (coal by wire) and ~~stop~~ coal and oil and terminals through taxing their pollution & imposing <sup>strict</sup> environmental regulations.
- Develop ~~business~~ housing retrofitting program (forever energy efficiency)
- Create forestry plan focused on carbon sequestration

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### Optional Information:

Name: Chris Chisholm  
Affiliation: The Wolf College  
City or Zip: Payallup

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When the economy plummeted, business didn't think they could make it. However, many were creative and found better and more efficient ways to conduct business. Practices that they still do, even now that the economy is recovering. Changes like the proposed actions seem overwhelming and change can be scary and hard. People are so creative and amazing! We can make it work! Please let us show the world how it can work. Please help stop the use of coal.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: Lindsey Hamilton  
Affiliation: Self, TESC  
City or Zip: Olympia, WA

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## Comments to the Climate Legislative and Executive Workgroup

The Climate Legislative and Executive Workgroup is interested in hearing public views on approaches to reducing greenhouse gas emissions in Washington State.

Comments and suggestions (please write legibly):

DEAR CLIMATE LEGISLATIVE + EXECUTIVE WORK GROUP.

As a lifelong resident of Washington State, I would like to see Washington State become a leader in CO<sub>2</sub> reduction legislation. I am a strong supporter of a carbon tax to shift the state tax burden from property owners to consumers of fossil fuels. I strongly oppose the construction of coal export facilities in our state. Washington State should not facilitate the expansion of coal production + consumption anywhere in the world. Finally, I support financial incentives for individuals + institutions to invest in renewable energy such as wind + solar.

Thank you,

Anne D. Hankins

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: Anne Hankins  
Affiliation: private citizen, Community For Interfaith Celebration  
City or Zip: Olympia 98506

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Comments and suggestions (please write legibly):

CIVILIAN  
CONSERVATION  
CORPS

COMMUNITY LEVEL PROJECT LIKE

FOSSIL FUEL FREE FOOD DISTRIBUTION

USING BICYCLES, SAILBOATS, CANOES, AND  
WASTE OIL VEHICLES WHILE CREATING

JOBBS, COLLABORATION OPPORTUNITIES,

EFFICIENCY, AND TOURISM APPEAL

GOOGLE

CASCADIA CARGO COOPERATIVE

**\*\*Please continue on back or attach pages if needed\*\***

gregschundler@gmail.com

### Optional Information:

Name: GREG H. SCHUNDLER

Affiliation: CASCADIA CARGO COOPERATIVE

City or Zip: OLYMPIA, 98506

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## Comments to the Climate Legislative and Executive Workgroup

The Climate Legislative and Executive Workgroup is interested in hearing public views on approaches to reducing greenhouse gas emissions in Washington State.

Comments and suggestions (please write legibly):

I SUGGEST THAT THE WORKGROUP CLEAN UP THE MESS AT HANFORD FIRST. I SUGGEST THAT THE WORKGROUP INSTAL RADIATION DETECTORS, PUT ONLINE, THAT DISPLAY TO THE PUBLIC RADIATION FROM JAPAN. OLYMPIA AND SEATTLE HAVE THE HIGHEST RATES OF BREAST CANCER IN THE US BECAUSE OF RADIATION. I SUGGEST THAT EACH COMMERCIAL AIRPLANE DISPLAY A RADIATION DETECTOR, THAT LANDS AT SENTAC & EACH DETECTOR THAT GOES OFF AT COUNTS OVER 100 (ALARM RATE) BE PUT INTO QUARANTINE UNTIL CLEANED UP, INCLUDING ALL PASSENGERS AND LUGGAGE.

HANFORD LEAKS INTO THE COLUMBIA RIVER WHICH FLOWS UP THE WEST COAST TO ALASKA AND THE PREVAILING WESTERLY WINDS CARRY THIS POLLUTION BACK OVER THE POPULATION.

**\*\*Please continue on back or attach pages if needed\*\***

### **Optional Information:**

Name: .....

Affiliation: .....

City or Zip: .....

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Comments and suggestions (please write legibly):

### ACCOUNTABILITY:

Based on observing the proceedings from 12/6/13, my only recommendation would be to require a standard of participation from members of the group (like Inshe asked today), and any members who stall / refuse to meet those standards be asked to leave the working group and replaced by people who will accomplish what is required by law.

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: ANDY VAREYU  
Affiliation: N/A  
City or Zip: SEATTLE, WA 98106

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## Comments to the Climate Legislative and Executive Workgroup

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Comments and suggestions (please write legibly):

NO NUCLEAR ENERGY !!!!!

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: Pat Rasmussen

Affiliation: .....

City or Zip: Olympia, WA 98508

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## Comments to the Climate Legislative and Executive Workgroup

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Comments and suggestions (please write legibly):

Please no more nuclear,



Please do end dirty coal.

Set a standard for ethics

by not allowing filthy coal through WA.

Enabling does equal promoting in this case.

Please support solar. Any way possible.

Can hemp production please be legalized.

Hemp can help sequester carbon

it is our ally in this battle.

Rooftop gardens, more local food.

End the subsidies to BIG AG that is harmful.

DE-INVEST from fossil fuels. Thank You

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: ..... Elizabeth GULICK .....

Affiliation: ..... Student .....

City or Zip: ..... 98502 .....

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13% Ag Economy

- International market

- critical farm input costs ↑  
w/ cap n trade

Dairy Fuel

## Comments to the Climate Legislative and Executive Workgroup

The Climate Legislative and Executive Workgroup is interested in hearing public views on approaches to reducing greenhouse gas emissions in Washington State.

Comments and suggestions (please write legibly):

I wish to highlight the comment that was made by one of the Climate Solutions panelists: Design our communities so that not everyone needs to get into a car to do what they need to do. This includes good transit systems, but also ~~bring~~ includes more density (so those transit systems can work efficiently.) Urban/suburban design that does not isolate residential and commercial land use in their far-flung zoning areas. I myself am very content living in a neighborhood where I can walk to the grocery store and bicycle to many of the places I need to go. ~~Time~~ I realize this is a very long-term project undoing the zoning and land-use decisions of the last 50 years, but in the end, it will improve our communities and our quality of life.

**\*\*Please continue on back or attach pages if needed\*\***

OVER

### Optional Information:

Name: Nancy Curtis  
Affiliation: self  
City or Zip: Olympia

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As a person who lived without owning a car until age 25 (and avoided using it as much as possible thereafter) I have experienced many difficulties in getting from one transportation hub to another (ie. from Anacortes ferry to Seatac, or Greyhound bus terminal, etc.) It has gotten a bit better in the last 10 years\*, but our mass-transit systems (which include ferries and airplanes here) still need to be better integrated! We don't need to reinvent the wheel here: it's being done in Europe, South America and even in other states & communities.

Oh, and I love riding my bike... don't leave bicycles out of the transportation mix.

\* although transit systems are now facing cuts!

## Comments to the Climate Legislative and Executive Workgroup

The Climate Legislative and Executive Workgroup is interested in hearing public views on approaches to reducing greenhouse gas emissions in Washington State.

Comments and suggestions (please write legibly):

We need renewables (clean!), a carbon tax, clean food standard, efficiency initiatives, etc. But we also need to understand that all of these measures, even in the aggregate, will not be enough — unless we cut down on our consumption patterns & abandon the expectation that we have unlimited consumer choices. Back to a simpler lifestyle! Bully pulpit needed here — someone, and Gov Inslee would seem an obvious choice — needs to get to the general public with the urgency for action —

Also, re "China syndrome." The Chinese people & leadership have been outspoken for years in pointing out the disparity in carbon footprint between the average US citizen & Chinese citizen. We need to show them we're —

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: Peggy Britton  
Affiliation: self  
City or Zip: 98506

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Serious -

And — if we are now one of the lowest of the 50 states in terms of carbon ~~production~~ emissions, we will change that status drastically if we permit our are to become a <sup>major</sup> coal-oil-gas entrepot.

And — why are looking to increase international trade (TTP etc) when the shipping of massive ~~am~~ quantities of consumer goods (to encourage over-consumption & premature obsolescence of products) adds significantly to the atmospheric carbon — When in a hole, stop digging!

And — "fracked" natural gas has been found to add a high methane component to the atmosphere, & therefore is not a clean energy choice

## Comments to the Climate Legislative and Executive Workgroup

The Climate Legislative and Executive Workgroup is interested in hearing public views on approaches to reducing greenhouse gas emissions in Washington State.

Comments and suggestions (please write legibly):

- 1) Please do not pass a "Low Carbon Fuel Standard" which will most likely add \$1.00 @ gallon to fuel costs. I can barely afford to purchase fuel now to go to work. This is an unacceptable burden to place on families in these hard economic times.
- 2) Make better use of our Hydro-electric capabilities from dams, rivers, and ocean.
- 3) Give electric utilities the flexibility they need to meet their biennial conservation targets.
- 4) Do more research as to how the numbers in RCW 70.235.020 were arrived at. Please consider revising the targets, so that the State of WA is not put at a competitive disadvantage as compared to other States with higher greenhouse gas emissions. \*\*Please continue on back or attach pages if needed\*\* → over

### Optional Information:

Name: Karen L. Collins  
Affiliation: FOR State Committee Woman  
City or Zip: Rochester, WA 98579

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5) Please do not do anything with Nuclear Energy. Look at what's happening with Fukushima, Japan. The State of Washington is on a major earthquake fault!

4) I am against "Wind Energy" because of the fact that 300 birds a day per wind mill are being killed and these wind turbines are non-discriminatory. They are killing eagles, owls, etc... In addition, look at what's happening in China where the ore is mined to make the huge magnets for these turbines. The earth is being poisoned and the Chinese peasants have rampant health problems! ~~including cancer, etc~~

Go to: Catastrophic Human Caused Global Warming is a myth!  
Rutan's Findings:

<http://rps3.com/pages/Burt-Rutan-on-climate-change.htm>



## Comments to the Climate Legislative and Executive Workgroup

The Climate Legislative and Executive Workgroup is interested in hearing public views on approaches to reducing greenhouse gas emissions in Washington State.

Comments and suggestions (please write legibly):

TO WHOM IT MUST CONCERN  
THE TIME HAS COME FOR ACTION BY THE STATE OF  
WASHINGTON - WE THE PEOPLE HAVE A RIGHT TO EXPECT  
DECISIVE & COURAGEOUS ACTS BY OUR STATE-  
WIDE ELECTED & LEGISLATIVE OFFICE HOLDERS, BOTH  
SENATORS & REPRESENTATIVES. OUR EXECUTIVE BRANCH  
OF GOV'T. MUST BE PRO-ACTIVE BY SEEKING BOTH CON-  
SENSUS WITHIN THE STATE OF OUR CITIZENS, BUT ALSO  
COOPERATION FROM ALL THE STATE'S INDUSTRIES.  
RESEARCH & DEVELOPMENT HAS BEEN A HALLMARK OF  
OUR GREAT STATE. IT HAS BECOME CLEAR - WE  
MUST GET BEHIND OUR CLEAN INDUSTRIES IE, SOLAR,  
WIND, GEO-THERMAL & HYDROPOWER. BUT, I MUST SAY  
WE ARE MISSING A MAJOR SOURCE OF CLEAN ENERGY  
TIDAL POWER. RIGHT NOW UOEW & NOAA ARE BACKING  
R&D ON TIDAL ENERGY!! THIS SOURCE WORKS - LET'S  
GET STARTED TO

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: GEORGE L. BARNER JR  
Affiliation: PORT OF OLYMPIA  
City or Zip: OLYMPIA, WASHINGTON 98501

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Comments  
continued

Produce clean Energy with non of the CARBON by products related to the variety so called clean fuels. The future of TIDAL Energy to augment Hydro power & wind, solar, & geothermal is not even understood for its potential. Please don't wait for the crisis of energy to overtake Washington state - LETS ACT NOW!, Be courageous, Look TO our Future to insure a clean & Healthy 21<sup>st</sup> CENTURY with Electric Energy for source of non-polluting automobiles for our American Industry to produce for Washington citizens to purchase & Drive for a healthy future economy. THANK YOU

Sincerely

GEORGE L. BARNER JR  
Port Commissioner  
w/ Port of Olympia

Olympia, Wa

## Comments to the Climate Legislative and Executive Workgroup

The Climate Legislative and Executive Workgroup is interested in hearing public views on approaches to reducing greenhouse gas emissions in Washington State.

Comments and suggestions (please write legibly):

Support Cold Fusion

**\*\*Please continue on back or attach pages if needed\*\***

### Optional Information:

Name: ..... John Coello .....  
Affiliation: ..... New Energy Movement .....  
City or Zip: ..... 98103 .....

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# WHAT IS COLD FUSION?

---

Cold fusion describes a form of energy generated when **hydrogen** interacts with various metals like **nickel** and **palladium**. Cold fusion is a field of *condensed matter nuclear science* CMNS, and is also called *low-energy nuclear reactions* LENR, *lattice-assisted nuclear reactions* LANR, *nickel-hydrogen exothermic reactions* Ni-H, and *quantum fusion*.

When hydrogen, the main element of water, is introduced to a small piece of the metal nickel or palladium, a reaction occurs that can create *excess heat* and *transmutation products*. Excess heat means more heat comes out of the system than went in to the system. LENR provides an ultra-clean source of energy that creates heat to make hot water and useful steam. Steam can turn a turbine to produce electricity.

Cold fusion devices can produce so much heat, it is more than can be accounted for by chemical means, and therefore must be generated by a nuclear source. But cold fusion is not like today's dirty and dangerous nuclear power.

**.No radioactive materials are used in cold fusion.** LANR occurs as the tiny protons, neutrons and electrons of hydrogen interact, releasing energy slowly, through heat and photons, **without the dangerous radiation** associated with conventional nuclear reactions, and **cold fusion makes no radioactive waste.**

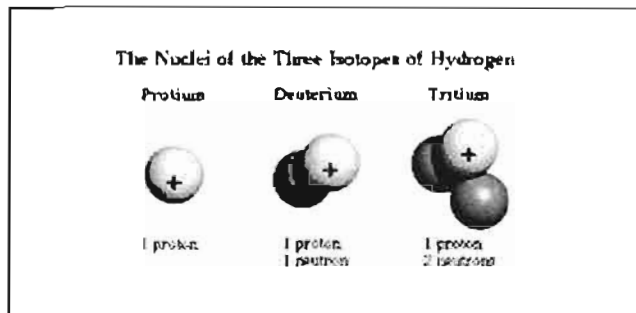
Hydrogen is the most abundant element in the universe. On Earth, hydrogen is found in water. An energy source from hydrogen is clean, with no carbon-dioxide CO<sub>2</sub> emissions. In LENR reactions, only tiny amounts of the hydrogen are consumed and the metal is recyclable when spent.

*Transmutation* occurs when one element is transformed, or *transmuted*, to another element. The creation of elements by transmutation has been the dream of alchemists for millenia. Now, new energy scientists are able to create new elements in their labs using LENR techniques. Research has shown that radioactive materials can be transmuted to benign elements, promising a path to ridding the planet of thousands of tons of radioactive waste.



Cold fusion energy generators will not need to be connected to an electrical grid. Small and portable power units will provide energy on-demand in any location. When access to water means access to fuel, local communities will find new-found independence with control over their own energy choices. Hot, clean water provides a health revolution around the globe.

Offering a new energy economy based on green power from plentiful hydrogen, energy-dense LENR makes it economically-viable to recycle all waste and restore wilderness and waterways to pristine conditions, saving a planetary biosphere from extinction.



*Hydrogen isotopes: Protium, Deuterium, and Tritium*

Accessing the energy of the nucleus of the atom, the central portion, the sweet-spot for human development and opportunity to grow and explore the universe with new engines providing long-term spacecraft power, with fuel virtually everywhere in the universe.

As a handful of independent labs from around the world bring two decades of research to fruition with commercial products, the global effort to bring cold fusion into physical reality marks the shift in our evolution as a species, the most revolutionary energy you've never heard of.

For more information <http://coldfusionnow.org/what-is-cold-fusion/>

NEW ENERGY MOVEMENT-SEATTLE

I am Herbert Burke, Founder of the website **Energize Northwest** (energizenorthwest.com, or energizenw.com).

The goal of Energize Northwest (ENW) is to energize the Northwest's economy by reducing our Global Warming Carbon Footprint to Zero and become Carbon Neutral.

ENW has been a work in progress for almost three years. I was aware of what was to become the Lidos report but was not aware of CLEW until recently, when I searched the internet for the report.

After much research, Energize Northwest realized the only way to drastically reduce our CO<sub>2</sub> emissions was to replace fossil fuel energy with clean Nuclear Energy and we should start by replacing all the fossil fuel generated electricity with Nuclear, and Hanford was an ideal place to construct new Nuclear Plants. I was not surprised that the report did not propose expansion of Nuclear Power, but I was delighted to see in the November 6 Meeting Summary, that Senator Erickson asked about it.

In answer to Senator Erickson's questions.

Calculating the quantity of GHG emissions that would be eliminated by replacing high carbon (I will assume coal) generated electricity with nuclear is quit simple. From page 8 of the Lidos Report, coal generated electricity consumed in the state produced 15.8 MMTCO<sub>2</sub>e of GHG emissions. To determine the quantity of electricity generated by coal, you look to table 5-1b on page 60 of the State's 2013 Biennial Energy Report with Indicators. This table shows that the State consumed almost 12 million MWh of coal-generated electricity. On the same page, table 5-1a shows the output for 2011 of the Columbia Station, our only nuclear plant, to be 4.8 million KWh. A new GE ESBWR is about 50% more powerful than the almost 30 year GE BWR powering the Columbia Station, or about 7.2 million KWh. So two new reactors would be able to supply something like 14.4 million KWh annually. This exceeds the 12 million MWh of coal generated energy consumed in the State.

The elimination of this one pollution source would achieve the State's 2020 goals, (2010 level of 96.1 less 15.8 gives you 80.3 well below the 2020 goal of 88.4). Adding a third reactor to replace natural gas generated electricity would further reduce emissions and would get the State halfway to its 2035 goal. In reality, it is not that simple as most of the natural gas generation is used for peaking not base load. Such a source switch would require the expansion of our dams to provide more peaking power and replacing their reduced base load generation capacity with Nuclear power. We have a more detailed discussion on our website.

The cost of reducing emissions by replacing fossil fuel generated electricity is a harder number to project. The reactor manufacturers' are closed lip about their plants costs. The nuclear industry chatter quotes figures from \$2 to \$6 billion per plant. Nuclear proponents and GE's sales literature, tend to quote nearer lower figure and with nuclear opponents quoting the higher as to deter expansion of nuclear power. However, these are capital costs which will be financed. Capital costs, along with operation costs will be paid by selling the power plants' electricity.

We should be able to keep total cost down because Energy Northwest controls the sites of two canceled reactors. Most of the remains of these incomplete plants have been demolished because they would be of little use in a newer plant design. The fact that the NRC has previously approved the locations and their owner should speed up licensing. Our guess is that much, if not all, of the infrastructure built to support the abandoned plants is still in place. Building two new plants here should speed up the permitting process and keep costs down.

As to ~~costs~~ revenue estimates, my guess is that the construction of the first two plants would generate at least half a billion dollars in direct tax revenue with the total economic impact being billions more. From what I have seen, the State's Commerce Department can do a much better job quantifying the economic impact than I can.

Energize Northwest was conceived to promote developing an economic engine for Washington State that could not be relocated elsewhere as Boeing is threatening to do. No one can relocate the Hanford Reservation or the Columbia River drainage basin. That puts the State in the position of not needing to offer tax exemptions and other incentives. Our incentives would be a State receptive to Nuclear Power with streamlined permitting procedures.

I would like to make some observations about the Report and CLEW's direction. Global warming is serious and fossil fuels are causing it but immediate problem is that the emissions from fossil-fueled plants in the United States are causing over 30,000 premature deaths annually. The September 2011 Scientific American Magazine, graphically documents these impacts. Go to SA or use the link on our website. All coal plants should be shuttered as fast as an alternative source for their energy can be found.

The report reference Germany in its discussion of FIT as an energy policy. Germany's move to non-polluting renewables was not motivated by CO<sub>2</sub> reduction but by an anti nuclear movement. They closed three non-polluting nuclear plants and attempted to replace their energy with wind and solar. Since wind and solar are very intermittent Germany was forced to buy electricity from its neighbors, some of which was produced with fossil fuels. The result is that last year Germany's CO<sub>2</sub> emissions went up.

The Northwest is blessed with an ample supply of hydropower, which under normal conditions would be adequate to replace all the fossil fuel generated electricity. However, most of the hydropower is publicly owned with the private utilities being the last to receive it. As a result, the private utilities have had to generate their own power, which was often coal, or natural gas fueled. Legislation to change this relationship would be the easiest and cheapest way to start reducing GHG emissions in the Northwest.

Herbert Burke  
Founder, Energize Northwest

HAND DELIVERED

DEC 13 2013

OFFICE OF THE GOVERNOR

Dec. 13, 2013

To: Washington State Executive, Governor Jay Inslee, and  
Washington State Legislature's House and Senate.

From: Jerry Dierker

RE: 1) Governor's and Senate and House of the State Legislature's improper, "ultra vires", unconstitutional, and unlawful joint Dec. 13, 2013 "public hearing" on Climate Change and Greenhouse Gases here in Olympia, Washington, which is either a violation of the Separations of Powers Doctrine of the State Constitution since it is occurring outside of the regular Legislative Session, or it is a "Special Session of the Legislature" which was called for the making of unconstitutional "Special Legislation" on this matter, either of which are "recallable offenses" in Washington State; and

2) Governor's and Senate and House of the State Legislature's improper, "ultra vires", unconstitutional, and unlawful "lottery" of the public's civil and constitutional equal protection and due process rights to testify at this alleged "public hearing", thereby, giving to only the "lottery winners" as "Special Privileges and Immunities" their civil and constitutional rights to testify at this Dec. 13, 2013 "public hearing", by denying those rights to all other members of the public who had wished to testify on this matter in violation of their civil and constitutional rights under the State and Federal Constitutions and statutes, especially for the disabled persons, like myself and others with respiratory problems, who want to testify there that is in violation of the Americans with Disabilities Act, Federal civil rights law, and the Washington State Blind Disabled and Handicapped "White Cane Law", a State criminal statute, any of which are also "recallable offenses" in Washington State.

Greetings Governor and State Legislature:

I am requesting that you cease and desist all to unconstitutional actions noted above.

I and others have written you in the last few months reasonably attempting to inform you of these mistakes you have made and requesting that you cease and desist or prevent similar improper, "ultra vires", unconstitutional, and unlawful actions taken in the last month by you and/or your subordinates in the Executive and Legislative branches of Washington State's government, up to the point of one person filing a "Recall Petition" against Governor Inslee with State Supreme Court appeal on similar improper, "ultra vires", unconstitutional, and unlawful actions.

However, instead of reasonably reviewing our claims and legal arguments controlling your actions as State Officials, etc., you have repeated failed to follow any law by using similar improper, "ultra vires", unconstitutional, and unlawful procedures to take similar improper, "ultra vires", unconstitutional, and unlawful actions, without sufficient legal reasons for doing so, as if you answer to no law or Constitution, and do not answer to the People of this State.

As noted, while I have previously giving you legal arguments controlling your actions as

State Officials, etc., you have continued to refuse to follow any law, I will again attempt to cite to the law controlling your actions taken here.

The making of "Special Legislation" in this state is prohibited in this State.

The Washington State Constitution's Article II Section 28, et seq., "Special Legislation" provides in part that:

"The legislature is prohibited from enacting any private or special laws in the following cases:  
... 5. For assessment or collection of taxes, or for extending the time for collection thereof. ...

10. Releasing or extinguishing in whole or in part, the indebtedness, liability or other obligation, of any person or corporation to this state, or to any municipal corporation therein."

Such prohibited "special legislation" is legislation for private gain designed to favor or benefit a particular individual or group and not the welfare of the community as a whole, and its inevitable effect is the granting a discriminatory benefit to one or a group of persons, to the detriment of others or the community without adequate public advantage or justification, and such prohibited "special legislation" is merely for the benefit of one or a few or for the disadvantage of some, still remains censurable because it is not for the general welfare. (See e.g.; *Smith v. Skagit County*, 75 Wn. 2d 715, at 743, 453 P. 2d 832 (1969); *Anderson v. Island County*, 81 Wn. 2d 312, at 325, 501 P. 2d 594 (1972); *Pierce v. King County*, 62 Wn. 2d 324, at 339 (1963).

The Washington State Constitution's Article I Section 8, et seq., "Irrevocable Privilege, Franchise, or Immunity Prohibited" provides:

"No law granting irrevocably any privilege, franchise, or immunity shall be passed by the legislature."

The Washington State Constitution's Article I Section 12, et seq., "Special Privileges and Immunities Prohibited" provides:

"No law shall be passed granting to any citizen, class of citizens, or corporation other than municipal, privileges or immunities which upon the same terms shall not equally belong to all citizens, or corporations."

These and other portions of the State Constitution provide for State-created civil and constitutional rights to "equal protection" of the law.

Further, in light of the current Recall Petition against Governor Jay Inslee that the Attorney General filed in the Superior Court on Nov. 1, 2013, it appears that this action may also be part of the unlawful and unconstitutional custom, pattern, procedure, or habit of Governor Jay Inslee and the Legislature to act in violation of the Constitutional "separations of powers" doctrine. (See Articles I and II of the U.S. Constitution; see also *U.S. v. Nixon*, 94 S. Ct. 3090 (1974) *Halperin v. Kissinger*, 606 F. 2d 1192 (C.A.D.C., 1979), 100 S. Ct. 2915 (1980), 101 S. Ct. 3132 (1981), 102 S. Ct. 892 (1982).

"A separation of powers is inferred from the organizing principles underlying the constitution itself. Indeed, constitutional government in the United States is distinguished by the care that has been exercised in committing functions to separate departments and forbidding encroachments. Constitutional mandate requires that the three branches remain separate and distinct and that such separation be strictly enforced." (See 16 CJS 111). "The fundamental

necessity of maintaining each of the three ...entirely free from the control or coercive influence, direct or indirect, of either of the others, has often been stressed and is hardly open to serious question, so much is implied by the very fact of the separation of the powers of these departments by the constitution." (See *Humphrey's Executor v. United States*, 295 US 602 629 55 S.Ct. 869, 874).

Clearly, these actions of the Governor and State Legislature are in violation, excess and/or abuse of their legal authorities under the Constitutions and statute of this State and the United States, and are also "recallable offenses" in Washington State.

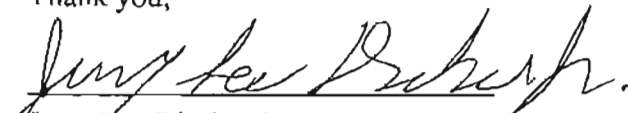
Finally, I also note that this claimed necessary action by the Governor and State Legislature to control "greenhouse gases" to prevent "climate change" appears to be in direct conflict with the recent "backroom meetings" on Gov. Inslee's \$12 Billion dollar roads and transportation package, and appears to be in direct conflict with the recent and illegal Boeing \$9 Billion dollar incentive for building the 787X Dreamliner here in Washington, since road and air traffic will already take \$21 Billion from the State's Budget eliminating any State money for climate change prevention, and since road traffic and aircraft traffic cause so much of the air pollution in Washington and the world, especially since Boeing aircraft put these pollutants directly into the upper atmosphere which causes so much of the "greenhouse effects" causing climate change on Earth, outside of the power plants and the 30% or more we get from coals burning and other air pollutions from China and Asia, which will increase with the coal train projects also being considered by this State.

This has probably occurred since no State actor here has followed the State Environmental Policy Act SEPA RCW 43.21C.030 and other such laws, et seq., which require a government to consider all direct, indirect, and cumulative impacts of an action **before taking the action which would negatively impact other state and public interests**, which has been repeatedly violated recently and routinely by the Governor and State Legislature, et seq, et al, which are also "recallable offenses" in Washington State.

Consequently, before the Governor and State Legislature takes these ultra vires actions, I am requesting that the Governor and State Legislature cease and desist all actions, which are in violation, excess and/or abuse of the legal authorities of the Governor and State Legislature under the law, and thereby "ultra vires" actions, for which Governor and State Legislature's Members are "Recallable". Please take the actions I have noted above to correct this.

Further, I would like to be allowed to review all records you have about this action as soon as possible to determine if I would need any copies of them or not. Please respond in writing with 5 days to this request pursuant to RCW 42.56, et al.

Thank you,

  
Jerry Lee Dierker Jr.

Olympia, WA 98502

Public Testimony to  
Climate Legislative Executive Workgroup (CLEW)  
December 13, 2013

Tom Crawford, Thurston Climate Action Team

Olympia, WA 98512

My name is Tom Crawford. I am board vice-president for Thurston Climate Action Team. I have a 40 year career in education, community development and information technology helping Washington State agencies, school districts and Native American communities improve services.

TCAT recently partnered with the Thurston Economic Development Council to provide energy efficiency services to residential and business customers throughout the county. This year we completed a greenhouse gas inventory, which provides a platform for developing a climate action plan for the Thurston Region.

TCAT believes that this Workgroup must recommend an action plan to meet or exceed the 2008 emission reduction targets by implementing a broad range of policy changes including cap & trade or a carbon tax.

We believe that taking bold action now for the climate would benefit several Priorities of Government (POGs) established for Washington State government, including:

- *Improve the security of Washington's vulnerable children and adults.* Solutions that reduce our carbon footprint can also improve access to affordable transportation, reduce energy bills through efficiency improvements, and lead to more jobs that pay a living wage.



- *Strengthen government's ability to achieve results efficiently and effectively.* Avoiding the worst effects of climate change will prevent government services from being overwhelmed with public health crises, transportation disruptions, forest fires, floods, and widespread failures of water, sewer, and power systems. More immediately, reducing our carbon footprint can significantly reduce the cost of building energy and transportation for state agencies.

I agree with many of the proposals you have discussed for meeting the state's targets for reducing greenhouse gases. Here are some proposals I'd like to highlight:

- It is clear that the most significant reductions will be achieved by putting a cap on carbon emissions.
- Local communities and jurisdictions can provide important citizen connections and support to make the state's climate program successful, and can be a powerful link to public engagement. Many local communities throughout the state have set aggressive greenhouse gas reduction targets. Working together, we can help each other meet both local and statewide climate goals.
- Target energy efficiency for buildings already in place. Help us address the unique challenges of encouraging landlords to improve the efficiency of rented and leased buildings.

Finally, I urge you to move forward with hope and confidence in our ability to build a better future for our state. No matter our political differences, we all are committed to our communities, to our children and grandchildren. There are risks and uncertainties, but the scientific evidence tells us clearly that we can no longer wait—we must take action now to assure a future for our children and grandchildren.

Thank you for your courage in tackling this very difficult but absolutely critical work. And thank you for inviting public participation in your decision-making process.

Thank you for your courage in tackling this very difficult but absolutely critical work. And thank you for inviting public participation in your decision-making process.

Hello my name is Greg Rock, I am a Washington based entrepreneur who founded Link Ventures and The Green Car Company plus I have a master's degree in Energy Engineering.

I want to remind you that there are three basic tenants for a perfect marketplace

1. Perfect Competition
2. Perfect Information
3. And Complete Markets

Least understood of these is complete markets which mean there should be no public goods, transaction costs, or externalities.

The production of GHG's and the depletion of finite resources represent two extremely large externalities associated with burning fossil fuels. These external costs, currently not internalized within the price of the commodity, create a tragedy of the commons situation which has accelerated depletion, environmental degradation, and economic inefficiency while simultaneously undercutting innovation and the incentive to develop alternatives.

Our failure to internalize these costs forces individuals and businesses to make poor decisions everyday that lead them away from the path of greatest social good and long-term profitability.

I urge you to focus on the pricing mechanism presented within this study.

I don't care if it is a cap and trade system or a carbon tax. Perfectly implemented the end result will be identical. What is important is that you come together to reach an agreement now, not years from now. For cost effective change to occur there needs to be a price signal at the point of consumption. Without that signal these rapidly growing externalities will destroy our economy and way of life.

In closing, I urge the republicans on the workgroup to go back to the party's core beliefs and recognize that a perfect market is the most cost effective solution to our entrenched economic challenges. Please, lead the way towards a market based solution that internalizes the external costs of burning fossil fuels and shifts us back towards that perfect market we know holds the power to rapidly point us towards the prosperous future I and every Washingtonian deserves.

Thank you,

Greg Rock  
Link Ventures, LLC

Mercer Island, WA  
98040

December 13, 2013 CLEW Testimony

Patricia A. Holm,

Olympia, WA 98506

*Patricia A. Holm*

Do not even consider studying nuclear energy as suggested in the Republican proposal. The people of Japan and Germany have already decided not to have nuclear power and I would hope the people of Washington State feel the same way.

Our Washington State target goals need to be **greater not less** as stated in the Republican proposal. Every scientific study that has come out recently is saying we have less time to make changes, not more. We cannot afford to wait. Washington State can be an example for the rest of the country. We must put in place actions that will curb the amount of carbon going into our atmosphere now.

Our carbon emissions are based on **consumption here in Washington** and should stay that way. Basing them on production does not make sense. PSE needs to stop buying coal generated power and selling it to us. Wind is now comparably priced to coal and is a clean source. We need to invest in clean energy not old fossil fuels that need to stay in the ground.

We all want to know the costs of making changes in dollars and cents. Not all costs can be measured in dollars and cents. The workgroup needs to consider the impact of doing nothing for our future generations. I want my grandchildren to have a future on this planet, not be deprived because we could do nothing to change our destructive ways.

As the Governor said on TV last night, we are an educated population, we are the home of Microsoft and Boeing. We must not let a few climate deniers in our State Senate decide the fate of Washington State.

I agree with the Democratic proposals to set

- 1) an enforceable limit on climate pollution using a market-based approach;
- 2) a switch from coal power to clean energy;
- 3) clean transportation fuels;
- 4) energy efficiency;
- 5) research and development of new technology; and 6) better transportation options for all.

*I prefer a  
carbon tax  
PJ*

**Washington Climate Legislative Energy Workgroup**  
**Olympia, December 13, 2013**

Over the last year and a half working as a volunteer with the Sierra Club's Coal Free PSE campaign, I have had the opportunity to talk to hundreds of PSE's customers. They are shocked to learn that PSE generates a third of its electricity from a dirty power plant in Eastern Montana and are asking that Colstrip be replaced as soon as possible. Sierra Club received 2,700 comments in October asking Governor Inslee to make retiring out of state coal the #1 climate priority. 10,000 people have let PSE and the UTC know that they want PSE to retire Colstrip as soon as possible. In addition, over 100 businesses have signed a letter asking the UTC direct PSE to account for the true cost of coal in their Integrated Resource Plan.

We can replace this dirty imported power imported with improved energy efficiency and local clean renewables. Innovation over the last five years has dramatically reduced the cost of wind and solar. In addition to becoming more cost effective, these technologies have the advantage of generating far more good paying jobs than replacing coal with natural gas as PSE proposes to do if forced to retire Colstrip.

Synapse Energy Economics (report prepared for Sierra Club, October, 2013) estimates that for the same amount of electricity generation, commercial and residential solar will produce 11x the jobs as compare with construction and operation of natural gas plants, for utility solar 5.5x times the number of jobs, and for wind and energy efficiency almost 1.5 times the number of jobs.

To make these numbers a little more concrete, let me give you a personal example. This spring I did a major energy retrofit on my home. And I needed a lot of work. The audit showed that I had air leaks the equivalent of a 20" by 30" hole in the wall. Two workers spent a week sealing and insulating my home. This fall I had a solar system installed to generate electricity. A crew of four including two electricians spent four days installing the system. These are all good Washington based jobs and they do not even include the manufacturing jobs in Bellingham WA where the panels were produced. Imagine the jobs we would produce if we multiplied this by 250,000 homes and commercial buildings.

We know what the future needs to look like. I encourage you to define the policies for the State to retire Colstrip as soon as possible and move us toward a cleaner energy future.

Ron Snell  
Kirkland WA

Lon Freeman

Olympia, WA 98502

Climate Legislative and Executive Workgroup (CLEW)  
Honorable Jay Inslee, Governor  
Keith Phillips (State Capital), Hedia ? (WA Dep't. Of Ecology)  
State Capital  
Olympia, WA 98504

December 12, 2013

ATT: Members: Rep. Shelly Short, Sen. Kevin Ranker, Gov. Jay Inslee, Sen. Doug Ericksen, Rep. Joe Fitzgibbon,  
(Alt.) Rep. Jake Fey, Leidos Staff Christina Waldron, Tim Kidman et. al.

RE: Public Comment CLEW "ACTIONS and POLICIES"

Dear Members:

I have been attending all of the public CLEW meetings since early September and I commend the difficult work you have all been engaged in. I have not been able to obtain and read the "Draft Workgroup Report" at the time of this writing. In lieu, I will offer a few suggestions for your consideration related to "ACTIONS and POLICIES" in encapsulated form based on the content proposals, and concerns, articulated in the public meetings thus far. As a starting basis I do accept the necessity and commitment in reaching the mandated goals and legislative responsibility to achieve the CO2 emissions reduction targets, and dates, specified in RCW 70.235.020 (2008), and the subsequent legislative requirement in devising "ACTIONS and POLICIES" embodied in E2SSB 5802 (2013) Sec 4, Line 15 to accomplish the emissions reduction targets.

In the array of potential action areas discussed over the past few months, and more specifically the 6 Action Items proposed by Governor Inslee at the October 14 CLEW meeting, I have a particular interest in advancing the promise of "technological innovation" in the electrical energy generation and utilization arena. In light of the projected shortfall by nearly ½ again (20 MMT shortfall in CO2 emissions reduction) in meeting the extended time frame reduction targets in 2035 and 2050, this is a poignant fact that needs to be addressed. The projected shortfall in meeting the reduction targets exist despite the sum total of ALL of the options elaborated by the consultant's model, including a carbon tax ("Leidos"). Acknowledging the long-range time horizon inherent in this Action Area, it is imperative to initiate in a timely manner refinements, honing, and innovation in Research policy, in Intellectual Property policy to alleviate patent gridlock, trolls, license stacking, royalty stacking, ROI by indefensible patents (reform by communication and mobilization at the federal level) (see Michael Heller, *The Gridlock Economy*, Chap 3, 2008). It would also be of help to initiate state facilitation of research networks (human capital) as well as open Data Sharing networks where feasible. As a matter of principle, the social component of *new knowledge* production and dissemination should be acknowledged and embodied as an Archimedean point in facilitating a quickened pace of technological innovation and commercialization in the energy generation sector.

Because there will eventually need to be a prioritization of technological innovation trajectories toward accelerated commercialization, for qualitatively different technologies, in a sequential fashion over future time frames, I also suggest the founding of a high level Office of Technology Assessment, at the state level, perhaps associated with the Governor's Office. This effort should be in cooperation with the comprehensive research universities and private equity research institutes and research foundations in the energy arena. This would need to be carefully and mindfully created and configured to assure objective and fair assessments, again in a time sequential fashion over future time frames for introduction of qualitatively different technologies of varying technical maturity.

# Lon Freeman

Olympia, WA 98502

In light of the preceding paragraph it is my contention that technological innovation policy, in spite of the best intentions, can never be technology neutral. Qualitatively different technological approaches to energy generation and comparison of their respective scale, capacity factors, patterns of use, distribution, facilities siting, and differing starting points and stages of development in the research stages tend to influence research funding patterns and the opportunity to achieve sufficient technical maturity for commercial introduction. Market dynamics and institutional investment decisions on a large scale are more inclined to short term realization of ROI than long range viability and social benefit, even if there is opportunity for private wealth accumulation in a far off "future". It will be up to the policy arena to equalize and balance these competing perspectives and research needs for viable future technologies with a long development trajectory to achieve the emission reductions necessary for climate stabilization, although it is entirely technically feasible and likely economically realizable. A host of different funding patterns and technological development scenarios with differing timelines will be needed depending on the prioritization of which technologies get deployed first, next and last over the next 40 years.

## Nuclear Energy

As an example of my intentions and meaning in the foregoing paragraphs, let me be more concrete. I have heard mentioned on more than a few occasions in the CLEW meetings an interest in nuclear energy. I am not someone who rejects nuclear energy out of hand. However, the term "nuclear energy" has many different meanings and conjurings, and embodies qualitatively different technologies. What typically comes to mind when the term "nuclear energy" is used is a large scale central station, pressurized, light water reactor in the class of 1000 to 1200 megawatts capacity, with large cooling towers and large footprint on the landscape, with Uranium fission fuel enrichment and proliferation risks, and a history of operations problems, accidents, and unsolved radioactive waste disposition problems. Then, there are the new fission reactor designs – fast modular reactor; mixed oxide molten salt reactor (breeder), pebble-bed high temp gas cooled reactor, all still using a Uranium fuel cycle and fission technology, with some breeding Plutonium as fuel, and some burning Plutonium waste and other actinides as transmutation reactors (Gen IV reactors). There are now in development stages Thorium based fission reactors (molten salt cooled) which still transmute to U233 (fissile) and are still fission reactors with the problem of neutron activation of surrounding materials. Canada both uses and exports heavy water reactor (Deuterated) fission technology, in the process breeding some Tritium by neutron absorption, but still being a fission technology. In addition there are the continuing programs in fusion energy development with the 2 large scale projects using Deuterium-Tritium fuel in both the Magnetic Confinement Tokamak device (ITER) and in the Inertial Confinement Laser fusion device (NIF), each out of the necessity of the physics principles involved being of huge scale with the attendant huge costs in Billions of dollars and a very long-term development scenario. Tritium, as part of the fuel mix is a radioactive isotope of hydrogen – is radioactive itself, and is used as a weaponizable fuel, and is not particularly abundant on Earth, so needs to be bred as part of the fusion reactor operations. And, still produces some, but less radioactive waste products as a result of the neutron activation of surrounding materials in the fusion reactor. But it's typical dangerous radioactivity is only on the scale of a hundred years or so instead of the tens of thousands of years for Uranium based fission reactor wastes.

But!, that is not the end of the story. There is now in the fusion energy domain small scale experimental fusion devices in development that are intended to use an entirely different fuel as the reactants – ordinary Hydrogen (stripped of its single electron by ionization, becomes the "proton", "p"), and the common element Boron, ("B") (remember 20 Mule Team Borax when you were a kid?). These 2 reactants, the proton (ordinary Hydrogen) and Boron11, neither of which are radioactive, under conditions suitable for sufficient fusion reactions produce 3 nuclei of the common element Helium for each fusion reaction, which is not radioactive either (Helium4) and a great quantity of energy liberated in the fusion reaction gain itself. So, neither the reactants nor

# Lon Freeman

Olympia, WA 98502

the products of this type of fusion are radioactive. And, by-in-large, there are no neutrons that are emitted by this type of fusion reaction (well, less than 1% due to side reactions, it is a probabilistic issue, and are not of the correct kinetic energy for absorption by surrounding materials in the fusion chamber). So, there is no neutron activation of the surrounding materials to generate radioactive waste either. The rub is that it is very difficult to attain the conditions necessary for sufficient fusion energy gain in order to achieve net energy production suitable for commercial deployment. This is currently under intense development, both theoretically and by simulation studies, and by experimental research. It is called "Aneutronic Fusion" and it is specifically of the "pB11" fusion reaction. And there is the integrated bonus with this type of fusion technology of the likelihood of Direct Energy Conversion. If this proves to be viable, it does away with the entire thermal cycle – no steam generators to get corroded and replaced, no turbines, no electrical generators in separate buildings and no cooling towers. And the scale of this type of fusion technology is typically much smaller than any other utility scale energy technology I am aware of. There are several different design approaches to this technology currently being worked on, with different theoretical approaches to the apparatus. They range from a tandem device to produce 2, 50 megawatt units = 100 megawatts, to a smaller scale 5 megawatt device suitable for decentralized, distributed generation on a neighborhood scale servicing some 1000 homes or a single electrically intensive manufacturing facility. If this type of fusion technology proves commercially viable, it may be suitable for marine propulsion. It may also have applications for space propulsion, for manned missions to outer planet exploration and resource use due to the accelerated velocities possible with this type of propulsion compared to chemical rocket velocities, and the subsequently shorter time durations needed for traversing space and the attendant exposure to harmful radiation and charged particles. Finally, this technology may be a reasonable option for desalination of coastal water in arid regions of the world suffering from dire insufficiency of agricultural, process, and potable water for their populations.

It is not my intention to portray this technology as a utopian reflection. There are associated risks inherent to the technology, including the use of "decaborane" ( $B_{10}H_{14}$ ) as a stock fuel source for decomposition to elemental Boron11 and elemental Hydrogen prior to ionization to the plasma state in preparation for fusion. Decaborane is a toxic and dangerous substance susceptible to tactile toxic contamination, and its widespread production and use cycle would have to be carefully regulated. Boron itself is a dangerous substance but is not found in nature in its unassociated elemental form. And, although there is no radioactive waste generated by this technology, a minute quantity of Carbon11 ( $C_{11}$ ) would be generated in the fusion vacuum chamber as fusion energy was being produced. The half-life of  $C_{11}$  is 23 minutes and it is a radioactive substance. If there were an accident in a 5 megawatt pB11 fusion unit where electrical power was interrupted, the unit would cease fusion reaction productions automatically and the resulting  $C_{11}$  radioactivity in the fusion chamber would dissipate to background levels within 9 hours. Unlike fission reaction technology, the fusion reactions necessarily depend on the continuity of electrical current to produce fusion reactions, otherwise they automatically cease. Finally, in the course of producing fusion reactions, there are intense X-Rays generated, also in the fusion vacuum chamber, so there needs to be adequate shielding designed into the facility for protection of operators and other person ell. I believe these risks are of far less severity and consequence than most other if not all other known nuclear energy technologies. And are of a different nature than fossil fuel pollution.

So, the remaining question is, as I began – what type of nuclear energy is the reference to when we speak of nuclear energy? Comparing the type of nuclear energy technology we have in our midst today to pB11 aneutronic fusion is like comparing a pterodactyl to a hummingbird. But the appropriate technology innovation policies, and the adequate if not ample funding opportunities, and the educational infrastructure both formal and non-formal have to be in place in a sequenced time series to realize the potential transformative nature of this technology for our current civilization.



# Lon Freeman

Olympia, WA 98502

## Bullet List of Suggestions:

- 1) Create a high level Office of Technology Assessment at the state level, for prioritization of Energy Tech. Development
- 2) Facilitate the creation of (Human Capital) research networks, and Data Sharing networks at the Comprehensive Research Universities and State Liberal Arts Colleges, and Private Equity Research Institutes and Research Foundations for greater Collaboration in energy transforming tech.
- 3) Communicate and mobilize for change the Intellectual Property (Patenting) traditions at the Federal level to acknowledge the social component of new knowledge production and dissemination, in order to unblock the Patent gridlock, and accelerated introduction of new technologies, by collaborative Patent Pools sharing mechanisms. Follow the Intellectual Property Rights dialogue occurring in the current “Trans Pacific Partnership” negotiations.
- 4) Fund small scale “Aneutronic Fusion” “pB11” research at the Comprehensive Research Universities, and establish international networks of Research Collaboration in this field, while still continuing advanced R&D in Renewable Energy Development technologies. Small scale (5-100 MW) Aneutronic Fusion may become an attractive path of energy tech. development in the mid to later years of the planning timeframe.
- 5) Establish and conduct public, non-Formal Community Education presentations and programs on the nature of Technology Assessment and the utility of it's founding principles in planning and projecting long range technological development to meet planning goals. NSF has a funding program on non-Formal Ed.

## Recommended Short Bibliography

- 1) Heller, Michael; *The Gridlock Economy*, Chap. 3 (on Intellectual Property), Basic Books, NY (2008)
- 2) Lemley, Mark A.; *Are Universities Patent Trolls?*; Stanford Public Law Working Paper No. 980776 (2007), Lemley answers “no”, but the story is complex
- 3) Nordhaus, William D.; *A Question Of Balance: weighing the options on global warming policies*; Yale U. Press New Haven (2008)

## Acknowledgments and Thank You

- 1) Eric J. Lerner, Founder and Chief Scientist; Lawrenceville Plasma Physics; NJ, for tireless work on pB11 fusion with the Dense Plasma Focus device and willingness to be open concerning development work.
- 2) Dr. Thomas Barjoe, Founder and Director; Plasma Science and Innovation Center (PSIC) at U. of WA, for the projects he has initiated and continues through thick and thin
- 3) Dr. Robert W. Brussard, posthumously; former Dir., Fusion Energy Program @ U.S. Dept. Of Energy, for his design discovery and development work on the Polywell pB11 fusion device – Inertial Electrostatic Confinement
- 4) Dennis Peterson, staff; “ZaP Flow Z Pinch Experiment” @ UW PSIC, and “Climate CoLab” @ MIT, Thank you Dennis for the very valuable “Contest” entry in Electric Energy section of Climate CoLab @ MIT

## CLIMATE LEGISLATIVE AND EXECUTIVE WORKSHOP

Gov Inslee, Sen. Ranker, Rep. Fitzgibbons/ Rep. Short and Sen. Ericksen

Program put forth by Gov Inslee and Democrats on the comm. (1) Cap on carbon pollution emission.

(2)Reducing "Carbon by Wire"

(3)Energy Smart Building Program

(4)Financial support of clean energy  
technologies.

(5)Modernize systems for transport of  
Goods and People

All the while during implementation monitoring and adjusting for the economic impact on individuals and groups.

The Republican members of the committee, in the meantime seem to have missed the very reason for their presence on the committee and the reason for the committee itself which is to advance towards meeting the Mandate put forward by the Legislature in 2008. That mandate being to meet goals of curbing Greenhouse gas emissions by 2020, 2035, and 2050.

Watching the Workshop Meeting on Fri. Dec. 6<sup>th</sup>, it would appear that their main thrust is to go back and re-evaluate the goals in the 2008 mandate and whether or not those goals are even necessary. Further, they do not want to present ANY program to the legislature until there is more study on the economic impacts of the proposals. They are not willing to even create a "straw man" (as was suggested last Fri.) before they start criticizing it as unfair or unworkable from an economic standpoint.

Worst of all is that their one substantial proposal is to replace carbon energy sources with Nuclear Energy, an energy source which, in this Post Fukushima Era, is only being actively pursued by Iran.

I feel that the only meaningful and productive work coming out of the workshop is that being proposed by Gov. Inslee and the Democrats.

Edward Ladergue

Olympia, Wash. 98501

Dennis D. ("Dusty") Rhodes

Olympia, WA 98513

December 13, 2013

### **Testimony Before the Climate Legislative Executive Work Group**

My name is Dennis Rhodes. My friends call me "Dusty". I hope a few words on my background will allow you to see why I am so passionate about the climate change policy issues this Work Group is addressing. I was born in Spokane in 1940. My father was a career US Air Force officer, so, growing up, I lived and attended schools all over the United States. I graduated from high school in Tokyo, Japan, and earned a bachelor's degree from Gonzaga University in 1963, along with an ROTC Distinguished Military Graduate commission as a 2<sup>nd</sup> Lieutenant in the US Army Infantry Corps. I became a paratrooper, and served in South Korea as Commandant of the 8<sup>th</sup> Army Non-Commissioned Officers Academy before leaving the Army in 1968 as a Captain. I served the next 32 years as a Washington State Employee, retiring from State service in 2000. I currently live in Olympia with my wife Annie. I am a father and a grandfather, and I am here today on behalf of both younger and future generations.

I want to thank you, Governor Inslee, and the legislative members of the work group, for giving me this opportunity to testify on behalf of meaningful policy proposals to address the impacts of climate change on the State of Washington. I would like to begin with a brief summary of my testimony, in hopes that your concern over the impacts that environmental policy changes will have on Washington and beyond may interest you enough to hear the details supporting my proposal.

#### **SUMMARY:**

Having served as a member of the U.S. Congress, Governor Inslee, you may already be familiar with the Earth Policy Institute; but for the benefit of the other members of the

Work Group, the Institute is a nonprofit environmental research organization based in Washington DC. You may also be aware of the pioneering work of its world-renowned president, **Lester R. Brown**. If not, I believe you will find that Mr. Brown and the staff of the Institute have compiled extensive and compelling evidence that documents a solid basis for people the world over to have grave concerns over the failing state of the Earth's natural systems – the oceans, glaciers, savannas, wetlands, rain forests, wilderness, arable land, aquifers, estuaries, the air we breathe, and so on. Mr. Brown presents thoughtful plans for effectively dealing with these concerns in his book ***World on the Edge – How to Prevent Environmental and Economic Collapse***. I have a copy of the ***World on the Edge*** for each member of the Work Group, which I will present at the conclusion of my testimony.

I am urging you to contact the Earth Policy Institute and invite Mr. Brown or his designee to address the 2014 Legislature on the perilous state of the Earth's natural systems and the urgent need for sweeping action. I can think of no more important issues facing Earth's inhabitants than those being addressed by the Institute. And, in view of your efforts to have the State of Washington become a leader in responsible stewardship of the Earth's resources, I think that Mr. Brown could help educate many, if not most, of the skeptics in the Legislature and elsewhere who have either questioned or opposed those efforts. And perhaps he would win over enough of them to gain their support for meaningful action in the 2014 session.

First, some background: Mr. Brown was the founder and president of the Worldwatch Institute for its first 26 years. He has authored or coauthored over 20 books; and he has been honored with numerous prizes, including a MacArthur Fellowship, the United Nations Environment Prize, Japan's Blue Planet Prize, the Presidential Medal of Italy, and the Borgstrom Prize of the Royal Swedish Academy of Agriculture and Forestry. He also holds 25 other honorary degrees as well as three honorary professorships in China, including one at the Chinese Academy of Sciences.

I had the opportunity to meet Mr. Brown following a lecture he gave at the Seattle Forum on November 11<sup>th</sup> of this year. I asked him if he would be willing to come to Olympia during the 2014 legislative session, and he said he would gladly do so if a mutually agreeable schedule could be arranged. You can explore both the origin and nature of the Earth Policy Institute and review Mr. Brown's credentials on the Institute's website at [www.earth-policy.org](http://www.earth-policy.org). You can also download any of the Institute's publications for free.

#### DETAILS:

I was encouraged by the creation of this Work Group from its inception, and I'm hopeful for both our state and for the country that your efforts will result in a model that will serve to educate and inspire the people of both Washingtons. Your insistence on searching for the truth and for taking into account the long-term consequences of human actions gives me reason to hope and inspires me to keep pushing for action. Thank you all for your leadership and commitment.

My main reason for coming before you today, though, is something that has haunted me with ever-growing intensity over the past 50 years of my life; and I sense that, to varying degrees, it troubles you all as well. My worst fear is that the future of all of Earth's inhabitants (except perhaps cockroaches) is in grave jeopardy, and that the survival of the natural systems upon which all life depends is far more precarious than most people realize. All these natural systems, which I named earlier, are clearly either failing or are in serious decline the world over. And I know that a growing number of people share my belief that precious little time remains for humanity to rescue them.

I also fear that too many of the world's political leaders are appallingly ignorant, woefully uninformed, and/or in utter denial of the perils facing our planet. Perhaps just as serious, a majority of the public also appears to be equally uninformed, in denial or too

preoccupied with the demands of daily living to both require the truth from our political leaders and to insist that they act responsibly.

I've always been a nature lover, fascinated by the beauty, complexity and fragility of the natural world. But, ever since reading *The Population Bomb* by Paul and Anne Earlich and Rachel Carson's *Silent Spring* back in the late 1960s, my concern for the Earth's future and my sense of urgency to do something meaningful about it has grown steadily. I've done what I could to make a difference and reduce my own carbon footprint, but I've always known that whatever I, or other well intentioned folks did individually, couldn't be enough – and I believed that no one was looking at the overall picture or, more importantly, trying to figure out what actions we need to take together *now* – to protect the Earth, both for ourselves and for future generations.

I genuinely fear that our own lives, as well as those of all future generations are in peril if humanity as a whole doesn't recognize the growing dangers to the Earth's natural systems and take the necessary steps to deal with those dangers, *while we still can*. To some degree, I think a growing number of people have the same fear, but that our sense of helplessness over what we, as individuals, can do about it leads us to block it out of our consciousness. We find it easier to focus on dealing with life's more mundane and manageable every-day problems. Only, below the surface, an uneasy feeling lurks in our guts. At least that's how it has seemed to me.

Then, last year I learned about the Earth Policy Institute and purchased my first copy of Lester Brown's book *World on the Edge – How to Prevent Environmental and Economic Collapse*.

As I read *World on the Edge* I realized that it indeed confirmed my worst fears about the immanent perils we face, but that, more importantly, it also identifies practical realistic

actions humanity can take (via the world's governments) to either avoid or to mitigate those perils. They've even calculated the financial costs of taking these actions and shown that those costs are well within the ability of the world's economies to afford.

*The key challenge lies in getting states and nations to recognize the severity of the situation soon enough for each to commit to taking sufficient collaborative action now before time runs out.* The task before us is equivalent to that of convincing the rest of the passengers and crew aboard the Titanic to realize, (before we slam at full-speed into the iceberg lying dead ahead), that ***THIS SHIP IS NOT UNSINKABLE***, and that, in Earth's case, ***THERE ARE NO LIFEBOATS!***

So, in light of the above, I purchased several copies of *World on the Edge* last year, and gave them to family members, friends and to others who are either in (or are seeking) public office. Having done that, it occurred to me that another (even better) way to draw and focus public attention on the precarious state of Earth's natural systems and the urgent need for international action to save them would be for you to familiarize yourselves with the work of the Institute and, if you deem it appropriate, invite Mr. Brown, or his designee, to address the Washington Legislature. I truly hope you will be willing to have your staff look into it.

I strongly believe that having Mr. Brown address the Washington Legislature would focus much needed state and national media attention both on the issue and on Washington's leadership role in addressing it.

Thanks again for this opportunity to offer my proposal for your consideration. If you do nothing else with the book, I urge you to please read the preface and the last chapter. I can assure you that your effort will lead to both a greater awareness of the problem and an even stronger sense of urgency for action.



## Washington State Labor Council, AFL-CIO

Jeff Johnson, President — Lynne Dodson, Secretary-Treasurer

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December 10, 2013

To: Governor Inslee's Climate Workgroup

From: Jeffrey Johnson, President  
Washington State Labor Council, AFL-CIO

Subject: Testimony - Clean Fuel Standards

On behalf of the Washington State Labor Council, AFL-CIO, and our affiliated local unions, I would like to say that we recognize that climate change and income/wealth inequality are the two great crises that we face today. History will judge us as leaders and as organizations by the efforts we make to address these problems. It is my belief that your work can, in part, address both of these issues.

The WSLC has been working with our affiliated local unions in a statewide Blue Green Alliance. I would like to go on record stating that we look forward to working with the Governor's office and the legislature to craft a clean fuels standard that reduces carbon emissions and also provides profitable investment opportunities for oil companies to invest in alternative fuel production. Such standards would retain and, in fact, expand job production and economic growth in our State. Increased investment in alternative fuel production and related energy infrastructure will increase high skill, high wage job growth and income growth which will lessen inequality.

Labor was able to work cooperatively with the environmental community and the California State Legislature in 2012 to pass a clean fuels standard that met carbon-reducing environmental goals while protecting working families and communities in and around the oil industry. We can and must do this in Washington State, as well.

For the sake of our communities and our State, I look forward to working with you on reaching these most important goals.





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**Public Hearing – Global Warming – Dec. 13, 2013 – 1-5 PM, John L. O'Brien Bldg., Hearing Rm A (Overflow in B)**

My Name is James Wilson, I am from Olympia, and I am representing myself.

*Gov. Inslee & Senators*

My comments will primarily address Actions to promote Green House Gas Emission Reductions through Education.

1. **Population:** The biggest driver of Anthropogenic Green House Gas emissions in the next 50 years will be our accelerating population. Provide education that lets the public know that there is a multiplier effect between accelerating population growth and Global Warming – with a result that will probably negate the green alternatives that are available.

According to an Oregon SU study each child born will have a carbon legacy of many times (5 to 20) the savings of a person driving a high mileage car, using energy saving appliances and other green lifestyle changes. Besides reduction of Global Warming, reduction in population growth will extend the availability of fossil fuels – giving more time to bring alternatives into production.

Ref. Reproduction and carbon legacies of individuals, Department of Statistics, Oregon State University, Paul Murtaugh 2008. Ref. Center for Biological Diversity ([biologicaldiversity.org](http://biologicaldiversity.org))

2. **What is the real Carbon Footprint of products purchased?**  
Provide Educational Guidelines for the consumer selection of Green Products based a Life Cycle Analysis – that shows the total carbon footprint from raw materials to the final product should be available. Also, our State should develop criteria on how a life cycle analysis is performed
3. **Database** – If the workgroup recommends the creation of a database:  
Please do not waste a lot of money building a new database for this project – modify existing database – keep the cost down



## **Friends Committee on Washington Public Policy (FCWPP)**

— A Quaker Organization

P.O. Box 452, Olympia WA 98507-0452

[fcwpp@quaker.org](mailto:fcwpp@quaker.org)

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### **Testimony before the Climate Legislative and Executive Workgroup**

December 13, 2013

Thank you for the opportunity to speak here today.

My name is Steve Evans. I live in Port Townsend, WA, and I chair the Local Responses to Global Challenges Working Group for the Quaker lobbying group Friends Committee on Washington Public Policy, on behalf of which I speak here today.

The time has come to act boldly and swiftly, with clearness of purpose and integrity, to confront the climate crisis. With vast methane stores beneath the Arctic commencing to thaw and the imminent threat of reaching a tipping point beyond which there is no return, there is no time to waste on mistakes of the past.

One such mistake has been awarding renewable energy credits to biomass-burning power plants, which are the most carbon-polluting power source of all, including coal.

Another mistake has been looking to nuclear power to save the day. One look at the extremely perilous situation in Fukushima Daiichi today should convince us that we do not have the ability to manage nuclear wastes for twenty times the length of current human history. We haven't been able to manage them securely for even a few decades.

Perhaps the most serious mistake has been thinking that we can somehow solve this problem without changing the way we live. The paramount question is not: What are the economic costs of addressing climate change? But rather: What is the economic cost of NOT addressing climate change? We need to embrace necessary changes, so we can have a future to which we can look forward.

We need to find every creative way we can to localize our economies, to cut down on the enormous waste that comes with processing, packaging, and shipping everything we eat, wear, and enjoy from hundreds or thousands of miles away.

We need to be honest with ourselves and each other. We shouldn't pretend that coal and oil trains are irrelevant. We can't be playing shell games or engaging in clever accounting tricks, like awarding renewable energy credits to existing mills using hundred-year-old technologies as a way of buttressing up failing pulp mills to save jobs, when we know perfectly well that those credits are doing absolutely nothing to lower our carbon footprint.





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**Instead, we must do everything we can think of to make real differences, like:**

- Recognizing that old forests are our best hope for sequestering carbon. We should make generous carbon credits easily available for preservation of forests that have not been cut in the last half-century, to be paid for by instituting a stiff carbon tax on carbon-polluting manufacturers, including oil companies;
- We should tighten building codes so all new structures are built to the highest standards of efficiency, and increase subsidies to retrofit older buildings for energy-efficiency.
- We should impose a toll on drivers who wish to drive their personal vehicles into congested urban centers as a way of getting people into improved mass transit and raising funds for energy-related incentives and subsidies.
- We should allow local jurisdictions to self-tax for mass transit improvements.
- We should eliminate limits on tax credits available to taxpayers and utilities for the installation of new green energy systems.
- We should subsidize best-technology solutions wherever possible, such as LED night-time illumination, and penalize wasteful and unnecessary uses.

Finally, and most importantly, we should each one of us think hard about what we individually can do to make a difference.

Thank you.

In 1961 my Jr. High school science teacher and his wife went on a 3 month trip for their summer vacation. Leaving from north of Chicago. The first stop was to pick up their new car at the factory in Detroit. From there the plan was to go to to every state East and South of Illinois and site see.

This may not seem eventful or remarkable until I tell you that they never had to put gas in their car. Let me say that differently in 1961 the car industry built a car that did not need gas.

You probaly already know that Nickola Tesla had built a clean and free energy sorce of electrcity.

*We have the answers to a healthy environment,*

So I ask you would this meeting even be taking place if these inventions were allowed. Our world would look very different.

*Lessing The*  
our cities will not be filled with pollution ~~no~~ need for Coal or Oil burning, <sup>Hampstead</sup> no Fukushima's we would be able to eat our sea food without becoming radio active, the people on the Gulf coast would not be ingesting heavy metals. <sup>from</sup> ~~And our food~~ <sup>and our food</sup> would not be filled with poisions. <sup>no Carbon Emmiss</sup> ~~ions from~~  
So the question is will you continue to perpetrate the lies and deceits for the coporations, international bankers and elite family's? *who could have allowed these inventions* <sup>Cars, factories</sup>

This grant money from ickcle with all it's strings and time regulations, for this panel. that money did not come from them, they didn't write you a check from their checking account. It will become another burden on the backs of the

<sup>Now &</sup>  
American people for generations to come.. Another Debt ~~on~~ <sup>FOR</sup>  
the Federal reserve, the want to be One World Order  
tyrants. Say no to this faciad, make them  
accountable. Choose a differnt legecy, ~~will~~ one that you ,  
we ,your children,our children will be happy to live in.

Help implement inventions already  
proven not To Harm us or our planet  
That's The Climate Action ~~needed~~  
That would make a difference

Geoffrey W. Glass PE

Olympia WA

Governor Jay Inslee, Chair  
Climate Legislative and Executive Workgroup

Dear Governor Inslee,

As a Professional Engineer I have dedicated most of my career to improving energy efficiency in healthcare facilities within western Washington from Centralia to Seattle. I currently serve my community as a board member on the Thurston Climate Action Team. I commend your personal leadership and vision and belief that climate change is one of the most challenging (and opportunistic) issues facing our future. I am disappointed that apparently CLEW remains deadlocked in meeting its objectives of Senate Bill 5802 to recommend a program of actions and policies to reduce greenhouse gas emissions as set forth by the 2008 legislature.

In terms of the two draft proposals created by Governor Inslee, Senator Ranker and Representative Fitzgibbon (proposal 1) and by Representative Short and Senator Ericksen (proposal 2), I strongly favor proposal 1.

I find the proposal 1 best represents my personal values and, I believe, the values of most of the citizens of Washington State – values that I think make this such a special place in the world to live. In short, proposal 1 responds to the charge for which the Workgroup was established by:

1. Putting a limit on carbon pollution and lets the market determine innovative solutions.
2. Incentivizing good stewardship in terms of energy conservation, land use planning and adoption of renewable forms of energy.
3. Recognizing and investing in the vast economic potential for Washington State business and good jobs inherent in responding to the challenge global greenhouse gas reduction.
4. Encouraging cleaner forms of transportation.

I find proposal 2 to not be responsive to the charge of the Workgroup in many areas including:

1. I believe that nuclear power is not economically cost effective, is not politically supported by citizens in our State and that the waste problem has not been solved.
2. It seems to me impossible to accurately measure the true cost of any proposal that is economy wide and as complex as emission reduction. Likewise, it is impossible to accurately quantify the cost of inaction.
3. I find these proposals to be quite modest in terms of their anticipated impact to help meet the 2008 emission targets.
4. It is very clear that our times require bold action and leadership to reduce emissions into our environment. *This is not the time to revisit the 2008 emission targets!*

I do support the provisions of proposal 2 that relate to additional flexibility to encourage energy efficiency as well as investments in research and development in new technologies to reduce emissions.

You must be aware that Washington State has developed a list of "Priorities of Government" to help guide decisions of resource allocation to the greatest needs of our State. I find it interesting that a plan to reduce emissions seems to advance six of these priorities as follows:

- Improve economic vitality of businesses and individuals
- Improve the quality of Washington's natural resources
- Improve the security of Washington's vulnerable children and adults
- Strengthen government's ability to achieve results efficiently and effectively
- Improve the health of Washingtonians
- Improve the safety of people and property

*Proposal 1 is right for Washington because it connects directly to so many priorities of government.*

If CLEW members are truly interested in advancing these priorities of government, how can they not develop such an action plan?

## A Cap on Carbon Emissions

I am in complete support on Washington establishing a hard cap on carbon emissions to meet the 2008 legislative targets. One thing is clear from the consultant's report – this is the only way Washington will meet its emission reduction goals. I find it an interesting

perspective to compare air pollution and carbon release with other forms of waste management:

The current market price for carbon in California is about \$12 / ton.

It is illegal to litter or dump trash in Washington; the cost of littering is about \$26 / lb. or \$51,500 / ton (the cost of solid waste tipping fees in King County is about \$106 / ton).

It is illegal to dump foreign materials in the storm sewer in Washington State with the fine in Thurston County being \$1,000 per occurrence.

Yet in Washington State there is no limit to how much carbon one can emit to the environment; only reporting requirements.

How is it that our State has managed to pass legislation to enforce solid waste and wastewater pollution yet is unable to address the externalities of carbon in our atmosphere?

### The Costs of Action (and of Inaction)

Some members of CLEW express publically a concern that information as to the costs of policy and action alternatives has not yet been fully vetted. While I find it laudable to seek as much information as possible to support policy choices, a worldwide issue such as climate change and our economy might be impossible to accurately predict the resulting costs of action.

CLEW members speak publically of a concern for a loss of jobs as a result of implementing emissions as tasked by the legislation. I see this as quite the opposite – I believe that this is an incredible opportunity for Washington State to leverage its entrepreneurial spirit and talent of its citizens to be leaders in a new global green economy.

Leadership from Washington State government in such areas as incentives for energy efficiency and renewable energy combined with investment in research and development in our green technologies at within our university system can set up Washington to be a global economic leader in the 21<sup>st</sup> century.

Finally, while much has been made of the risk of losing jobs to other states who might not commit to emission reductions, again my view differs – I believe that by establishing a priority on emission reductions we will preserve a quality of life for future generations that will become a draw for growth and for future employment in Washington State.

## From Mitigation to Adaptation

I have observed over the years how our discourse has transitioned from mitigating the impacts of climate change to more recent plans to adapt to the impacts of climate change.

This is very troubling to me.

As a society we seem to wait until a problem becomes extreme before acting. I had hopes that your election could be the trigger point for a serious action plan on emission reduction as represented by the CLEW process.

In conclusion, this challenge of greenhouse gas reduction requires our elected officials to set aside their differences, do the job that we sent you to Olympia to do, and develop an action plan to address the charge of the 2008 legislation.

Sincerely,

A handwritten signature in black ink, appearing to read "Geoffrey W. Glass". The signature is written in a cursive, flowing style.

Geoffrey W. Glass

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Finally, and most importantly, we should each one of us think hard about what we individually can do to make a difference.

Thank you.

**Testimony before the Climate Change Workgroup**  
by Janet Jordan Olympia 98506  
December 13, 2013

I believe the positive steps outlined by the majority of the working group will help our economy enormously.

Establishing a cap on carbon emissions will probably raise the price of fossil fuels. This does not actually cost the state anything it was not already paying, but merely shifts costs from the people who suffer from climate change, such as damage from insect infestations, illnesses new to our area, and damage from extreme weather, to those who emit the carbon. The cap then works to limit those emissions and reduce the damage created by climate change. Overall, our economy benefits from limiting the damage to our infrastructure.

We should be concerned about the low-income person who has to pay the carbon taxes or higher prices. One good way of protecting those persons is to return some of the taxes collected to them. If they avoid emitting carbon, they end up with more money than before, and we all benefit from the avoidance of emissions.

We can wonder if our statewide efforts will help enough to be worth the cost. Republicans have questioned this. But one state represents one-fiftieth of the country, and significantly lower emissions in a whole state will help the entire country by that much. Even the best states in the U.S. have high emissions compared to the rest of the world. In addition, other states will be encouraged to join us as they see how meaningful our actions are. Reining in climate change will begin to look possible. Activists in other states will point to us as an example.

Energy-smart buildings will be something new for the state, and will generate a whole new industry. The new techniques will require trained workers, who will be appropriately well paid. Add this income to the income generated by the creation of clean energy and clean transportation across the state, and it is clear that the workers and families of Washington State will be able to sustain an economic revival. Enough money will be put in circulation to jumpstart many new retail ventures. We are all job creators when we have money and demand goods.

New sources of money for the new industries are appropriate, even if borrowed. They will set us on a better path, away from the catastrophic effects of global warming and towards employment for all, and will be worth the interest costs whatever they may be.

Compare this rosy future with the dismal prospect of business as usual, in which workers are dependent on a few centralized job sources in industries dedicated to keeping labor costs low. Fuel costs will rise even without a cap on emissions – the fracking boom will run its course and fossil fuel will begin their upwards rise again, as they become more scarce each year. No one will be able to visualize a future in which they have either jobs or a healthy environment. Despair will reign, as it does today.

Let's go for the positive. I want to see Washington State begin on the clean and healthy future outlined by the majority interests in the Working Group.

## Testimony to Climate Legislative & Executive Workgroup

December 13, 2013

Rhonda Hunter

Rochester, WA 98579

Please show leadership in Washington State to help slow the disaster of climate disruption. Others will eventually look for actions that work, as this whole ongoing climate crisis worsens and we can help lead the way.

Personally, I am an ecosystem biologist and I finished my career as a climate educator. I won't relay all the science here, as I'm confident you have already heard it.

Ironically, as climate disruption has worsened, my own daughter living in New York City was hit by super Hurricane Sandy, and my own son was recently traveling and trapped in the path of deadly record-breaking super Typhoon Haiyan. If you have children, you can imagine that both these events brought this mother to the very edge of her sanity.

These climate disasters are not only happening to other people and "someplace else". They affect all of us and we must act to slow this down!

Please be CLIMATE LEADERS and take action by implementing the most effective policies to reduce greenhouse gases from our state.

**Use Cap and Trade** recommendations and add the low carbon fuel standard, zero emissions vehicle mandate, 5% renewable fuel standard, public benefit fund, Property Assessed Clean Energy, appliance standards and Feed-in-Tariff recommendations in this report.

Please build on these with other policies to reduce our own contributions to greenhouse gases, especially require Puget Sound Energy to stop using coal to generate our power.

Also, most importantly, don't let us become the gateway for exporting fossil fuels to worsen climate disasters by burning fossil fuels overseas. Stop the fossil fuel export terminals.

Additionally, please divest our state pension funds and other investments from making a profit from fossil fuels that are destroying our very future.

Economic decisions in the short term won't mean much as our future is destroyed by worsening climate change, so make the decisions based on slowing climate change and leading the way.

**Your own children and grandchildren** will be in the path of future climate disasters. They look to you to help prevent this.

## **To the Climate Legislative and Executive Workgroup**

**December 13, 2013**

**Bourtai Hargrove,**

**Olympia, WA 98512**

**Despite the warnings of climate scientists, we are continuing to burn fossil fuels, adding additional CO<sub>2</sub> to the cumulative greenhouse gases in the atmosphere. Our current emissions trajectory is putting us on a path to warm between 4 and 6 degrees Celsius above pre-industrial levels by the end of this century. *We do not know if humans can survive in such a climate.* For years, Jim Hansen, the nation's foremost climate scientist has warned us that we have a narrow window of opportunity – ten years or less – to drastically reduce our use of fossil fuels. The job of this work group could not be more important.**

**To reduce carbon emissions rapidly, we need a comprehensive carbon tax – beginning at \$15/tCO<sub>2</sub> and rising \$10/tCO<sub>2</sub> each year. Because a carbon tax is regressive, we need to return the tax to low and moderate income people through cuts in other taxes. Although a carbon tax is essential, it is not a panacea. It must be coupled with a massive fund to (a) speed the deployment of wind and solar energy, (b) finance energy efficiency retrofits for all Washington homes and (c) transition from single-occupancy vehicle traffic to a public transportation system. Yes, this will be expensive, but we have no alternative if we want to preserve a livable climate for our grandchildren and future generations. As climate scientists Anderson and Bows have stated, “The only conceivable way to produce the necessary level of emission reductions is a full-scale, all-hands-on**

deck mobilization, what William James called 'the moral equivalent of war.'"

One of the easiest things we can do is require our public utilities to end all use of coal within the next five years. Utilities must transition to renewable energy - not to natural gas which we are learning may be almost as carbon-intensive as coal. *And we cannot allow the big coal and oil companies to turn the Northwest into a hub for fossil fuel export.* Coal and oil burned anywhere in the world will add to the greenhouse gases in the atmosphere and if not checked, will lead to global temperatures far beyond the range humans have lived in throughout history (the Holocene) and eventually trigger amplifying feedbacks that we may not be able to control.

Submitted by Ted Nation

Olympia, WA 98512

Dear Governor and Task Force Legislators,

The climate crisis is immediate and also long term. Increases in extreme weather events are already evident around the world and in our own country. Climate science concludes that conditions will only get worse in the future even with comprehensive efforts to reduce the release of greenhouse gases. Without such efforts many regions will become uninhabitable! For instance a recent article in Nature predicted that within a few decades the average high temperature in almost every location in the world would exceed the highest historical temperature for that location.

The Governor's Climate Change Action Plan, passed with bipartisan support, calls for you to recommend policies that will put Washington on track to meet our state's greenhouse gas reduction goals by 2020 and beyond. Given the existential crisis and absence of a comprehensive federal and international response, your recommendations should go beyond the goals stated in the legislation.

I support strong climate action and call on you to develop recommendations that reflect the scale of the climate challenge. A price on carbon is essential but insufficient in itself. Major initiatives in efficient transportation, building efficiency and renewable energy generation are also called for. It is clear from a number of studies that we can move to a carbon free energy system without economic sacrifice and with major improvements to the health of our citizens. The longer we delay this necessary transition the higher the price we will pay in the form of climate impacts!

"Climate Change and Extreme Weather: Catastrophic storms, droughts, heat waves and rising sea levels will increasingly impact cities, harming citizens, destroying property, disrupting local economies and wiping out infrastructure. Among the solutions: Communities must take a number of important steps now, including upgrading facilities and infrastructure to weather storms and partnering with the private sector to help finance improvements." National League of Cities

Governor Inslee, and members of the Legislative and Executive Workgroup,

Thank you for allowing me to comment. My name is Cynthia Pratt. I live in Lacey, Washington. I'm the Lacey City Council's representative to Thurston Climate Action Team's Energy Advisory Committee, and I sit on the Energy, Environment and Natural Resources, National League of Cities, subcommittee. Our subcommittee's resolutions this year address climate change. Increased weather fluctuations impact cities across the country not only in increased costs, but impacts the health and safety of our communities. I'm here today because I am concerned for Lacey's citizens. Washington State, as well as the nation, needs to take action now. We can't afford to wait.

I support the five programs you have proposed. The State especially needs to find funding to help existing commercial and residential buildings be converted for energy efficiency and to reduce the use of fireplaces in homes. We should look at programs, such as the PACE program that Colorado and Florida have put in place, to see if it would also work for Washington.

Funding for transportation infrastructure is critical for reducing GHG emissions including promoting transit systems. Vehicle idling due to congestion between Lacey and JBLM during peak hours impacts air quality all along that corridor. Support for transit options would reduce this impact.

We also need to have tougher enforcement of vehicles that sit idling in urban areas, whether they are trucks being loaded, or cars driven by parents dropping off school children. Signs that say it's not allowed are usually ignored without any consequences.

Thank you again for allowing me to speak.

Cynthia R. Pratt

Lacey, WA 98503

Dear Governor Inslee and Committee members,

**THE CORE PROBLEM:** Before you find 'solutions' to the green gases 'problem', I believe you must become fully aware of the 'history' which has caused the problem. Clean and free energies have been available for 100 years...yet, we do not have them in production. Why? PLEASE SEE THE SITUATION AS IT TRULY IS –**The entire world is becoming enslaved by a few greedy, wealthy, powerful and controlling bankers and their mega corporations..** Be aware that these 'few banking families' have in the recent past (1913) **bought politicians** so that our banking systems were purposely '**privatized**' and '**given**' to **THEM!** . The prophecy of Thomas Jefferson is now coming true in this generation!

*"If the American people ever allow private banks to control the issue of their currency, first by inflation, then by deflation, the banks and corporations that grow up around them will deprive the people of all property until their children wake up homeless on the continent they conquered!"*  
- Thomas Jefferson

And not just here in America...but, the 'privatized' central banks in other countries have brought '**DEBT SLAVERY**' upon 99.9% of the entire world!! [Note: In the middle ages 'interest' was considered *immoral* and made *illegal*.]

AND these same 'few' own the energy/ the fossil fuel corporations, which are an outdated OLD technology which is DESTRUCTIVE to the environment and human beings...just to keep us under their control!! [Note: Rochefellar/EXXONMOBIL, Rothschild/B.P etc.] These 'few' do this by 'buying up' new patents, buying out small innovative companies which challenge them in the market place and even get paid **subsidies** from our government! AND more importantly because of their 'control' of the banking system, these 'few' control 'funding' sources for new start up green energy businesses.....thus keeping their 'power and control'. Please view THRIVE documentary

**THE SOLUTION:**

**TAKE THEM ON!! TAKE ON THE BANKERS AND THEIR FOSSIL FUEL INDUSTRIES!!** Our children, grandchildren and the FUTURE depends on our resolve!!

1. Disallow any corporations to be licensed in this state which jeopardizes our inalienable "RIGHT TO LIFE". Licensing corporations is a state's moral and legal right.
  - A. For example, the COAL INDUSTRY causes DEATH of its miners...700 miners die of Black Lung Disease each year. – OUTLAW the COAL INDUSTRY in our state. No coal trains because coal dust KILLS.
  - B. The 'new' OIL from the Bakken Shale is very volatile and can 'easily ignite' causing train derailments and death as in Canada. – OUTLAW the shipment of this DEATHLY OIL into our state.
  - C. Nuclear energy whether in plants or weapons causes DEATH! Look at Chernobyl and Fukushima accidents and the uranium 'leakage' in military tanks etc. causing fetal deaths and deformities in Iraq. – OUTLAW any production of nuclear plants or weapons in this state. And, make those responsible industries pay for the 'cleanup'....like the radiation in the Columbia River.
  - D. The new 'fracking' technology used in N. Dakota is causing DEATH by cancer, as well as poisoning water, crops and animals.- OUTLAW any shipment related to this 'fracking' industry within our state. [Examples: stop the HUGE transports which damaged our bridge and the 'proppants' which go thru our Port of Olympia]



2. **FINANCE green, renewable and free energy projects which do NOT take human life. Suggest a state fund, or state bank for such projects since the 'current private banking system' will not finance ANY ENERGY PROJECTS BUT THEIR OWN FOSSIL FUELS!!**
3. **IMMEDIATE MORATORIUM on 'cutting of evergreen trees' on public lands and mega tree farms like Weyerhaeuser. Evergreens sequester CO2 and our NW rainforest must not be logged for profits...especially not now with the 'climate crisis' upon us. [Note: China, for example, has mandated that every citizen plant 3 trees each year. ] We must stop this RAPE of OUR FORESTS NOW! America has 'lost' 90% of her forests, most in the last 30 years. Mono crop forestry and clear cutting destroys ecological systems and creates poor quality, unhealthy trees which are *spindly* and fall over, or break, in high winds. Nutrients which are carried into the trees from the soil are not 'replaced' into soils or streams for the animals and fish (like Salmon) when the timber is 'shipped' abroad. Healthy habitats for our brethren, the animals and plants, are being destroyed. Deforestation world wide is a major contributor to the global climate crisis. We must stop it here in our state.**
4. **Place a carbon tax to keep the DEATHLY 'coal in the hole, and the oil in the soil'. It is time that there is a 'penalty' for causing pollution to the environment by the fossil fuel industries.**

I would like you to know of the work of Yoram Bauman, a young man who is tirelessly working on a fair and just carbon tax solution for our state. I know you are deeply concerned that the people of this state will not 'suffer' any more financially by what you do. I believe this is a 'righteous' plan. Please consider Mr. Bauman's plan as a way to reduce our fossil fuel use in the state. Here's his latest draft:

**Sec. 1 INTENT.** The intent of this act is to encourage sustainable economic development by a phased-in one percent reduction of the state sales tax, elimination of the business and occupation tax on manufacturing, tripling the business and occupation tax credit for small businesses, and a sales tax rebate for qualifying low-income persons, all funded by a phased-in carbon pollution tax on fossil fuels consumed in the state. The proceeds of this tax are not intended to be used for highway purposes. This chapter is not intended to exempt any person from tax liability under any other law. This act is intended to: Create accounts in the state treasury and address withdrawals from those accounts; address the carbon pollution tax; repeal the business and occupation tax on manufacturers; reduce the state sales tax; increase the business and occupation tax credit for small businesses; and increase the working families' tax exemption.

**NEW SECTION. Sec. 2 FINDINGS AND DECLARATION OF POLICY.** The people find that reduction of Washington state's high sales tax will increase commerce in this state; reduction of the business and occupation tax on manufacturers will encourage business formation by reducing the burden of this tax and encourage the expansion of existing manufacturing businesses; the funding of the working families tax rebate program will allow the execution of a policy expressed at the inception of that program; and the imposition of a fossil fuel tax to fund these actions will establish Washington state's national leadership in reducing both climate change and the acidification of the oceans.

**NEW SECTION. Sec. 3 DEFINITIONS.** The definitions in this section apply throughout this chapter unless the context clearly requires otherwise.

(1) "Aircraft fuel" has the same meaning as in RCW 82.42.010.

(2) "Carbon calculation" means carbon content calculations for fuels or combustible materials adopted by the energy information administration, the United States department of energy, or its successor in effect on January 1st of each year, which the department of revenue must put into effect by the following July 1st. If carbon content calculations cease to be so adopted, the last calculation effective on the last January 1st must be used.

(3) "Carbon pollution tax" means the tax created in section 7 of this act.

(4) "Coal" means coal of any kind, including anthracite coal, bituminous coal, subbituminous coal, lignite, waste coal, and coke of any kind.

(5) "Consumer" means without limiting the scope hereof, every individual, receiver, assignee, trustee in bankruptcy, trust, estate, firm, copartnership, joint venture, club, company, joint stock company, business trust, corporation, association, society, or any group of individuals acting as a unit, whether mutual, cooperative, fraternal, nonprofit, or otherwise, municipal corporation, quasi municipal corporation, and also the state, its departments and institutions and all political subdivisions thereof, irrespective of the nature of the activities engaged in or functions performed, and also the United States or any instrumentality thereof;

(6) "Department" means the department of revenue.

(7) "Fossil fuel" means each of the following formulated or intended to be burned or oxidized for heat or power: petroleum products, motor vehicle fuel, special fuel, aircraft fuel, natural gas, petroleum, liquefied petroleum gas, coal, or any form of solid, liquid, or gaseous fuel derived from these products, including without limitation still gas and petroleum residuals including bunker fuel.

(8) "Motor vehicle fuel" has the same meaning as in RCW 82.36.010.

(9) "Natural gas" means naturally occurring mixtures of hydrocarbon gases and vapors consisting principally of methane, whether in gaseous or liquid form, including methane clathrate.

(10) "Person" means without limiting the scope hereof, every individual, receiver, assignee, trustee in bankruptcy, trust, estate, firm, copartnership, joint venture, club, company, joint stock company, business trust, corporation, association, society, or any group of individuals acting as a unit, whether mutual, cooperative, fraternal, nonprofit, or otherwise, municipal corporation, quasi municipal corporation, and also the state, its departments and institutions and all political subdivisions thereof, irrespective of the nature of the activities engaged in or functions performed, and also the United States or any instrumentality thereof;

(11) "Petroleum product" means plant condensate, gasoline, aviation fuel, kerosene, diesel motor fuel, benzol, fuel oil, residual oil, and every other product derived from the refining of crude oil formulated or intended to be burned or oxidized for heat including waste heat or for power, but the term does not include crude oil or liquefiable gases.

(12) "Possession" means the control of a fossil fuel located within this state and includes both actual and constructive possession. "Actual possession" occurs when the person with control has physical possession. "Constructive possession" occurs when the person with control does not have physical possession. "Control" means the power to sell or use a fossil fuel or to authorize the sale or use by another.

(13) "Qualified sequestration" means sequestration qualified for credit pursuant to RCW 80.70.020 or sequestration of carbon in accordance with a method approved by the United States environmental protection agency or its successor.

(14) "Qualifying utility" means a light and power business, as the term "light and power business" is defined in RCW 82.16.010(4), that serves more than twenty thousand customers in the state of Washington. The number of customers served may be based on data reported by a utility in form 861, "annual electric utility report," filed with the United States energy information administration or the United States department of energy.

(15) "Rule" means a rule adopted by any agency or other entity of Washington state government to carry out the intent and purposes of this chapter.

(16) "Special fuel" has the same meaning as in RCW 82.38.020 and includes fuel that is sold or used to propel vessels.

(17) "Use" means the first act within this state by which the taxpayer, as a consumer, consumes electrical energy in the taxpayer's own facility or stores electrical energy in the taxpayer's own facility for later consumption by the taxpayer.

(19) "Year" means the twelve-month period commencing January 1st and ending December 31<sup>st</sup> unless otherwise specified.

**NEW SECTION. Sec. 4 CARBON POLLUTION TAX ACCOUNT.** The carbon pollution tax account is created in the custody of the state treasury. All receipts from the collected carbon pollution tax must be deposited into this account. The account is subject to allotment procedures under chapter 43.88 RCW, but an appropriation is not required for expenditures.

**NEW SECTION. Sec. 5 DISBURSEMENT FROM CARBON POLLUTION TAX ACCOUNT AUTHORIZED BY OFFICE OF FINANCIAL MANAGEMENT.** The office of financial management shall estimate the funding requirements for fulfilling anticipated expenditures from the sustainable economy working families account created by section 6 of this act, one hundred ten percent of which estimate must at all times be maintained as a required reserve in the sustainable economy working families account before disbursement of further funds from the carbon pollution tax account. Funds in excess of this required reserve in the carbon pollution tax account shall be disbursed into the general fund.

**NEW SECTION. Sec. 6 SUSTAINABLE ECONOMY WORKING FAMILIES ACCOUNT.** The sustainable economy working families' tax exemption account is created in the custody of the state treasury. All expenditures from the account may be used only to provide the working

families' tax exemption as specified in RCW 82.08.0206 and administrative costs incurred in its administration. The account is subject to allotment procedures under chapter 43.88 RCW, but an appropriation is not required for expenditures.

**NEW SECTION. Sec. 7 CARBON POLLUTION TAX.**

(1) There is levied and collected a separate and independent fossil fuel carbon pollution tax upon the privilege of possession of fossil fuels in this state, equal to fifteen dollars (\$15) per metric ton of carbon dioxide as of July 1, 2015, increasing to twenty-five dollars (\$25) per metric ton as of July 1, 2016, with automatic increases thereafter by five percent each year beginning July 1, measured in each case by applying a carbon calculation to the particular fossil fuel, in the manner specified as follows:

(a) The possession of fossil fuels for sale or use in Washington by any person (except fossil fuels used to generate electricity or to refine fossil fuels), including, but not limited to, fossil fuels sold or used for aviation or marine purposes, but excluding fossil fuels intended for export outside this state. Fuels containing fossil fuels shall be taxed by the percentage of fossil-nonfossil fuel mix unless otherwise specified below. Export to a federally recognized Indian tribal reservation located within this state is not considered export outside this state;

(b) The possession of fossil fuels used to refine fossil fuels, the carbon dioxide contents of which for purposes of this act shall be determined by using reports filed with the federal environmental protection agency or its successor under its greenhouse gas reporting program or successor program, a duplicate of which report by each refinery shall be simultaneously filed with the department together with such information as the department may require by regulation.

(c) Any tax collected under this section must be reported and collected in the manner specified in the applicable statutory provisions cross referenced below for the following fossil fuels:

(i) Petroleum and its products, including crude oil, plant condensate, lubricating oil, gasoline, kerosene, diesel motor fuel, benzol, fuel oil, residual oil, liquefiable gases, and every other product derived from the refining of crude oil in accordance with and at the intervals provided in chapter 82.23A RCW in accordance with supplemental regulations and forms the department adopts;

(ii) Motor vehicle fuel, in accordance with and at the intervals provided in chapter 82.36 RCW in accordance with supplemental regulations and forms the department adopts;

(iii) Special fuel, in accordance with and at the intervals provided in chapter 82.36 RCW, and to the extent not covered therein, then in accordance with chapter 82.38, all in accordance with supplemental regulations and forms the department adopts;

(iv) Aircraft fuel, in accordance with and at the intervals provided in chapter 82.42 RCW in accordance with supplemental regulations and forms the department adopts;

(v) Fossil fuels not listed in this subsection and not consumed to generate electricity, in accordance with chapters 82.08 and 82.12 RCW and supplemental regulations and forms the department adopts unless expressly provided otherwise in this section 7;

and

(vi) Carbon pollution emanating into the atmosphere from refineries including plant condensate not reported as provided above must be reported by each refinery operator as provided in subsection 1(c)(i) of this section, and the tax on the carbon reported thereon must be paid to the department within fifteen days thereafter in accordance with regulations adopted by the department.

(2) There is levied and collected a separate and independent carbon pollution tax upon the privilege of using in this state electric energy generated by a qualifying utility from the combustion of fossil fuel, equal to fifteen dollars (\$15) per metric ton of carbon dioxide as of July 1, 2015, increasing to twenty-five dollars (\$25) per metric ton as of July 1, 2016, with automatic increases thereafter by five percent each year beginning July 1 in each case by applying a carbon calculation to the particular fossil fuel, in the manner specified as follows: fossil fuels consumed to generate electricity must be collected in accordance with chapter 82.12 RCW and disclosed to consumers in accordance with RCW 82.16.090, with supplemental regulations and forms the department adopts

(3) The carbon pollution tax must be reduced for uses of fossil fuels that can be shown and verified not to contribute to increasing carbon pollution by reason of qualified sequestration. The tax reduction in such cases must be proportional to the fraction of emissions that are so sequestered. The right to carbon pollution tax reduction under this subsection may not be transferred, traded, or banked: PROVIDED, That for purposes of the tax imposed by section 7(2), qualified sequestration by a qualifying utility inures to the benefit of the consumers to whom it provides electric energy.

(4) It is the intent and purpose of this act that the tax upon possession is imposed only once and at the time and place of the first taxable possession and upon the first taxable possessor within this state. Any person whose activities would otherwise require payment of the tax imposed by this act but are exempt from the tax has a precollection obligation for the tax that must be imposed on the first taxable event within this state. Failure to pay the tax with respect to a taxable event may not prevent tax liability from arising by reason of a subsequent taxable event.

(5) The department must adopt rules as necessary to implement the carbon pollution tax and sequestration tax credits provided for in subsection (1)(c). The department must develop and make available worksheets and guidance documents necessary to calculate the carbon pollution produced by various fossil fuels. The department must use the carbon calculation to calculate the amount of carbon pollution produced by each type of fuel and the consequent tax rate for each fuel as to which the department is authorized to exercise its discretion in classifying and calculating the carbon content of fuels not scheduled in the carbon calculation.

(6) Any person possessing fossil fuels and any person consuming electricity furnished by a qualifying utility is liable for payment of the carbon pollution tax imposed under this section with respect to those fuels or that electricity. The provisions of this chapter do not apply in respect to the possession of fossil fuels or the use of electricity that the state is prohibited from taxing under the Constitution of the state or under the Constitution or laws of the United States.

(7) While collected in accordance with the chapters referred to above, the proceeds of this separate and independent tax collected under this section must be deposited as set forth in the following order of priority:

(a) Into the carbon pollution tax account created in section 4 of this act from which withdrawals in favor of the funds identified in this section must be made;

(b) Into the sustainable economy working families' tax exemption account created in section 6 of this act: Funds determined as provided in section 5 of this act to be sufficient to provide the working families' tax exemption in RCW 82.08.0206 including administrative costs incurred to implement this exemption;

(c) Into the general fund: All remaining funds.

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**NEW SECTION. Sec. 8 EXEMPTIONS.** The tax levied under section 7(1) of this act does not apply to:

(1) fossil fuels brought into this state by means of the fuel supply tank of a motor vehicle, vessel, locomotive, or aircraft;

(2) diesel fuel, biodiesel fuel, or aircraft fuel, used solely for agricultural purposes by a farm fossil fuel user. This exemption is available only if the buyer or user provides the seller, and if the seller is not within the state, then the department, with an exemption certificate in a form and manner prescribed by the department.

(a) The definition in RCW 82.04.213(2) and this subsection apply to this subsection.

(i) "Agricultural purposes" means the performance of activities directly related to the growing, raising, or producing of agricultural products.

(ii) "Agricultural purposes" does not include: (A) Heating space for human habitation or pumping water for human consumption; or (B) Transportation on public roads, except when the transportation is incidental to transportation on private property.

(b) "Aircraft fuel" is defined as provided in RCW 82.42.010.

(c) "Biodiesel fuel" is defined as provided in RCW 19.112.010.

(d) "Diesel fuel" is defined as provided in 26 U.S.C. 4083, as amended or renumbered as of January 1, 2006.

(e) "Farm fossil fuel user" means: (i) A farmer; or (ii) a person who provides horticultural services for farmers, such as soil preparation services, crop cultivation services, and crop harvesting services.

(3) The following users for transportation purposes by:

(a) Every privately owned urban passenger transportation system and carriers as defined by chapters 81.68 and 81.70 RCW. For the purposes of this section “privately owned urban passenger transportation system” means every privately owned transportation system other than ferry systems having as its principal source of revenue the income from transporting persons for compensation by means of motor vehicles or trackless trolleys, each having a seating capacity for over fifteen persons over prescribed routes in such a manner that the routes of such motor vehicles or trackless trolleys, either alone or in conjunction with routes of other such motor vehicles or trackless trolleys subject to routing by the same transportation system, shall not extend for a distance exceeding twenty-five road miles beyond the corporate limits of the county in which the original starting points of such motor vehicles are located: PROVIDED, That this exemption does not apply to special fuel used by any privately owned urban transportation vehicle, or vehicle operated pursuant to chapters 81.68 and 81.70 RCW, on any trip where any portion of the trip is more than twenty-five road miles beyond the corporate limits of the county in which the trip originated.

(b) Every publicly owned and operated urban passenger transportation is exempt from the provisions of this chapter. For the purposes of this subsection, “publicly owned and operated urban passenger transportation systems” include public transportation benefit areas under chapter 36.57A RCW, metropolitan municipal corporations under chapter 36.56 RCW, city-owned transit systems under chapter 35.58 RCW, county public transportation authorities under chapter 36.57 RCW, unincorporated transportation benefit areas under chapter 36.57 RCW, and regional transit authorities under chapter 81.112 RCW.

(4) Possession of fossil fuels used to generate electric energy by a qualifying utility whose customers pay the tax imposed by section 7(2) of this chapter.

(5) Nothing in this act shall be construed to exempt the state or any political subdivision thereof from the payment of the tax except as provided in this section 8.

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NEW SECTION. Sec. 9 DELINQUENCY, LATE FILING PENALTY, INTEREST ON DELINQUENT TAX. Chapter 82.32 RCW applies to the tax imposed in this chapter. The tax due dates, reporting periods, return requirements, and other administrative provisions applicable to chapter 82.04 RCW apply equally to the tax imposed in this chapter.

NEW SECTION. Sec. 10 REFUNDS AND CREDITS. Any person who has purchased fossil fuel in this state on which the tax imposed by section 7 of this chapter has been paid may file with the department an application for refund of the tax pursuant to RCW 82.32.060 for:

(1) Taxes previously paid on fossil fuel exported for use outside of this state. Special fuel carried from this state in the fuel tank of a motor vehicle is deemed to be exported from this state. Special fuel distributed to a federally recognized Indian tribal reservation located within the state of Washington is not considered exported outside this state.

(2) Tax, penalty, or interest erroneously or illegally collected or paid.

**NEW SECTION. Sec. 11** RCW 82.04.240 (Tax on manufacturers) and 2010 c 114 s 104, 2004 c 24 s 4, 2003 c 149 s 3, 1998 c 312 s 3, 1993 sp.s. c 25 s 102, 1981 c 172 s 1, 1979 ex.s. c 196 s 1, 1971 ex.s. c 281 s 3, 1969 ex.s. c 262 s 34, 1967 ex.s. c 149 s 8, 1965 ex.s. c 173 s 5, & 1961 c 15 s 82.04.240, RCW 82.04.2403 (Tax not applicable to cleaning fish) and 1994 c 167 s 3, and RCW 82.04.2404 (Tax not applicable to processors of semiconductor materials) and 2010 c 114 s 105, 2006 c 84 s 2 are each repealed.

**Sec. 12** RCW 82.08.020 and 2011 c 171 s 120 are each amended to read as follows:

(1) Beginning July 1, 2015, ~~((T))~~there is levied and collected a tax equal to six ~~((and five tenths))~~ percent, decreasing to five and five-tenths percent beginning July 1, 2016, of the selling price on each retail sale in this state of:

(a) Tangible personal property, unless the sale is specifically excluded from the RCW 82.04.050 definition of retail sale;

(b) Digital goods, digital codes, and digital automated services, if the sale is included within the RCW 82.04.050 definition of retail sale;

(c) Services, other than digital automated services, included within the RCW 82.04.050 definition of retail sale;

(d) Extended warranties to consumers; and

(e) Anything else, the sale of which is included within the RCW 82.04.050 definition of retail sale.

(2) There is levied and collected an additional tax on each retail car rental, regardless of whether the vehicle is licensed in this state, equal to five and nine-tenths percent of the selling price. The revenue collected under this subsection must be deposited in the multimodal transportation account created in RCW 47.66.070.

(3) Beginning July 1, 2003, there is levied and collected an additional tax of three-tenths of one percent of the selling price on each retail sale of a motor vehicle in this state, other than retail car rentals taxed under subsection (2) of this section. The revenue collected under this subsection must be deposited in the multimodal transportation account created in RCW 47.66.070.



(4) For purposes of subsection (3) of this section, "motor vehicle" has the meaning provided in RCW 46.04.320, but does not include farm tractors or farm vehicles as defined in RCW 46.04.180 and 46.04.181, off-road vehicles as defined in RCW 46.04.365, nonhighway vehicles as defined in RCW 46.09.310, and snowmobiles as defined in RCW 46.04.546.

(5) Beginning on December 8, 2005, 0.16 percent of the taxes collected under subsection (1) of this section must be dedicated to funding comprehensive performance audits required under RCW 43.09.470. The revenue identified in this subsection must be deposited in the performance audits of government account created in RCW 43.09.475.

(6) The taxes imposed under this chapter apply to successive retail sales of the same property.

(7) The rates provided in this section apply to taxes imposed under chapter 82.12 RCW as provided in RCW 82.12.020.

**Sec. 13** RCW 82.04.4451 and 2010 1st sp.s. c 23 s 1102 are each amended to read as follows:

(1) In computing the tax imposed under this chapter, a credit is allowed against the amount of tax otherwise due under this chapter, as provided in this section. Except for taxpayers that report at least fifty percent of their taxable amount under RCW 82.04.255, 82.04.290(2)(a), and 82.04.285, the maximum credit for a taxpayer for a reporting period is ~~((thirty-five))~~ one hundred five dollars multiplied by the number of months in the reporting period, as determined under RCW 82.32.045. For a taxpayer that reports at least fifty percent of its taxable amount under RCW 82.04.255, 82.04.290(2)(a), and 82.04.285, the maximum credit for a reporting period is ~~((seventy))~~ two hundred ten dollars multiplied by the number of months in the reporting period, as determined under RCW 82.32.045.

(2) When the amount of tax otherwise due under this chapter is equal to or less than the maximum credit, a credit is allowed equal to the amount of tax otherwise due under this chapter.

(3) When the amount of tax otherwise due under this chapter exceeds the maximum credit, a reduced credit is allowed equal to twice the maximum credit, minus the tax otherwise due under this chapter, but not less than zero.

(4) The department may prepare a tax credit table consisting of tax ranges using increments of no more than five dollars and a corresponding tax credit to be applied to those tax ranges. The table shall be prepared in such a manner that no taxpayer will owe a greater amount of tax by using the table than would be owed by performing the calculation under subsections (1) through (3) of this section. A table prepared by the department under this subsection must be used by all taxpayers in taking the credit provided in this section.

**Sec. 14** RCW 82.08.0206 and 2008 c 325 s 2 are each amended to read as follows:

(1) A working families' tax exemption, in the form of a remittance tax due under this chapter and chapter 82.12 RCW, is provided to eligible low-income persons for sales taxes paid under this chapter after January 1, 2008.

(2) For purposes of the exemption in this section, an eligible low-income person is:

(a) An individual, or an individual and that individual's spouse if they file a federal joint income tax return;

(b) (~~((An individual who))~~) An individual who is eligible for, and is granted, the credit provided in Title 26 U.S.C. Sec. 32; and

(c) (~~((An individual who))~~) An individual who properly files a federal income tax return as a Washington resident, and has been a resident of the state of Washington more than one hundred eighty days of the year for which the exemption is claimed.

(3) For remittances made in 2009 and 2010, the working families' tax exemption for the prior year is a retail sales tax exemption equal to the greater of five percent of the credit granted as a result of Title 26 U.S.C. Sec. 32 of the federal internal revenue code in the most recent year for which data is available or twenty-five dollars. For ~~((2011))~~2015 ~~((and thereafter))~~, the working families' tax exemption for the prior year is equal to the greater of ~~((ten))~~ fifteen percent of the credit granted as a result of Title 26 U.S.C. Sec. 32 of the federal internal revenue code in the most recent year for which data is available or ~~((fifty))~~ one hundred dollars. For 2016 and thereafter, the working families' tax exemption for the prior year is equal to the greater of twenty five percent of the credit granted as a result of Title 26 U.S.C. Sec. 32 of the federal internal revenue code in the most recent year for which data is available or one hundred dollars.

(4) For any fiscal period, the working families' tax exemption authorized under this section ~~((shall))~~ must be approved by the legislature in the state omnibus appropriations act before persons may claim the exemption during the fiscal period.

(5) The working families' tax exemption ~~((shall))~~ must be administered as provided in this subsection.

(a) An eligible low-income person claiming an exemption under this section must pay the tax imposed under chapters 82.08, 82.12, and 82.14 RCW in the year for which the exemption is claimed. The eligible low-income person may then apply to the department for the remittance as calculated under subsection (3) of this section.

(b) Application ~~((shall))~~ must be made to the department in a form and manner determined by the department, but the department must provide alternative filing methods for applicants who do not have access to electronic filing.

(c) Application for the exemption remittance under this section must be made in the year following the year for which the federal return was filed, but in no case may any remittance be provided for any period before January 1, 2008. The department may use the best available data to process the exemption remittance. The department shall begin accepting applications October 1, 2009.

(d) The department (~~shall~~) must review the application and determine eligibility for the working families' tax exemption based on information provided by the applicant and through audit and other administrative records, including, when it deems it necessary, verification through internal revenue service data.

(e) The department (~~shall~~) must remit the exempted amounts to eligible low-income persons who submitted applications. Remittances may be made by electronic funds transfer or other means.

(f) The department may, in conjunction with other agencies or organizations, design and implement a public information campaign to inform potentially eligible persons of the existence of and requirements for this exemption.

(g) The department may contact persons who appear to be eligible low-income persons as a result of information received from the internal revenue service under such conditions and requirements as the internal revenue service may by law require.

(6) The provisions of chapter 82.32 RCW apply to the exemption in this section.

(7) The department may adopt rules necessary to implement this section.

(8) The department (~~shall~~) must limit its costs for the exemption program to the initial start-up costs to implement the program. The state omnibus appropriations act (~~shall~~) must specify funding to be used for the ongoing administrative costs of the program. These ongoing administrative costs include, but are not limited to, costs for: The processing of internet and mail applications, verification of application claims, compliance and collections, additional full-time employees at the department's call center, processing warrants, updating printed materials and web information, media advertising, and support and maintenance of computer systems.

**Sec. 15** RCW 82.32.010 and 2010 1st sp.s. c 19 s 1 are each amended to read as follows: The provisions of this chapter apply with respect to the taxes imposed under chapters 82.04 through 82.14 RCW, under chapter 82.14B RCW, under chapters 82.16 through 82.29A RCW of this title, under chapter 84.33 RCW, under [section 7 of this act,] and under other titles, chapters, and sections in such manner and to such extent as indicated in each such title, chapter, or section.

NEW SECTION. **Sec. 16** If any provision of this act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected.

NEW SECTION. **Sec. 17** This chapter may be known and cited as the Environmental Tax Reform act.

NEW SECTION. **Sec. 18** Sections 1 through 10 of this act constitute a new chapter in Title 82 RCW.

NEW SECTION. **Sec. 19** This act takes effect July 1, 2015.

In closing, I ask you to REPRESENT the meek and beautiful common people of WA, not those few wealthy individuals who may have supported your political campaigns. I do not care if you took their money....I DO CARE that you know that you have a FIDUCIARY RESPONSIBILITY to ALL the people. Ourselves, our children, our grandchildren and the next seven generations depend on your *moral* and *fearless* resolve to 'take on the fossil fuel tyrants'.

Sincerely, Mary Abramson, resident of WA

*Lady Liberty*

P.S. fyi *A conversation on wind and solar between a Sanford scientist and a late night talk host:* Here's a video on the topic of 100% renewable energy (Part 1 is 5 minutes). The state of Washington is mentioned:

[http://www.cbs.com/shows/late\\_show/video/zQCZGwen\\_LSJhQPjD7HV\\_IyiS3dNHZlm/david-letterman-stanford-professor-mark-jacobson-part-1/](http://www.cbs.com/shows/late_show/video/zQCZGwen_LSJhQPjD7HV_IyiS3dNHZlm/david-letterman-stanford-professor-mark-jacobson-part-1/)

And here is Part 2:

[http://www.cbs.com/shows/late\\_show/video/Evylxb2yRAzFcBOv\\_m0xIMgTpEMlPgUh/david-letterman-stanford-professor-mark-jacobson-part-2/](http://www.cbs.com/shows/late_show/video/Evylxb2yRAzFcBOv_m0xIMgTpEMlPgUh/david-letterman-stanford-professor-mark-jacobson-part-2/)

December 13, 2013 CLEW

Public Hearing

It was with dismay that I listened to the rhetoric at the Dec. 6, hearing that showed a total disregard for finding a way to meet the carbon emission targets for 2020 and 2030. The whole uproar gave the appearance of a well orchestrated attempt to keep any resolution to comply with the mandated targets, set by the legislature in 2008, from being made. The tired old reference to hurting the poor worker is not believed. If there was concern, by this PARTY and the Industries it represents, all those jobs would not have been outsourced, and workers would be paid a living wage with benefits. It sounds very hollow to keep repeating it. Where is the evidence to justify the statement that the CO2 numbers were pulled out of the air? There also was the statement that the economic effect on the state has not been studied in depth to justify reduction levels of the CO2. That is not the right statement to make. The correct one, is what will the effects be on the economy if the targets are not met. Cleanup costs of contamination and pollution are astronomical. Right now, if all the costs of contamination and pollution, that we have already were added up, the State would be bankrupt. No one really knows how much it would cost. It is not talked about and often hidden from the public.

There should be a very detailed investigation and analysis of the two problems to the economy done by completely independent and qualified experts to actually see how they compare.

Time is not on our side. According to the National Oceanic and Atmospheric Administration, UNIPCC "Climate Change 2013, The sea-level had risen 1ft. since 1800 until 2013,. If levels drop to zero immediately, the rise will be 2 ft. by 2100. If emissions continue at current rate the level will be 3 ft. by 2100.

RCW 70.235.020 section (3) states:" Except for purposes of reporting, emissions of carbon dioxide from industrial combustion of biomass in the form of wood, wood waste, wood by-products, and wood residuals shall not be considered a greenhouse gas as long as the region's cultural sequestration capacity is

maintained or increased.” This needs to be changed and not allowed. “Globally, biomass burning is estimated to produce 40% of the CO<sub>2</sub>, 32% of carbon monoxide, 20% of the particulates, and 50% of the highly carcinogenic poly-aromatic hydrocarbons produced by all sources.” Joel Levine, Chapman conference on Global Biomass Burning, Williamsburg, Virginia. You can’t say you are for CO<sub>2</sub> emissions reduction and then allow Biomass (wood incineration), to remain in effect.

The citizens who care about the health of our planet, want all of you to get your act together and work for the benefit of “WE THE PEOPLE” AND NOT CORPORATE SPECIAL INTERESTS. Greed cannot be the determining factor for deciding on what the comprehensive plan will be to combat CO<sub>2</sub> emissions by the time schedule mandated by the legislature.

Patricia Vandehey, Shelton

DECEMBER 13, 2013

CLIMATE LEGISLATIVE AND EXECUTIVE WORKGROUP

Public hearing Addition comments

My name is Patricia Vandehey, and I live in Mason County outside of Shelton.

Mason County has a history and reputation of past and present pollution and contamination. From dioxin, PCBs, chromium, mercury, arsenic, PAHs, VOCs, excessive nitrate levels in water testing from a sludge operation to a paving facility which was ordered by Ecology to put a liner in a retention pond about six years ago but never done. We narrowly escaped having a "Biomass" incinerator operating that would have spewed 168,000 Tons of CO<sub>2</sub> over Shelton and the surrounding area.

Climate change is not only the emissions of CO<sub>2</sub>, but also includes all the other industries that directly or indirectly help in making fossil fuel our major source of energy, or in the case of Biomass plants, burning wood and many other types of toxic materials.

The planet operates as a highly integrated entity. The pollution produced in China is carried across the oceans to us. If we are using fracking to open up new sources of gas and oil that is causing earthquakes, we have no idea what this may do the earth in other parts of the world. If the oceans are more and more polluted, what does this do the fishing in places where it is the major form of food.

There are more and more news items and articles happening now and foreseen in the future,

The terrible typhoon in the Philippines,

An article in the Bloomberg BusinessWeek telling about 33 islands comprising the Country of Kiribati. It is composed of 310 square miles surrounded by the Pacific Ocean. There 103,000 people of which nearly half live on a strip of land less than a mile wide. Over the last 20 years, the planet's oceans have risen faster than at

anytime in history. Kiribati will soon be engulfed by water, and its people have nowhere to go.

The Olympian Nov.26,2013:The U.S. is spewing 50% more methane, than the federal government estimates. Methane is 21 times more potent at trapping heat than CO<sub>2</sub>. Much is coming from Texas, Oklahoma, and Kansas.

The Olympian November 28, 2013: Details fracking operations. Each well uses up to 7 million gal. of water. There are over 600 chemicals ( unnamed because of the Haliburton Loophole which has made them proprietary information) that are used with the water. All this water is polluted. Where does it go? No one says where. In an article dated September 16, 2012 , tells of Haliburton crew members lost a radioactive rod used in drilling wells in West Texas. It went missing on a 130 mile route from Pecos to Odessa. I have not seen anymore information if it was ever found. Who has it? Is it just lost? How is a radioactive rod used in well drilling? It is very scary.

The Olympian November 29, 2013: America is becoming the new Saudi Arabia. "The number of wells drilled in Texas compared with Saudi Arabia is 1,000 to1." This is due to fracking.

The Olympian November 29, 2013 article about a terrible Problem from 'petcoke'. "Billowing black clouds of dust caused by winds sweeping across huge black piles of petroleum coke or "petcoke", a powdery by product of oil refining that has been accumulating along Midwest shipping channels. It is exported to places like China. Burning it emits high levels of soot and greenhouse gases so its use in the U.S. is limited.

If the United States is to do its part, it must start with restoring all the power to the agencies and research projects which have been created to protect the environment.. The EPA, Department of Ecology and all governmental entities including the Legislature, must work together to attack the problem. Unfortunately, just the opposite is happening. There has been and is an agenda to make them ineffective.



Bill 5011 sponsored by our own Tim Sheldon, saying it is needed because “private property rights are being attacked and taken over by developing environmental and developmental policies that infringe or restrict private property rights without due process.” That is the job of The Growth Management Board to see that all the requirements of land use, rezoning ordinances, and private property protection are enforced. There is no need for this outrageous bill. It appears to be an attempt to prevent any restriction on what someone wants to do on private property no matter how much harm it would cause to the environment and every one else.

Our former State Attorney, Rob McKenna is now a lobbyist for Montana and North Dakota. He is trying to have an environmental review of a proposed coal terminal in Longview not include possible climate change considerations.

At meeting in Shelton of the Shoreline update of rules and regulations, I asked where was the input on climate warming in the rules. I was abruptly stopped from speaking and told “climate change “ is not to be considered in any way in any decisions. The representative from Ecology sat there and never said one word to this remark.

There is a Bill 2ESSB 6406 stating: “modifying programs that provide for the protection of the state’s natural resources.”

“Directs the Department of Ecology to conduct rulemaking processes by December 31, 2012 and 2013, in order to update rule based categorical exemptions and the State Environmental Policy Act (SEPA) checklist.

Make changes to SEPA and other local development provision, including expanding streamlined environmental review for certain non-projects and authorizing SEPA lead agencies to, in certain circumstances, recognize actions adequately covered in other regulations.” This is another attempt to water down the effectiveness of THE SEPA Checklist.

Non projects is a way to get around giving all the information required in a SEPA Checklist or having what is given, ignored. These changes make for arbitrary judgment decisions., which local government takes as a right to always decide in

the favor of special interests to the detriment of other residents in the community.

There is a project now in Mason County, the City of Shelton, Green Diamond Resources and Hunter Farms to form a partnership to set up a heavy industrial area and have presented a Mou (Memorandum of understanding). The MOU was written by Green Diamond and contains the statement that all the parties will have the right to decide the extent of the EIS which is called "Programmatic" .I could not find a definition for this but was told by one of the cities department heads that certain parameters will be set up and if an industry proposed within these guidelines no further input from the public will either be asked for or considered. No matter how egregious a proposed industry might be, we would be stuck with it if the City and County say it is within the guidelines, whether it is or not. How can the citizens fight such a thing. The city and County officials just ignore what we say. Sounds like a really thought out way to stop the citizens to make any comments or have any say. I don't know how the government entities can form a partnership with the two private companies they are supposed to evaluate and let one of companies write the rules in the MOU. How can such a partnership be legal?

The environmental regulations should be strengthened not diluted.

The agencies particularly Ecology must be made to really enforce the established rules and regulations and stop them from making exceptions, such as allowing to industries turn a blind eye to critical water readings that exceed the MCLs for nitrates, or blatantly ignoring request for information, saying there is none when a copy of their and an industry's correspondence was sent with the FOIA Request.

The Legislature must become responsible and do what is best for us the people and not be romanced by special interests.

I am concerned about an organization that has been around for forty years and has systematically worked to eliminate any environmental bill or regulation. They are very well organized and extremely well funded by special interests. They

have formulated what they call 'MODEL BILLS", created to offer in private to like minded legislators in hopes of having them passed. There are over 1,000 Bills. Here are some that pertain to climate change in all its aspects.

## MODEL BILLS

The Disclosure of Hydraulic Fluid Composition Act.

Resolution to retain State Authority over Hydraulic Fracturing.

Carbon Emissions.

State Withdrawal from Regional Climate Initiatives.

Restrictions on Participation in Low Carbon Fuel Standards.

Conditioning Regulation of Non-Polluting Emissions on Science Act Summary.

Resolution on U.S. conference of Mayors Climate Protection Agreement Accountability.

Air Quality.

Resolution Opposing EPA's Regulatory Train Wreck.

State Sovereignty for Air Quality and Visibility Act.

State Implementation plan Requirements of Ozone and Particulate.

Regional Air Quality Interstate Compact.

Asbestos.

Asbestos Claims Transparency Act.

Asbestos and Silica Claims Priorities Act.

Asbestos in Educational Facilities and/or Public Buildings Act.

All State Legislators and Agencies should be aware of these Bills and decide how egregious they are to Climate health and how to stop them from being passed.

All these Model Bills and policies can be downloaded from their Website, [ALEC.com](http://ALEC.com).

Nothing will change unless all our governmental agencies work independently of outside influences and really work for the benefit of all and not just the ones with the most money. Our planet is very, very sick. We hope to make it well, we must start now. Otherwise, what will be leaving for generations to come. Do we want our children, grandchildren, and great grandchildren to inherit a terrible, unimaginable mess that will not be livable?

Patricia Vandehey

Shelton WA 98584

### **THE RCWS REFERED TO FOR CLEW**

RCW70.235.005: This rule needs to be changed. Biomass Incineration is exceedingly polluting. You cannot be for CO2 reduction have this as an exception.

RCW 7-.235.010 (6): Should include Biomass Incineration.

RCW 70.235.020: (2) Has this been done? (3) This is totally wrong and needs to be changed.

RCW 70.235.030:(1) (a): Based on RCW 70.235.020 which should be changed. (e) Has this been done? (f) This is very bad and needs to be changed.

RCWs70.235.040,050,060,070, Have any of these been done?

# Burning Issues

*A project of Clean Air Revival, Inc.*

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## BIOMASS BURNING:

**WOOD, LEAVES, GRASS, FORESTS, CROPS and TRASH**

**Luke Curtis, MS, CIH- from Human Ecologist- Fall Issue 2002**

**Burning Issues Special Edition Nov. 11, 2002 [ additions noted with "ed." ]**

Biomass Burning is a problem of long standing. Huge amounts of air pollution are produced worldwide by the annual burning of 3 billion metric tons of biomass such as wood, leaves, trees, grass and trash (Abelson). Biomass burning represents the largest source of air pollution in many rural areas of the developed and developing world. Biomass burning is used create heat, to clear forests, to dispose of leaves, crop stubble, trash and wood. Globally, biomass burning is estimated to produce 40 percent of the carbon dioxide, 32 percent of the carbon monoxide, 20 percent of the particulates, and 50 percent of the highly carcinogenic poly-aromatic hydrocarbons produced by all sources (Levine).

The ill-health effects of biomass burning are well-established. Smoke from biomass burning is particularly dangerous since most of the particulates are smaller than 10 microns in size (PM10) and are easily able to travel deep into the lungs. Numerous studies have noted that increasing levels of PM10 (even if below the US EPA standard of 50 micrograms PM10 per cubic meter of air) can significantly increase levels of respiratory and heart problems (Morris, Schwela) [and are linked with a sudden death rate of approximately 5 percent at that level. ed]. About 95 percent of this burning is set by people, although lightning sometimes ignites fields and forests (Levine).

### WOOD BURNING

The most significant form of biomass burning in the USA is wood burning. Wood is a renewable resource that has generally been in ample supply in most of the US, although some countries are suffering severe deforestation. Wood was the

predominant heating/industrial fuel in 18th century, while in the late 19th and 20th Centuries [more efficient *ed.*] coal, oil, natural gas and propane have displaced many uses of wood fuel. However, the energy shortages of 1974 and 1978 have promoted increased use of wood burning. The EPA (EPA, 1986) in 1984 estimated that there were 11 million U.S. wood burning stoves, that they burned 43 million tons for woodstoves annually, that fireplaces burned an additional 11 million tons, and industry another two million.

Burning a kilogram (2.2lbs.) of wood in a new wood stove will produce about 130 grams of **carbon monoxide**, 51 grams of **hydrocarbons** (including up to 10 grams of carcinogenic benzene), 21 grams of **fine particulates**, and about 0.3 grams of the highly carcinogenic **poly cyclic organic hydrocarbons** (EPA, 1984, Larson, 1993). Wood burning also produces from 10 to 167 milligrams of highly carcinogenic **dioxins** per kilogram of fuel burning (Abelson). Wood burning is responsible for about 3 percent of the total suspended particulates, 6 percent of the total carbon monoxide, and 51 percent of the highly carcinogenic polycyclic organic matter produced by all US sources (EPA, 1986). Wood smoke is usually released near ground level in populated areas and thus is especially apt to hurt people. Wood burning pollution is often concentrated in certain areas of the country such as the Northwest, and at specific times, such as winter evenings. [Biomass smoke is generally heavier than air and tends to sink to the ground. It causes high concentrations of deadly particulate where ever it is burned, from a food cart in New York City to a neighbor or restaurant near you. *ed.*]

Compared to natural gas, our cleanest burning fuel, wood burned in stoves produces 1,100 times the carbon monoxide, 50 times the sulfur oxides and 1,687 times the potent carcinogen benzo(a)pyrene to produce the same amount of BTU heat energy (Cooper)! Another study showed that an old wood stove will produce 16,500 times the particulates per day as will a gas furnace. (McCrillis, 1990). [A new woodstove is 8,500 times dirtier and deteriorates in efficiency rapidly. A pellet stove is 2,500 dirtier than natural gas or propane. *ed.* ]

Wood burning can greatly increase outdoor pollutant concentrations. For example, in Missoula, Montana about half the households burn wood as a primary form of heat (Cannon, Missoula Department of Health). Wood burning was responsible for 51 percent of Missoula's average total suspended particulate (TSP) level of 110 microgram/ cubic meter of air in 1980. This TSP level of 110 micrograms/ cubic meter was almost double the old EPA standard of 60 micrograms TSP/ cubic meter of air. During many cold winter days with much



wood burning the TSP levels exceeded 500 micrograms/ cubic meter. In the San Francisco Bay area Mary Rozenberg (Rozenberg) found significantly higher levels of carbon monoxide, particulates and carcinogenic polycyclic aromatic hydrocarbons on winter evenings when wood burning is most common . Other studies have noted that wood burning can produce a large percentage of total winter airborne particulates smaller than 2.5 microns in size (PM2.5). The percentage of PM2.5 produced by wood burning in winter has been estimated to be 45 percent in San Francisco, 40 percent in Los Angeles, 50 percent in the Grand Canyon, 72 percent in Boise, Idaho, 75 percent in Albuquerque, 85 percent in Petersville, Alabama and 95 percent in Raleigh, North Carolina (Rozenberg, 2002). [This affects indoor concentrations as well, with readings as high as 70 percent of outdoor levels. There is no protection from this pollution as it is so small it bypasses masks and air filters. ed.]

Residential wood burning can increase average outdoor concentrations of the potent carcinogen benzo(a)pyrene by an average 8.8 nanograms (ng) per cubic meter (EPA, 1986). Occupational Physician Bertram Carnow (Carnow) estimated that for every 1 ng per cubic meter increase in benzo(a)pyrene there appears to be about a five percent increase in lung cancer.

A cord of wood is four feet by four feet by eight feet. A heavy wood stove user can burn eight cords in a winter. Joellen Lewtas (Lewtas) estimated that burning two cords of wood produces as many mutagenic particles as driving a car 130,000 miles at 20 miles per gallon! (Mutagenic means it causes mutations which often cause cancer.)

Wood burning not only increases pollution levels outdoors, it can greatly increase indoor pollution levels especially if the stoves/ fireplaces are not air-tight. [Even if they are air tight pollution re-enters the house. ed.] One study noted that wood burning can increase indoor pollution levels by as much as 7.5 PPM carbon monoxide and 480 micrograms/ cubic meter of total suspended particulates (TSP) (Traynor). Most wood smoke particles are less than 0.4 microns in diameter and can easily enter homes. Koenig (Koenig, 1993) found that indoor particulate levels in non-wood burning homes are about 70% as high as outdoor levels during heavy community wood burning periods. This suggests many of the burning particulates are able to penetrate into homes and indoor air.

Cooking over wood and charcoal grills was found to increase personal sample levels of particulates smaller than 2.5 microns in diameter (PM 2.5) by an average of 125 micrograms per cubic meter (Johnson).

## ADVERSE HEALTH EFFECTS OF WOOD BURNING

Several studies have looked at the specific adverse health effects of wood burning. A Seattle area study (Koenig, 1990 & 1993) noted increases in asthma and other respiratory disease and declines in lung function among children exposed to woodsmoke.

Lung-function declines were especially great during wintertime wood burning periods and in children who lived in smoke trapping valleys. As much as 90 percent of the winter particulate levels were produced by wood burning. A study, in Santa Clara County, California, found significantly higher rates of hospital emergency room visits and significantly higher air levels of particulates (PM10) during the winter months. Residential wood burning was responsible for over 50 percent of winter particulates smaller than 10 microns (Lipsett). A Michigan study and a study with Navajo Indians both noted statistically significant increases in respiratory illnesses in children in homes with wood burning stoves (Hornicky, K Morris). Zelikoff (Zelikoff) found that rats suffered significantly lower rates of lung bacterial clearance and lung phagocytic (ie. microbe killing) activity when exposed to wood smoke at concentrations typically found indoors during residential wood burning periods.

David Fairley of the San Francisco Bay Area Air Quality Management District estimates that Bay area wood burning annually kills 200 and costs over \$1 billion in medical expenses- even though only about 16 percent of the Bay population burns wood (Hall). It is estimated that wood smoke pollution is responsible worldwide for about 2.7 million premature deaths per year (World Health Organization).

A survey of gas and wood prices in Chicago in 2001 found that natural gas cost about the same as commercial wood on a BTU heat basis. On the other hand, natural gas can cause serious problems for a chemically sensitive person if it leaks out unburnt.

A number of states and communities have taken steps to reduce wood burning.

In 2001, the Berkeley, California city council banned new fireplaces, woodstoves and wood burning pizza ovens (Burrell). Residential wood burning in the Puget Sound Area of Washington State and in Missoula, Montana is banned on high pollution days unless the house has no other source of heat. Medford, Oregon introduced a similar ban on wood burning on high pollution days and also required emission certification standards for wood burning stoves. Several legal judgements have ordered homeowners to stop using woodburning stoves because it poses a health threat to their neighbors (Thomsen, McGrath). For more information on wood burning pollution please visit Mary Rozenberg's burning issues website at [www.burningissues.org](http://www.burningissues.org).

## BURNING OF LEAVES, GRASS, AND TRASH

The second most significant form of biomass burning in the U.S. is the burning of leaves, grass, and trash. This smoke is particularly hazardous since it is released at ground level in populated areas. Burning a ton of leaves will produce about 117 pounds of carbon monoxide, 41 pounds of particulates (most of them smaller than 10 microns and easily absorbed in the lungs), and at least seven highly carcinogenic polycyclic aromatic hydrocarbons (Battelle, Friedman). A 1975 Des Moines study found that one-third of the air measurements during the leaf-burning month of October exceeded U.S.EPA standards for particulates and carbon monoxide, but none of the air measurements in nonburning August exceeded these standards. This study was instrumental in getting a leaf-burning ban in Des Moines in 1977. [In addition, vegetation and trees are burned in urban areas to make way for housing. Forests and undergrowth vegetation are burned to remove fire hazard. *ed.*]

A number of studies have demonstrated adverse health effects from leaf burning. Jim VanDeBerg (VanDeBerg) director of Iowa Lutheran Hospital in Des Moines, reported that October 1975 respiratory admissions were 60 - or more than twice the monthly 1975 average of 28 admissions. Following the 1977 Des Moines leaf burning ban, the October 1977-1989 respiratory admissions at Iowa Lutheran Hospital were no greater than the annual average. The Des Moines leaf burning ban can therefore be projected to cut October respiratory admissions by at least half.

A detailed study of the effects of leaf burning on respiratory function was conducted in Beloit, Wisconsin in 1989 (From, 1992). Seven asthmatics on their

usual asthma medication were asked to walk one mile during a Monday afternoon leaf burning period. Five of the seven asthmatics had a significant drop in lung function following leaf smoke exposure, with two asthmatics suffering a drop in FEV1 (forced expiratory volume at one second) of 20 percent or greater. The effects of the leaf smoke might have been even greater had the seven asthmatics not been on their usual asthma medication and/or the test had been conducted on a Saturday- when leaf burning rates are typically at their highest. Another study reported that 36 out of 60 asthmatics (60 percent) reported worsened asthma upon exposure to leaf smoke (Shim and Williams). In addition, burning poison ivy/ poison sumac leaves can release dangerous quantities of the toxin urushiol, which can cause life threatening respiratory reactions and cause a rash over 100 percent of the body (Brill).

Stubble from wheat, corn, rice and other crops is often burned away in the fields. A 10-year study in Butte County, California noted that hospital asthma admissions were 29 percent higher than average on days when large quantities of rice stubble was been burned (Jacobs). A five-year study in a rice growing area of Japan reported that the average number of childhood asthma hospital visits were more than double during the rice burning months of September and October as compared to the rest of the year (Torigoe). Average airborne particulate concentrations were also more than double during September and October as compared to the rest of the year. In addition, an adult asthmatic volunteer in this study suffered a 41 percent drop in peak expiratory flow after being exposed to rice burning smoke for 20 minutes (Torigoe). A southern Louisiana study found that hospital respiratory admissions were increased by about 50 percent during the October-November sugarcane-burning season (Boopathy).

In many communities, residents often burn trash and grass clippings. This trash burning can produce significant amounts of carbon monoxide, particulates, heavy metals, and toxic chemicals such as dioxins and poly aromatic hydrocarbons. A North Carolina study found that burning a kilogram of mixed household waste produced from 10 to 6000 nanograms of highly carcinogenic dioxins (Gullett).

The burning of leaves/grass/trash is also a major fire hazard, especially if these fires are left unattended (as they frequently are). For example, East Moline, Illinois (population 20,000) averages three house fires annually caused by leaf burning (Long).

The states of California, Ohio, New York, New Hampshire, Delaware, District of Columbia, Massachusetts and Rhode Island completely ban burning or allow it only by permit. The right of states to pass anti burning legislation over the objections of local communities was affirmed on August 2, 1971, in Nassau County (New York) Superior Court, Case 323 N.Y.S. 2d504, Judge Betram Harnett presiding. In this case, the New York Appellant court rejected a suit from the town of Old Westbury to allow an exemption from New York's statewide ban on leaf burning. The court concluded "The court is not persuaded by the argument that Nassau County's air is already befouled and a small additional amount would not cause any additional damage. The same logic, if applied elsewhere, would result in total dismemberment of all applicable air quality regulations, since all the sources of air pollution appear independently small."

In addition, many towns and counties have banned leaf burning where state law does not prohibit it. Many communities have had leaf burning bans and/or communities leaf pickup services for many decades. For example, Tenafly, New Jersey has had a community leaf pickup service and leaf burning ban since 1956 (Van Vorst).

In many communities, however, leaf burning has become a contentious issue, and many anti-leaf burning groups and some pro-burning groups have been formed.

A case in point is South Bend, a community of about 150,000 people in northern Indiana. Richard Miller, a retired South Bend steel worker, suffered respiratory distress during a heavy leaf burning period in 1985 (Duda) and had been hospitalized at a cost of \$90,000. Upon his hospital discharge, he formed a "ban the burn" committee with alderwoman Loretta Duda. They enlisted help from physicians, nurses, and the local media for their campaign. They collected several thousand petitions against burning, including several hundred from elementary teachers who were tired of seeing their students miss school due to fall asthma attacks. A TV debate on the issue was held between Duda and another alderwoman who favored continued burning.

A 1988 South Bend city council vote failed to ban leaf burning by one vote. Later that year, a seven- year- old child nearly died of an asthma attack during a burning period. Moved by the near death of the child, the alderwoman who debated Duda then dramatically changed her vote and a leaf ban and leaf pick up service was instituted for South Bend in 1989. Their leaf collection service has gone

smoothly, with few complaints and costs less than \$3 per resident per year (Duda).

The Americans with Disabilities Act (ADA) has also been successfully employed to ban leaf burning. Anita and Thomas Kacmarynski filed an ADA complaint that the leaf burning allowed in their home town of Mallard, Iowa was endangering the life of their five-year old daughter Heather who suffers from asthma and congestive heart disease. On November 8, 1996, Judge Mark Bennett, US District Court, North District of Iowa, handed down a precedent setting case in which he found that Mallard was discriminating against Heather by allowing burning to continue (CASE #C95-3048-MWB), and ordered a total burning ban in Mallard. The court rejected a motion by Mallard to allow a "compromise" of continued burning during limited days of the year, since Heather could still suffer a fatal asthma attack during these limited burning times. (For more information on this case- please visit [www.iowacleanair.com](http://www.iowacleanair.com) or call Blake Parker 515-955-2193, the lawyer who successfully prosecuted this ADA complaint [current as of October, 2002. *ed.*]).

What can be done with leaves not being burned? Leaves may be easily composted by throwing them in an open pile, where they will decompose easily in a year or less. Using special composting pits and adding other nutrients and microbes may speed up decomposition or produce a richer compost- but these interventions are not absolutely necessary. Leaf compost is excellent for enriching gardens, mulching or filling in low spots. The leaves from large wooded properties can be picked up easily and quickly with large and powerful leaf vacuum/shredder/baggers available for under \$600. Many towns also have community leaf pick up and composting services. Mandated leaf composting is a triple victory: less air pollution, less fire risk and production of rich soil.

## OTHER BIOMASS BURNING

Many third- world nations use wood, straw, dung, leaves or other materials for heating and food cooking. Such uses of biomass for cooking can have serious adverse health effects. A Mexican case-control study noted that the use of wood burning stoves greatly increased the risk of both chronic bronchitis and chronic airway obstruction (Perez-Padilla).

Worldwide, huge amounts of biomass are burned in tropical rain forests in South America, Africa and Malaysia/Indonesia to make room for agricultural crops. The



stubble of tropical crops is also often burned to form a "slash and burn" agriculture which depletes the soil rapidly and forces farmers to abandon fields after several years of burning. During the summer and early fall, South America is regularly covered by thick clouds of smoke covering as much as 2.5 million square miles (The USA is about 3.5 million square miles-LC) (Schemo). Such smoke is often so thick that airports and roads have to be closed since the visibility is so poor (Schemo). A study in a rural Brazilian Amazon village reported average air particulates smaller than 10 microns (PM10) of 191 micrograms per cubic meter of air were reported during a weeklong agricultural burning period(Reinhardt). (This compares to the USA annual PM10 standard of 50 micrograms per cubic meter- LC). Another study in a Southern Brazilian sugarcane growing area reported that total air particulates were significantly higher during sugarcane burning periods and that the number of patients requiring inhalation therapy also increased significantly during sugarcane burning periods (Arbex).

Over the past 10 years, huge areas of Indonesian and Malaysian rainforests have been burned to make room for farming operations. The smoke from these huge fires has traveled for hundreds of miles to Singapore and the Philippines and has covered over two million square miles (Emmanuel). A Singapore study reported that hospital outpatient asthma admissions were 30 percent higher during periods of heavy rainforest burning. The smoke came mainly from the Indonesian provinces of Sumatra and Kalimantan which lie 300 to 500 miles from Singapore! (Emmanuel) A second study in Malaysia (Awang) studied air quality during heavy rainforest burning periods of 1997. In September 1997, all 28 Malaysian air quality stations recorded air concentrations of particulates smaller than 10 microns (PM10) above 150 micrograms per cubic meter. In the Hospital Kuala Lumpur, hospital respiratory admissions were 912 in June 1997, but rose more than 5-fold to over 5,000 in during the heavy forest burning month of September, 1997 (Awang). Efforts are underway to promote more environmentally sound policies in tropical rainforest areas, such as carefully managed tree farming and no-burn agricultural practices (Uhl).

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## RESOURCES

- For information on the case that led to the Mallard, Iowa leaf burning ban, please visit [www.iowacleanair.com](http://www.iowacleanair.com) or call Blake Parker, (515) 955-2193, the lawyer who successfully prosecuted this ADA complaint.
  - For information on filing an ADA complaint, please contact the U.S. Office of Interior, Office for Equal Opportunity, 1849 C Street NW, Washington, DC 20240; E. Melodee Stith, (202) 208-5693.
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## Burning Issues

Box 1045

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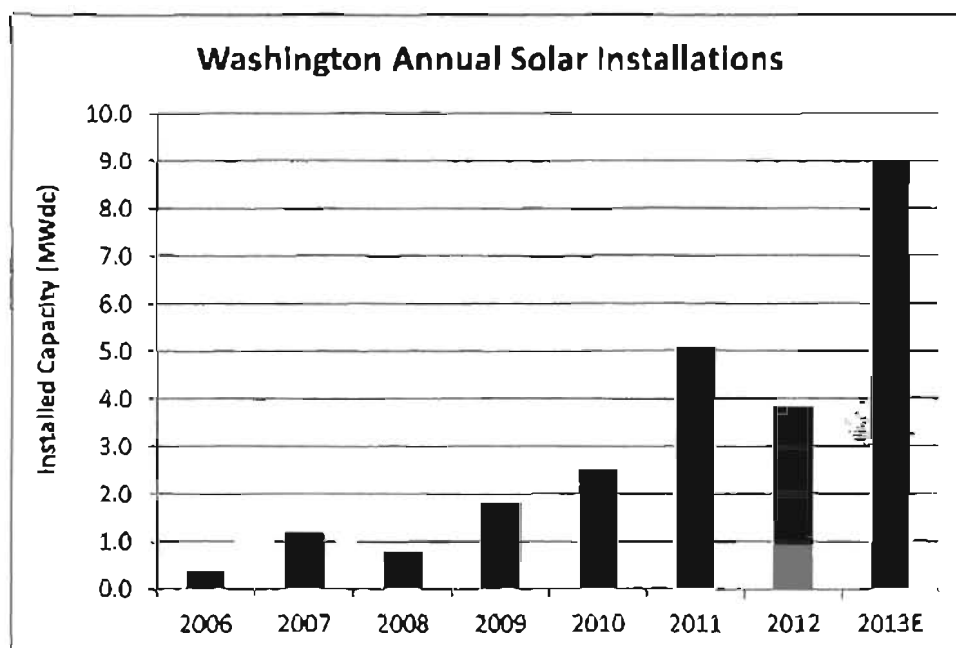
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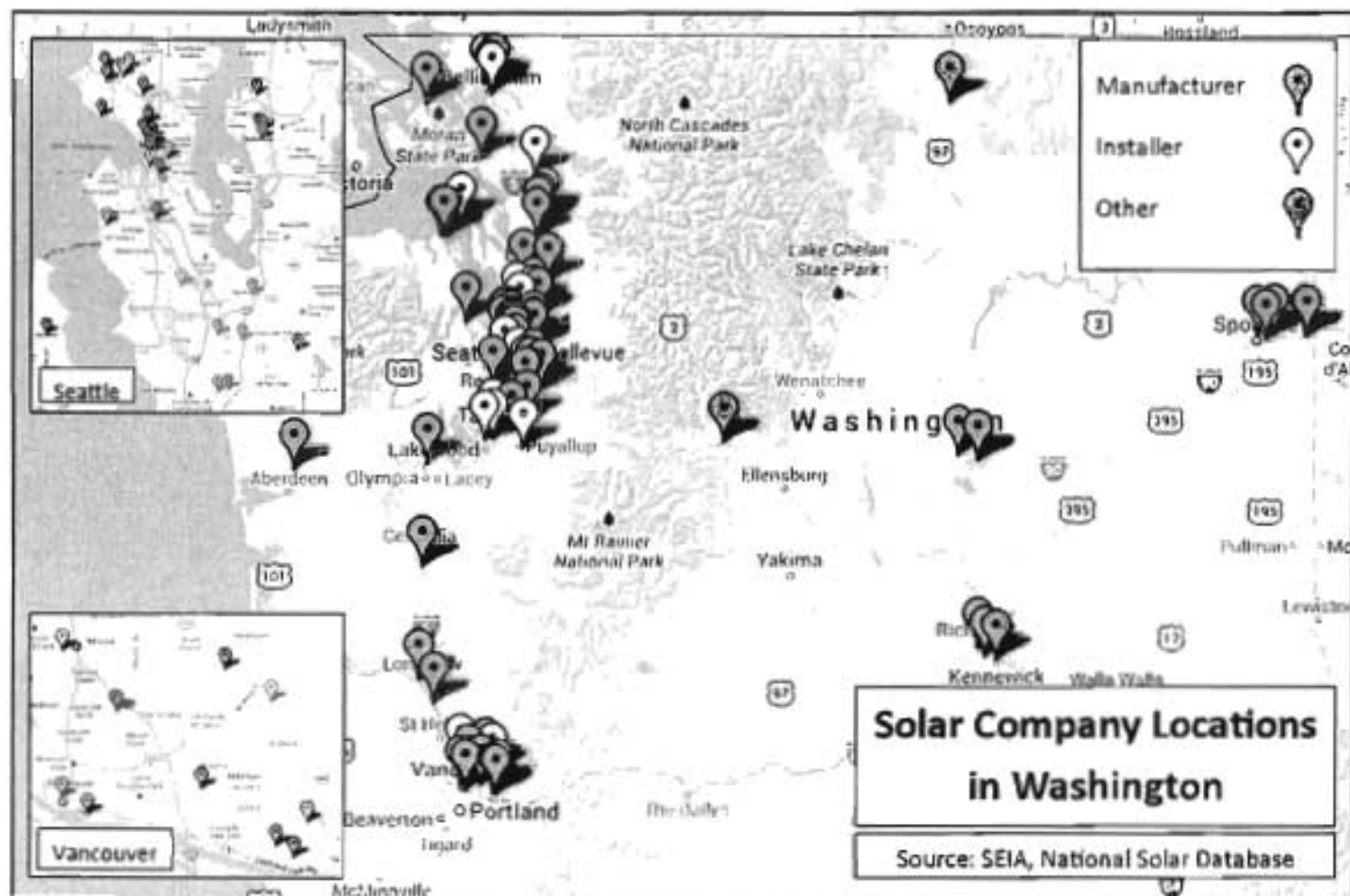
Back to [Burning Issues](#)

# Solar Spotlight: Washington

## At a glance

- There are currently more than **102 solar companies** at work throughout the value chain in Washington, **employing 1,300**. These companies provide a wide variety of solar products and services ranging from solar system installations to the manufacturing of components used in photovoltaic panels. These companies can be broken down across the following categories: 28 manufacturers, 12 manufacturing facilities, 37 contractor/installers, 8 project developers, 10 distributors and 19 engaged in other solar activities including financing, engineering and legal support.
- **2 MW of solar were installed** in Washington in the third quarter of 2013. Washington ranked 22nd nationally in third quarter installations.
- In 2012, Washington installed **4 MW of solar electric capacity**, ranking it 25th nationally. Of this capacity, 3 MW were residential and 0.5 MW were commercial.
- The **22 MW of solar energy currently installed** in Washington ranks the state 24th in the country in installed solar capacity. There is enough solar energy installed in the state to power 1,900 homes.
- In 2012, **\$23 million was invested in Washington** to install solar on homes and businesses.
- Average installed residential and commercial photovoltaic system **prices in Washington have fallen by 22% in the last year**. National prices have also dropped steadily— by 5% from last year and 28% from 2010.





Established in 1974, the Solar Energy Industries Association® is the national trade association of the U.S. solar energy industry. Through advocacy and education, SEIA® is building a strong solar industry to power America. As the voice of the industry, SEIA works with its 1,000 member companies to champion the use of clean, affordable solar in America by expanding markets, removing market barriers, strengthening the industry and educating the public on the benefits of solar energy. [www.seia.org](http://www.seia.org)

Robin Love from Yelm... 12/13/13  
Climate Change Committee

Today myself, the others present or watching the televised are funding the governor and this committee while they "steamroll" ahead to propose the need for "MORE FUNDING"... I recently watched TCTV as only 2 people on this CLIMATE LEGISLATION committee represented me for a starteling moment ...Representative Short and Senator Erickson gave pause and their reasons to reconsider PLUMMETING AHEAD. Thank you ~~for your pause~~...The committees job is to figure out how to reduce carbon emissions in Washington...Most of this committee is "full speed" to take WASHINGTONIANS forward in this mad hatter race to implement carbon emission caps... minus to say the LEAST.... economic impact reports?... Is there anybody out there besides me that thinks something smells fishy in govt.?

In 2 min the best I can do today is share information that may que.... even politicians that haven't bought ALL the global warming propaganda...I don't mean that our planet DOESN'T need help....I do mean that WA and the rest of the states DO NOT need to become the new China or Korea...

OK ...enough diplomacy...GEOENGINEERING, what is it? Ever heard of it?

If you don't know and you're on this LEGISLATIVE committee in a big rush to tell people they need to turn down their heat , get out of their cars and give up (my personal favorite) SPRAWL.... then I respectfully ENCOURAGE you all to become familiar with GEOENGINEERING ... you need to understand THE FACTS ABOUT it. The patents for it... the documentation of how long it's been in use ..Who WAS using it and what

infamous corporation is involved with it now.. You need to get a grasp on the Top down push to IGNORE facts about WEATHER manipulation so to rush forward implementing control legislation the PEOPLE OF THIS STATE pay for , monetarily and with sickness and ILL HEALTH. ... I'm not here to dispute global warming or climate change...I AM disputing any "fast track" economic proposal FROM THIS committee when they are tasked with a job they DON'T HAVE PRORITY information about ...IF they did I'd hope at least more than 2 of you would be compelled to start asking some serious questions about the roll of carbon emissions vs. GEOENGINEERING VS controlled GENOCIDE...

# WHAT'S WRONG WITH SUSTAINABLE DEVELOPMENT?

How could something that sounds so good be bad? Who wouldn't want to be sustainable? Vibrant? Walkable? Bikeable? Green? These buzz words were designed to make you think that you're doing something good for the planet. This is the biggest public relations scam in the history of the world.

Sustainable Development was created and defined by the United Nations in 1987, and the action plan to implement it was signed onto in 1992 by US President Bush and 178 other nations. It was called Agenda 21, the Agenda for the 21st century. Considered unsustainable under this plan: middle class lifestyle, single family homes, private vehicles, meat-eating, air conditioning, appliances, dams, farming, you.

Clinton began to implement it in the US in 1993 by giving the American Planning Association a multi-million dollar grant to write a land use legislative blueprint for every municipality in the US. It is called *Growing Smart Legislative Guidebook with Model Statutes for Planning and the Management of Change*. This was completed in 2002 and is being used to train planners in every university, college and government planning office in the nation. *Growing Smart* is Smart Growth.

*Growing Smart* is in our planning department and its principles are in our city and county plan. Right now. Beside this, on the shelf, is *The Local Agenda 21 Planning Guide* put out by ICLEI and the United Nations. Urban areas are being consolidated and rural areas are being emptied of people through restrictive land use policies, gasoline costs, vehicle miles traveled taxes, loss of rural road maintenance, closure of rural schools, closure of rural post offices, water well monitoring, smart meters, and regionalization pressures. Smart Growth is not just the preferred building style for UN Agenda 21/Sustainable Development; it is the ideology. Moving people into centralized urban areas in high density housing creates the perfect opportunity for domestic surveillance. This ideology is being used as the justification to radically change every city in the United States and to impose regulations dictated by unelected regional boards and commissions. It is remaking government. This dramatic revolution in private property rights extends to every facet of our lives: education, energy, food, housing, transportation. We are being told that this is OUR PLAN but it is not. We object to this manipulation and refuse to be subjected to it. Educate yourself. Speak out. BE the Resistance

PLEASE COPY AND DISTRIBUTE. AWARENESS IS THE FIRST STEP IN THE RESISTANCE.



# **WHY IS EVERYONE TALKING ABOUT UN AGENDA 21?**

**UN Agenda 21/Sustainable Development is the action plan to inventory and control all land, all water, all minerals, all plants, all animals, all construction, all means of production, all information, all energy, and all human beings in the world. INVENTORY AND CONTROL**

Have you wondered where these terms 'sustainability' and 'smart growth' and 'high density urban mixed-use development' came from? Doesn't it seem like about 10 years ago you'd never heard of them and now everything seems to include these concepts? Is that just a coincidence? That every town and county and state and nation in the world would be changing their land use/planning codes and government policies to align themselves with...what?

Far from being a 'conspiracy theory' or a 'tin-foil hat' fantasy, this is an actual United Nations plan, signed onto in 1992 by President George HW Bush along with 178 other world leaders. The UN called it Agenda 21 because it is the Agenda for the 21<sup>st</sup> century. According to UN Secretary General Maurice Strong, the 'affluent middle-class American lifestyle is unsustainable.' That includes single family homes, private vehicles, appliances, air-conditioning, & meat-eating. They are a threat to the planet.

This might sound like a silly plan that doesn't affect you. But look around. This economic collapse is UN Agenda 21. You'll hear that this plan is non-binding, that it's a dusty old plan with no teeth. That is a lie. In fact over the last 20 years this plan has been implemented all over the United States. It's called Sustainable Development. The 3 E's: ecology, economy, equity.

After George Bush signed it in 1992, it was brought back to the US by President Clinton (1993) when he created the President's Council on Sustainable Development for the sole purpose of getting it into every city, county, and state in the US through federal rules, regulations, and grants. This is a global plan but is implemented locally. You'll see it as a regional plan. It might be called Vision 2035, or Your Town 2025, or One Bay Area, or Plan NY...all of these regional plans are the same. They call for stack and pack housing, restricted mobility, and regional government. Domestic surveillance, smart meters, GMO's, loss of freedom—all UN Agenda 21/Sustainable Development. You are losing your rights. You are being manipulated. You are being lied to. You are the Resistance.

**This is a non-partisan worldwide grassroots movement.**

**PLEASE COPY AND DISTRIBUTE. AWARENESS IS THE FIRST STEP IN THE RESISTANCE.**

[PostSustainabilityInstitute.org](http://PostSustainabilityInstitute.org)

[DemocratsAgainstUNAgenda21.com](http://DemocratsAgainstUNAgenda21.com)



Geoengineers deny having deployed aerosol programs for years, yet they are currently proposing to spray 10-20 million tons of aluminum oxide with other toxic chemicals into our sky annually as stated in numerous geoengineering documents. Lab tests have disclosed extremely high levels of these metals in ground, water, rain and atmospheric tests worldwide. Blood and urine tests reveal alarming levels of aluminum, barium, strontium, cadmium and other chemicals known to cause high blood pressure, cancer, asthma, Alzheimers, heart, kidney and liver damage, osteoporosis, chronic inflammation, headaches, skin disorders, severe lung, spleen and intestinal diseases, immune system decline, blurred vision, intense ringing in the ears, muscle weakness, hair loss, etc. **NO** purpose justifies these consequences.

### Wouldn't the following results be enough to stop geoengineering now?

- severe drought caused by consistent daily aerosol spraying of aluminum (a moisture-drying desiccant)
- Monsanto's drought-resistant and aluminum-resistant seeds then become a necessity because natural seeds won't grow
- destruction of forests saturated with millions of tons of aluminum known to cause the dying of trees and wildfires burning with record heat
- a shocking statement by geoengineers that they have **not** done any studies or research on the health affects of aluminum, barium or other chemicals they are proposing to spray nor plan to
- 200 species becoming extinct every single day
- massive Honeybee die-off and beached whales due to geoengineering's HAARP technology
- a 10,000%-increase in autism since 1975

[www.geoengineeringwatch.org](http://www.geoengineeringwatch.org)  
[www.bariumblues.com](http://www.bariumblues.com)  
[www.globalskywatch.com](http://www.globalskywatch.com)  
[www.TruthMediaProductions.us](http://www.TruthMediaProductions.us)

"The media, public servants, meteorologists and others who are indifferent and remain silent to the evil of this sinister program are as much to blame

*"The only thing needed for evil to triumph is for good men to do nothing."* **Edmund Burke**



# US Government Issues Alarming Patent To Hughes Aircraft

From U.S. Patent # 5,003,186 - Filed April 1990.

(SEE for yourself at [www.uspto.gov](http://www.uspto.gov), then search by patent number)

## Stratospheric ... Seeding For Reduction Of Global Warming

*"...the particle seeding should be done at an altitude on the order of 10 kilometers. The particles may be seeded by dispersal from seeding aircraft...solution to the problem of global warming involves the seeding of the atmosphere with metallic particles...it is therefore an object of the present invention to provide a method for reduction of global warming due to the greenhouse effect.*

*2. ...said material comprises one or more of the oxides of metals.*

*3. ...said material comprises aluminum oxide."*

**{There are dozens of weather modification patents that include various forms of climate alteration and artificial cloud formation.}**

- The US military has openly stated that it is their goal to "OWN THE WEATHER" by 2025
- Atmospheric physicists state that a naturally occurring vapor trail can last only 60-90 seconds maximum, under the most extreme conditions.
- German scientists and meteorologists have exposed and are taking legal action against the German government for weather manipulation and counterfeiting satellite and radar imagery to mask the scope of those operations.
- The last RAIN TEST taken (Shasta County) in May of '08 was hundreds of times the range of "normal" for aluminum and seven times the MCL (maximum contaminant level).
- Concerned Citizen groups have formed in all major western US population centers with SIMILAR TESTING RESULTS! Major cities throughout the NATO nations are seeing public unrest and a demand for truth. Aluminum, Barium and other known weather modification agents are being found world-wide at horrifying levels.
- Shasta County Air Quality staff stated that testing would cost from five hundred thousand to one million dollars, when in fact, each test is \$21. Why are they ducking their responsibility? Lab tests for Siskiyou and Shasta County residents were performed by a state certified lab in Redding.
- According to the National Center for Atmospheric Research, the only way to form artificial clouds in warm dry air is to introduce enough particulates into the atmosphere to attract and accrete all available moisture into visible vapor. If repeated often enough, the resulting rainless haze can lead to drought.

### Are Saturating Our Skies w/ These Chemicals Causing Drought in CA?

- Numerous studies have connected aluminum exposure to neurological damage (like Alzheimer's) and a host of other diseases. It is very detrimental to soils, changing PH levels, and lethal to many forms of aquatic life.
- Atmospheric conductivity, and lightning strikes have increased dramatically since the apparent onset of these programs. Metallic particles increase atmospheric conductivity, increasing lightning frequency and intensity.
- State of California tests taken by aircraft of Pacific clouds from China show NO aluminum or barium, contrary to Shasta County Air Quality officials who stated China was the cause (again without testing themselves).

### ARE FINE METALLIC PARTICULATES, LIKE ALUMINUM, HURTING OUR CHILDREN?

Asthma and other respiratory diseases have seen dramatic increases over the last decade, while Alzheimer's has become epidemic.

Harvard reports that particulates less than 10 microns poses a serious threat to human health. (source: [http://earthislandinstitute.net/journal/index.php/eij/article/stolen\\_skies\\_the\\_chemtrail\\_mystery/](http://earthislandinstitute.net/journal/index.php/eij/article/stolen_skies_the_chemtrail_mystery/))

The major mainstream paper, The Las Vegas Tribune, writes "... Especially disturbing for residents of heavily chemtrailed communities like Las Vegas is a "chemtrail sickness associated with heavy spray days leaving many stricken people complaining of the "flu" and acute allergic reactions..."

#### The BOTTOM LINE IS THIS:

We believe that ALL federal, state and county Air Quality and environmental officials have a legal, moral and political responsibility to locate the source of these alarming levels of contaminants in our water, air and land, whatever it may be.

*If not their responsibility, then WHO?*

*WHY would the Shasta County Air Quality officials REFUSE to investigate these DANGEROUS FINDINGS in spite of repeated requests by Citizens and Supervisors?*

*For local information visit [jeffpress.com](http://jeffpress.com)*

**TOGETHER WE COULD STOP THIS!  
MAKE YOUR VOICE HEARD!**

*Shasta County Supervisors 225-5550  
Shasta County Air Quality: 225-5674  
Governor's Office: (916) 445-2841  
<http://www.whitehouse.gov/contact/>*

**ALL US REPS / SENATORS (866) 220-0044**

**This IS dire...investigate for yourself!  
MORE INFO: [geoengineeringwatch.com](http://geoengineeringwatch.com)**



**[www.geoengineeringwatch.org](http://www.geoengineeringwatch.org)**



www.geoengineeringwatch.org

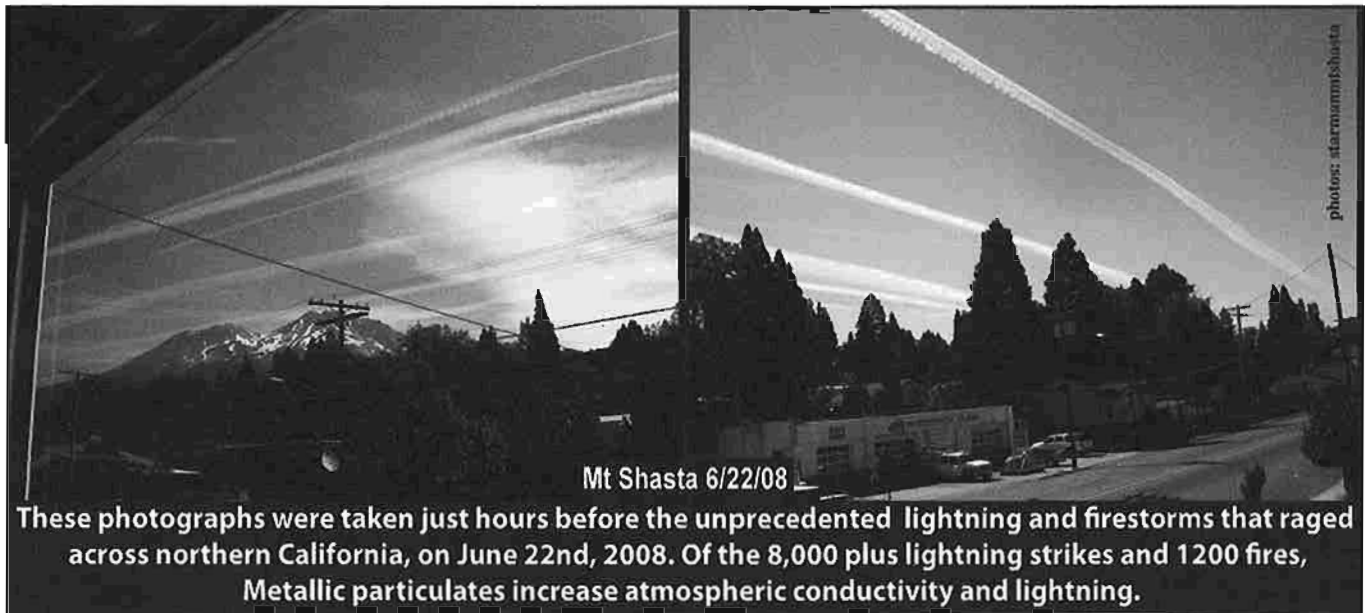
# ARE WE THE EXPERIMENT?

**Are illegal weather modification programs (GEOENGINEERING) altering our climate, poisoning us and contaminating our land, water and air? HERE ARE THE FACTS, YOU DECIDE.**

**OVER THREE DOZEN SHASTA AND SISKIYOU COUNTY LAB TEST RESULTS TAKEN FROM SNOWPACK, RAINFALL, POND & DUST SAMPLES, SHOW**

**"OFF-THE-CHART" LEVELS OF ALUMINUM, BARIUM AND STRONTIUM!**

Tests performed by BASIC LABS, a state certified lab in Redding California



## Alarming Local Lab Tests Reveal Accumulated Contamination

Tests performed by BASIC LABS, a state certified lab in Redding California

A Lake Shasta sample from Pit River Arm tributary tested at 4,610,000 ug/l (ugl=ppb or parts per billion), over 4610 times the maximum contaminant level for aluminum in drinking water for the State of CA.

A rubber-lined pond in Shasta County in a "filtered location" (forested hilltop away from any highway or industry), tested "0" for aluminum when filled.

After 1-1/2 years exposure to the atmosphere, the pond tested at 375,000 ug/L or 375 times the maximum contaminant level.

Recently, snow pack sample taken from Ski Bowl on Mt. Shasta, tested at 61,100 ug/L or 61 times the maximum contaminant level for aluminum in drinking water for the State of CA.

## FAST TRACKING "WEATHER MODIFICATION" BILLS IN CONGRESS:

### U.S. Senate Bill 1807 & U.S. House Bill 3445 & Climate Security Act of 2008:

While the US Government continues to deny the existence of these weather modification programs, Congress IS NOW planning to legalize such schemes. *If weather modification programs are not being conducted, then why are these Bills needed, even fast tracked?* These programs are to be conducted with no publicly disclosed oversight whatsoever. **Farmers from Texas to Nebraska have made a public outcry about the altered weather patterns due to weather modification programs openly conducted in their states. Weather modification programs are fact, not fiction.** Nearly one hundred publicly disclosed programs were conducted in the continental US last year. A similar number are expected to be performed this year.

**All military programs are considered classified and remain unpublicized.**

<http://www.geocities.com/area51/Shadowlands/6583/project339.html>

December 10, 2013

Comments To:

## Washington State Climate Legislative and Executive Work Group

climateworkgroup@ecy.wa.gov

Dear Climate Work Group Members,

### Introduction:

The climate crisis is an energy crisis. The Building Sector is the largest contributor to climate change, using coal, natural gas and oil that are high in greenhouse gas emissions. The Building Sector consumes nearly half (47.6%) of all energy produced in the United States. Seventy-five percent (74.9%) of all the electricity produced in the U.S. is used just to operate buildings: heating, lighting, HVAC and control systems. Heat and lights represent 75.7% of that. U.S. CO2 emissions from electricity production are 80.4 % from coal, the dirtiest of fossil fuels.

Since the Building Sector has been the largest contributor to greenhouse gas emissions, it has the potential to become the best solution. Design choices can change the way buildings consume energy. Design strategies come from the mind of the designer. Design choices can continue to use greenhouse gas emitting fossil fuels or instead replace them with efficient HVAC, lighting, and control systems, on-site renewables and limited offsets. Informing designers before they put the pen to paper can lead to carbon neutrality. The "Architecture 2030 Challenge: Carbon Neutrality" shows how this can be done: <http://architecture2030.org/> . Tied to it, the Seattle 2030 District [www.2030district.org/seattle/](http://www.2030district.org/seattle/) is a groundbreaking high-performance building district in downtown Seattle that aims to dramatically reduce environmental impacts of facility construction and operations. Changing building codes now in Washington State based on their model can achieve greater efficiency.

We have a historic opportunity. Five billion square feet of new and 5 billion square feet of renovated buildings are expected per year in the US. Now is the time to change the way buildings consume energy.

One such heating and cooling solution – VRF (Variable Refrigerant Flow) – has been embraced around the world because it reduces the need for coal, oil, and natural gas. In Japan 90% of buildings are using VRF, in China 86% and in Europe 81%, but in the US only 6%. This needs to change.

Air source heat pumps take heat from the outside air and pump it up to maintain a desired temperature in commercial, residential and school buildings. They do not burn

coal, oil or natural gas for heat, they get the heat from the outside air. In the summer when it's hot they reverse the process to cool the buildings. VRF can maintain a variety of temperatures in a building – meeting rooms may need to be warmer and computer rooms may need cooling. The heat pumps run on electricity, but consume much less than other methods and are not burning coal, natural gas or oil. They can be run on solar power or other renewable energies. They represent an opportunity for a huge reduction in greenhouse gas emitting fossil fuels in the Building Sector. The climate in Western Washington is ideal for VRF air source heat pumps.

The Mitsubishi VRF market in Washington State has grown significantly in the last two years. One highlight of the year is a project called Rice Fergus Miller building in Seattle that won the National ASRAE Technology award for 2012 and Mitsubishi Electric VRF equipment was installed.

Rice Building Reference:

<https://www.ashrae.org/news/2012/ashrae-technology-awards-highlight-outstanding-building-projects>

“After one year, the project has an EUI of 21.8 kBtu/sf/year, 76 percent better than the national average for office buildings, which is 93 kBtu/sf/yr.”

A new notable VRF project in Seattle:

A twin tower 41 story condo building in downtown Seattle which is the largest Mitsubishi VRF project in the country.

Notable Schools:

Riverview School District has Mitsubishi VRF installed in all their remodels and new construction projects. To date, they have (3) Elementary Schools, (1) Middle School, Maintenance Facility and District offices, all with the Mitsubishi VRF equipment.

Many engineers and building owners, who are LEED and energy driven, find the Mitsubishi Electric VRF system meets their efficient heating and cooling solution.

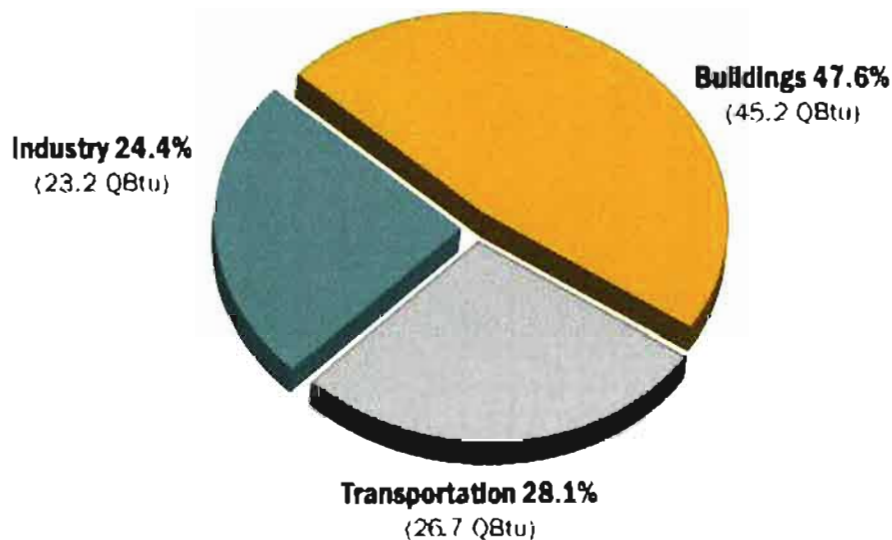
I learned of VRF from Marcia L. Karr, P.E., Mechanical Engineer, EERE Information Center, Energy Efficiency and Renewable Energy, U.S. Department of Energy, 1-877-EERE INFO (1-877-337-3463), [www.eere.energy.gov](http://www.eere.energy.gov). Attached is the explanation she gave for how it works and how well it works. We have a viable solution for heating and cooling commercial, residential and school buildings without burning coal, oil or gas. All we need to do is embrace and choose it. It is now being installed in schools, commercial and residential buildings in Washington State, but not at the scale that it could be if it were encouraged and people were informed about it.

### **Buildings Consume More Energy Than Any Other Sector:**

According to the U.S. Energy Information Administration (EIA), the Building Sector consumes nearly half (47.6%) of all energy produced in the United States. [1] Seventy-five percent (74.9%) of all the electricity produced in the U.S. is used just to operate buildings. Globally, these percentages are even greater.

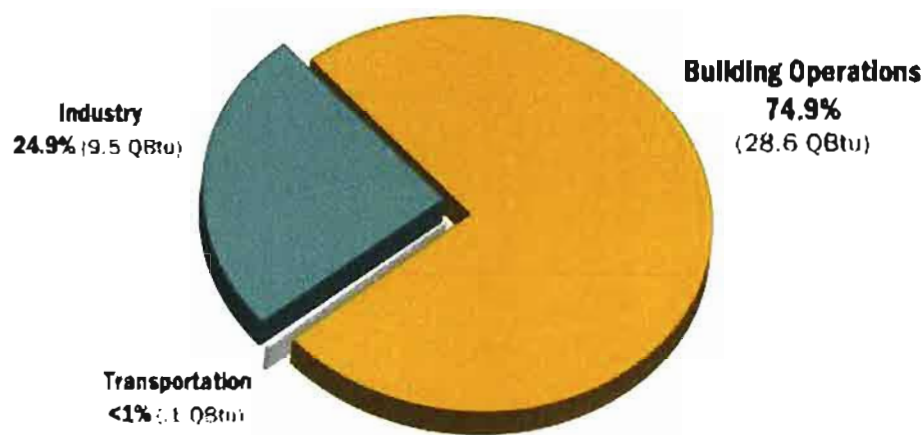
### **Buildings are the Largest Contributor to Climate Change:**

With so much attention given to transportation emissions, many people are surprised to learn this fact. In truth, the Building Sector was responsible for nearly half (44.6%) of U.S. CO<sub>2</sub> emissions in 2010. By comparison, transportation accounted for 34.3% of CO<sub>2</sub> emissions and industry just 21.1%.



#### **U.S. Energy Consumption by Sector**

Source: ©2013-2030, Inc. / Architecture 2030. All Rights Reserved  
Data Source: U.S. Energy Information Administration (2012)



### U.S. Electricity Consumption by Sector

Source: ©2013-2030, Inc. Architecture 2030. All Rights Reserved.  
Data Source: U.S. Energy Information Administration (2012)

Architecture 2030 issued the 2030 Challenge: Carbon Neutrality

[http://www.architecture2030.org/2030\\_challenge/the\\_2030\\_challenge](http://www.architecture2030.org/2030_challenge/the_2030_challenge) asking the global architecture and building community to adopt the following targets:

All new buildings, developments and major renovations shall be designed to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 60% below the regional (or country) average/median for that building type.

At a minimum, an equal amount of existing building area shall be renovated annually to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 60% of the regional (or country) average/median for that building type.

The fossil fuel reduction standard for all new buildings and major renovations shall be increased to:

70% in 2015

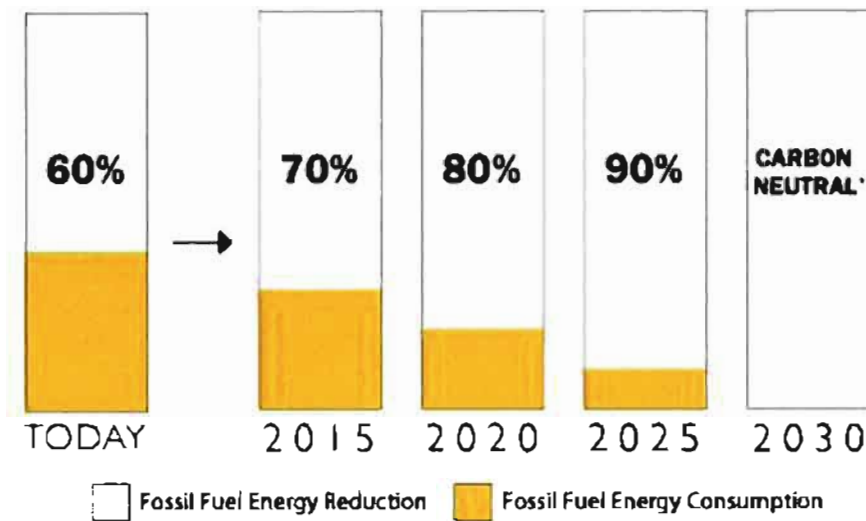
80% in 2020

90% in 2025

Carbon-neutral in 2030 (using no fossil fuel GHG emitting energy to operate).

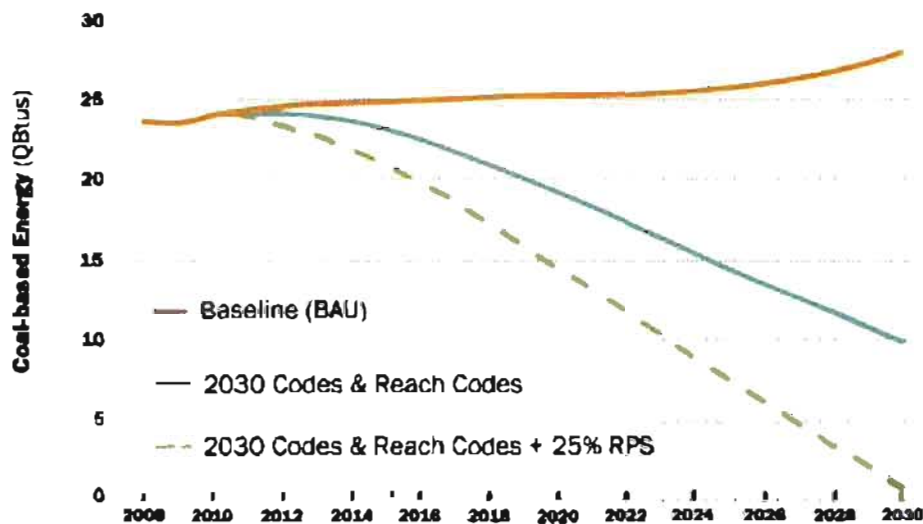


These targets may be accomplished by implementing innovative sustainable design strategies, generating on-site renewable power and/or purchasing (20% maximum) renewable energy.



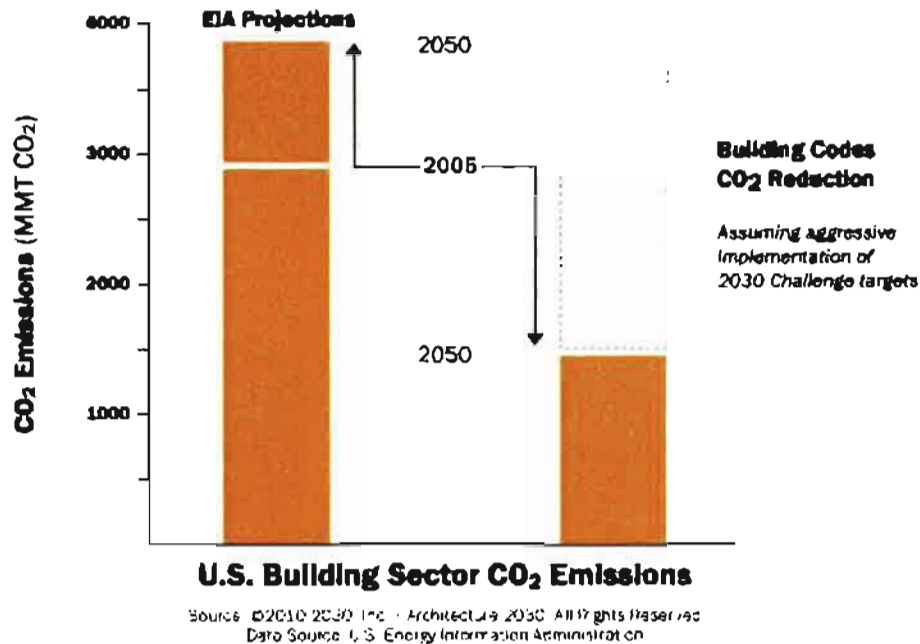
### The 2030 Challenge

Source: ©2010 2030, Inc. / Architecture 2030. All Rights Reserved.  
 \*Using no fossil fuel GHG-emitting energy to operate



### Potential Coal Energy Reductions by 2030

Source: ©2010 2030, Inc. / Architecture 2030. All Rights Reserved.  
 Data Source: Adapted from P. Kharecha et al. "Options for Near-Term Phaseout of CO<sub>2</sub> Emissions from Coal Use in the U.S." 2010



## Conclusion:

The Climate Change Work Group can support rapid reduction in greenhouse gas emissions through the Building Sector:

- \*\*\* Recognize in your documents and plan that the Building Sector is the largest contributor to greenhouse gas emissions.
- \*\*\* Support and facilitate implementation of the "Architecture 2030 Challenge: Carbon Neutrality" [www.architecture2030.org](http://www.architecture2030.org).
- \*\*\* Support and facilitate implementation of the "Seattle 2030 District" [www.2030district.org/seattle/](http://www.2030district.org/seattle/) as a model for the State.
- \*\*\* Inform the Legislature and Washingtonians of the great potential of VRF air source heat pumps in commercial, residential and school buildings to drastically reduce greenhouse gas emissions.
- \*\*\* Recognize the climate leadership that PNW regional company Thermal Supply [www.thermalsupplyinc.com/](http://www.thermalsupplyinc.com/) is providing as the regional leader in installing VRF air source heat pumps in commercial, residential and school buildings.
- \*\*\* Implement Washington State SB5854 Energy Code Reductions.

\*\*\* Improve the Washington Building Code for lights, heat and energy systems in buildings with specific low greenhouse gas emission codes to use Best Available Demand Technology – best off the shelf, not cheapest.

\*\*\* Develop new building codes that require design strategies that reduce greenhouse gas emissions by choosing efficient HVAC, lighting, and control systems, on-site renewables and limited offsets.

Victor Martinez, Director of Research and Operations of the Architecture 2030 Challenge: Carbon Neutrality and on the Board of the Seattle 2030 District, said, "We can phase out coal plants... We can't produce our way out of greenhouse gas emissions but we can conserve our way out."

Thank you,   
Pat Rasmussen

Olympia, WA 98508

August 10, 2010

Pat Rasmussen  
World Temperate Rainforest Network  
RE: Variable Refrigerant Flow

Dear Ms. Rasmussen:

Thank you for contacting the EERE Information Center.

## Background

Variable Refrigerant Flow (VRF) heating and cooling systems were introduced in Japan over 20 years ago and now condition over 50% of Japanese medium-sized (less than 70,000 square foot) commercial buildings and about 35% of larger buildings. They quickly became popular in Asia, Australia and Europe, and were introduced in the U.S. in the early 2000s. Applications include offices, retail spaces, hotels, luxury apartments, light industrial buildings and data centers, including both new and existing buildings.

## What is VRF?

VRF systems (also known as variable refrigerant volume, VRV) are heating, ventilating and air conditioning (HVAC) systems similar to ductless heat pumps used in residences and spot cooling in commercial buildings. VRF systems are typically larger, installed in commercial buildings, and include more indoor units per outdoor unit than ductless heat pumps, as illustrated in Table 1.

**Table 1: General Comparisons**

	Ductless Heat pump	VRF heating or cooling	VRF with/simultaneous heating and cooling
Relative Cost	Low	Medium	High
Maximum size (tons)	5	30	24
Number of indoor zones per outdoor condensing unit	1-8	Up to 50	Up to 50

While the efficiencies of ductless heat pumps and VRF systems are similar, VRF systems with simultaneous heating and cooling will use less energy due to their ability to transfer heat among zones. VRF indoor air handlers are available in many styles to accommodate existing architecture. Compared to ducted systems that cool by airflow, VRF systems provide heating and cooling using refrigerant, thereby eliminating duct losses (as shown in Figure 1).



**Figure 1**

There are four components that are modulated to control temperatures and optimize energy use: the condenser fan, the indoor fan coil, the compressor, and the expansion valve. The controls for VRF are somewhat more complicated than ductless heat pumps but no more complicated than a chiller and boiler plant type system. Features vary from one manufacturer to another (ease of retrofit, first cost, etc), but energy savings claims are similar.

## **Factors to Consider for Simultaneous Heating and Cooling**

Some VRF systems can provide simultaneous heating and cooling capability. These systems have better part-load efficiencies and potentially higher energy savings and incentives (compared to VRF systems without simultaneous heating and cooling).

Good applications include buildings in which different zones may require heating and cooling at the same time. For example, the VRF can transfer heat removed from an area requiring cooling (such as an interior data center) to another area that is in heating mode (such as an external office zone), rather than simply rejecting the heat from the warmer zone to the outside.

## **VRF Benefits**

Some of the benefits of VRF systems are:

- Potential operating cost savings due to better part-load efficiencies and duct loss minimization, when compared to standard air-to-air heat pumps
- Smaller mechanical space requirements – both interior and exterior
- Design flexibility with the variety of indoor air handler options
- Easier retrofits where running ductwork is an issue, such as an older building currently lacking ductwork
- Greater rentable space due to smaller mechanical rooms and less space required between floors for ductwork
- Relatively lighter weight, minimizing structural requirements
- Potentially lower electrical retrofit costs; always check electrical requirements for the replacement system

## **Regional Fit**

Due to its mild climate, the Pacific Northwest benefits greatly from a technology that offers internal/external heat recovery. VRF offers this. For comparison, the Integrated Part Load Value (IPLV) for non-inverter driven technologies (for example, a 12-ton packaged heat pump) is 9.9, while the IPLV for VRF 18.6. In the mild Pacific Northwest climate, where HVAC systems often run at part load, IPLV is very relevant.

## **Market Potential**

If the Pacific Northwest market reacts to this technology as markets in some other countries have, this could have a high market penetration. In countries where this technology has been present for a decade or more, it is installed in 50% of buildings up to 70,000 square feet and one-third of the commercial buildings more than 70,000 square feet according to the article “Variable Refrigerant Flow Systems,” *ASHRAE Journal*, April 2007.

## **Non Energy Benefits**

According to the manufacturers, VRF provides less temperature fluctuations due to the variable frequency drive (VFD) fan, inverter compressors, and throttling expansion valve.

VRF takes up less space due to minimal, if any, space-consuming ductwork. This is a great feature for both new and renovation projects. This allows for more rentable space and reduces the cost of new construction.

VRF is less noisy than water source heat pumps because the compressors are not located in the conditioned space.

Often these systems are supplied with few or no ducts. Systems with fewer ducts tend to deliver better indoor air quality, since mold growth and dust accumulation often occurs in ducts.

VRF is available in geothermal applications, providing for even higher efficiencies.

VRF is lighter weight than variable air volume (VAV) systems, so structural concerns are less.

Though these units are relatively new to the U.S., the expectation is that VRF has a long life relative to most other technologies due to the soft start of the inverter-driven compressors (as provided by historical data from ASHRAE).

Maintenance is minimized with the self diagnostics available locally or remotely.

The VRF system is an efficient technology for many buildings with multiple zones, such as offices, residential, mercantile and education occupancies.

From the following website we find that this technology has among the highest expected lives of large HVAC systems (about 20 years): <http://www.facilitiesnet.com/hvac/article/HVAC-System-LifeCycle-Database-Now-Available--8095>.

There are some concerns about refrigerant safety, with so much refrigerant volume that could potentially spill into an occupied space. This concern needs to be addressed by the system design engineer, as it should be with any technology.

Hot water can be generated using a desuperheater connected to the VRF system, reducing the cost of hot water by about 50%.

### **O & M Costs**

Per a price quote from two design/build HVAC contractors, Sunset Air and Hunter-Davisson, the following would be what they would charge on a project they had:

- Annual maintenance on the VAV system would be \$9,000 per year.
- Annual maintenance on the VRF system would be \$5,800 per year.

This is roughly a 36% saving in maintenance.

The VRF maintenance would consist of cleaning the outdoor coils and replacing the indoor filters. Maintenance of other technologies would include chiller-boiler system, cooling tower maintenance, or big air handling unit (AHU) maintenance.

Initial pre-assessment information to make estimates of longevity and operations and maintenance costs can be obtained from the ASHRAE database at <http://xp20.ashrac.org/publicdatabase/>.

### **References**

- "New and Cool: Variable Refrigerant Flow Systems," American Institute of Architects, April 10, 2009: [http://info.aia.org/aiarchitect/thisweek09/0410/0410p\\_vrf.cfm](http://info.aia.org/aiarchitect/thisweek09/0410/0410p_vrf.cfm)
- "Information for CEE Program Administrators On The New Part Load Efficiency Metric For Unitary Commercial HVAC Equipment": [www.cee1.org/com/hecac/Prog\\_Guidance\\_IEER.pdf](http://www.cee1.org/com/hecac/Prog_Guidance_IEER.pdf)
- ENERGY STAR® Program Requirements for Light Commercial HVAC (see page 5 reference to AHRI standard 1230): [http://www.energystar.gov/ia/partners/prod\\_development/revisions/downloads/lhvac/spec\\_v2\\_final.pdf](http://www.energystar.gov/ia/partners/prod_development/revisions/downloads/lhvac/spec_v2_final.pdf)

- “Variable Refrigerant Flow Systems” by William Goetzler, *ASHRAE Journal*, April 2007.  
<http://www.ashrae.org/publications/detail/17029>
- “Variable Refrigerant Flow Systems for Commercial HVAC” by William Goetzler, *GovEnergy Conference*, 2008. <http://www.govenergy.com/2008/pdfs/technology/GoetzlerTechn1.pdf>

The Building Technologies Program in EERE works in partnership with states, industry, and manufacturers to improve the energy efficiency of our nation's buildings. Through innovative new technologies and systems-engineered building practices we are transforming how we design, build, and operate the approximately 15 million new buildings projected to be constructed by 2015.

I hope the information provided will help you improve the efficiency of the buildings you are working with. If you need further assistance or have other energy-related questions, please call the EERE Information Center at [1-877-337-3463](tel:1-877-337-3463) between 9AM and 7PM Eastern. Thank you. -

Sincerely,

Marcia L. Karr, P.E.

Mechanical Engineer

EERE Information Center

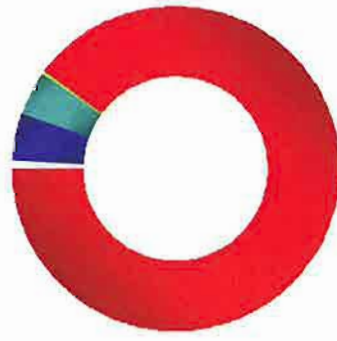
Energy Efficiency and Renewable Energy

U.S. Department of Energy

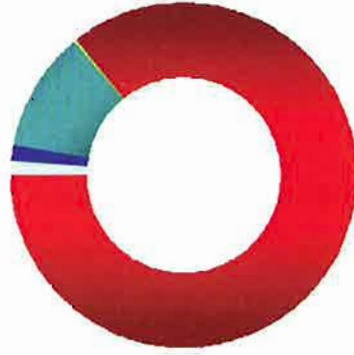
1-877-EERE INFO ([1-877-337-3463](tel:1-877-337-3463))

[www.eere.energy.gov](http://www.eere.energy.gov)

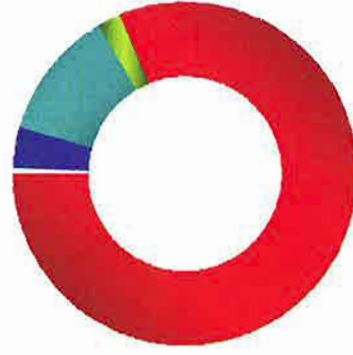
## Worldwide Usage-Opportunity



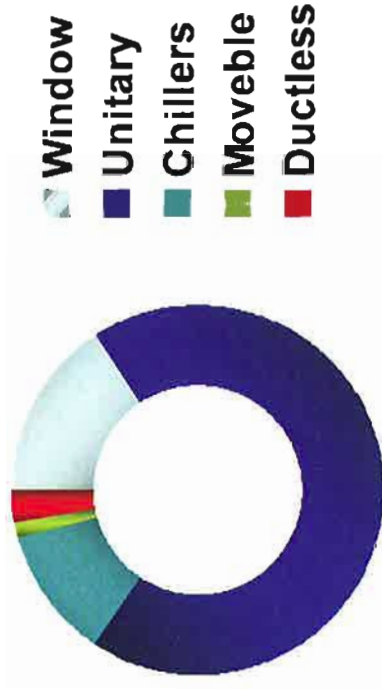
Japan  
90%  
7.2M Systems



China  
86%  
16.7M Systems



Europe  
81%  
7.6M Systems



USA  
6%  
0.4M Systems

Window  
Unitary  
Chillers  
Moveable  
Ductless





# Environmental Tax Reform

## Washington & King County

etr-wa  
etr-ma

350  
Seattle



CGE COMMITTEE FOR A  
GREEN  
ECONOMY

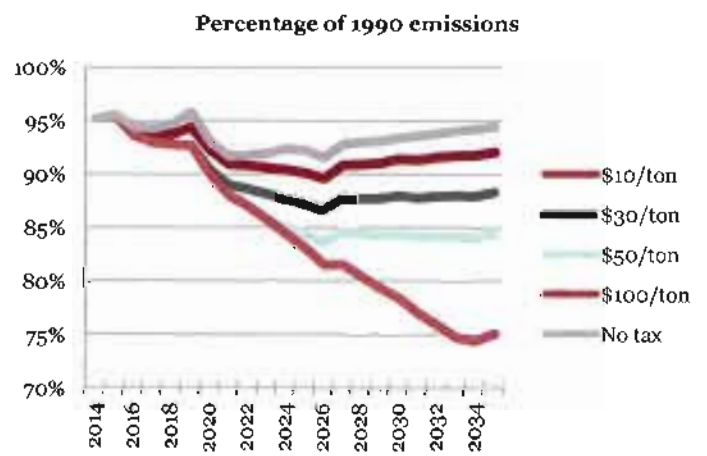
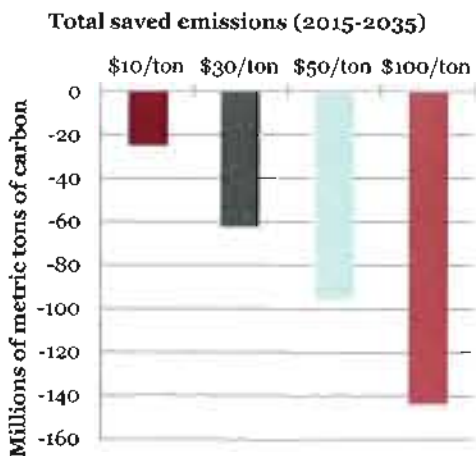
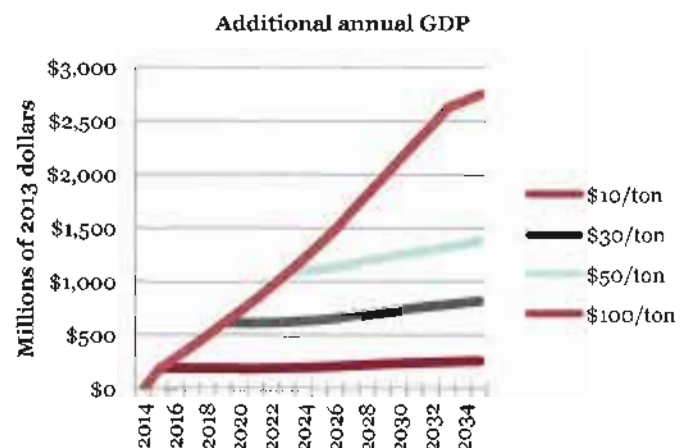
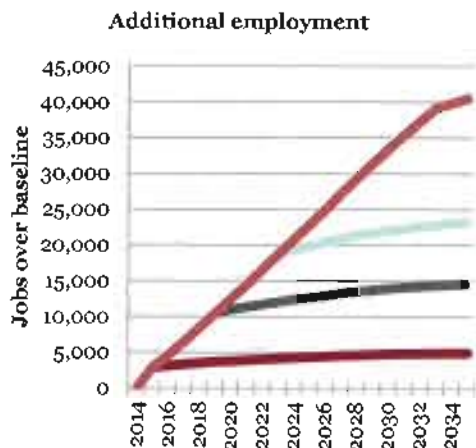
## WASHINGTON STATE ENVIRONMENTAL TAX REFORM

- Tax the Carbon in Fossil Fuel
- Reduce the Sales Tax and increase the Working Family sales tax rebate
- Reduce the B&O Tax

Goal: Reduce CO<sub>2</sub> emissions and Grow the Economy

Scenarios: \$10 per metric tonne, \$30/tonne, \$50/tonne, and \$100/tonne phased in at \$5/year.

Model Results: The tax on CO<sub>2</sub> causes emissions to drop. Tax reductions make the economy and employment grow. The business and household sectors received tax cuts equal to their environmental tax payments.



## King County Environmental Tax Reform

- Tax the Carbon in Fossil Fuel
- Reduce the Sales Tax
- Reduce the Property Tax

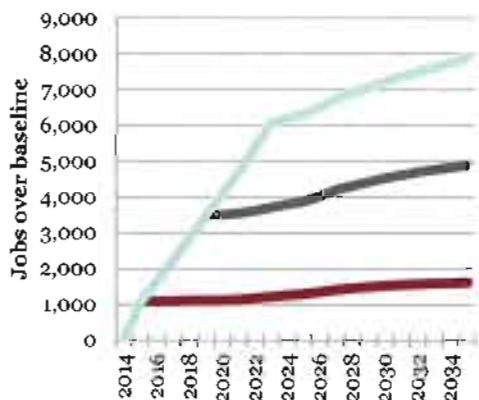
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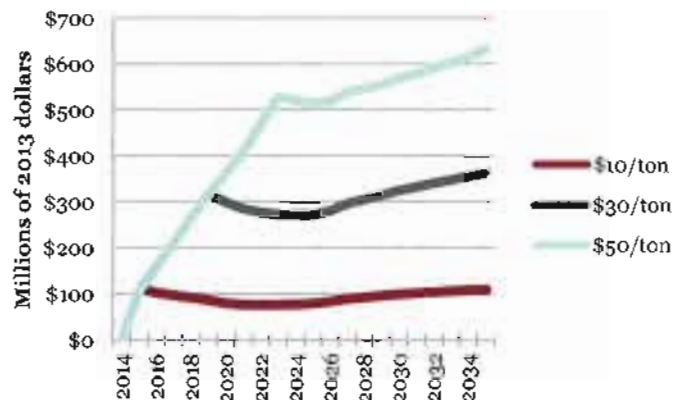
Model Results: The tax on CO<sub>2</sub> causes emissions to drop. Tax reductions make the economy and employment grow. The business and household sectors received tax cuts equal to their environmental tax payments.



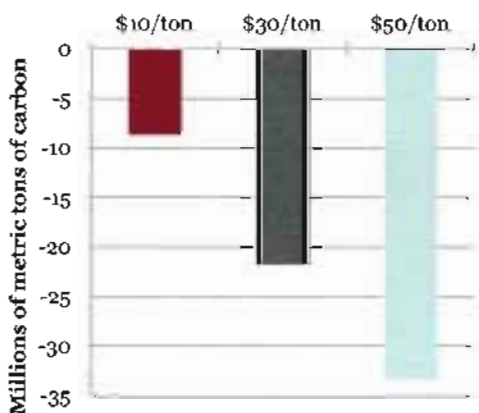
Additional employment



Additional annual GDP



Total saved emissions (2015-2035)



### Top eight industries benefiting:

- Construction
- Hospitals and ambulatory healthcare
- Monetary authorities – central bank; Credit intermediation and related
- Professional, scientific, and technical services
- Real estate
- Securities, commodity contracts, investments
- Real estate
- Wholesale and retail trade

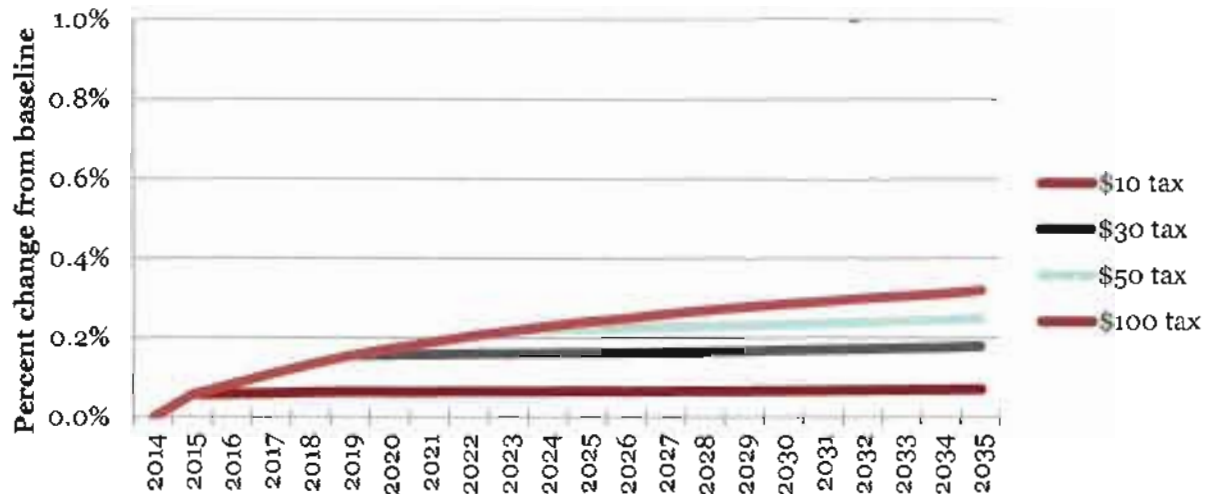
King County grows more with a state wide Environmental Tax Reform

The State of Washington outside of King County also gains from the King County stand-alone Environmental Tax Reform.

OVERALL COSTS GO UP LESS THAN 1/2 OF 1%

PERSONAL CONSUMPTION EXPENDITURE (PCE)-PRICE INDEX

Washington, Statewide Reform



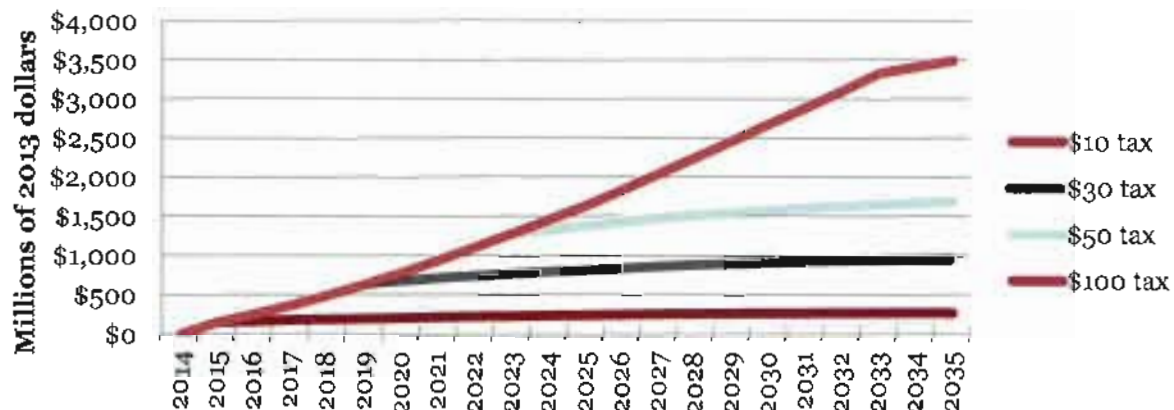
The lower income groups are buffered.

PCE-Price Index by Income Quintile

Quintile	2015	2020	2025	2030	2035
<b>Lowest 20%</b>	+0.06%	+0.18%	+0.25%	+0.30%	+0.33%
<b>Low-Middle 20%</b>	+0.06%	+0.18%	+0.25%	+0.29%	+0.33%
<b>Middle 20%</b>	+0.06%	+0.17%	+0.24%	+0.29%	+0.32%
<b>High-Middle 20%</b>	+0.06%	+0.17%	+0.23%	+0.28%	+0.31%
<b>Highest 20%</b>	+0.06%	+0.17%	+0.23%	+0.27%	+0.31%

Incomes improve in all scenarios

Washington, Statewide Reform



# #1 CLIMATE ACTION:

**SAY NO TO COAL,  
YES TO CLEAN ENERGY.  
REDUCE CARBON POLLUTION,  
INVEST IN WASHINGTON**



PLEASE  
PLACE  
STAMP  
HERE

Governor Inslee  
C/O Sierra Club  
180 Nickerson Steet, #202  
Seattle WA 98109



# Governor Inslee is ready to lead on climate change, let's help him!

## Dear Governor Inslee:

Thank you for stepping up and leading on ways to reduce our climate pollution while creating a new energy economy for Washington.

I believe that one of the best actions you can take is to end our reliance on dirty, dangerous and increasingly expensive coal. Our utilities should all be developing plans to phase out coal, while investing in the clean energy alternatives such as wind, solar and energy efficiency. With a major investment in cleaner sources of fuel, we can stop making climate change worse and boost home-grown energy resources.

Unfortunately, Puget Sound Energy's 20-year plan doubles down on coal-fired power. We need your leadership and others to transition to clean energy to meet our greenhouse gas goals.

You wrote the book on how to make this transition happen – it's time for a sequel titled "How Washington State Became Coal-Free."

We need to replace coal-fired power in Washington state and replace it with clean energy because:

---

---

---

Laurel

First Name

Nelson-King

Last Name

---

Address

Shelton

City

Wa

State

98584

Zip

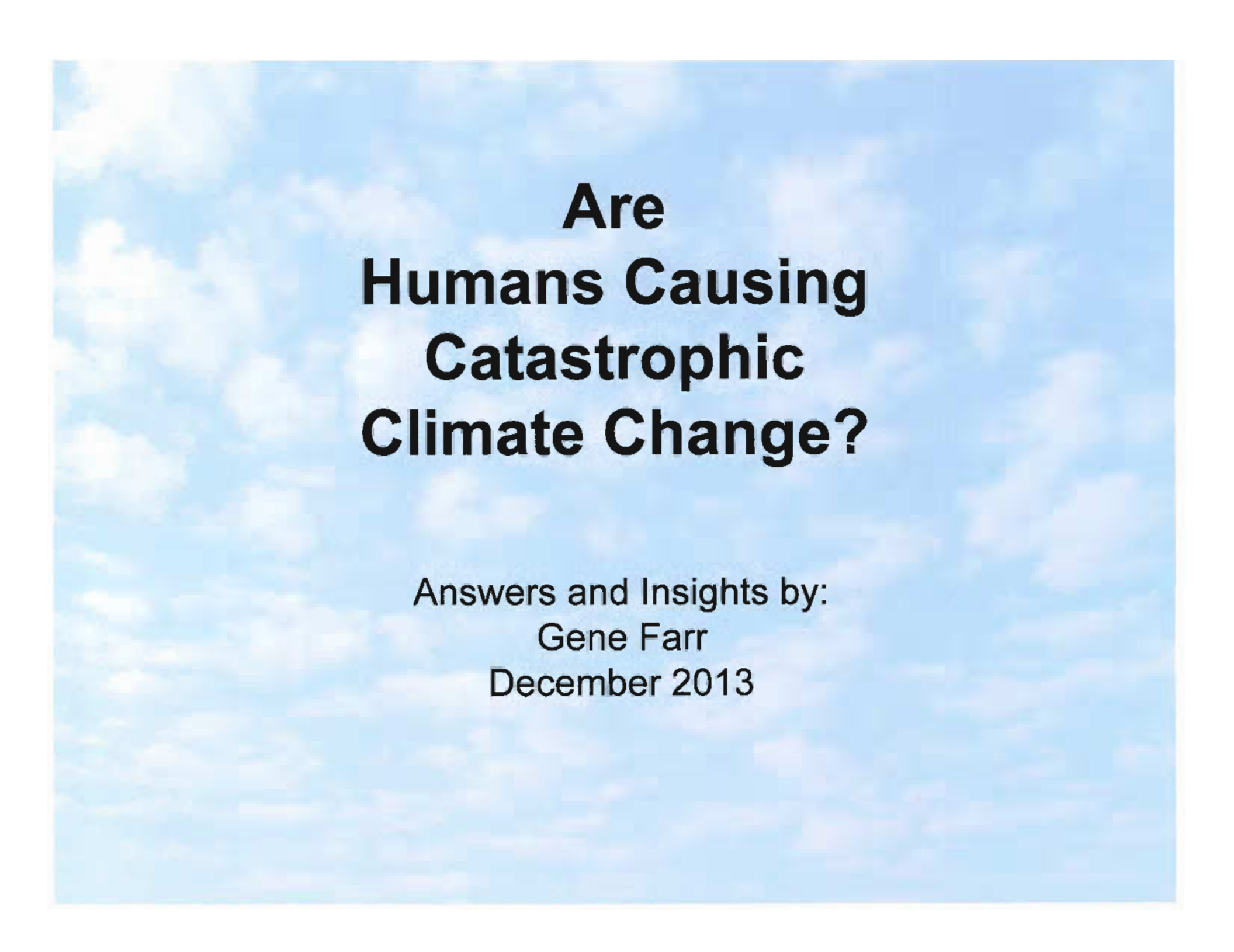
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Email

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Phone

By providing your email address you become a participant of the Sierra Club's Online Community. As a participant, you'll stay informed and involved with the latest environmental news, information and action alerts.



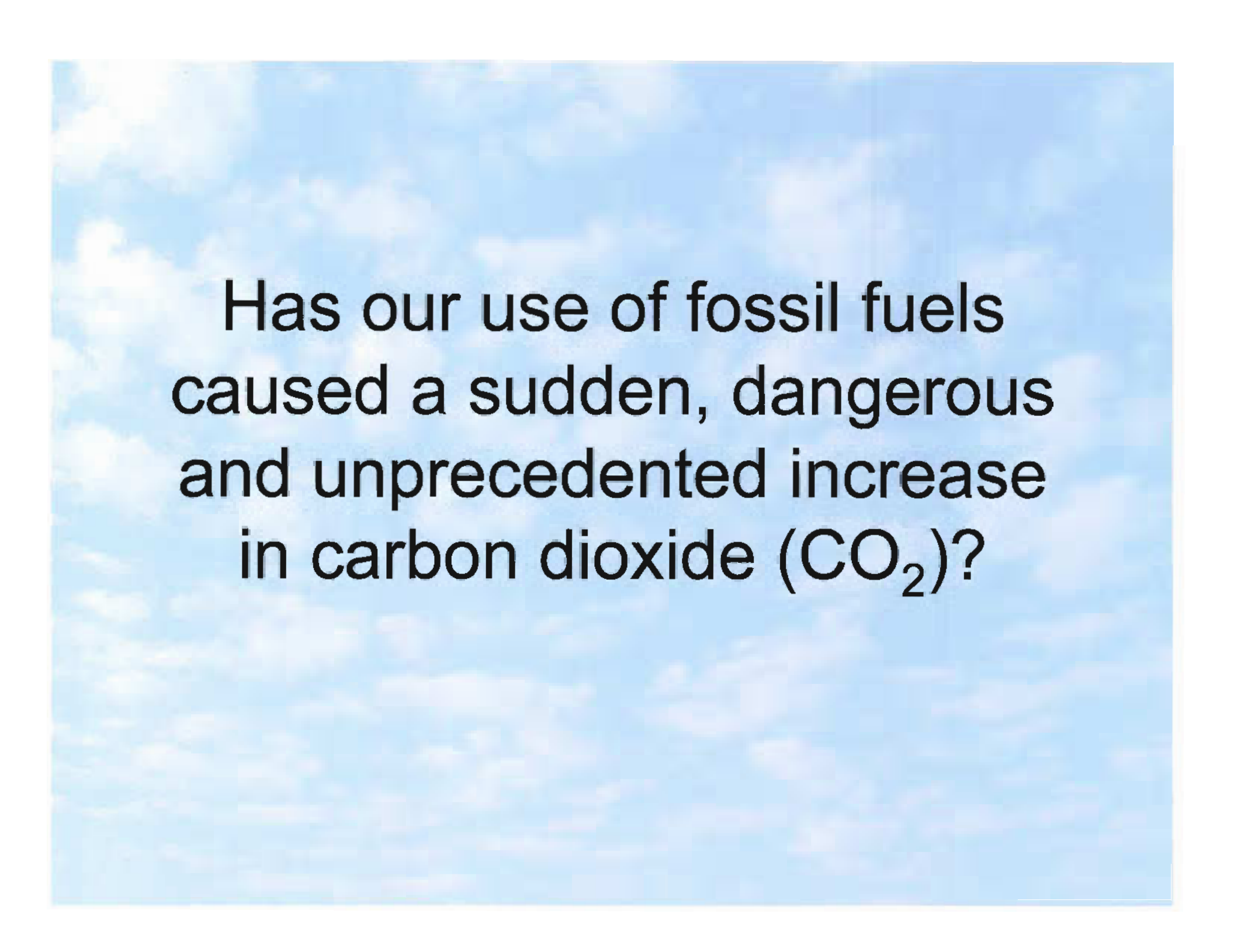
# **Are Humans Causing Catastrophic Climate Change?**

Answers and Insights by:  
Gene Farr  
December 2013

# Outline

- Has our use of fossil fuels caused a sudden, dangerous and unprecedented increase in carbon dioxide (CO<sub>2</sub>)?
- Do Human Generated CO<sub>2</sub> Emissions Cause Global Warming?
- Did dangerous, sudden global warming occur over the last 50 years?
- Are the current global temperatures too hot and further warming bad?
- Is dangerous global warming likely to occur over the next century?
- Epilog
  - Is there consensus that humans are causing a climate crises?
  - Why are we hearing so much about “Human Caused Climate Change”?
  - References.

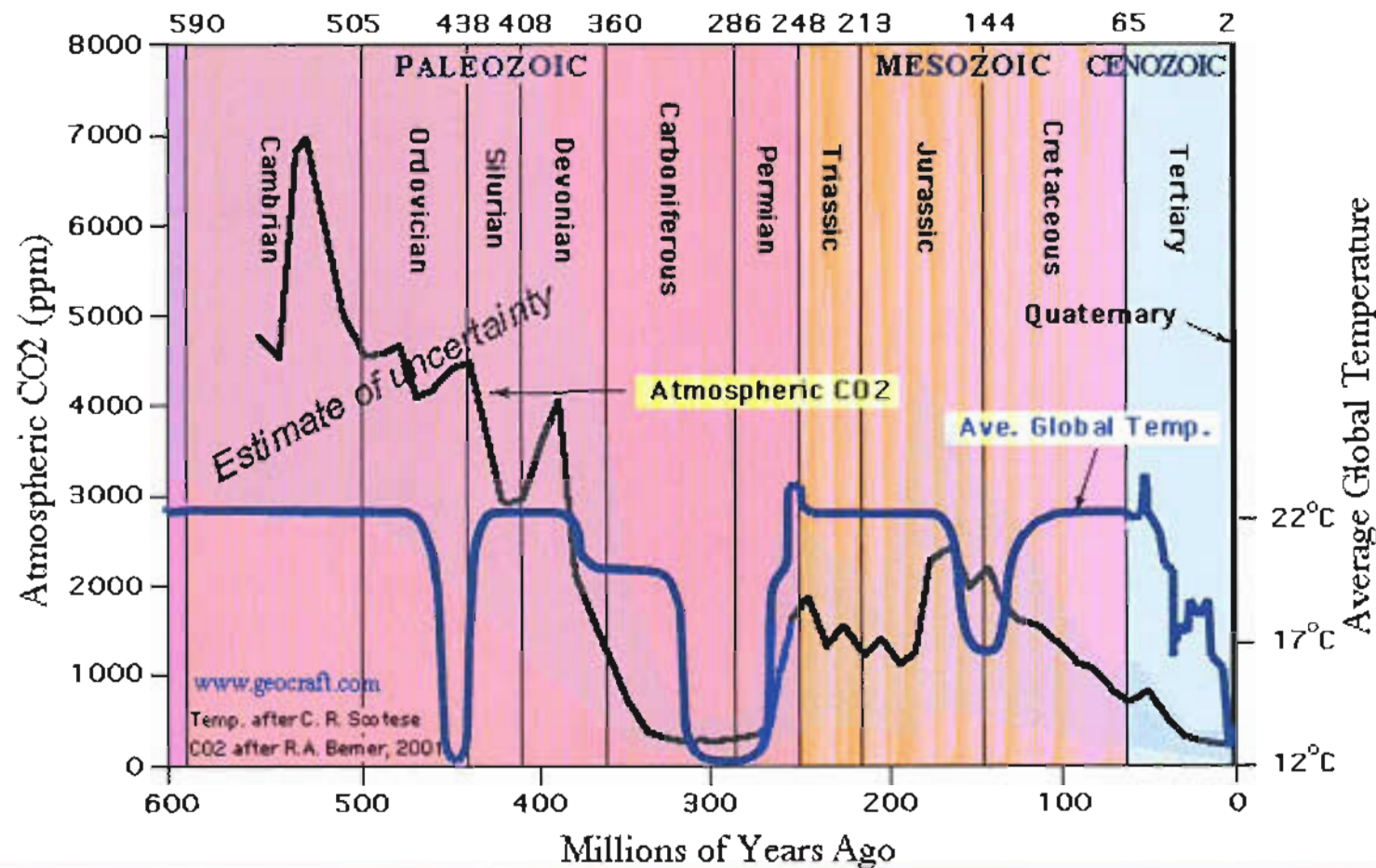




Has our use of fossil fuels  
caused a sudden, dangerous  
and unprecedented increase  
in carbon dioxide (CO<sub>2</sub>)?

# First, let's look at the history...

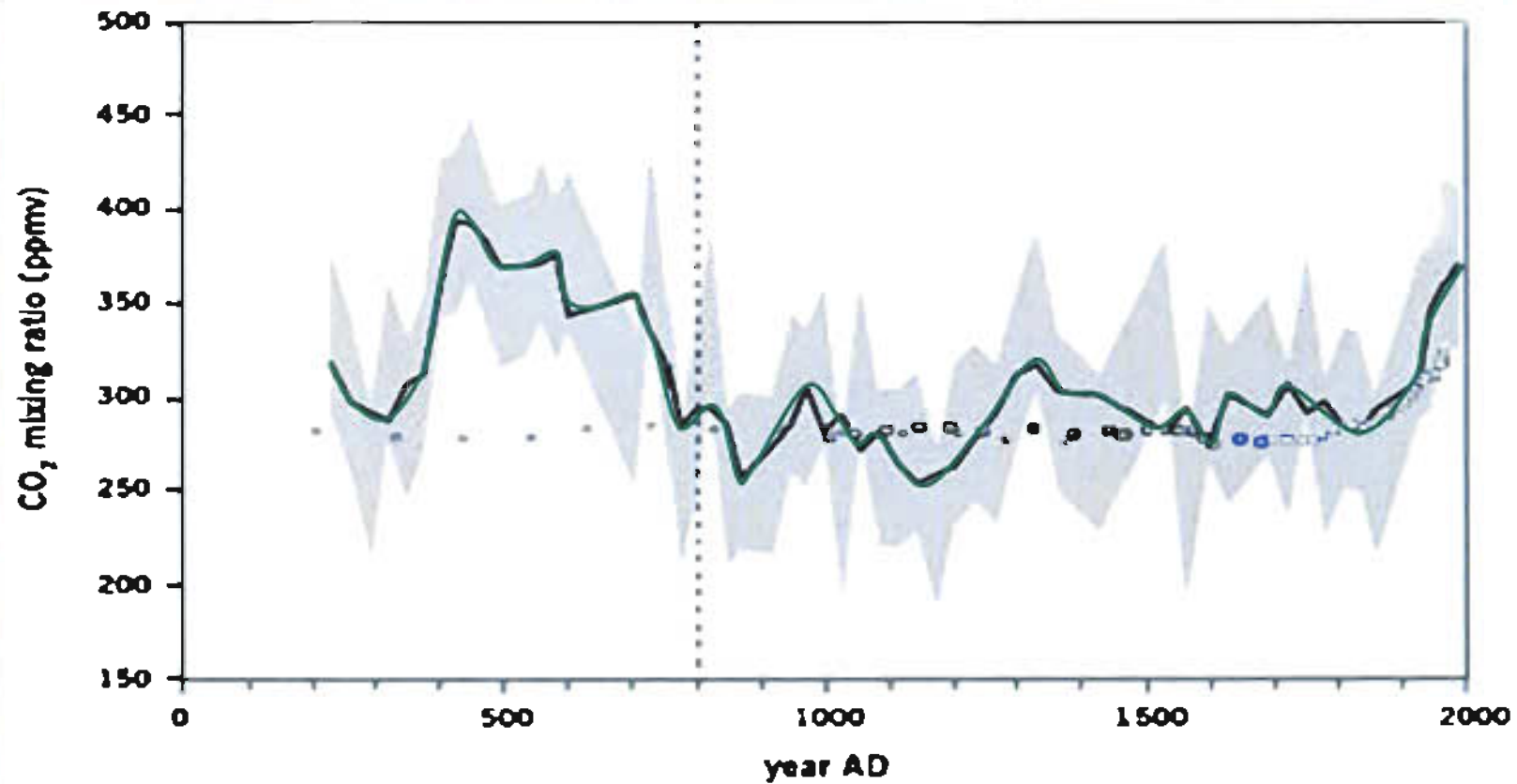
Global Temperature and Atmospheric CO<sub>2</sub> over Geologic Time



# Looking Back 1800 years

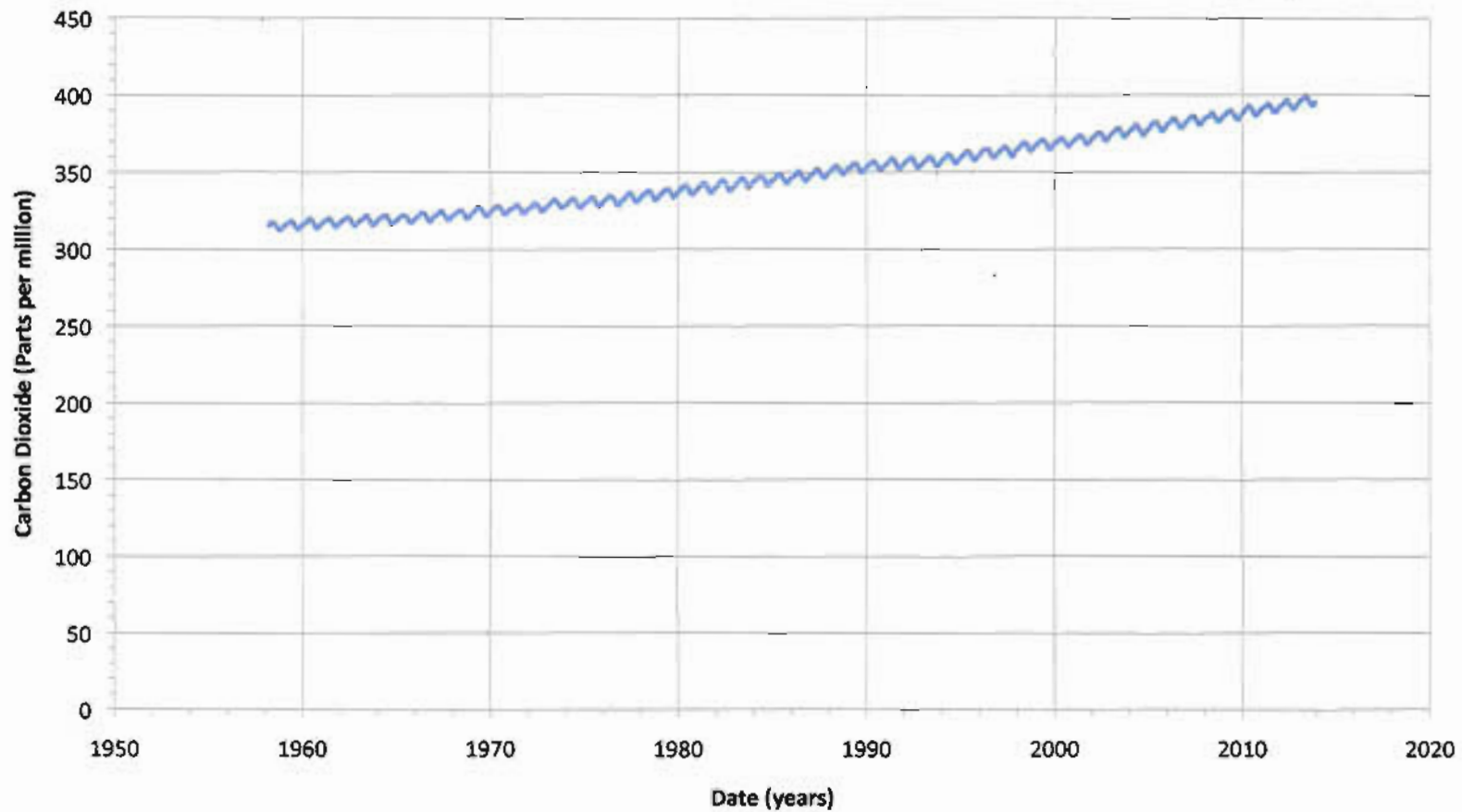
## CO<sub>2</sub> Measurement Proxies

From stomatal density in fossil pine needles and ice core air.

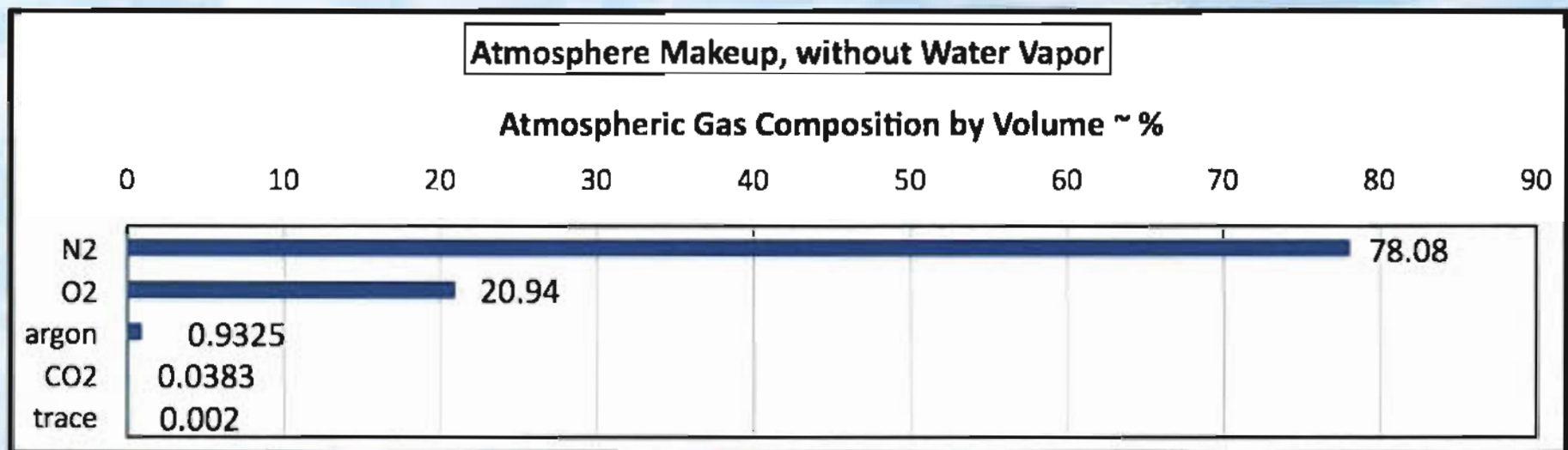


# Mauna Loa Observatory

**Mauna Loa Carbon Dioxide Measurements (Monthly Averages)**



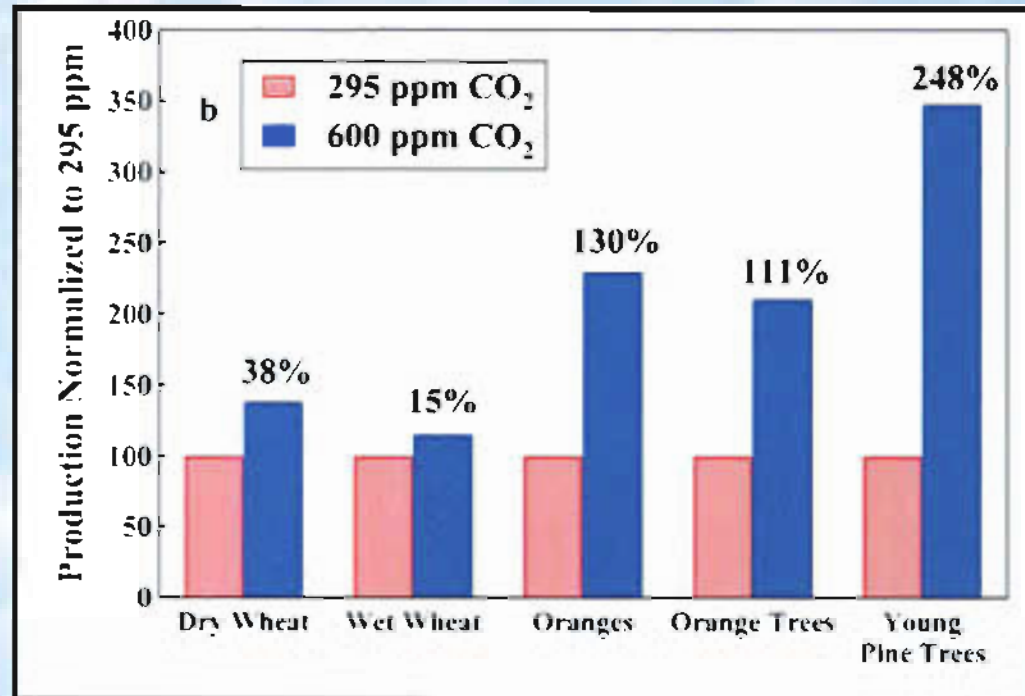
Carbon Dioxide content in air is very small.  
Invisible on a bar chart.





# Plants and Trees Love CO<sub>2</sub>

- A doubling of CO<sub>2</sub> would greatly improve crop yields & forest growth.



- See [www.co2science.org/data/plant\\_growth/plantgrowth.php](http://www.co2science.org/data/plant_growth/plantgrowth.php)

Has our use of fossil fuels  
caused a sudden, dangerous  
and unprecedented increase  
in Carbon Dioxide (CO<sub>2</sub>)?

**NO !**



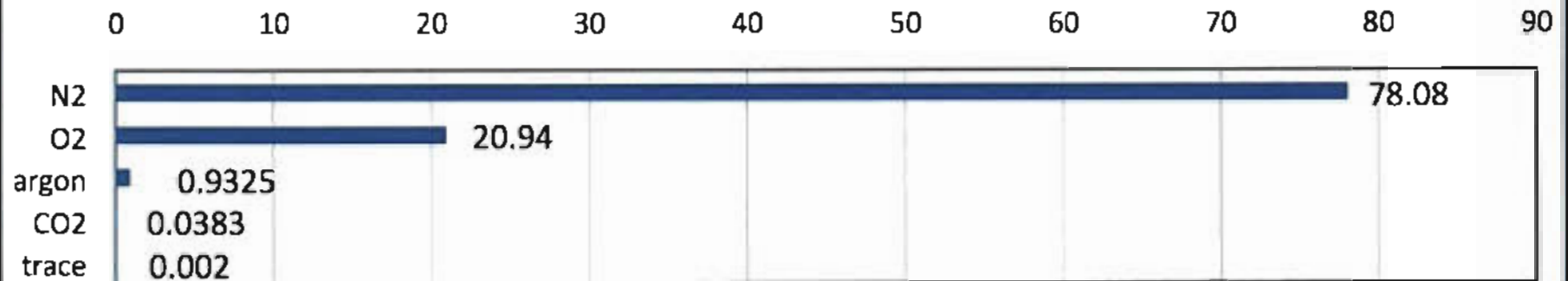
Do Human Generated  
CO<sub>2</sub> Emissions Cause  
Global Warming?



# Considering the effect of Water Vapor

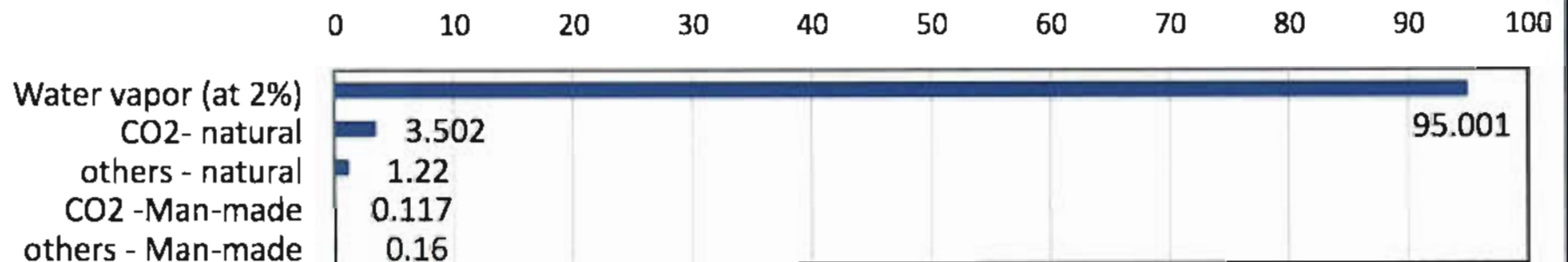
## Atmosphere Makeup, without Water Vapor

### Atmospheric Gas Composition by Volume ~ %



## Greenhouse Gas Effects adjusted for heat retention characteristics

### Greenhouse Gas Composition by Volume ~ %



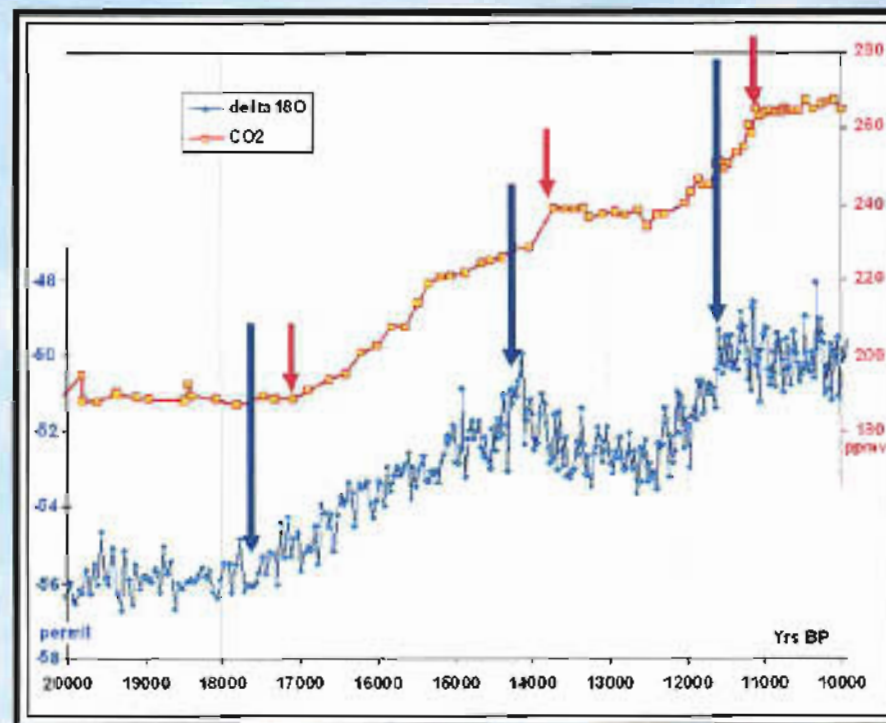
Human caused emissions of CO<sub>2</sub> contribute only 0.117% of the total greenhouse gas warming effect.

# CO<sub>2</sub> is Not the Likely Driver of Global Warming

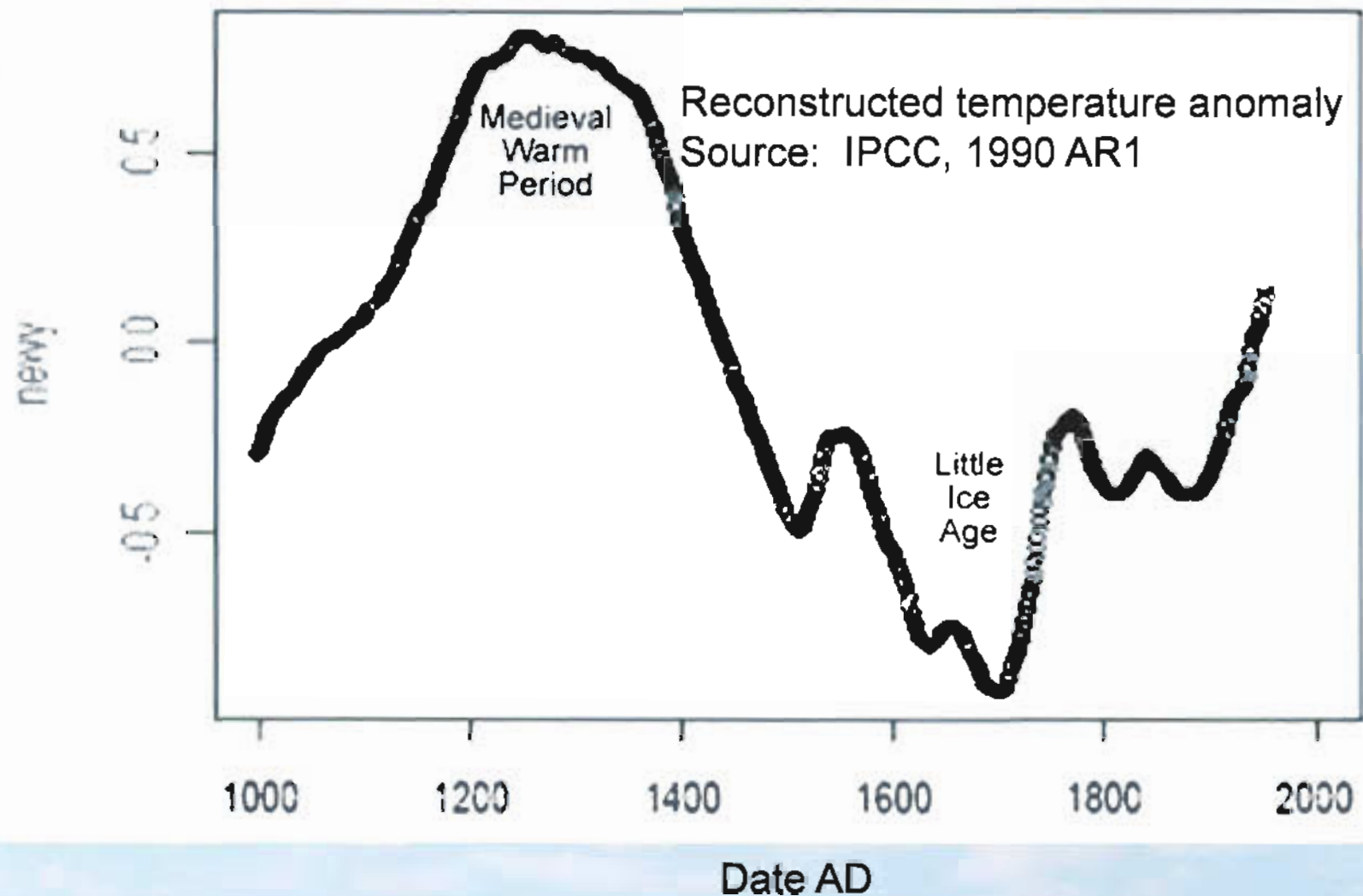
Chart shows a 10,000-year period during the last ice age recovery.  
Data basis - ice cores.

CO<sub>2</sub> changes happen **after** temperature changes.

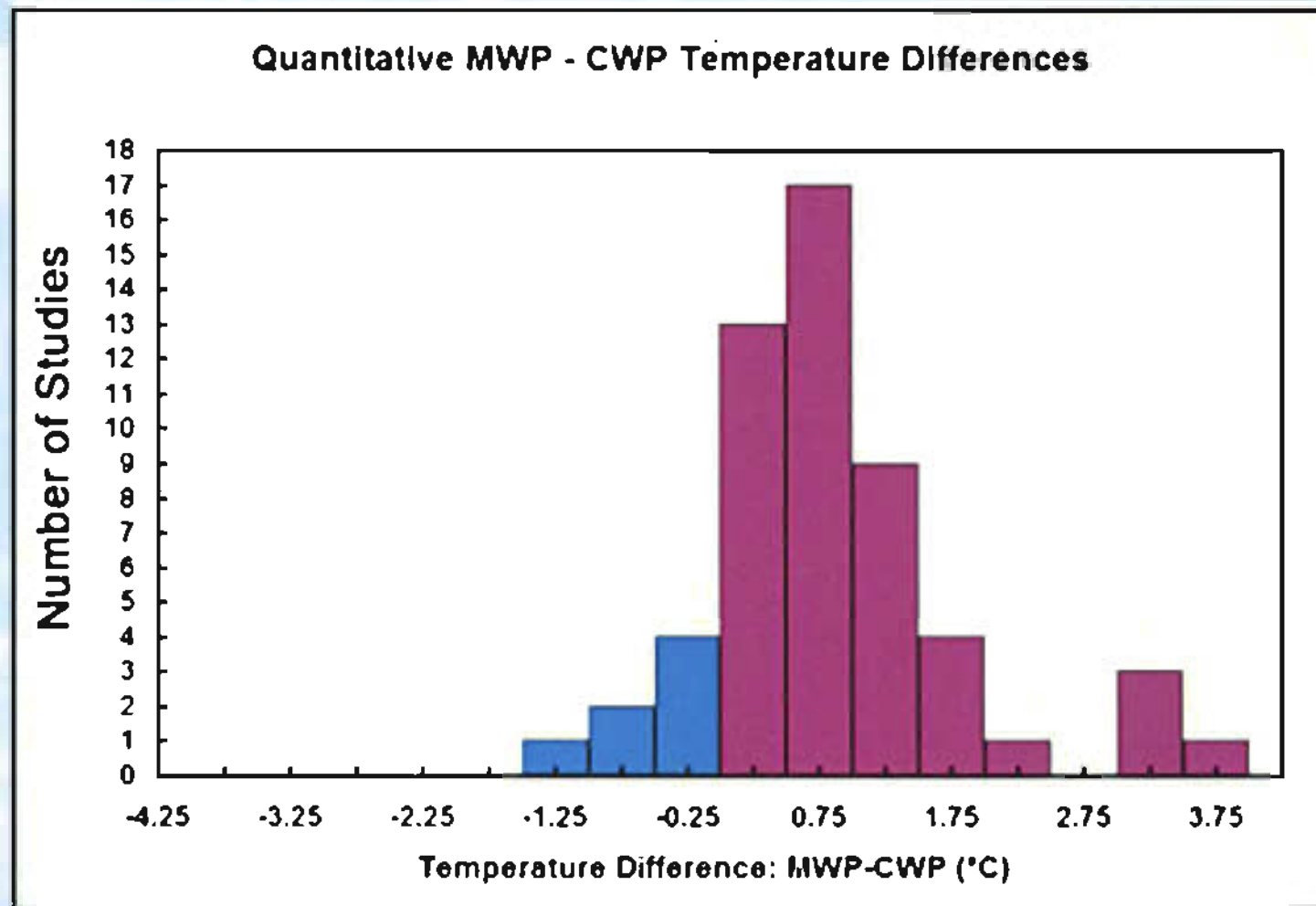
Temperature changes, **then** CO<sub>2</sub> responds 500 to 800 years later.



# Early UN IPCC Reports Found Current Temperatures to be Unexceptional



# Comparing the Medieval Warm Period to the Current Warm Period

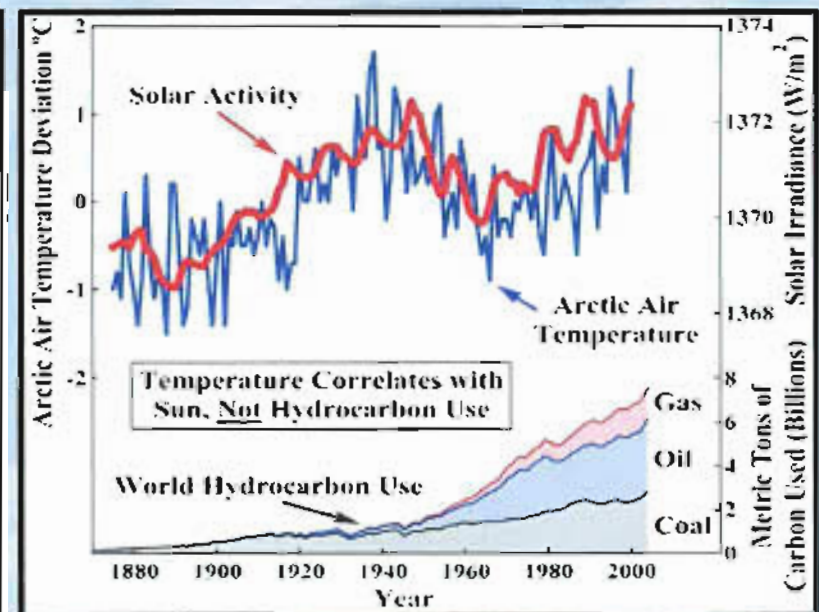
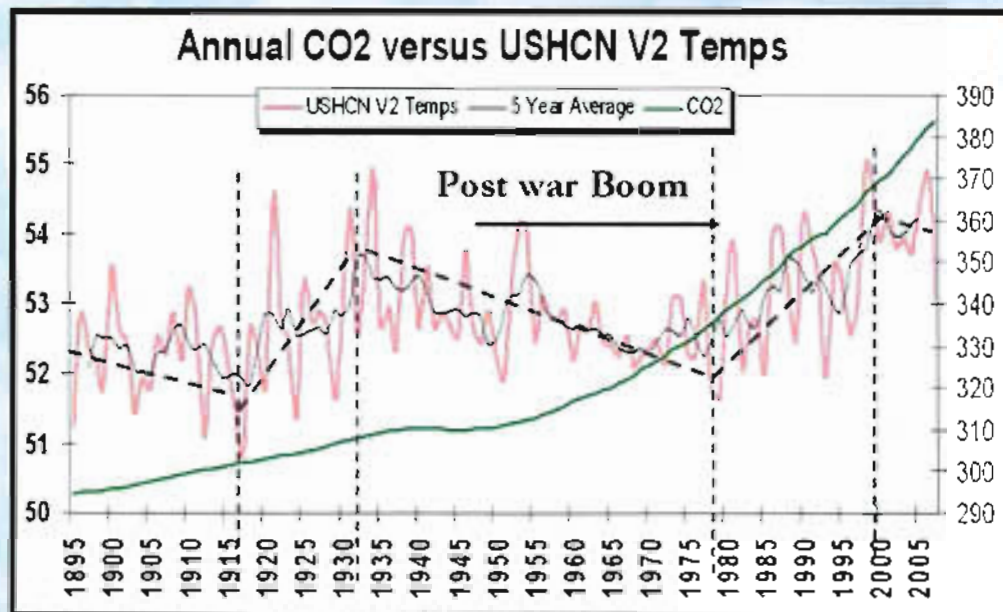


From the Center for the Study of Carbon Dioxide and Global Change

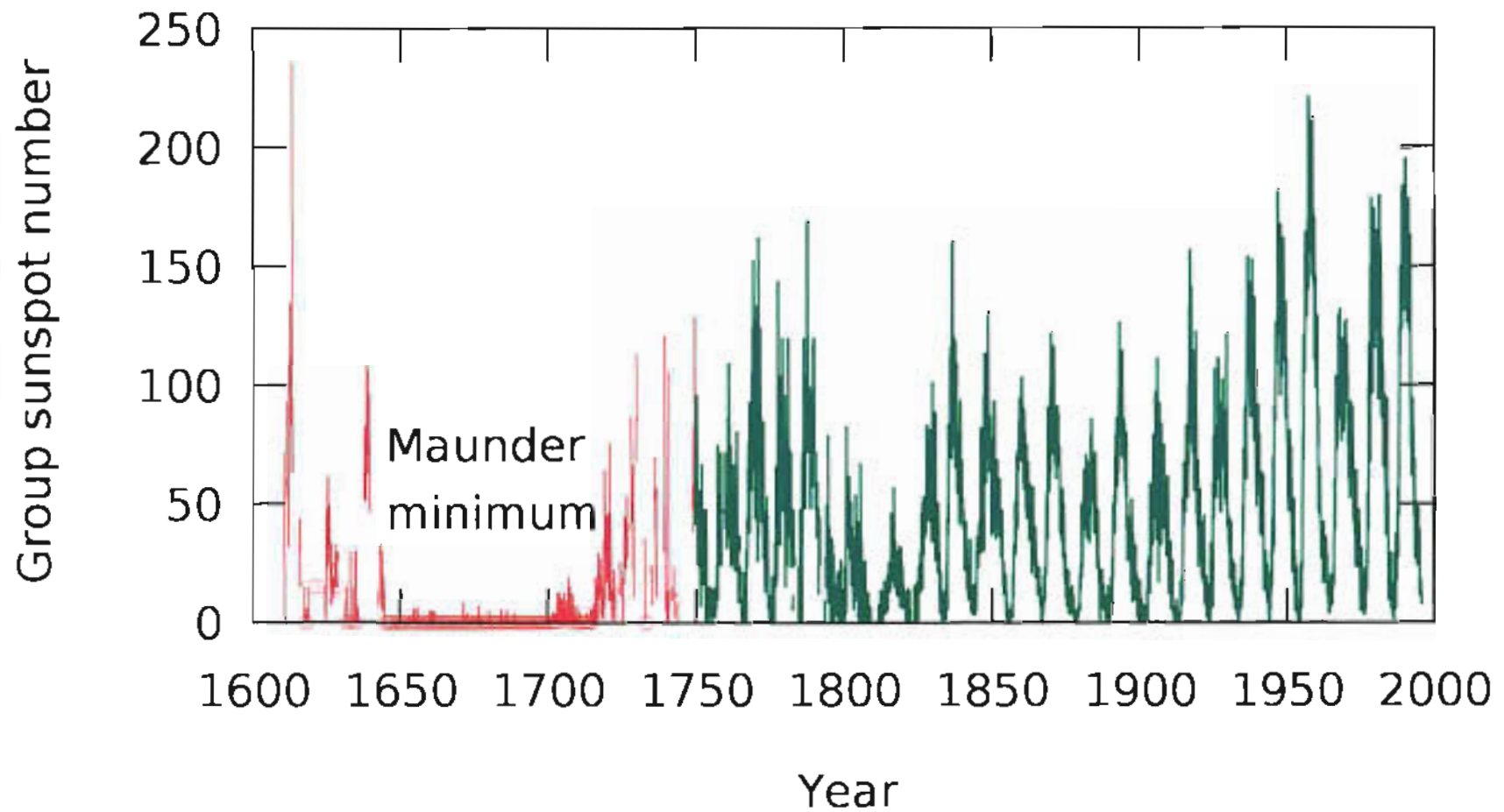


# Assessing the Blame for Global Warming

Atmospheric warming and human carbon emissions shows 'good' correlation only after 1970.

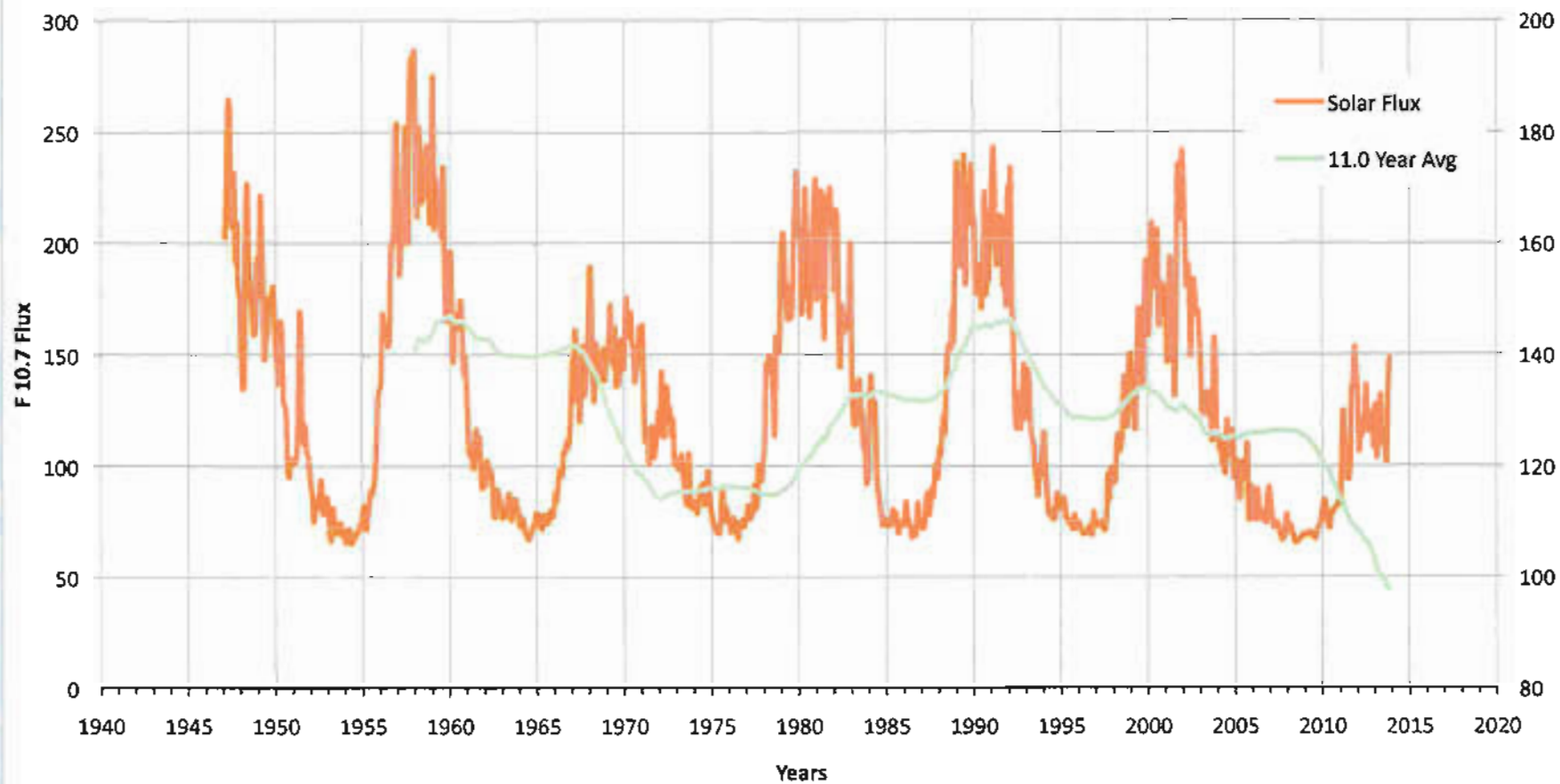


# Variation in Sun Spot Numbers (Solar Activity)



## Monthly Average Observed Solar Flux Levels

Solar Flux Units






## It appears that the Greenhouse CO<sub>2</sub> effect is a **Minor** player in Global Warming and:

- Water vapor is the primary greenhouse gas, overwhelming CO<sub>2</sub>.
- Solar activity correlates very well with Earth average temperatures while human caused CO<sub>2</sub> levels don't.
- The important climate thermostats are **too chaotic and complex to model**:
  - **Precipitation and Cloud formation**; A <2% precipitation change more than offsets a **doubling** of CO<sub>2</sub>, but rain and clouds are too chaotic to model, even short term.
  - **The Pacific heat vent**; observed and powerful, is a stable, temperature control thermostat. But, it has not been modeled.
- High clouds tend to warm the planet but at the same time, low clouds tend to cool it. Low solar activity promotes low cloud formation.



Do Human Generated  
CO<sub>2</sub> Emissions Cause  
Global Warming?

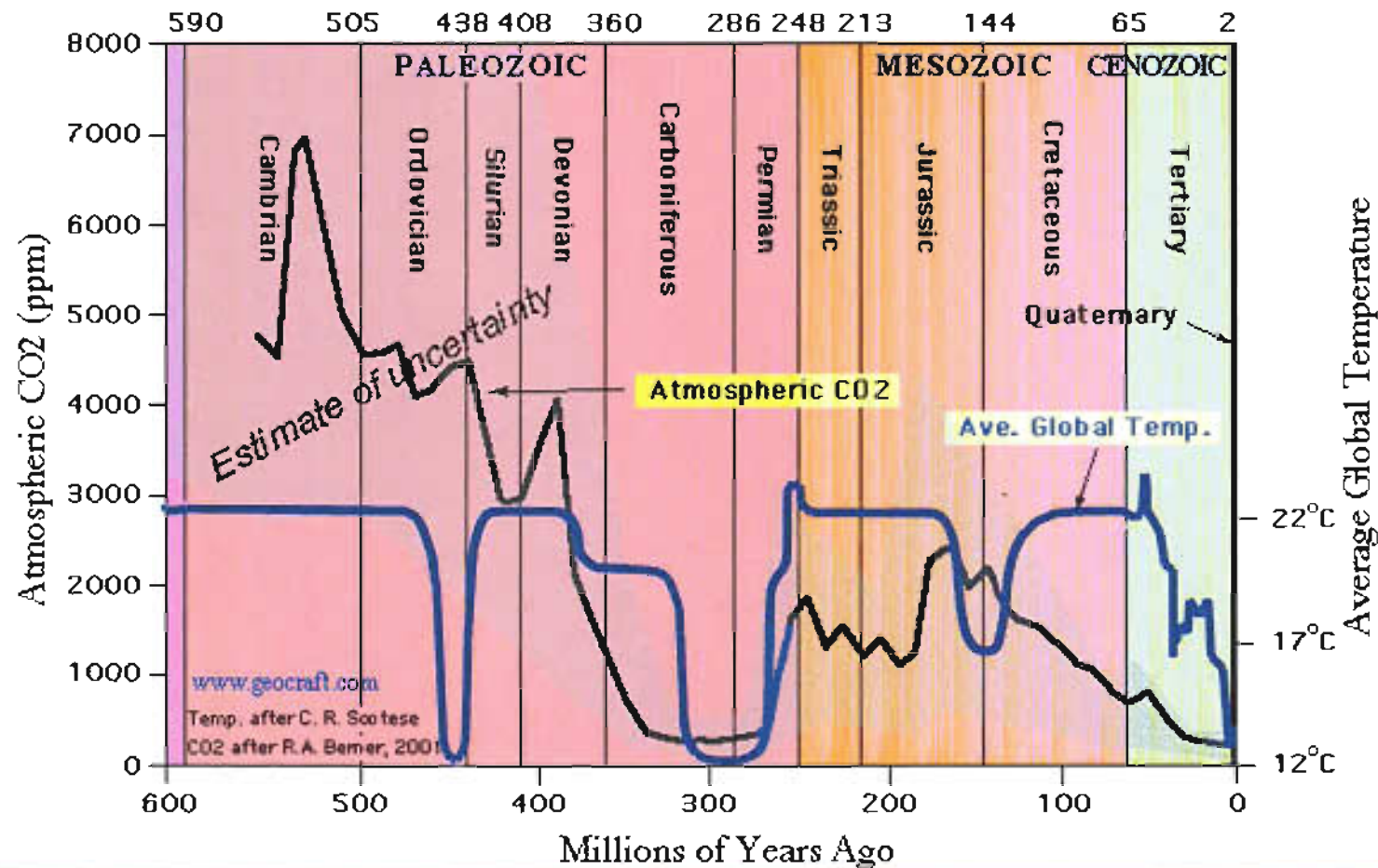
**NO !**



Did dangerous, sudden  
global warming occur  
over the last 50 years ?

# Another look at the history...

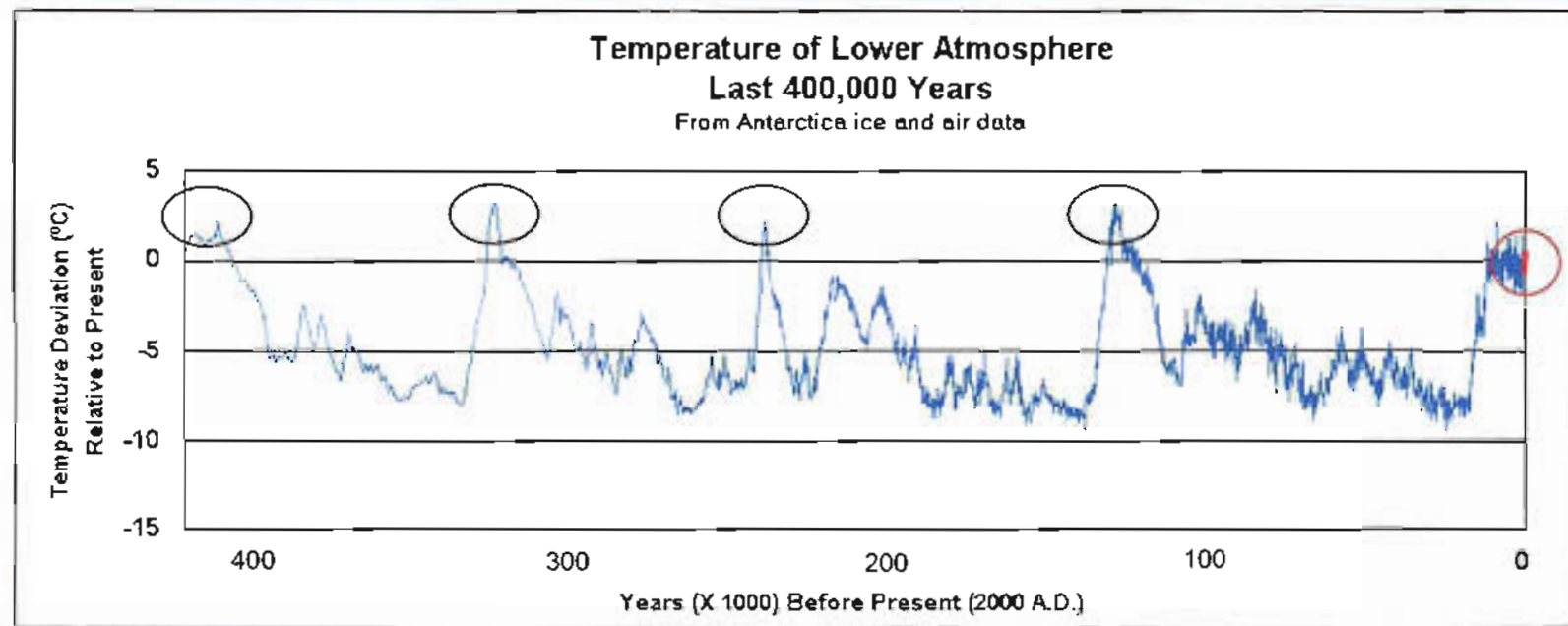
## Global Temperature and Atmospheric CO<sub>2</sub> over Geologic Time



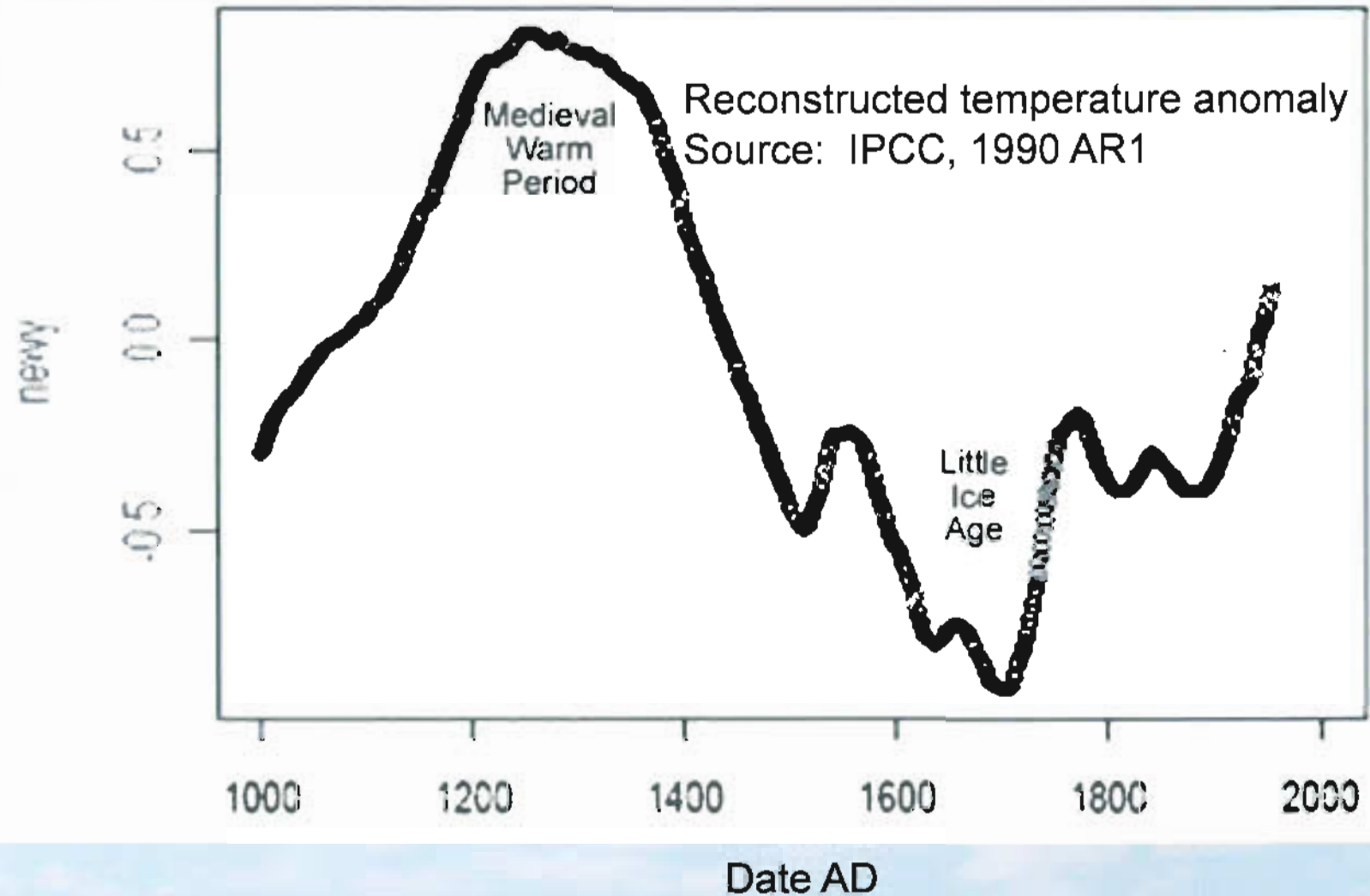
# Global Temperature Data

Looking Back 400,000 years

The last 1,000 years' temperatures were completely **normal**.  
The four previous interglacial warm periods were all **warmer** than the current one.



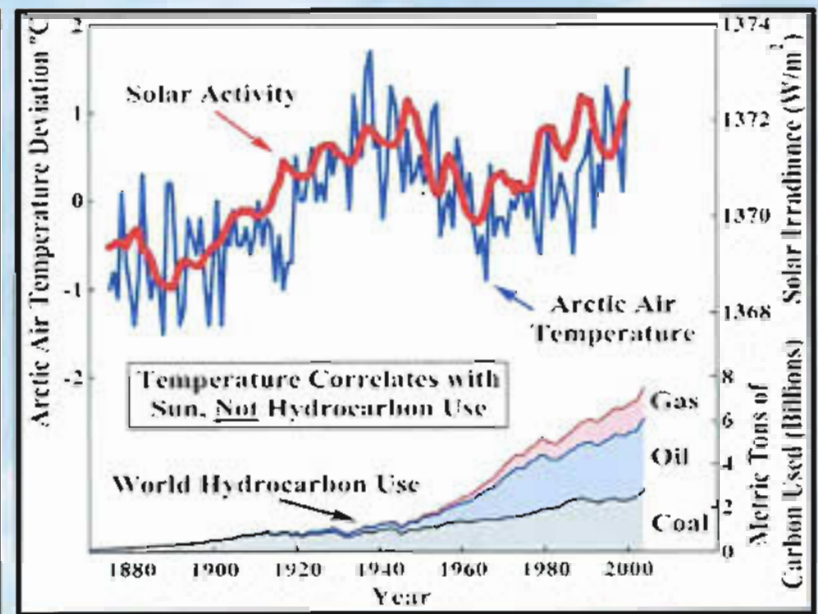
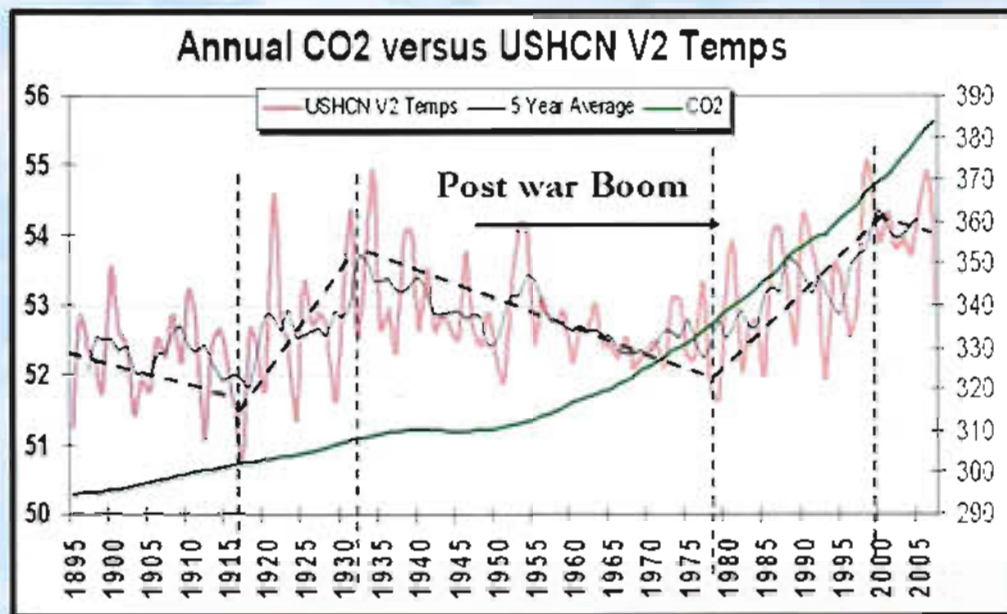
# Early UN IPCC Reports Found Current Temperatures to be Unexceptional



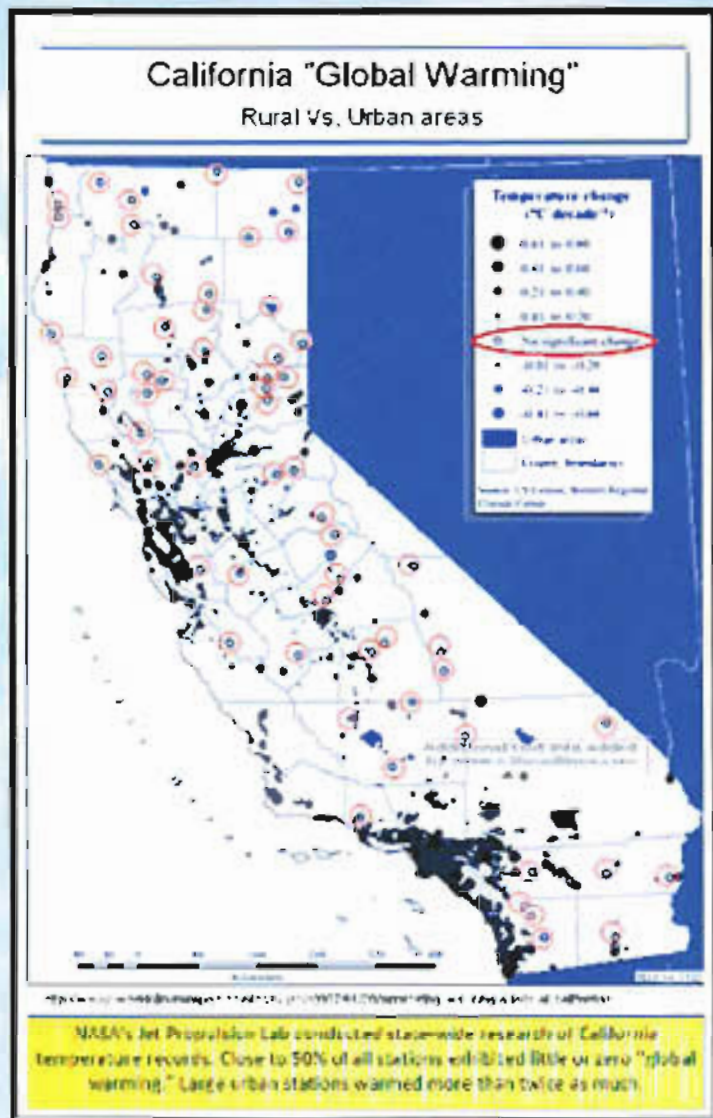


# Assessing the Blame for Global Warming

Atmospheric warming and human carbon emissions shows 'good' correlation only after 1970.

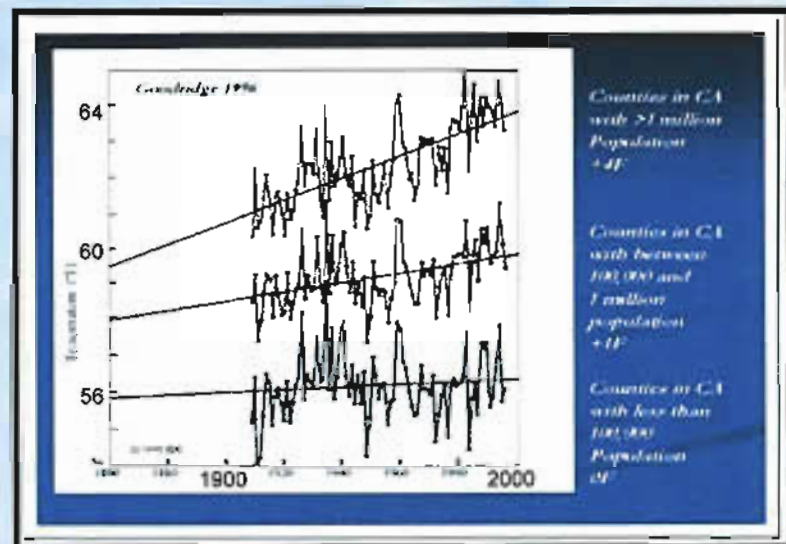


# Can Surface Thermometer Measurements be Trusted?



California shows no warming in counties that did not have a big increase in population during the last 100 years.

Population locally biases the sensors hotter.



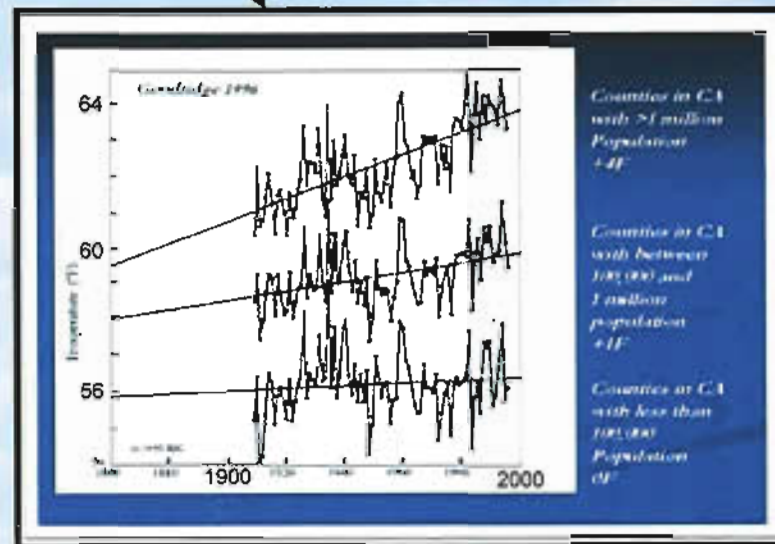
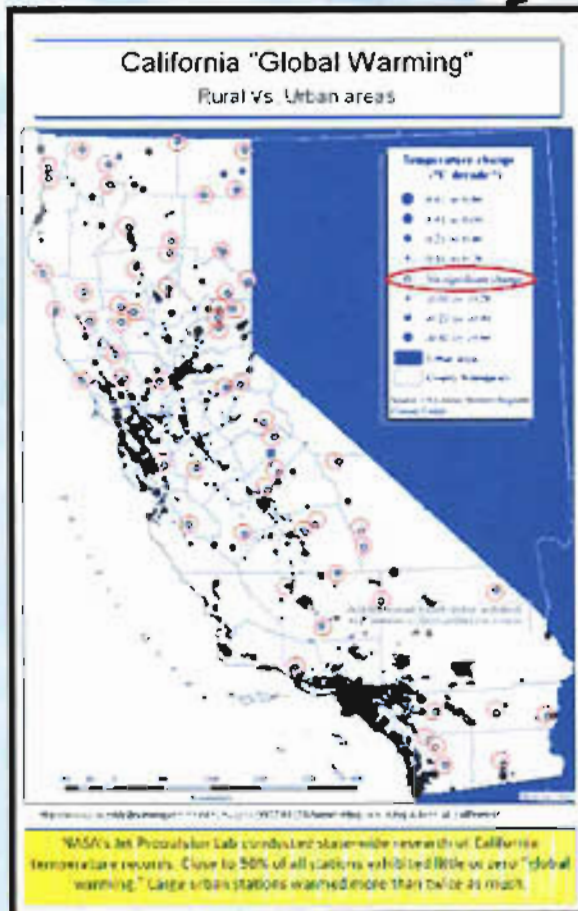
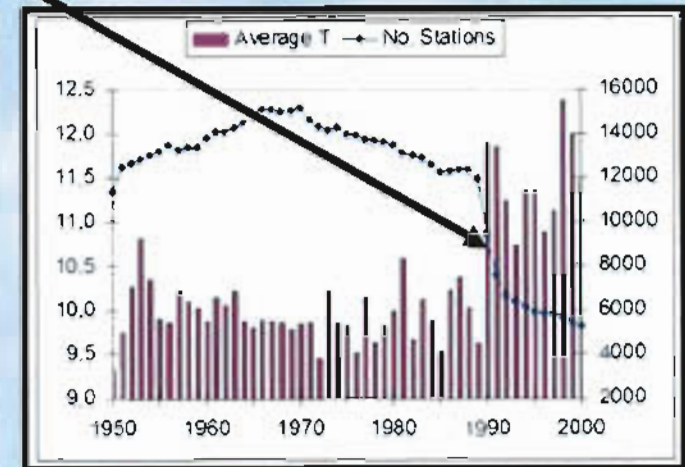


# Can Surface Thermometer Measurements be Trusted?

Soviets had paid outposts for fuel based on how cold they were. Then, 'warming' happened when the policy was ended.

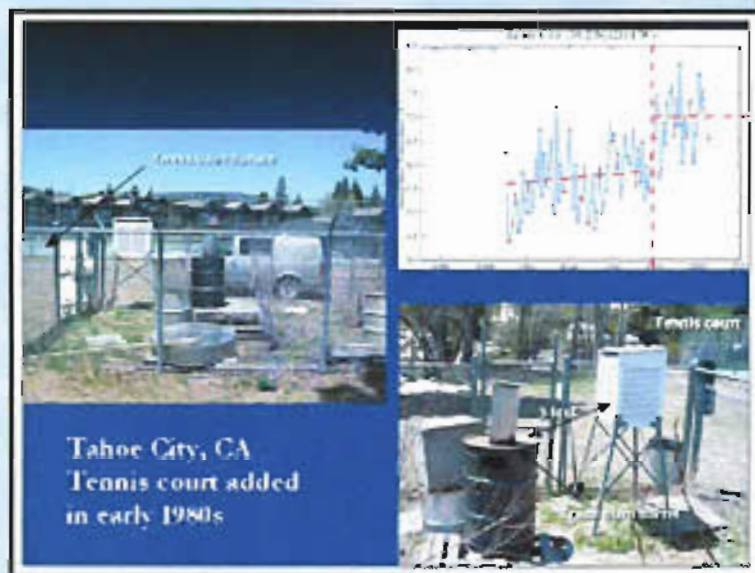
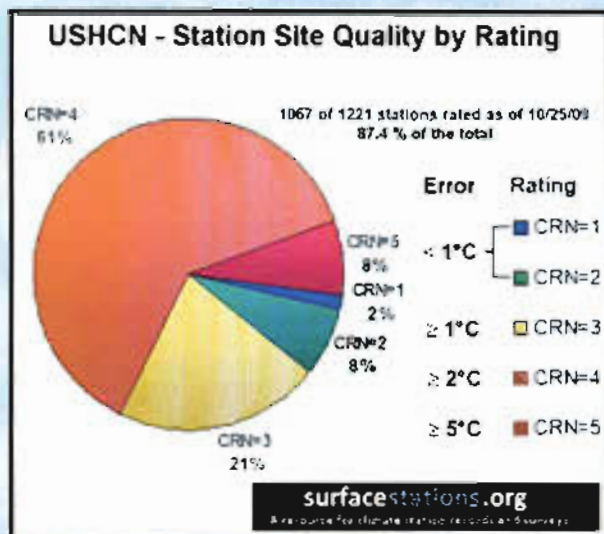
California shows no warming in counties that did not have a big increase in population during the last 100 years.

Population locally biases the sensors hotter.



# Surface Thermometer Measurement

90% of US sensors do not meet NOAA site quality standards.



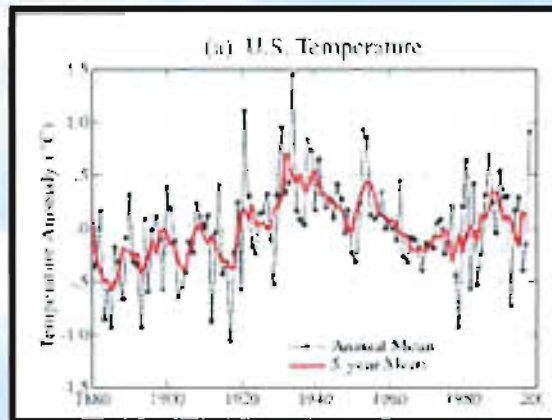
Changes over time, all bias the temperature higher.



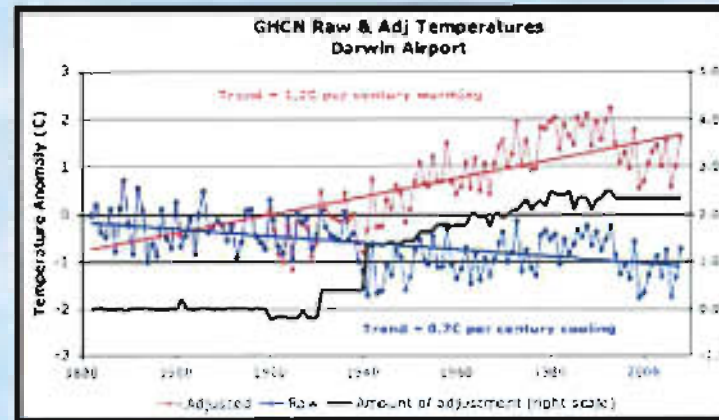
# Surface Thermometer Measurements

## Data manipulations

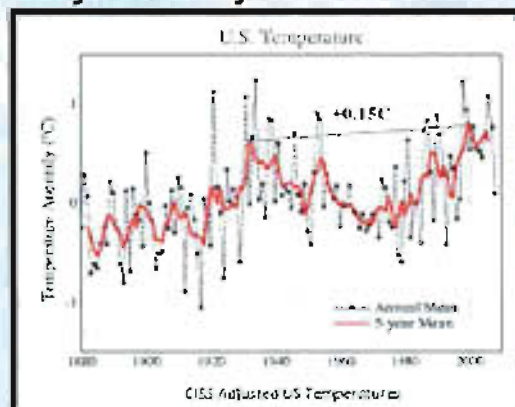
US surface temp,  
presented by NASA  
in 1999



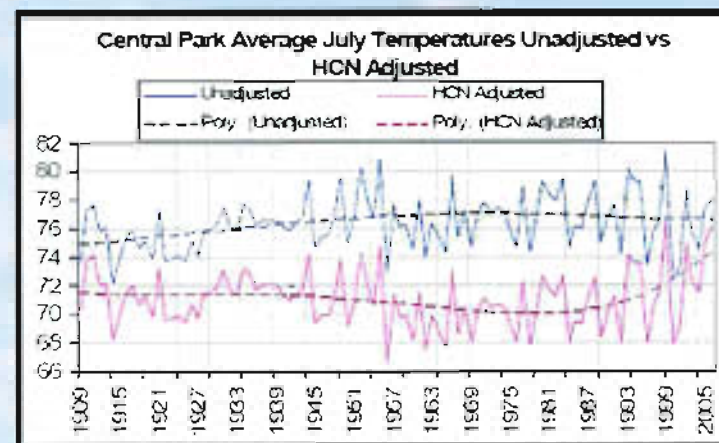
The Darwin Australia "Adjustments"  
Blue = raw data Red = Adjusted  
Black = the arbitrary adjustment.



The same data were later  
'adjusted' by NASA GISS

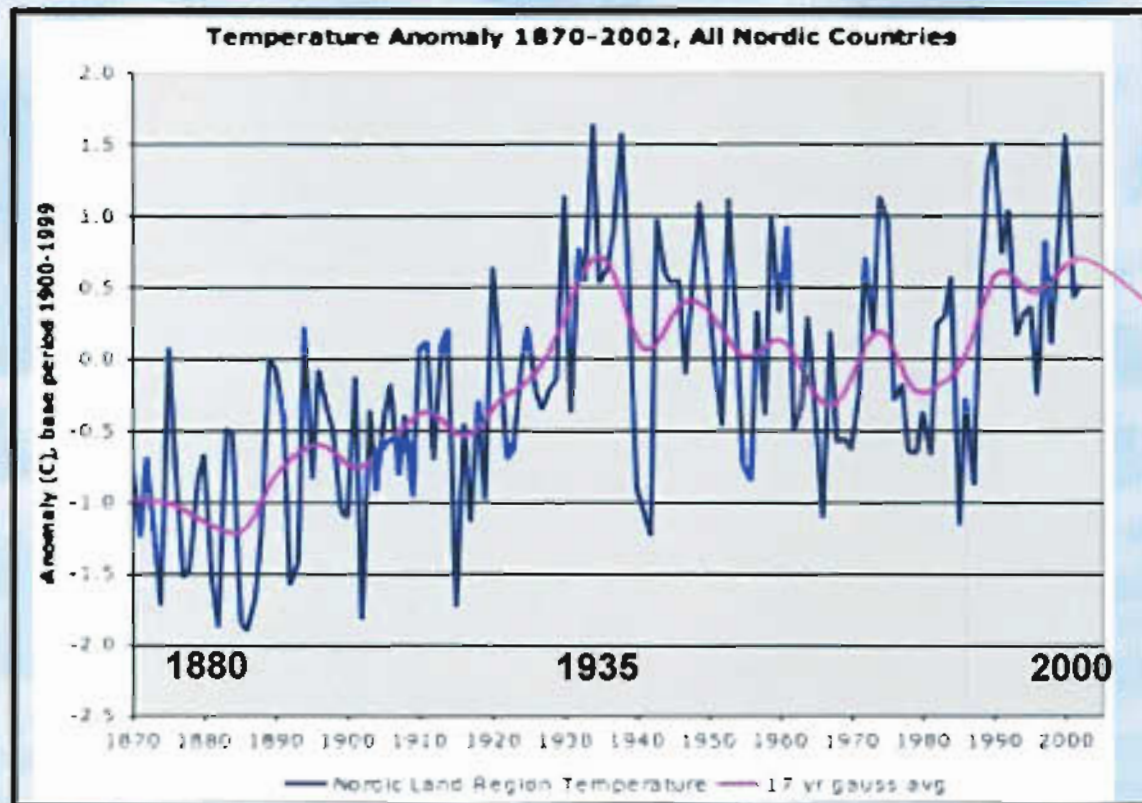


Urban-Heat Corrections of Central Park

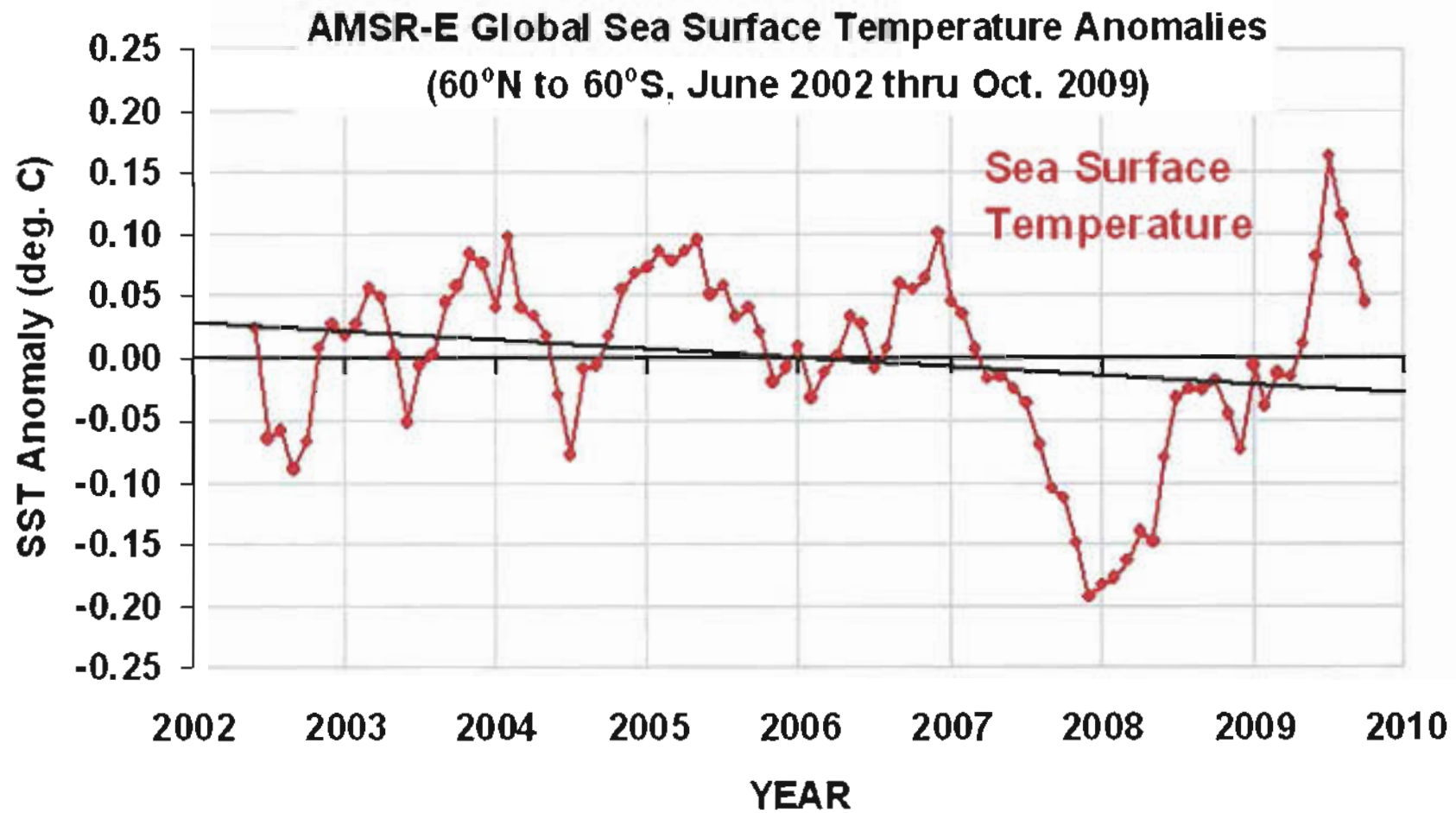


# Surface Measurements all Nordic countries

With no evidence  
of manipulation  
current temp is  
**lower** than in 1935



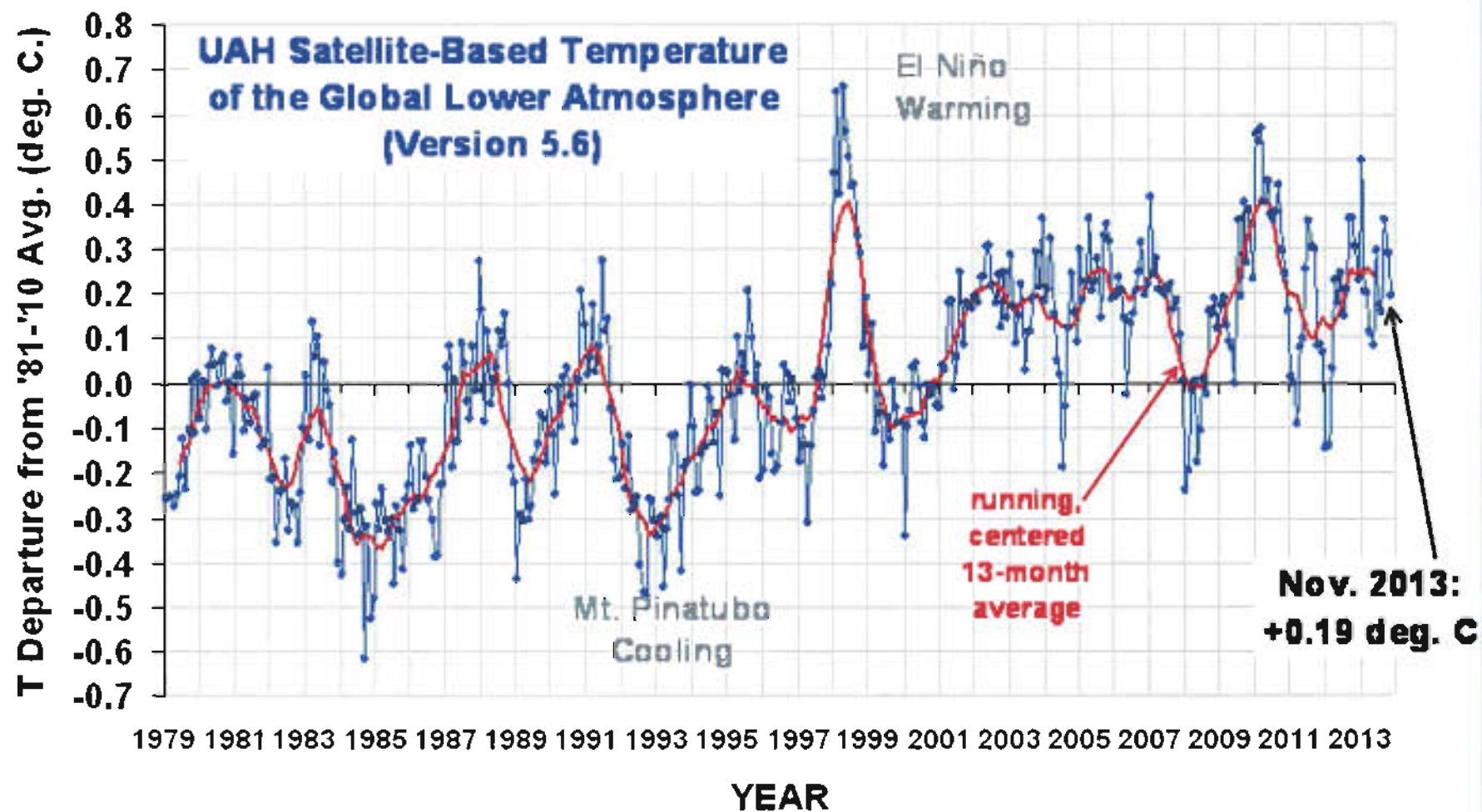
# Sea Surface Temperature





# NOAA & NASA Satellite Data

## 1979 to 2014



Did dangerous, sudden  
global warming occur  
over the last 50 years?

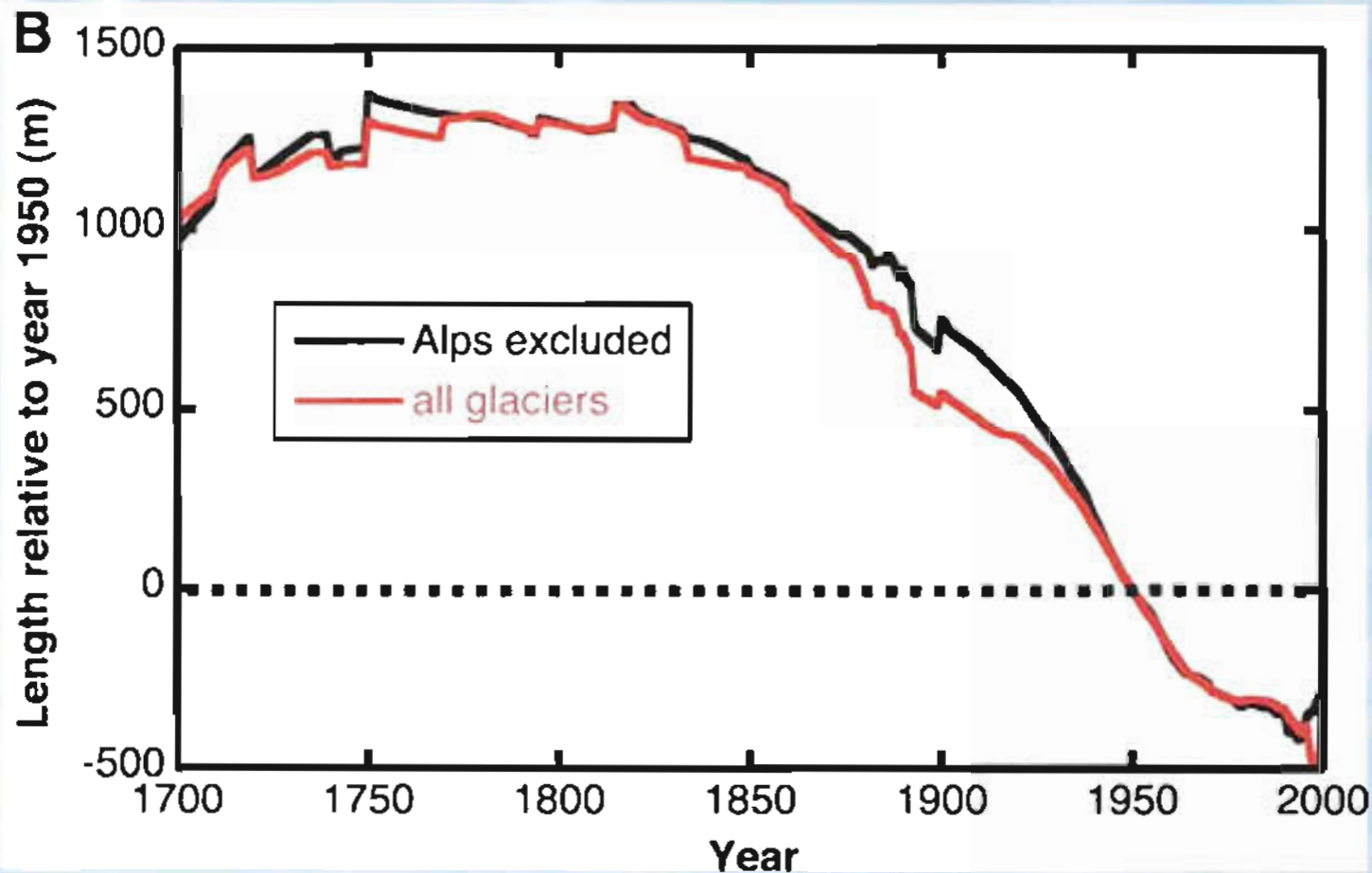
**NO !**





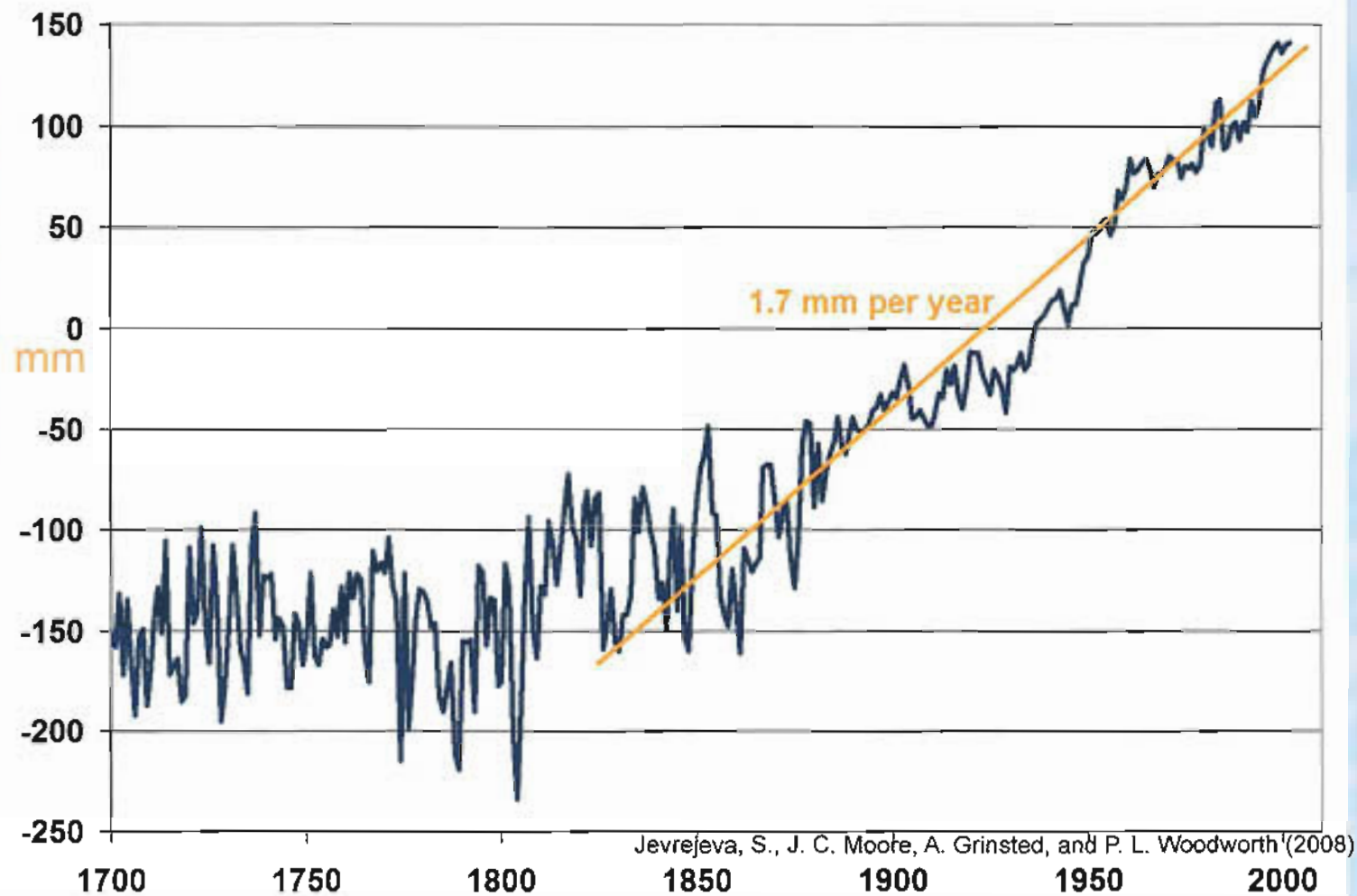
Are the current global  
temperatures too hot and  
further warming bad?

# Glaciers Have Been Retreating far Longer Than We Have Emitted CO<sub>2</sub>



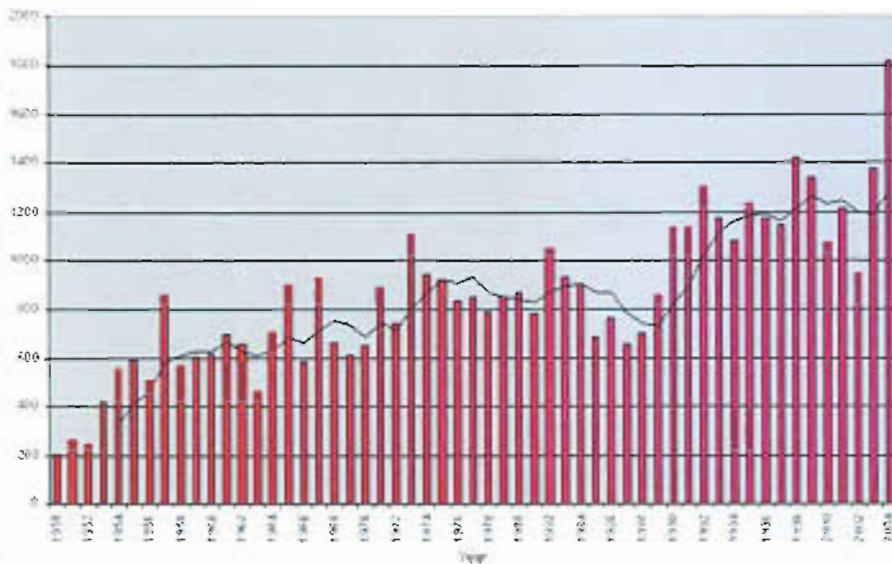
Source: Oerlemans, et al, 2005

# Sea Levels Have Risen at a Fairly Constant Rate Since the Little Ice Age



# Al Gore Said Global Warming Is Increasing Tornadoes

Total US Tornadoes By Year 1950 to 2004



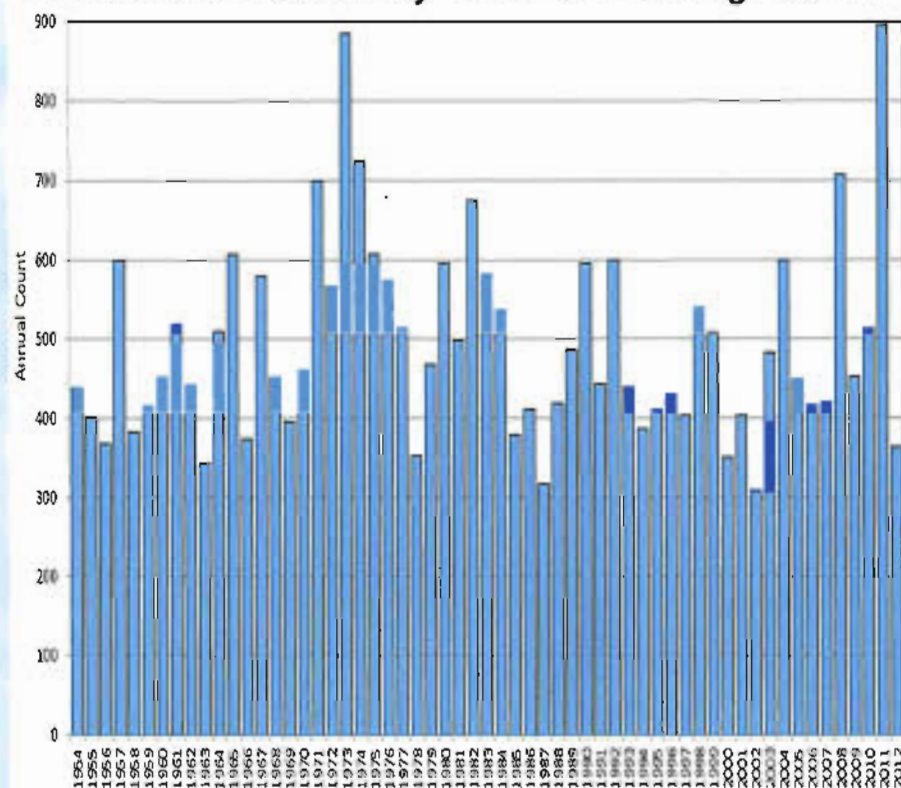
It looks, at first, like he might be right.

But in fact, the increase of measured tornadoes is mainly due to better measurement and reporting (e.g. Doppler radar, storm chasers, cell phone photos, You Tube Videos, etc.)



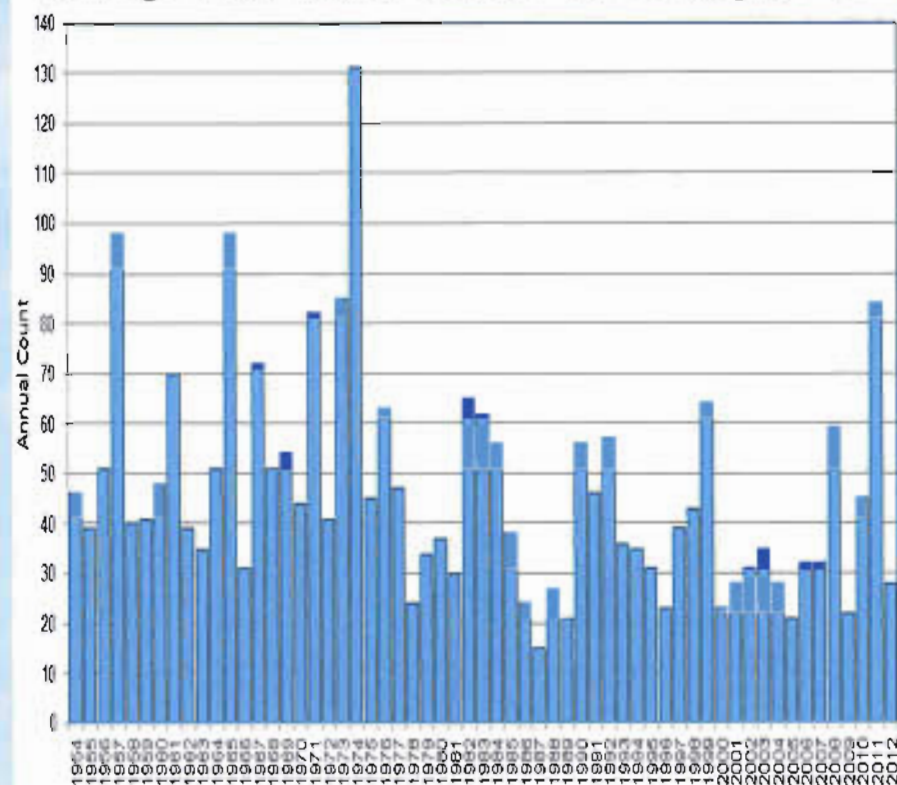
# Strong to Violent (EF-3 to 5) Tornadoes with Consistent Measurement are Flat to Down

Total US Tornadoes By Year 1954 through 2012



Data Source: NOAA/NWS Storm Prediction Center

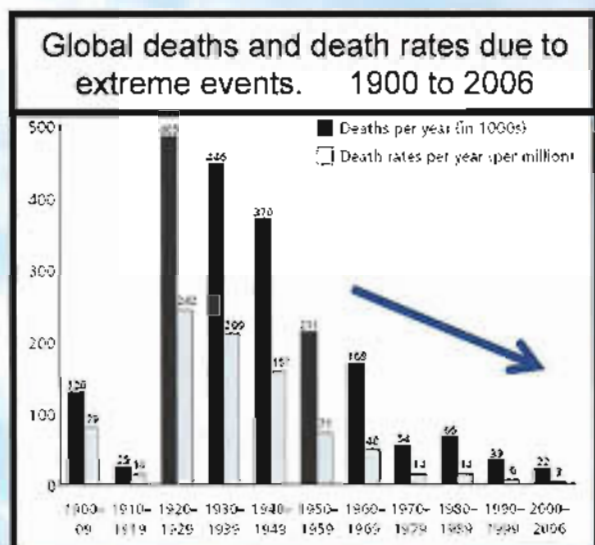
Strong/Violent US Tornadoes 1954 through 2012



Source: NOAA/NWS Storm Prediction Center

# Is Climate Change Causing Disasters?

Records show that twice as many die from extreme cold events than extreme hot events. Thus, human survival would **improve** if it were warmer.

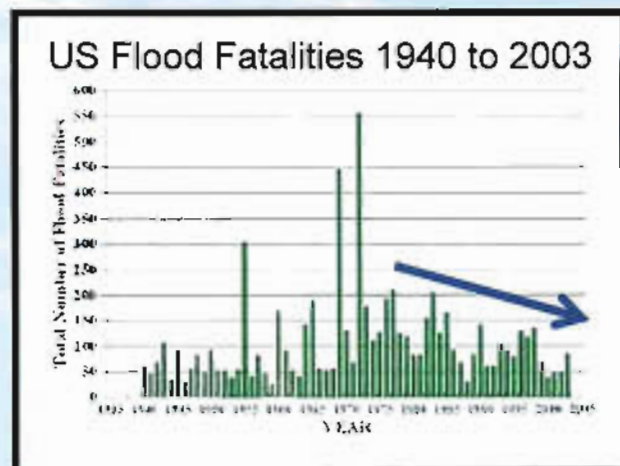
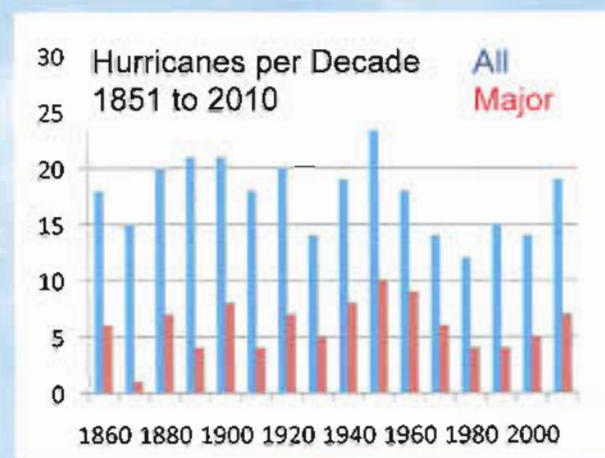


DOWN

Extreme events-caused deaths

DOWN

Hurricanes Per decade

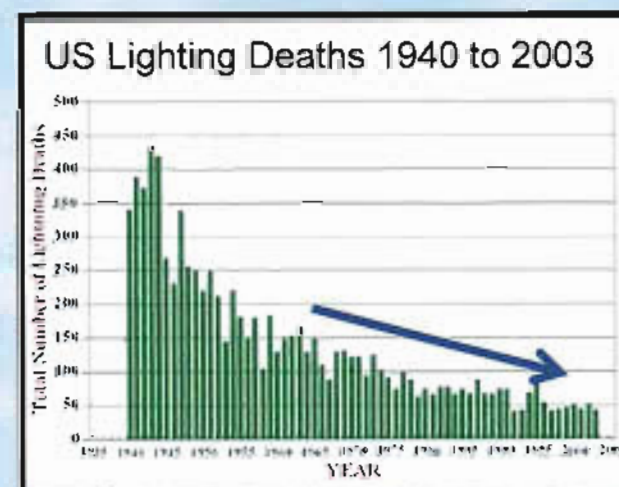


DOWN

Flood Fatalities

DOWN

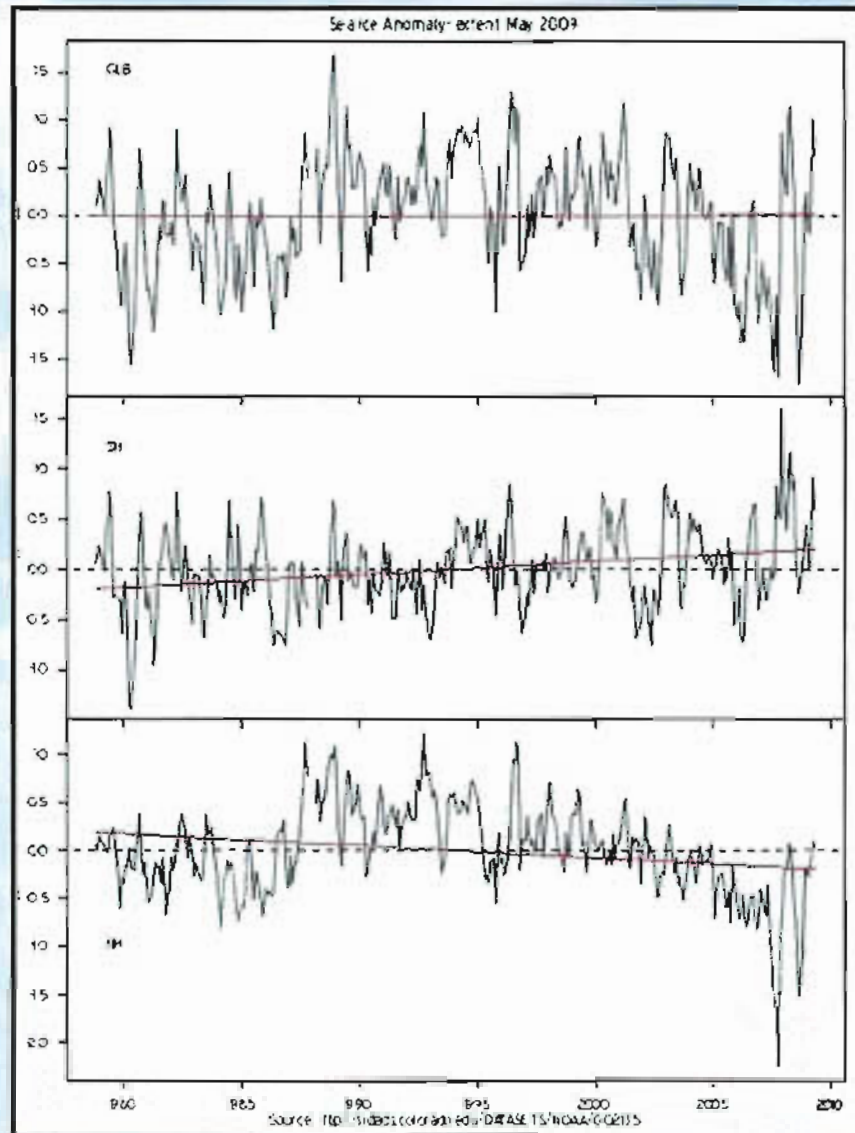
Lightning deaths





# Is Climate Change Causing Disasters?

## Arctic Sea Ice, 1978 to 2010



**FLAT**

Global Sea Ice Extent

**INCREASING**

Southern Hemisphere  
Sea ice extent

**DECREASING**

Northern Hemisphere  
Sea ice extent

Arctic sea ice

Has now (March 2010) recovered  
to the 1979-2000 average.



**Polar Bear Population**

1950 - 5,000

1980 - 10,000

Current - 22,000






# Are there Adverse Health Effects from Global Warming?

- There is less respiratory disease in the summer months.
- More time in the fresh air and sunshine gives better health.
- Malaria and other tropical diseases can occur at any latitude.
  - Largest malaria outbreak in the world was in Siberia in the 1920s with 13 million cases per year and 600,000 deaths.
  - Public health efforts in the developed countries have controlled the problem. WHO states that malaria deaths are down 40% over the last decade.



Are the current global  
temperatures too hot and  
further warming bad?

**NO!**

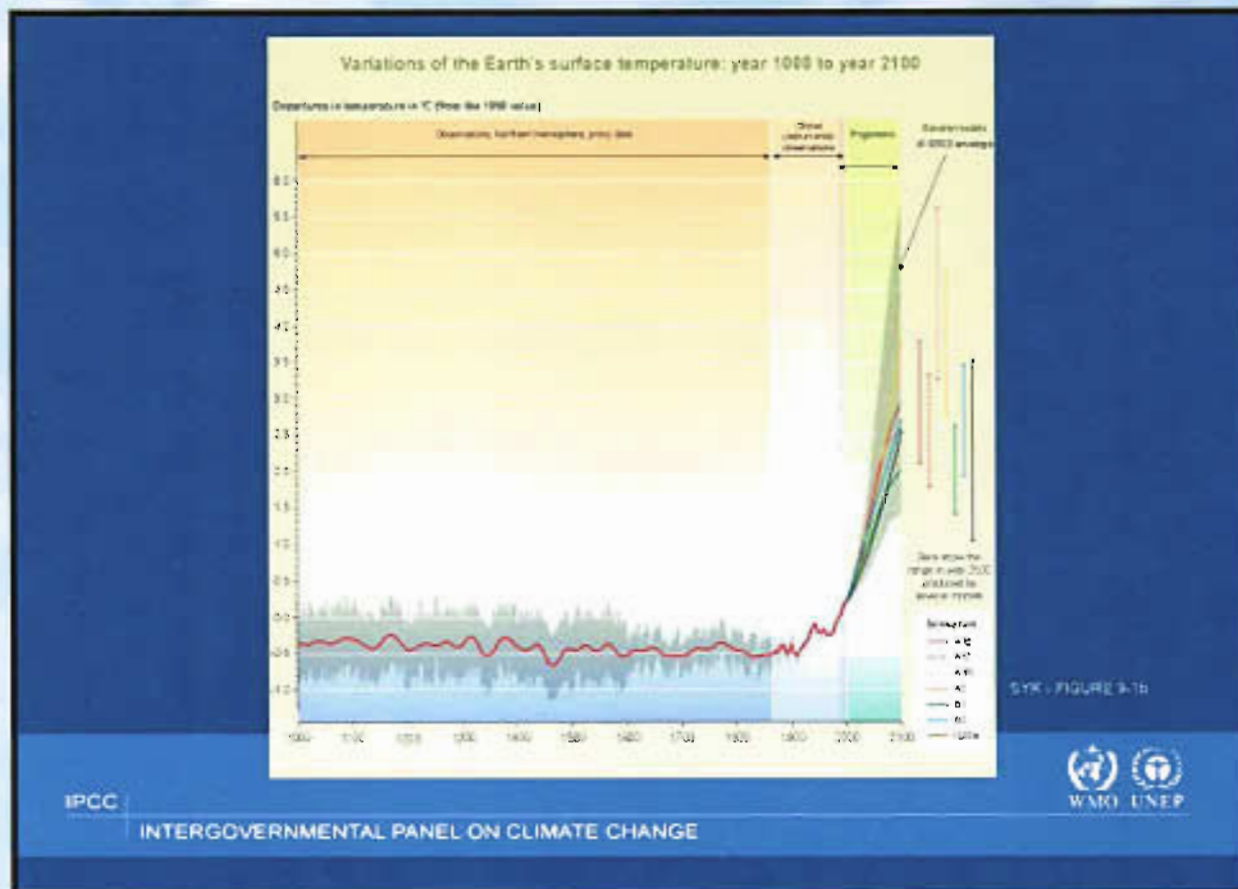


Is dangerous  
global warming likely to occur  
over the next 100 years?

# The Temperature Scare Chart

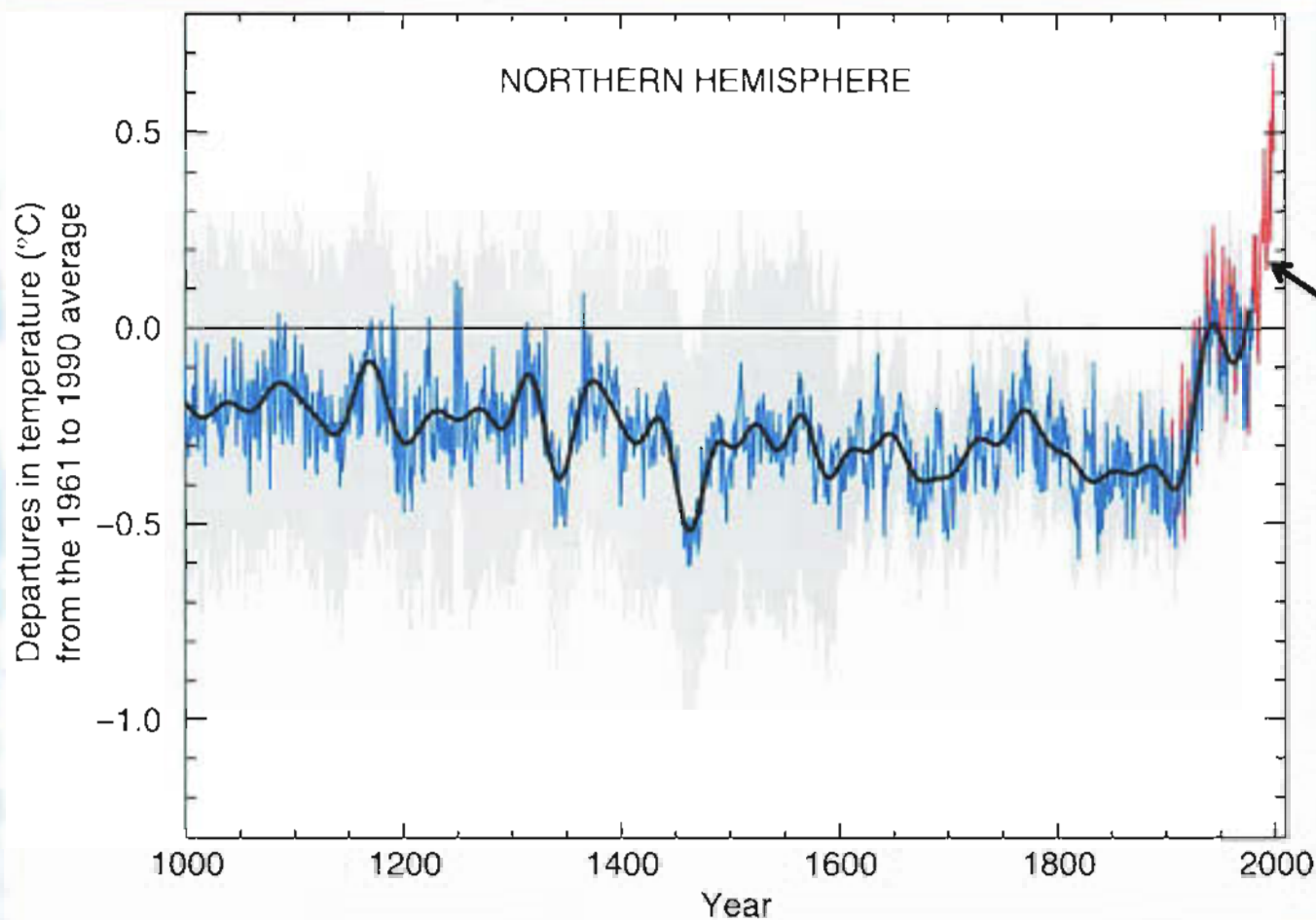
Full color, promoted by the United Nations IPCC.

This chart includes a large number of catastrophic predictions. None of the predictions are based on reliable, tested evidence and most of the data shown in this chart are now known to be wrong.



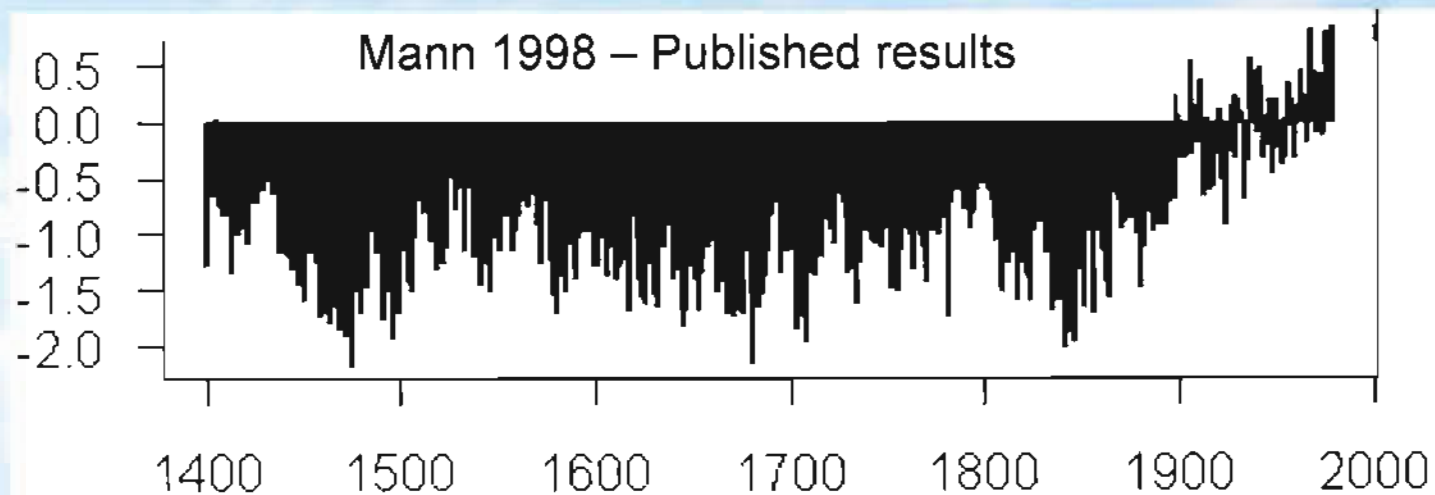
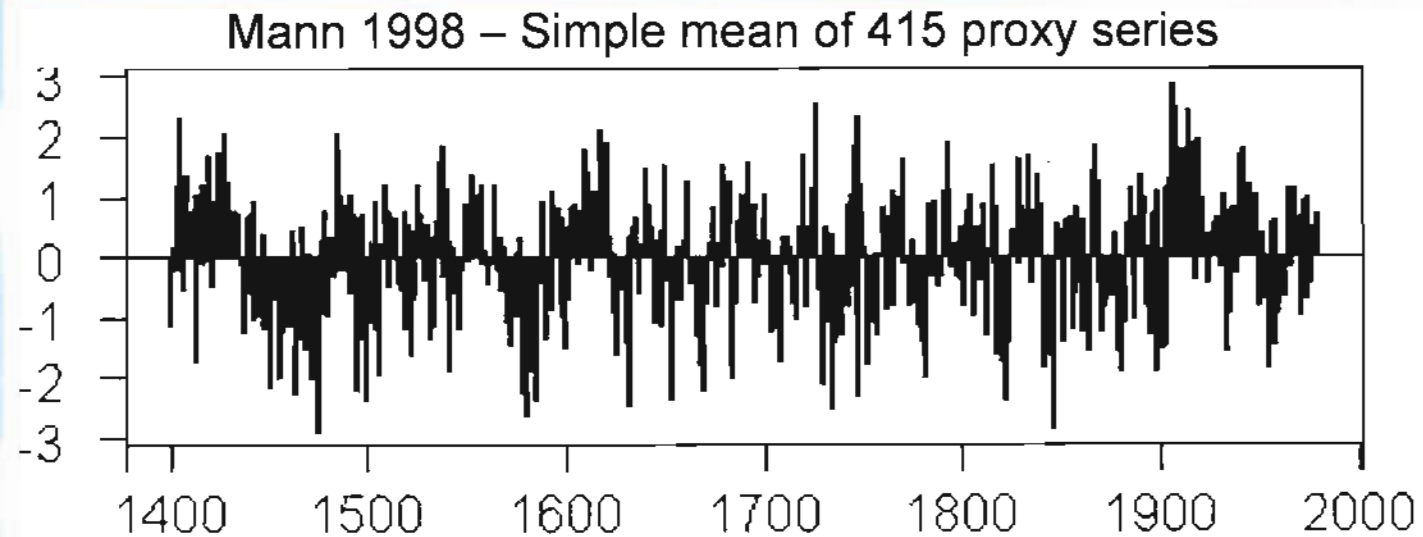


# Mann's Hockey Stick Purported to Show Recent Warming as Unprecedented



Proxy Data truncated and surface temperature data spliced on at end.

# Mann's "Questionable" Statistical Methods



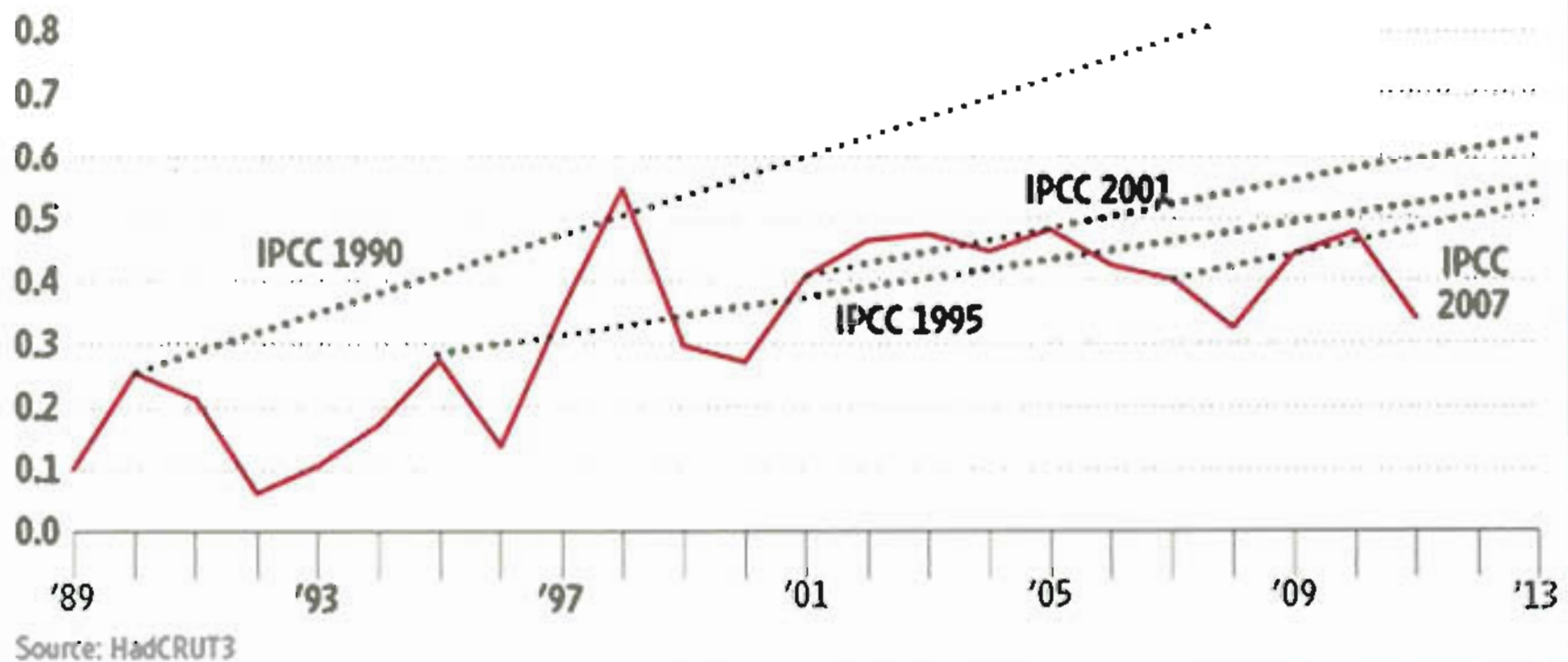
McIntyre & McKittrick, 2006



# UNIPCC Temperature Prediction All Wrong

## Reality Versus Alarm

Surface global temperature shift, in degrees Celsius, vs IPCC projections, 1989-2011

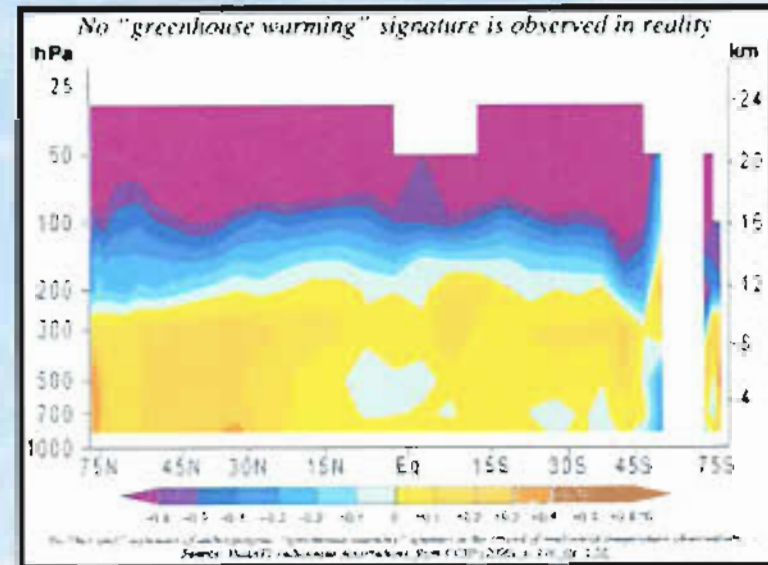
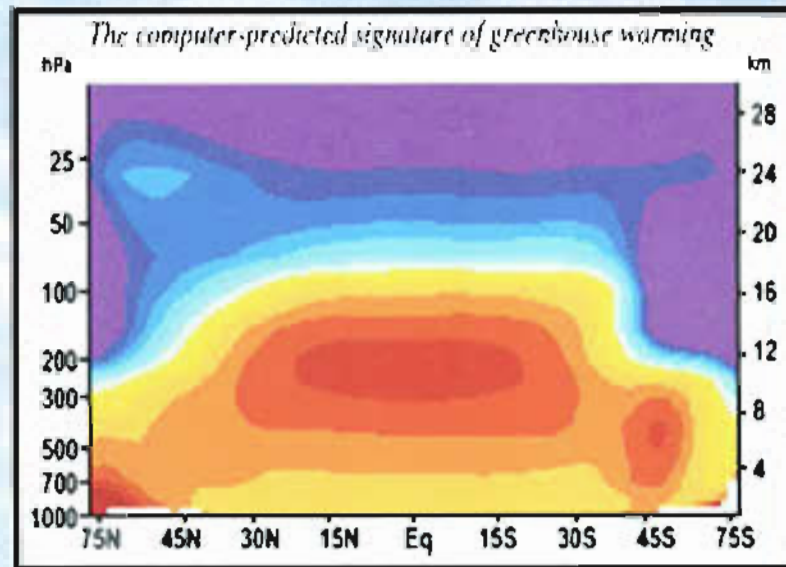


## A Problem With All Greenhouse Warming Models

The character and distribution of the warming in the atmosphere (as measured) is dramatically different than predicted by the climate computer models. This brings the model's assumptions into question. How can we rely on the warming predictions, if the models **incorrectly** predict atmosphere warming?


Model predicts hot spot at 8 to 13 km for mid latitudes

But, the atmosphere does **not** warm at 8 to 13 km altitude



# Recent Modeling Developments


- Reported July 2011. NASA satellite data show more heat is escaping into space than United Nations promoted computer models have predicted.
- Reported August 2011. CERN Particle accelerator is showing that cosmic rays contribute significantly to the formations of low level clouds.
  - Low solar activity allows more cosmic rays to reach the earth and low level clouds provide a cooling effect.
  - Therefore, low solar activity provides less solar heating while also allowing cosmic rays to increased cooling.



Is dangerous  
global warming likely to occur  
over the next 100 years?

**NO !**





**Are  
Humans Causing  
Catastrophic  
Climate Change?**

**NO !**

# Epilog

- Is there Consensus?
- Why are humans being blamed for Climate Change?
- References

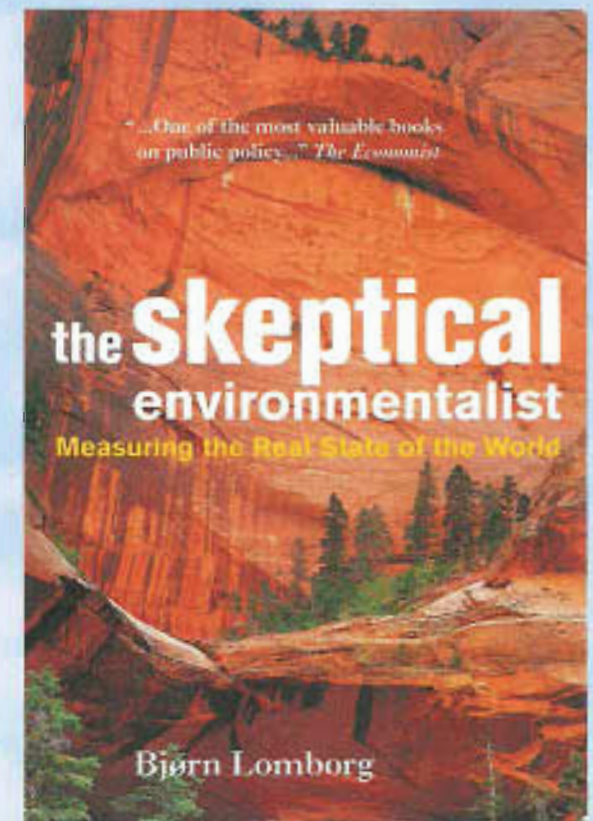
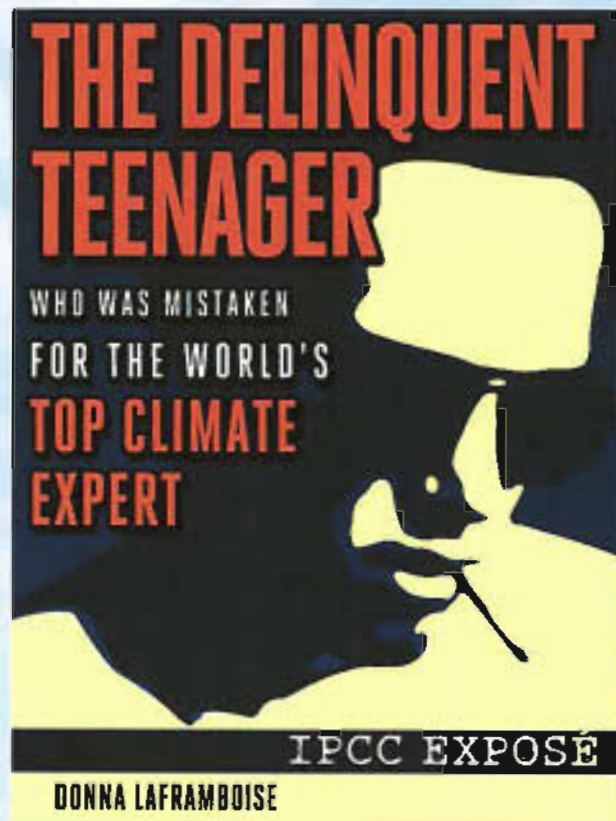


# Is There Consensus That Humans Are Causing a Climate Crises?

- Of the 2500 scientist that were involved with the 2007 UN IPCC Assessment Report, only 7 were impartial reviewers of the section where that claim was made, two of whom loudly disagreed with that conclusion!
- The “Manhattan Declaration”, Endorsed by Scientists from 40 countries, soundly rejects that conclusion.
- A Gallup pole of members of the Meteorological Society and American Geophysical Society found that 83% disagreed with the statement “Humans are Causing Global Warming”.
- A petition signed by 31,000 scientists (9,100 with PhDs) states that there is no convincing evidence that humans are causing a problem.
- Recently 49 NASA Astronauts and Scientists petitioned NASA Headquarters to stop blaming humans for climate change.

**No !**

# Why are we being accused of causing “Catastrophic Global Climate Change”?





# World Wide Web References (1)

- Burt Rutan's Engineer's critique:  
[http://rps3.com/Pages/Burt\\_Rutan\\_on\\_Climate\\_Change.htm](http://rps3.com/Pages/Burt_Rutan_on_Climate_Change.htm)
- The BBC Channel 4 Site for "The Great Global Warming Swindle":  
<http://www.greatglobalwarmingswindle.co.uk/> Has directions to numerous sites with excellent supporting information.
- View the "The Great Global Warming Swindle" Video  
[www.moviesfoundonline.com/great\\_global\\_warming\\_swindle.htm](http://www.moviesfoundonline.com/great_global_warming_swindle.htm)
- Geo Craft site with analyses and supporting data:  
<http://www.geocraft.com/WVFossils/TableOfCont.html>
- CO<sub>2</sub> related Data <http://www.co2science.org/>

# World Wide Web References (2)

- Environment & Climate News from The Heartland Institute  
Contact [dbast@heartland.org](mailto:dbast@heartland.org)
- Climate Wiki [http://climatewiki.org/wiki/Main\\_Page](http://climatewiki.org/wiki/Main_Page)
- Climate Related News: <http://www.worldclimatereport.com/>
- Watts Up With That: <http://wattsupwiththat.com/>
- US Historic Climate Network (USHCN) Evaluated:  
<http://www.surfacestations.org/>
- The UN IPCC Exposed: <http://nofrakingconsensus.com/>
- What Happens with UN Agenda 21:  
<http://www.postsustainabilityinstitute.org/>  
<http://www.democratsagainstunagenda21.com/>

# Books of Interest

- “Blue Planet in Green Shackles” by Vaclav Klaus
- “The Hockey Stick Illusion” by A. W. Montford
- “The Delinquent Teenager Who Was Mistaken for the World’s Top Climate Expert: An Expose of the IPCC” by Donna Laframboise
- “Behind the Green Mask – UN Agenda 21” by Rosa Koire
- “The Skeptical Environmentalist” by Bjorn Lomborg  
Covers everything from Acid Rain to Zinc.
- Fiction: “State of Fear” by Michael Crichton  
with reference to climate facts



# **Polar Bears** ❤️



# **Global Warming**