

Climate Change Resolution – Gill Sorg

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1. A brief review of the greenhouse effect, including:
 - A. Its rapid amplification by human use of fossil fuels
 - B. The effective permanence of climate change in the absence of rapid action to reduce the use of fossil fuels
 - C. A short list of adverse effects of climate change in New Mexico
 - D. The very long lead time to change energy sources away from fossil fuels unless practical

Presenters:

Vincent P. Gutschick and John Nelson, on behalf of the Citizens Climate Lobby, Las Cruces Chapter

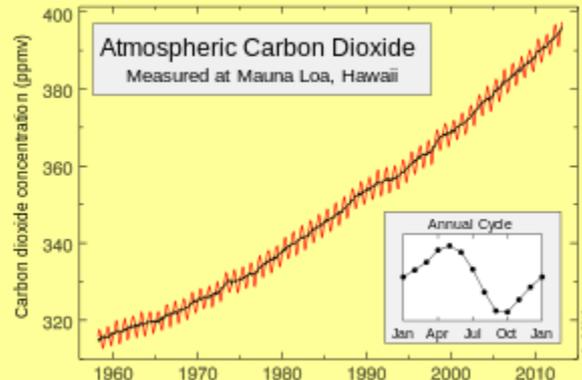
The fundamental concerns about climate change

CO₂ (and methane, other gases) and the greenhouse effect

Known since the time of **Arrhenius, 1896**

Understood in increasing physical detail since

The trend in CO₂ – **Ralph Keeling's Mauna Loa record** (and much more detail now, by geographical location)



...and the origins – our use of fossil fuels; **about 60% of CO₂ stays up,**
for periods of 100 -1,000 years

We're seeing
effect to

-5°C is a Ice Age;

+4°C is a sauna & meltdown

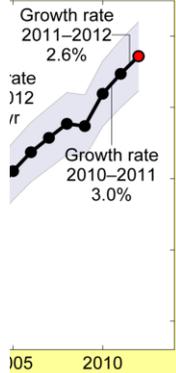
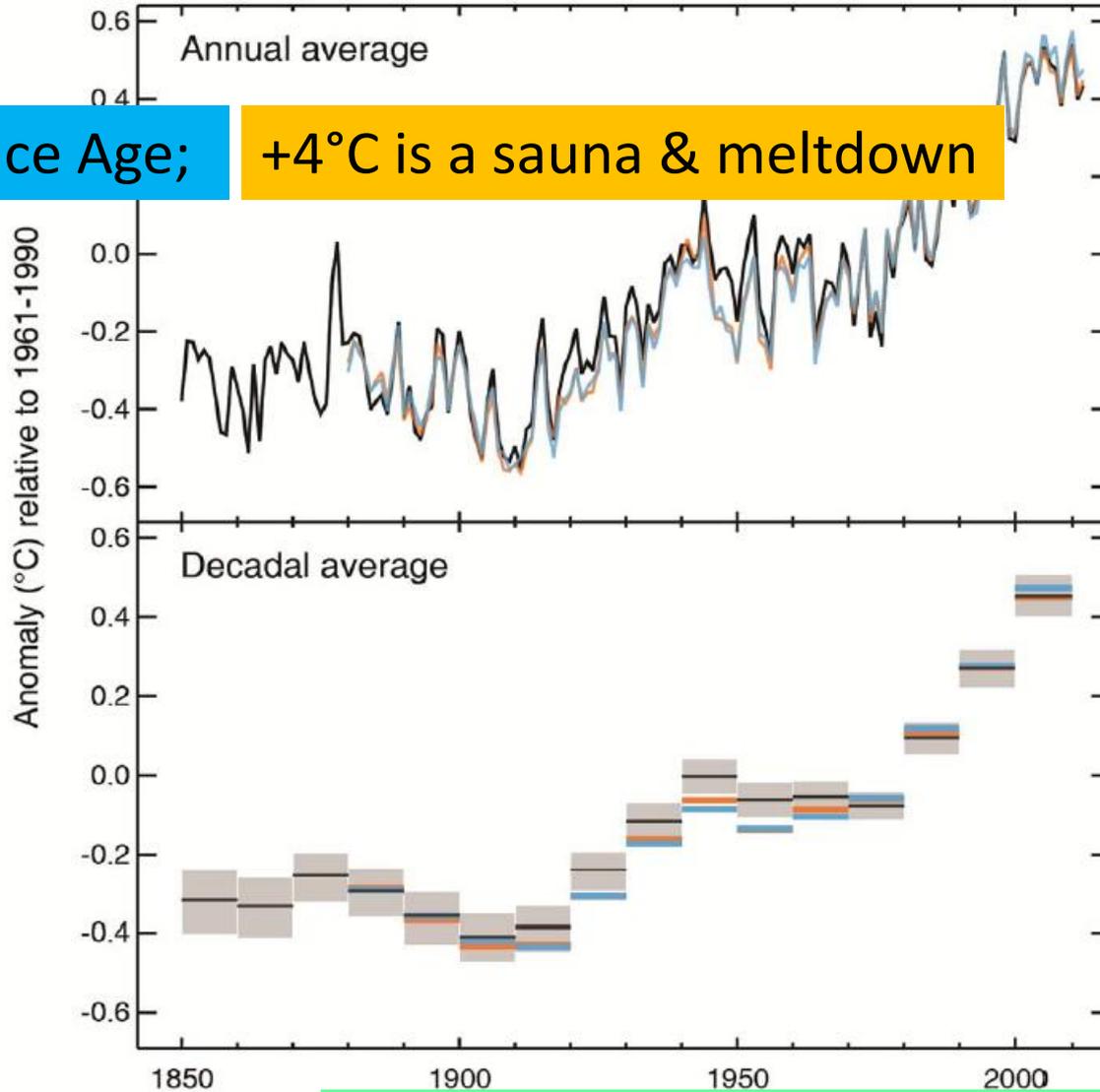
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If we come
removing
fast as w
we can r
If not: 70-8
AH MacD

We know th
Aridity an
Early snow
Spread of
Extreme weather event

(a)

Observed globally averaged combined land and ocean surface temperature anomaly 1850–2012



include

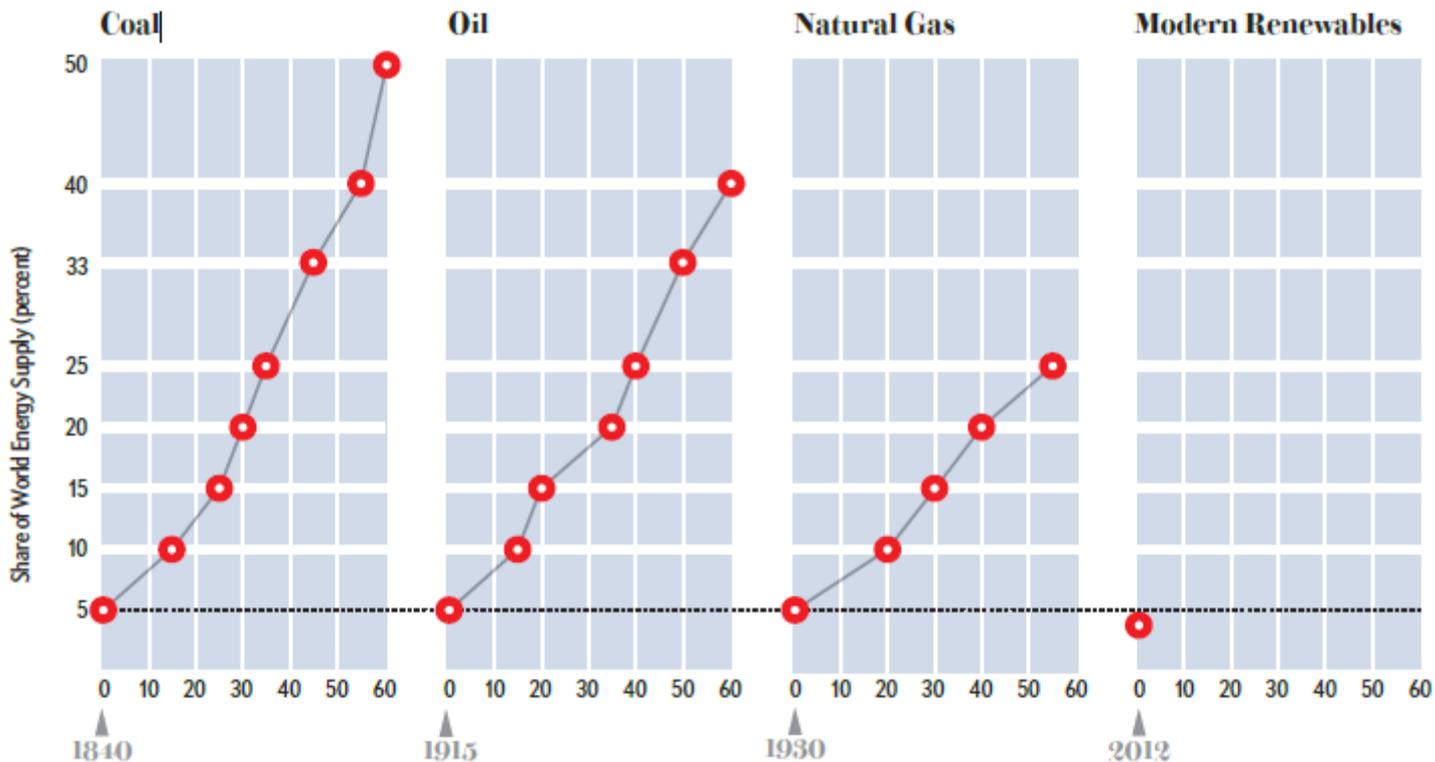
Copies of the current IPCC Summary for Policy Makers can be obtained by Googling "ipcc ar5 wpm"

Can we stop in time? Business as usual will take far too long

Many Years Needed to Take Over the Energy World

Each major energy source that has dominated world supply has taken 50 to 60 years to rise to the top spot. Coal reached 5 percent of global supply in 1840 (*bottom left*) and gradually took over from wood, reaching 50 percent some 60 years later, around 1900. Subsequent transitions to oil and natural gas have followed a similar pattern in reaching benchmark levels of supply (*vertical axis*), rising steadily after they achieve

5 percent. Oil has not yet reached 50 percent and may never. Natural gas is still partway along the path and is taking longer to ascend. The so-called modern renewable energy sources—wind, solar, geothermal and liquid biofuels—have hit only about 3.4 percent; unless a disruptive technology or revolutionary policy speeds up change, they, too, may be destined for a long transition.



The action plan of the Citizens Climate Lobby

...is to lobby for national legislation that

- taxes C-based fossil fuels at the source and
- redistributes the moneys to all US households
 - 2/3 of whom should come out ahead or even

It appeals even to conservatives, including leading economists

- It is revenue-neutral,
- does not add regulations,
- does not pick winners and losers, and
- resists being “gamed”...
- while encouraging technologies and markets for the switch to low-C energy sources

Who we are

About 30 Las Crucens of diverse backgrounds

Locally, 74th chapter in June, 2013 (there are now 148)

CCL is organized regionally up to nationally and internationally

We work to inform our Congressional delegation and lobby for bills to introduce tax-and-dividend

We also communicate with the public in forums and in the media

Our current effort here is to support the adoption of the resolution to be introduced in the next City Council meeting

It is patterned on resolutions passed by Taos, Santa Fe, and other cities

Common ground with the Sustainability Action Plan

“Whereas, the City of Las Cruces has embraced the underlying principles of sustainability, including environmental health, economic well-being, social equity, long-term thinking, wise use of natural resources, resilience, and stability; and...”

The proposed resolution aims to advance key elements of this:

- environmental health (climate change, or CC, is one of the biggest such challenges),
- social equity (don't burden the poor with climate costs largely incurred by actions of the more affluent),
- long-term thinking (CC will be with use for about 1,000 years if we act fast – new report in Geophysical Research Letters), and
- wise use of natural resources (fossil fuels are tradable against renewables; no need to use them all for energy alone).

Introduction, Guiding Principles of Sustainability

“Triple Bottom Line.” The three objectives are economic well being, environmental health, and social equity. Other section headings that match key elements of the proposed resolution

Long-Term Thinking

Wise Use of Natural Resources

Set medium-term goals related to sustainability

The resolution aims for a phased-in multi-year plan to reduce fossil-fuel use and attendant GHG emissions that cause CC

The primary focus of the plan is on internal goals and actions the City will take to “lead by example.”

Las Cruces endorsement ,

– US Conference of Mayors Climate Protection Agreement

Under the agreement, participating cities commit to certain actions.

One action was that cities urge their state government and the federal government to enact policies to meet or beat the greenhouse gas emission reduction target set by the Kyoto protocol.

<http://www.usmayors.org/climateprotection/list.asp>

***Thanks very much
for your attention***

Vince Gutschick
John Nelson