

CARBON POLICY AROUND THE GLOBE: DEGREES OF DISASTER

**Presented at The Energy Council 2013 Global
Energy and Environmental Issues Conference
Lake Louise, Alberta, Canada**

**Roger H. Bezdek, Ph.D.
Management Information Services, Inc.
www.misi-net.com**

December 2013



PRESENTATION

I. CLIMATE CHANGE? WHICH DIRECTION?

II. EUROPEAN UNION

III. ONTARIO, CANADA

Carbon is not a pollutant –
it is the basis of life on earth.

IV. AUSTRALIA

VI. CALIFORNIA, USA

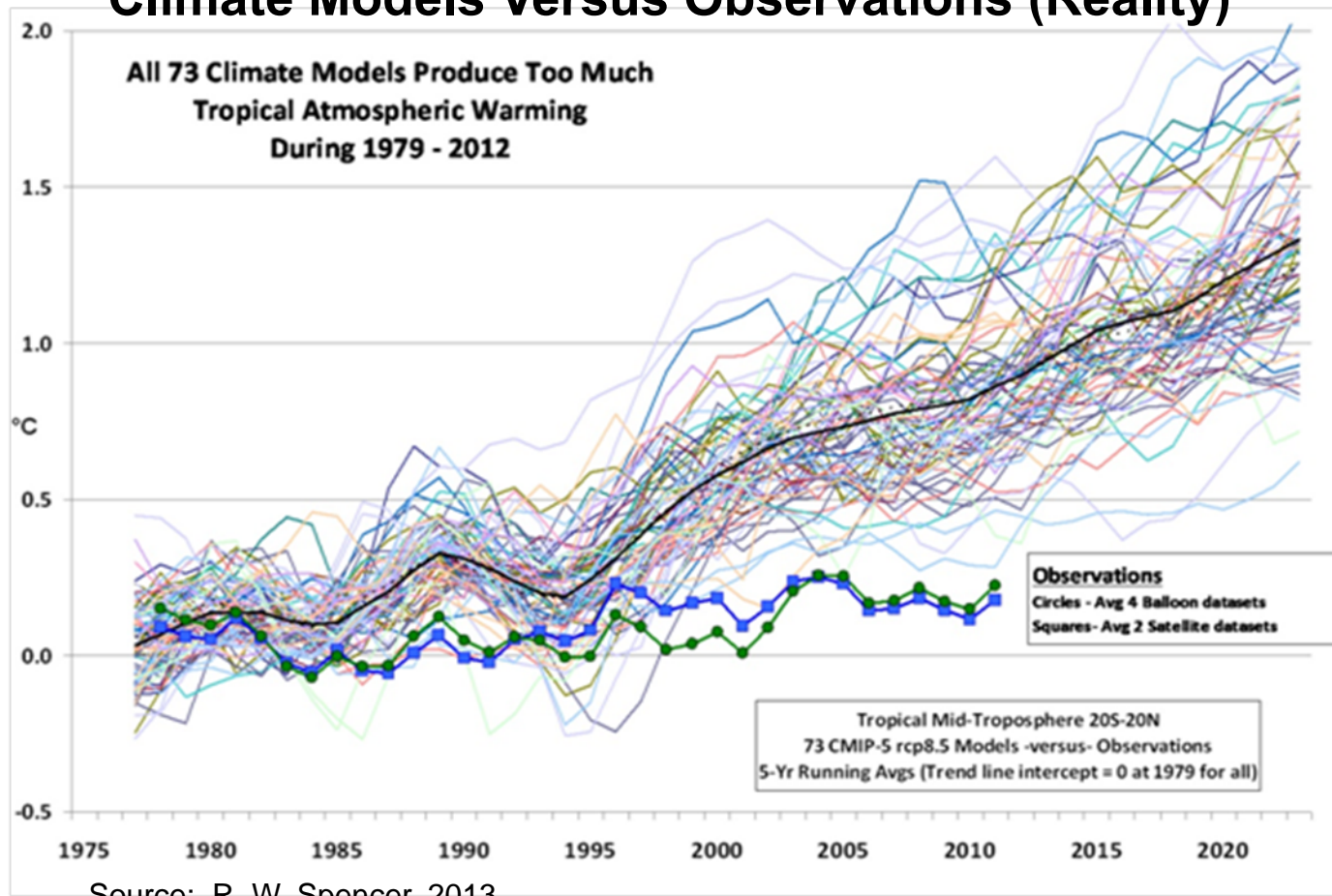
Carbon restriction policies working perfectly in every country:
Destroying economies & jobs
& impoverishing citizens.

VII. CONCLUSIONS

CLIMATE CHANGE? WHICH DIRECTION?

Climate models invalid

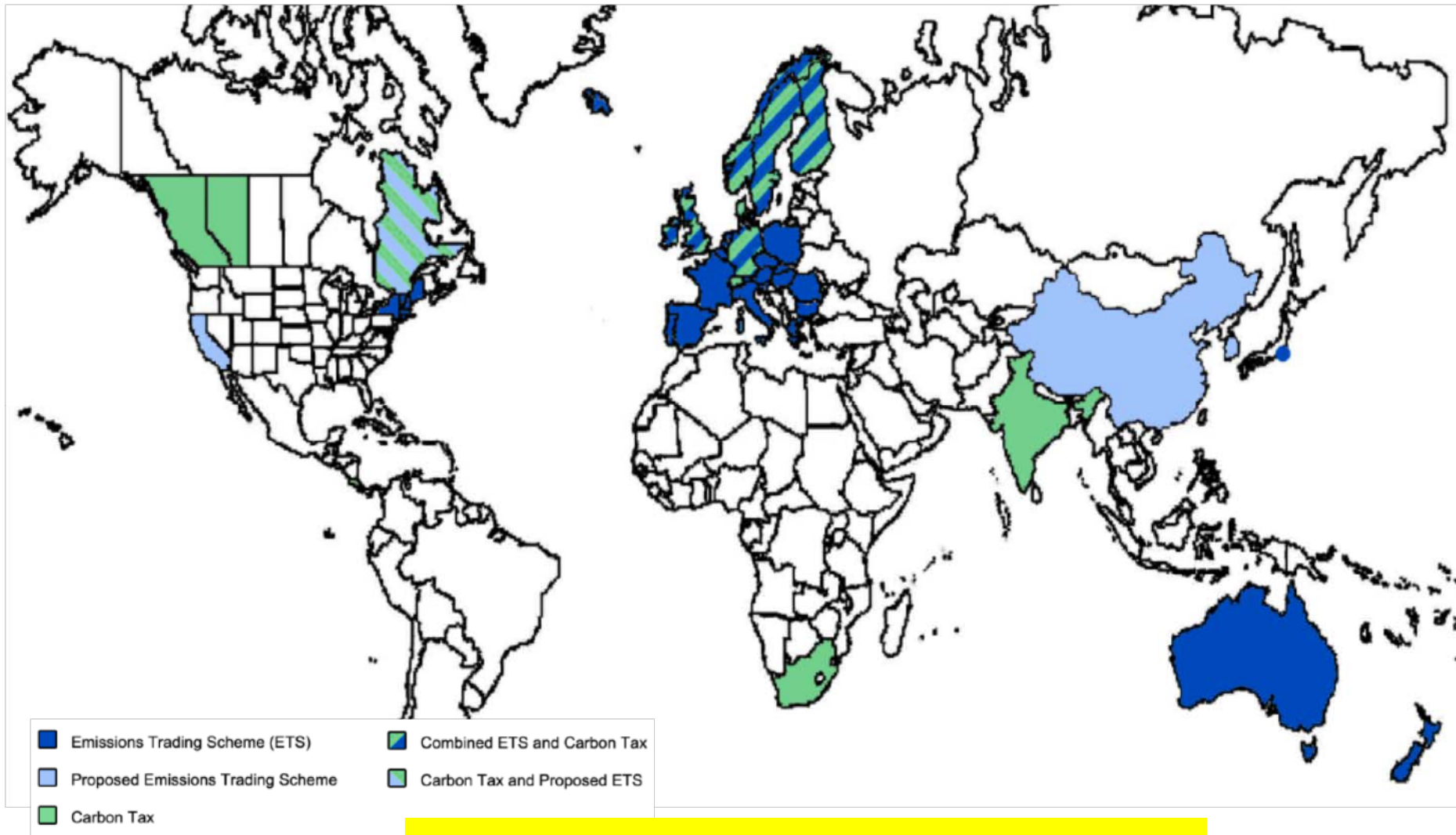
Climate Models Versus Observations (Reality)



Source: R. W. Spencer, 2013.

“The level of disagreement between the models and observations is quite striking.” Dr. Craig Idso

CARBON RESTRICTION SCHEMES



> 2 dozen nations have carbon restrictions

THE EU ETS FLAWED BY EVERY MEASURE

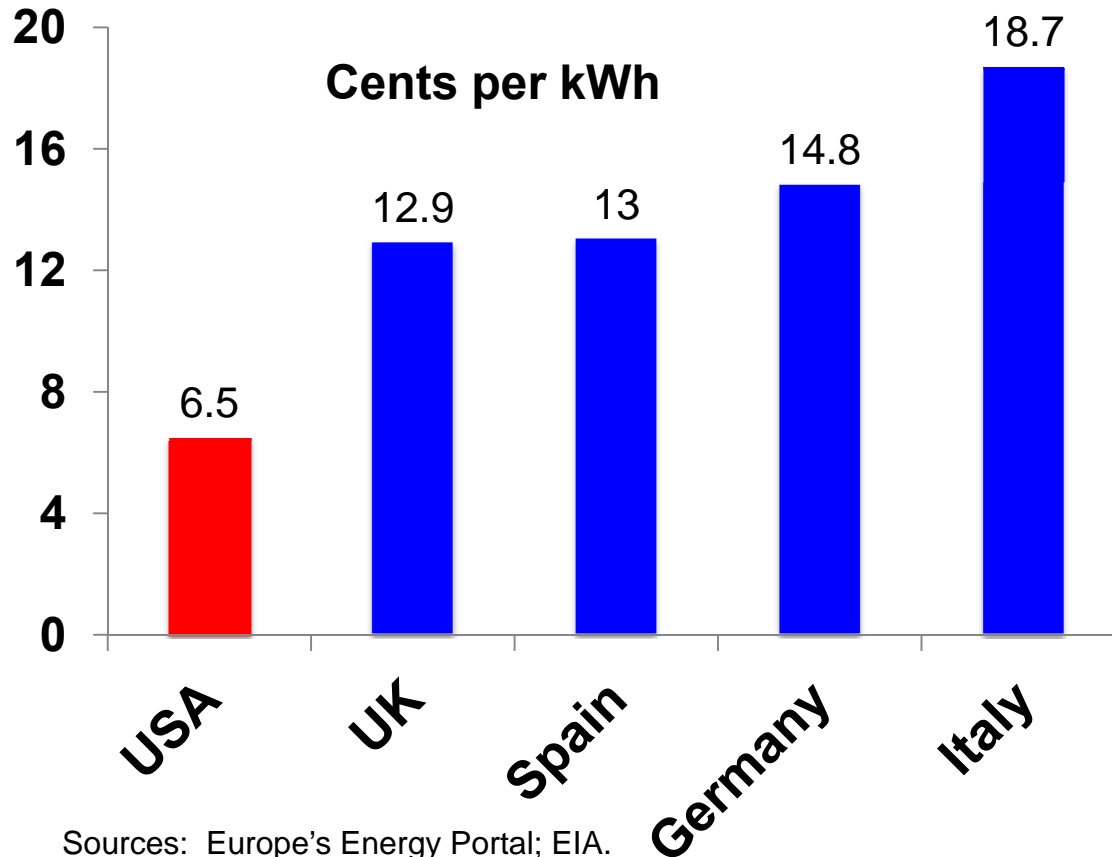
Emissions Trading System Debacle

- It has not reduced emissions.
- Dramatically raised energy prices
- Increased national debt
- Driven businesses out of Europe
- Led to massive job losses
- Greatly increased energy poverty
- Plagued by fraud & corruption.
- It is a socioeconomic albatross



“There is little evidence pointing towards a causal link between emissions reductions and the EU ETS.” European Environmental Agency

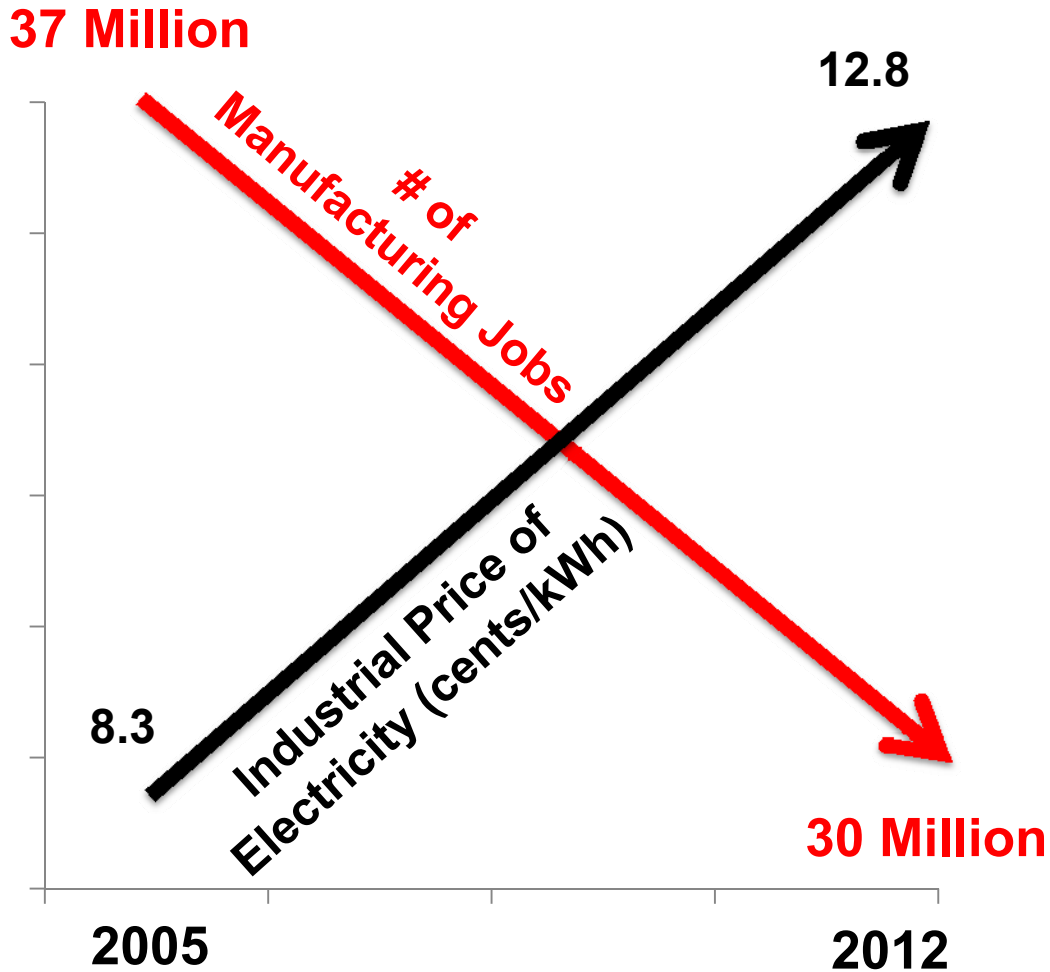
ETS = HIGHER ELECTRICITY PRICES FOR EUROPEAN INDUSTRY



“Energy intensive industries are not going to stay here with the ETS and other climate policies driving up the cost of energy.” Matthew Sinclair, Director, Taxpayers' Alliance



HIGHER EU ELECTRICITY PRICES = LESS MANUFACTURING JOBS

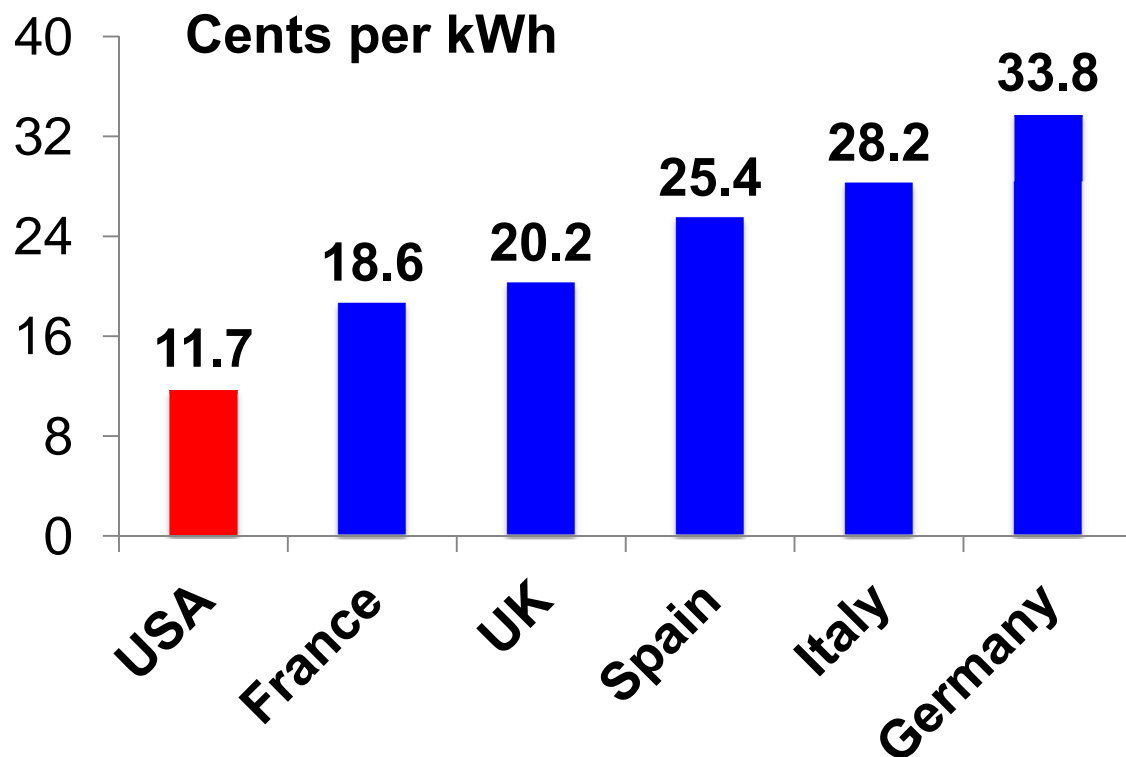


Sources: European Commission, Eurostat.

“The EU’s climate policy is endangering our industry. Our factories are closing and investments have come to a standstill.” Robert Jan Jeekel, Director of Energy, European Metals Association



ELECTRICITY PRICES FOR FAMILIES UNDER EU-ETS



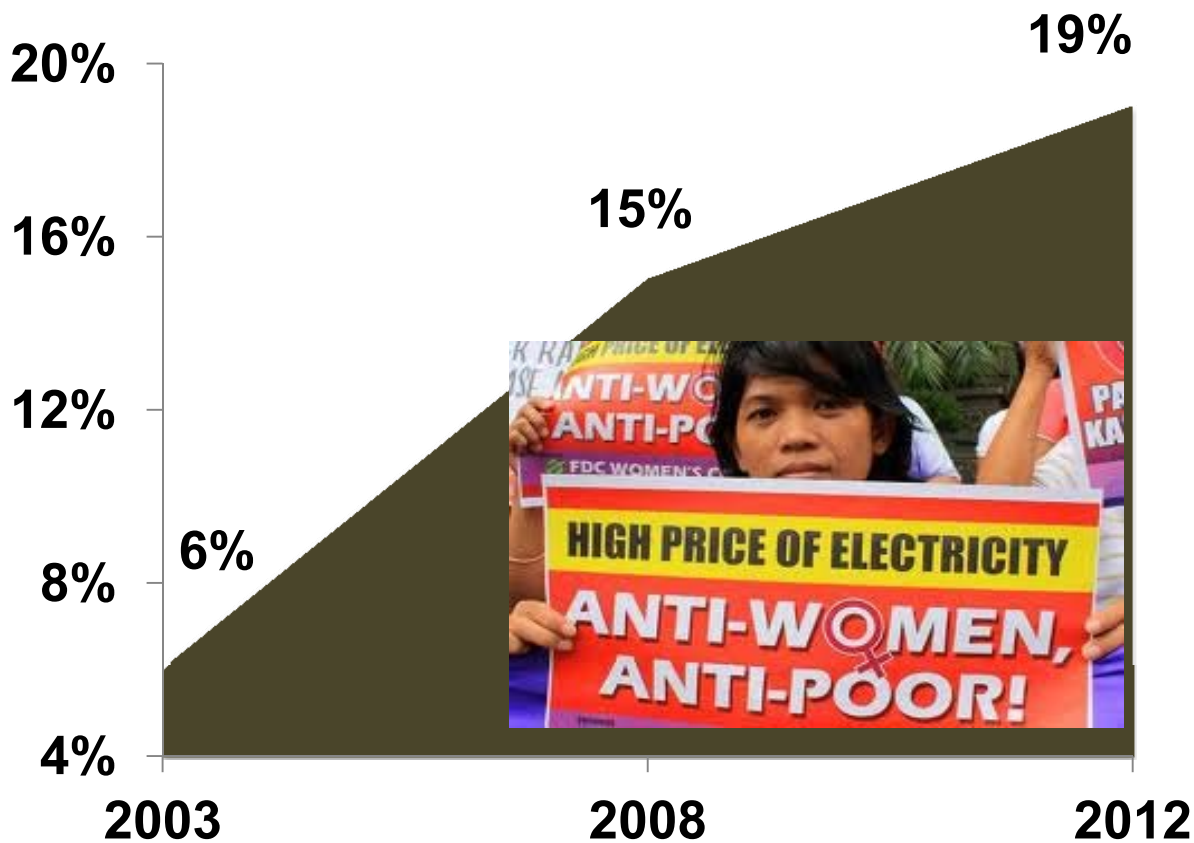
Sources: Europe's Energy Portal; EIA.

“German policy has declared energy to be a luxury. The poorest will notice first.” Prof. Helmut Alt, University of FH Aachen



“Europe faces a crisis in energy Costs.” *New York Times*, 4-17-13

PERCENTAGE OF ENGLISH FAMILIES IN FUEL POVERTY



Source: UK Fuel Poverty Monitor.

100 million Europeans suffering from “fuel poverty” – where families pay more than 10% of their income on energy



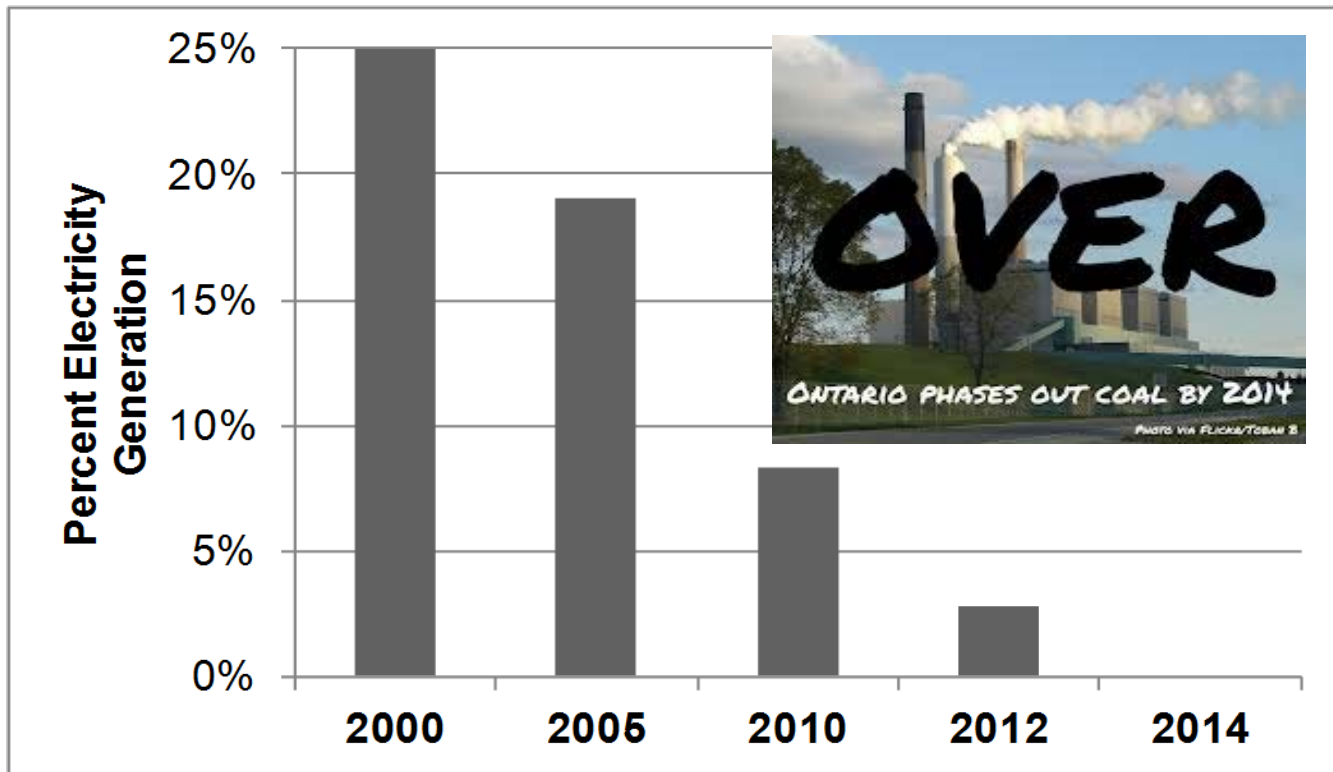
ONTARIO ELECTRICITY RATE SHOCK

- Coal plant phase out drastically increased electricity rates
- Ontario electricity rates highest in Canada & are skyrocketing
- Residential electricity costs becoming unaffordable
- Hospitals & schools spending money on electricity instead of patients & students
- Industry being driven out
- Electric costs forecast to increase much more
- Bleak future for Ontario industry



COAL PHASED OUT BY 2014

Coal as a Percent of Ontario Electricity Generation

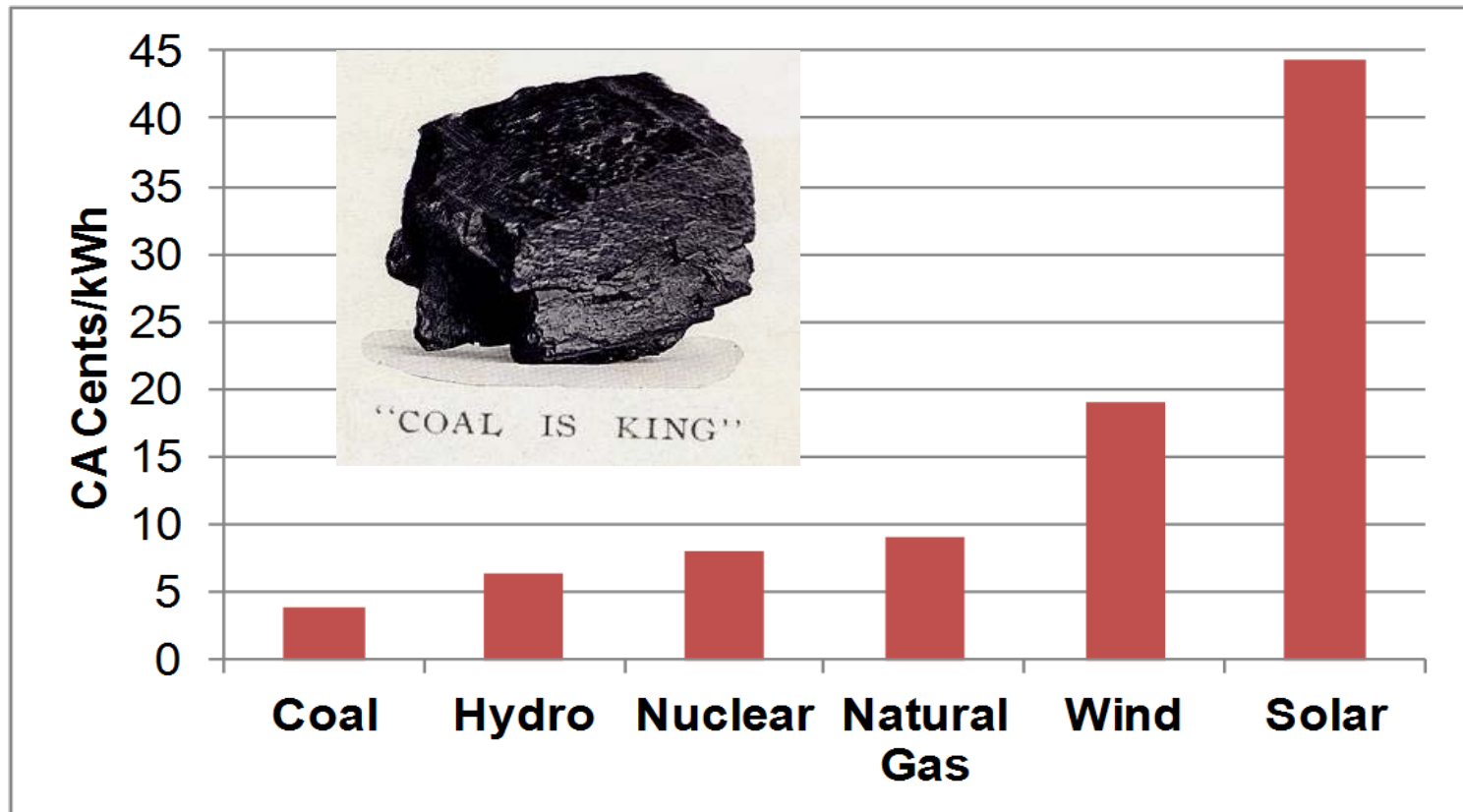


Source: Ontario Independent Electricity System Operator.

“Govt., on basis of no rigorous analysis, chose to expose Ontario businesses & households to significant energy & environmental risks.”
Queens Institute for Energy & Environmental Policy

COAL IS LOW-COST POWER SOURCE

Ontario Electricity Generation Costs

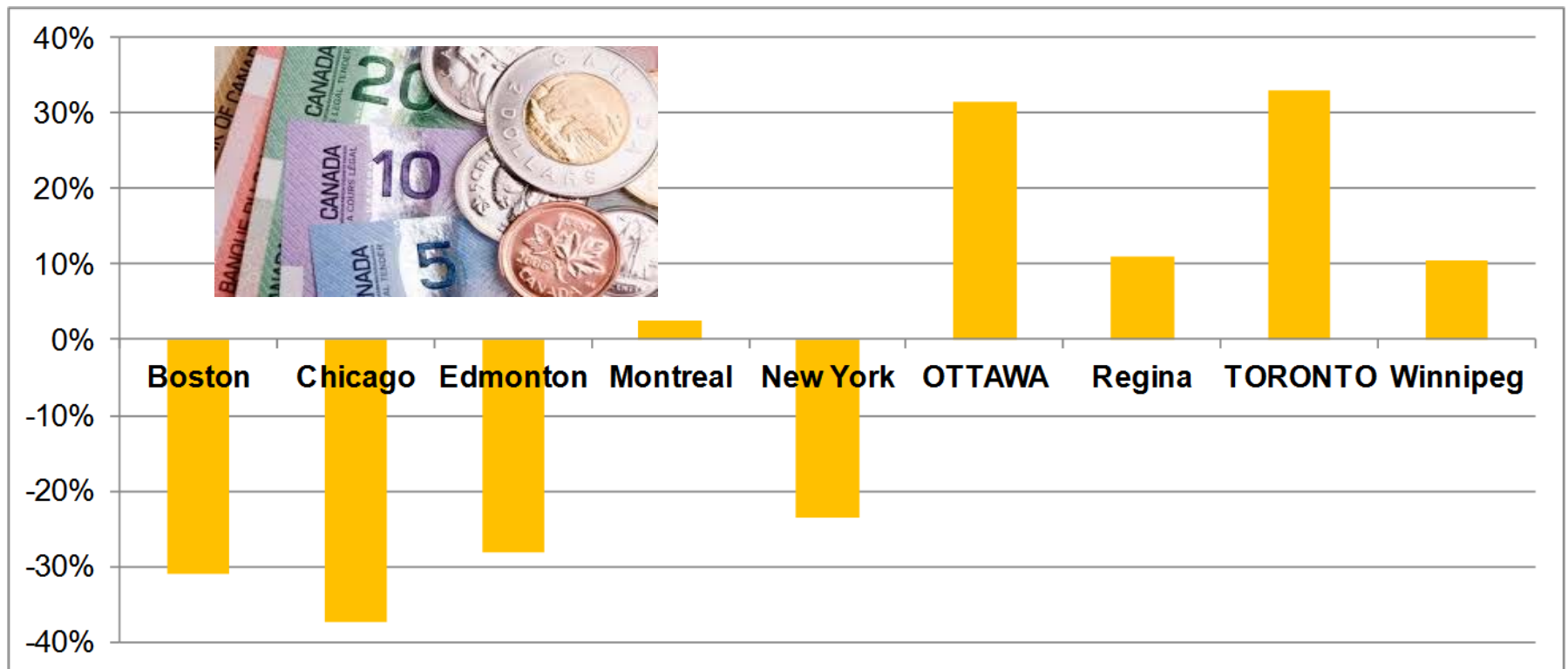


Source: Ontario Power Authority and Sarnia Construction Association.

Coal is 1/7th cost of wind and < 1/11th cost of solar

ONTARIO RATES SKYROCKETING

Industrial Electricity Rate Increases in North American Cities, 2008 - 2012



Source: Hydro Quebec.

"The No. 1 issue that comes to the top of the list on almost every project that might locate here is the cost of power." Sarnia, Ontario Mayor Mike Bradley

ONTARIO ENERGY POVERTY INCREASING

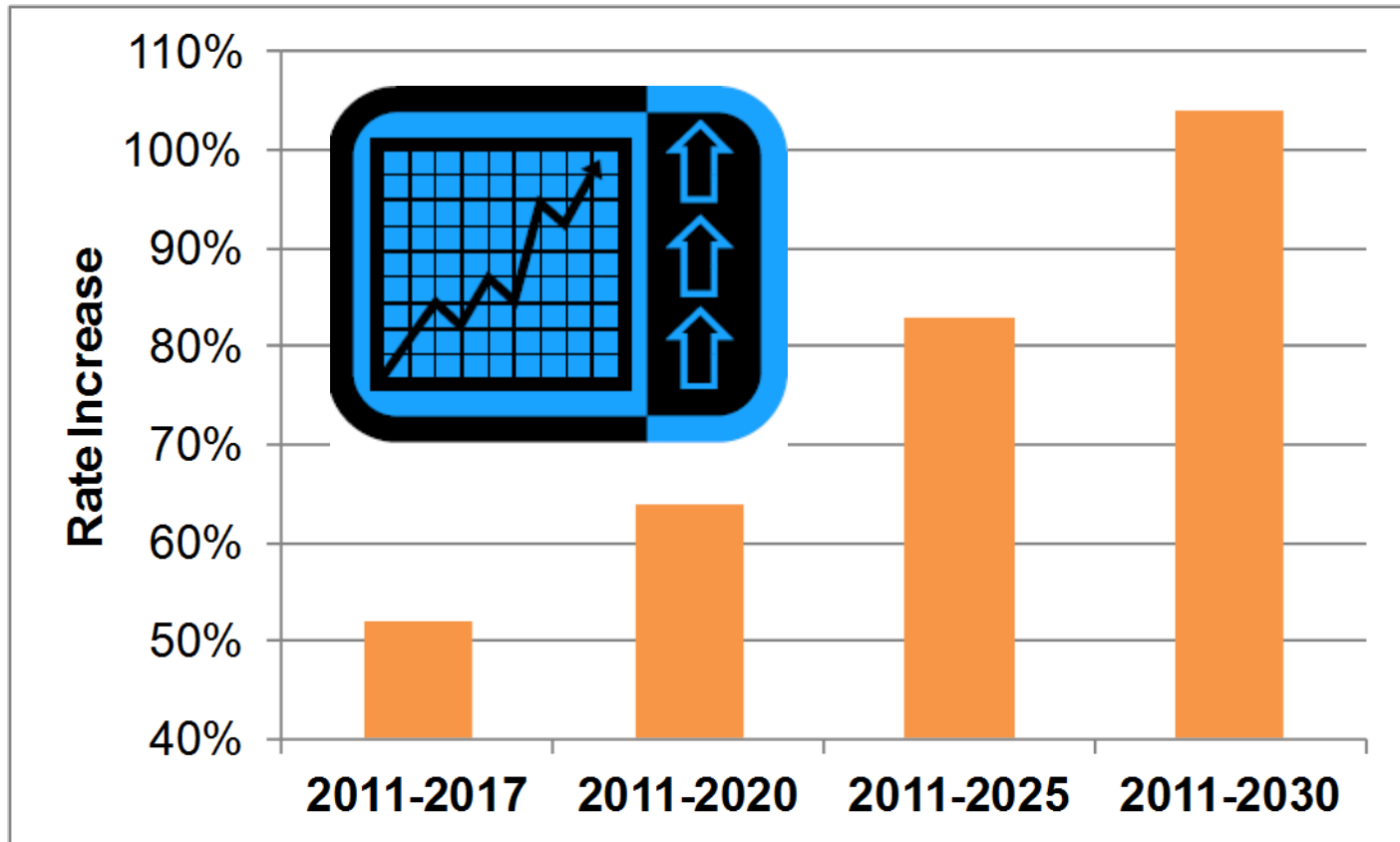
- Ontario's goal is to eliminate energy poverty
- Instead, **1/5 of Ontarians struggle to pay energy bills**
- 20% Ontario renters risk homelessness due to energy costs
- Energy costs 2nd most prevalent cost of evictions – after inability to pay rent
- Low-income Ontarians forced to choose between paying for energy, food, rent, or medicine
- It is forecast to get much worse

“Energy poverty is a significant province-wide problem.” Ontario Energy Board



EVEN WORSE TO COME

Ontario Real Residential Rate Forecast Through 2030



Source: Low Income Energy Network and Management Information Services, Inc.

Real residential rates will more than double

AUSTRALIA CARBON POLICY: ECONOMIC, SOCIAL, AND POLITICAL FIASCO

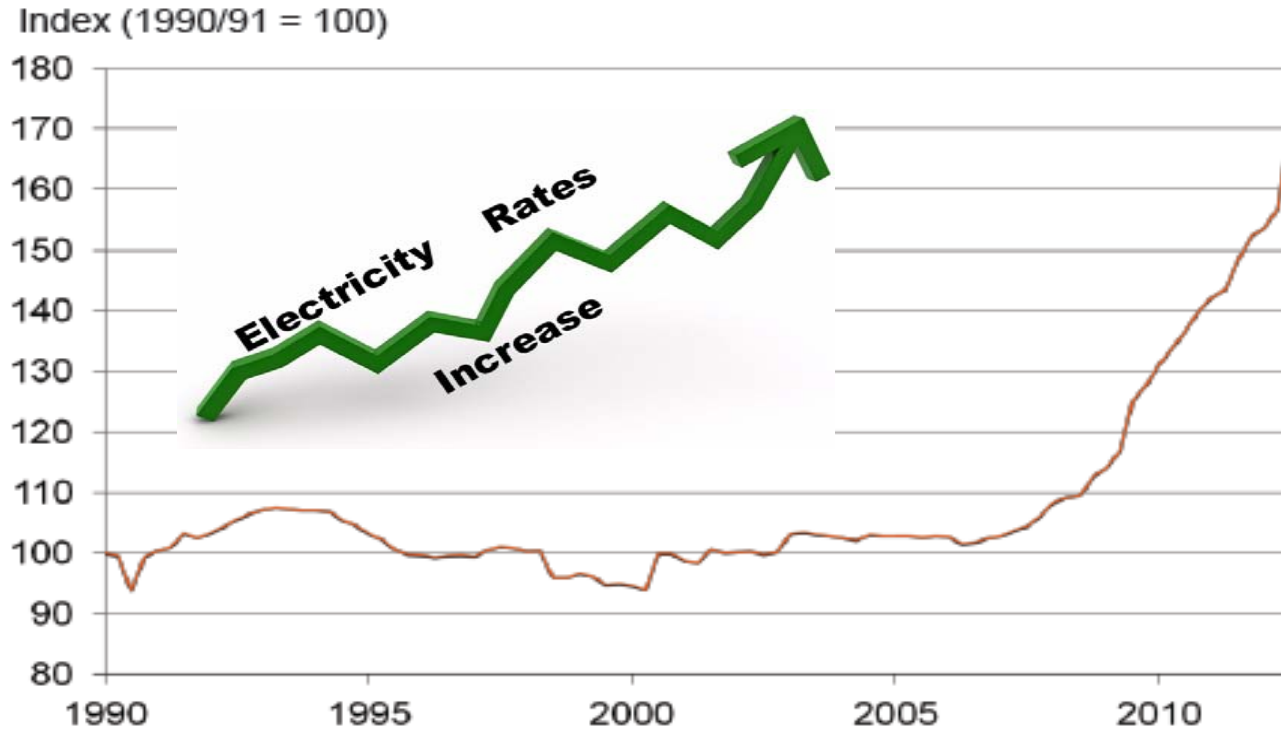
- Australia's carbon tax:
 - Carbon tax of \$23/ton; rose on 7-1-13 to \$24.15; to rise again July 2014
 - From 2015 will be linked to European price, set by markets
 - Was major election issue: Helped defeat Labor Party
 - New PM Tony Abbot vows to repeal it in 2014
- State policies such as Mandatory Renewable Energy Targets require that RE contributes a greater % of the country's energy supply.
- Australia's official target is to generate 20% of its energy by 2020 from RE; after 2020, RE target may increase



Australian businesses are paying a carbon tax five times higher than that in Europe.

ELECTRICITY PRICE INCREASES UNPRECEDENTED

Growth in Australian Electricity Retail Prices

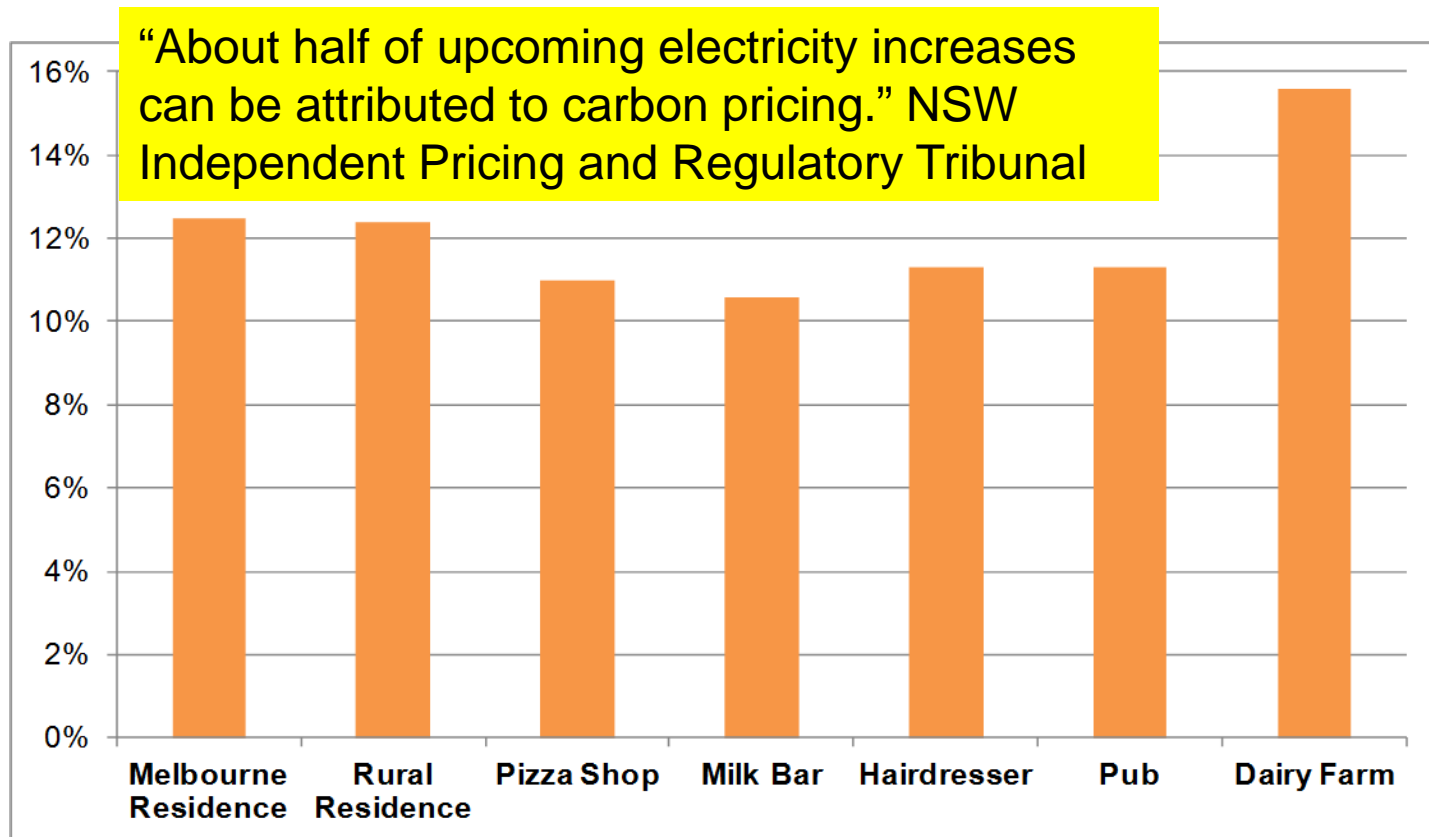


Source: Australian Bureau of Statistics.

**“Global Warming has become a religion.”
Former Australian PM John Howard, November 2013**

INITIAL CARBON TAX IMPACT IN VICTORIA

Initial Added Costs of the Carbon Tax in Victoria (Percent Increase in Electricity Bills)

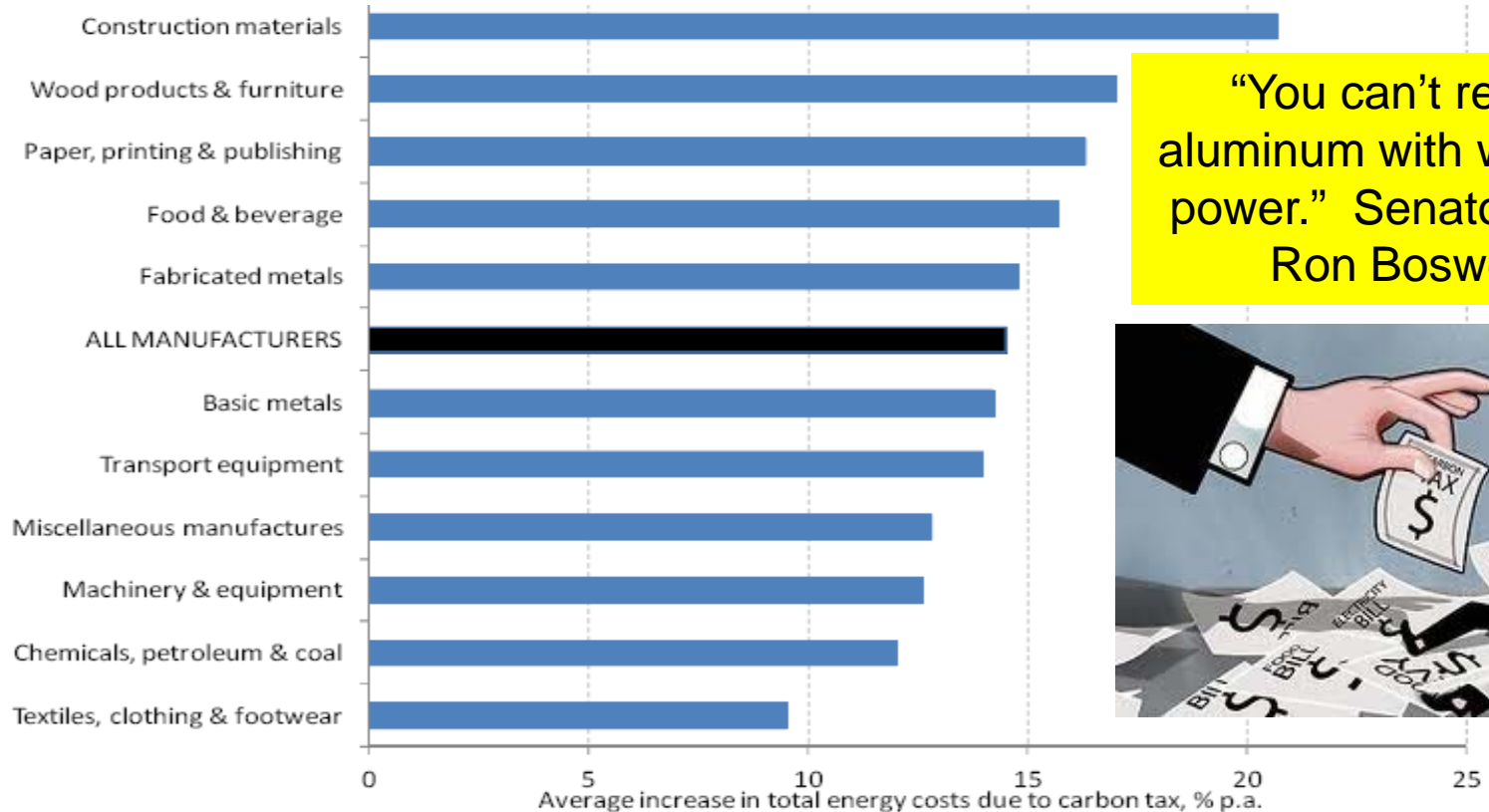


Source: Australian Institute of Public Affairs.

This is just the initial impact; much worse is to come

MFG. ENERGY COSTS INCREASED 15%

Average Increase in Energy Costs Due to Carbon Tax



“You can’t refine aluminum with windmill power.” Senator Hon. Ron Boswell



Source: Australian Industry Group.

91% of manufacturers said electric utilities had raised prices to cover carbon costs

CARBON TAX & RE POLICIES INCREASE FUEL POVERTY IN AUSTRALIA

- “Fuel Poverty”: Household has to spend > 10% of its income on fuel
- **Energy price increases are highly regressive**, & energy bills crowd out food, health, clothing, & other basic necessities
- Problem in Australia:
 - Energy bills are greatest cause of rental arrears
 - ~ 40% of lowest household income groups unable to pay electricity bills on time
 - Price increases threaten to push 350K NSW & QLD households into fuel poverty
- **Electricity price increases from carbon tax & green initiatives greatly harm low income Australians**



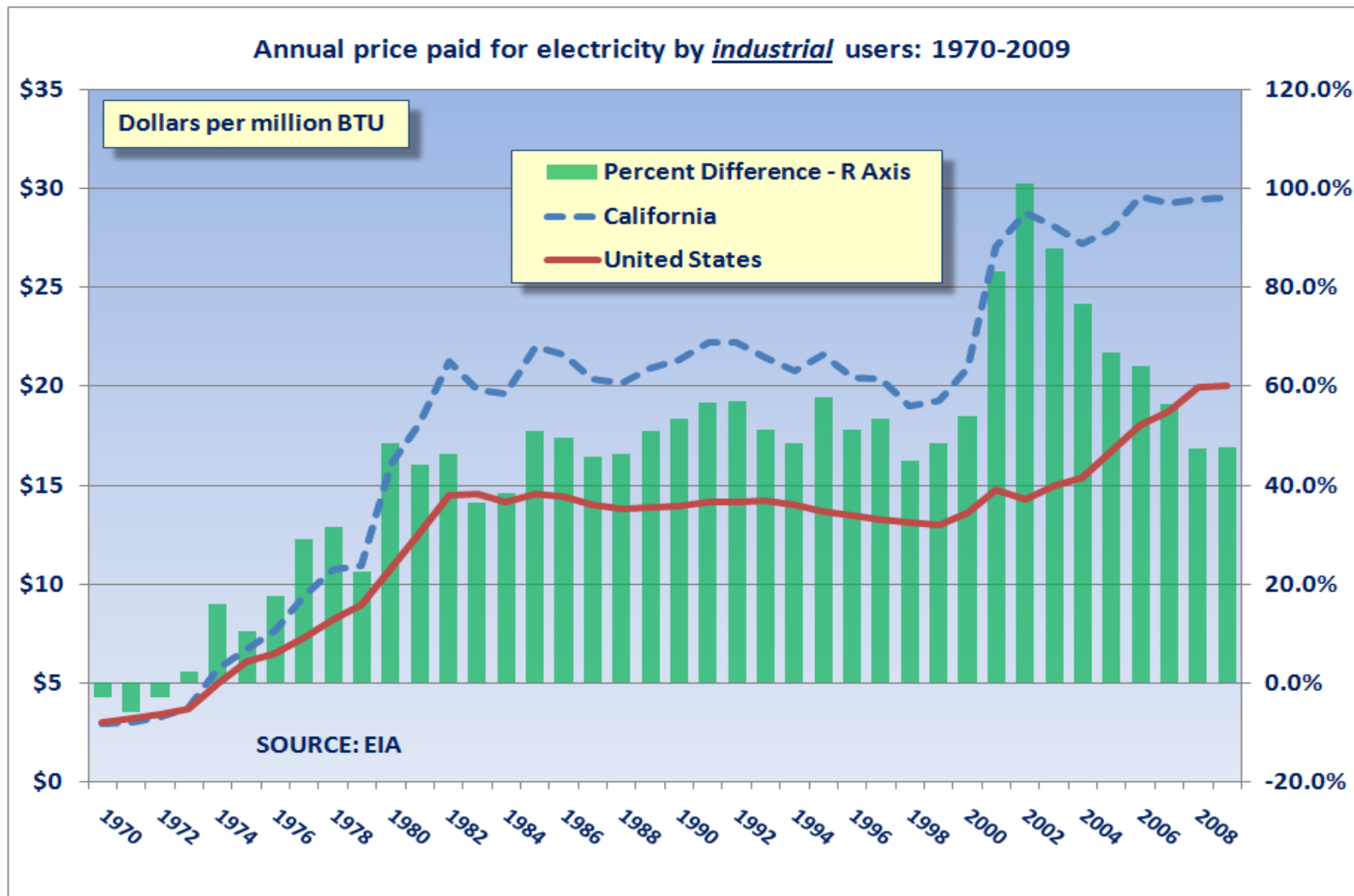
“Carbon pricing increases costs of energy and consumer goods and disproportionately affects low income earners.” Queensland Council of Social Service

CALIFORNIA: WORST IS TO COME

- CA Global Warming Solutions Act requires GHG caps starting 2012
- CA mandated 33% RPS by 2020
- CA electric rates increasing due to state energy & environmental legislation
- CPUC forecasts electric rates will increase 5% to 7%/yr. through 2020
- CA natural gas prices projected to double by 2020

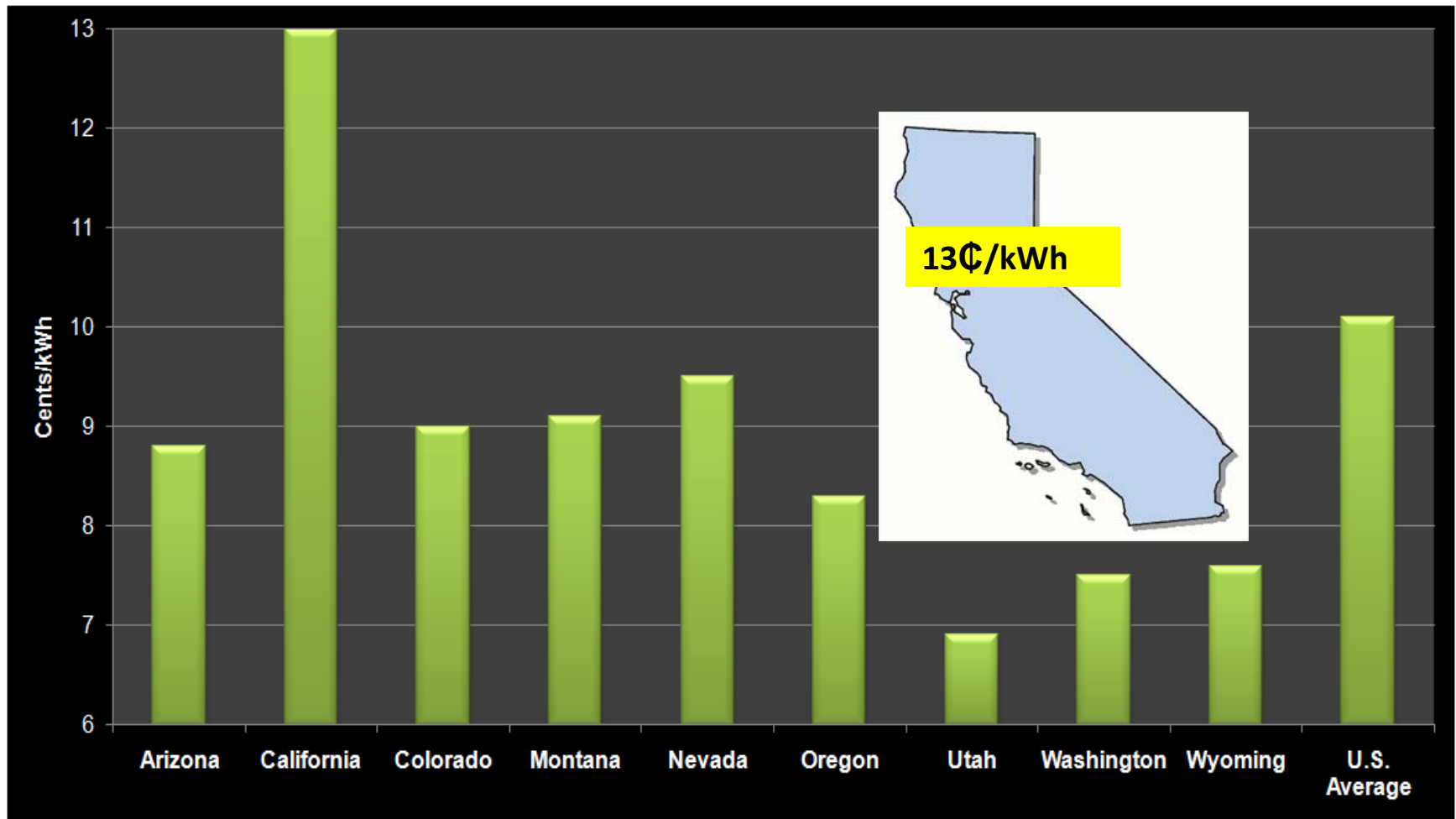


CA INDUSTRIAL ELECTRICITY RATES HAVE INCREASED MUCH FASTER THAN U.S. AVERAGE



“Intel’s electric bill in Oregon will be an astonishing 80% to 90% < in CA.”

CALIFORNIA COMMERCIAL ELECTRICITY RATES > U.S. AVERAGE & NEARBY STATES



Source: U.S. Energy Information Administration.

California experiencing fastest rate ever recorded of companies leaving -- energy costs cited as a major reason

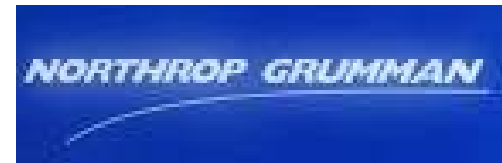
CALIFORNIA JOB EXODUS

Examples of job relocations out of CA:

- **Intel:** 1,000 high-tech factory jobs to Oregon
- **Adobe Systems:** ~ 300 high tech jobs to Utah
- **Toyota:** 4,700 factory jobs to Texas & Canada
- **Abraxis Health:** 200 jobs to Arizona
- **LegalZoom.com Inc.:** 600 jobs to Texas
- **Northrop Grumman:** 300 jobs to Virginia
- **Redbarn Pet Products:** 200 jobs to Arkansas
- **Structured Solutions Inc.:** 200 jobs to Nebraska
- **Amonix Inc.:** 300 jobs to Nevada
- **Ditech:** 300 jobs to Pennsylvania
- **Edwards Lifesciences:** 1,000 high-tech jobs to Utah
- **Genentech:** 200 high-tech jobs to Oregon
- **Facebook:** 200 jobs to Texas
- **Rockwell Collins:** 600 jobs to Oregon & Iowa



facebook



Edwards Lifesciences



Genentech
IN BUSINESS FOR LIFE



Rockwell
Collins

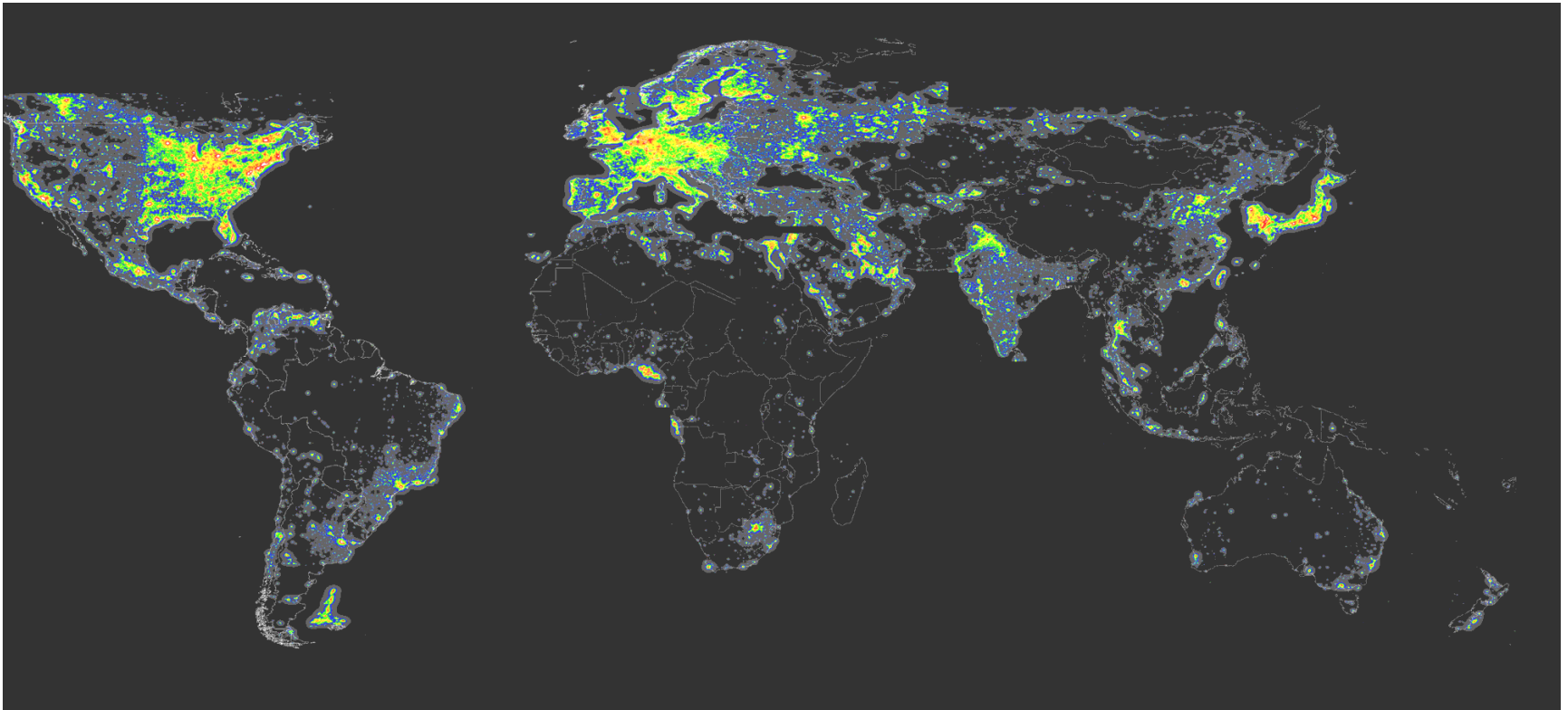
CONCLUSIONS: CARBON FOLLY

- **Effects of carbon restriction policies are predictable & inevitable:**
 - Huge increases in electricity & energy costs
 - Economic stagnation
 - Decline of industry & commerce
 - Massive job destruction
 - Large increase in energy poverty
 - Social chaos
 - Political upheaval
- **Bottom line: These policies should be avoided and, where implemented, reversed**

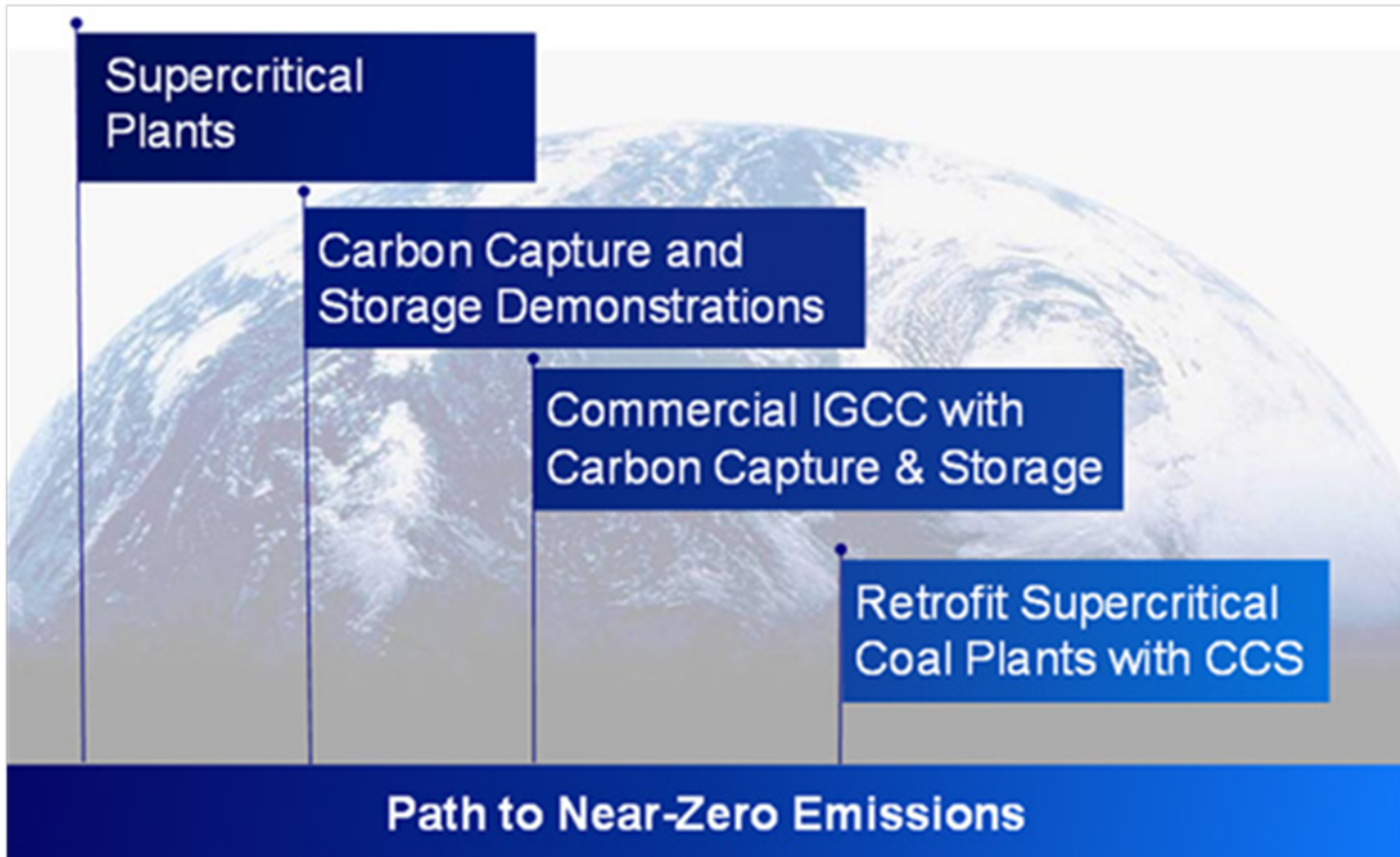


**Definition of insanity is “doing the same thing over and over and expecting different results.”
Why, then, would anyone implement such policies?**

COAL FUELS THE ELECTRICITY THAT KEEPS THE LIGHTS ON AROUND THE WORLD



TECHNOLOGY IS THE PATH FOR FUTURE POWER SUPPLY



Path to near-zero emissions includes building advanced coal plants that drive down CO₂ emissions & are carbon capture ready, demonstrating carbon capture & storage (CCS) & then deploying commercial-scale CCS projects