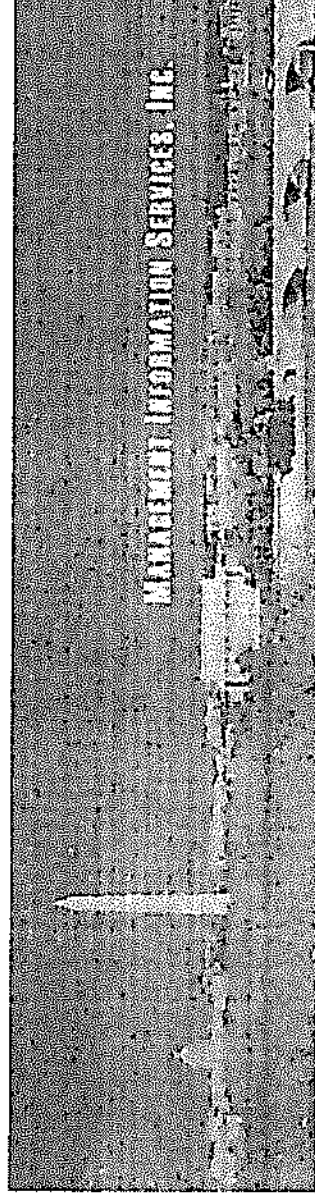


**Presented at The Energy Council 2013 Global  
Energy and Environmental Issues Conference  
Lake Louise, Alberta, Canada**

**Roger H. Bezdek, Ph.D.  
Management Information Services, Inc.  
[www.misi-net.com](http://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.

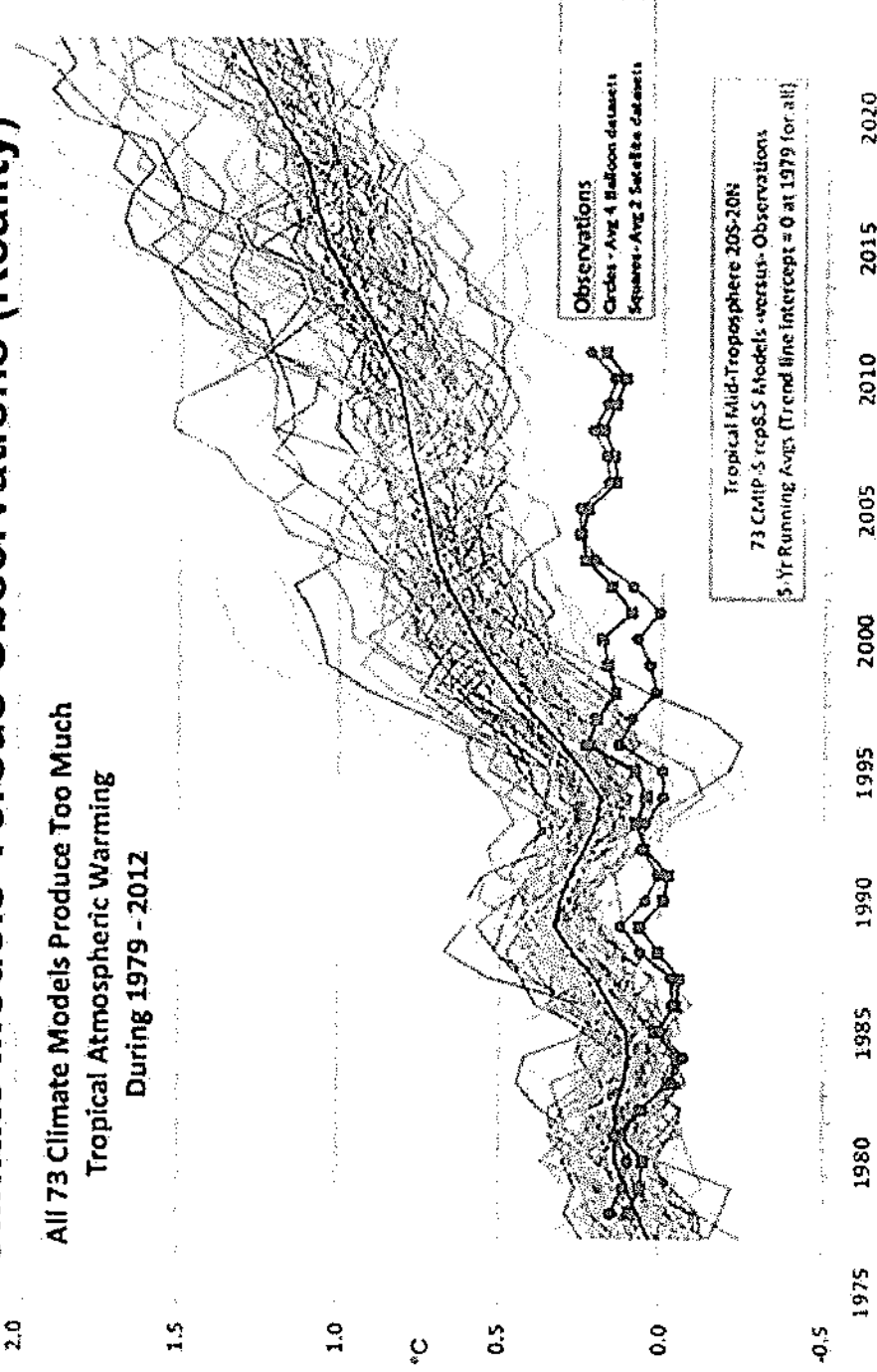
## VII. CONCLUSIONS

# CLIMATE CHANGE? WHICH DIRECTION?

## Climate models invalid

### Climate Models Versus Observations (Reality)

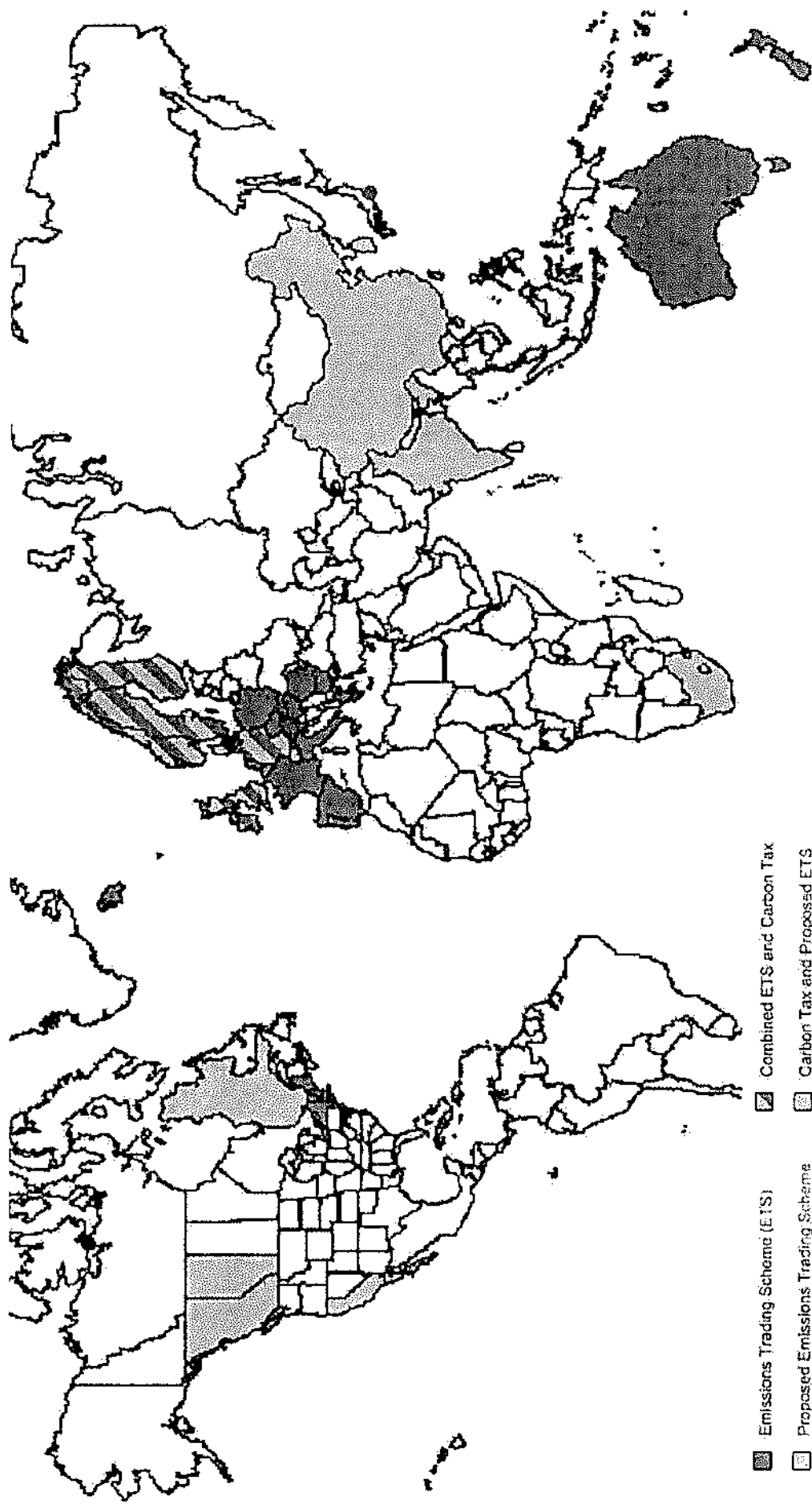
All 73 Climate Models Produce Too Much Tropical Atmospheric Warming During 1979 - 2012








Source: R. W. Spencer, 2013.

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

# CARBON RESTRICTION SCHEMES



-  Emissions Trading Scheme (ETS)
-  Proposed Emissions Trading Scheme
-  Carbon Tax
-  Combined ETS and Carbon Tax
-  Carbon Tax and Proposed ETS

> 2 dozen nations have carbon restrictions

# THE EU ETS FLAWED BY EVERY MEASURE

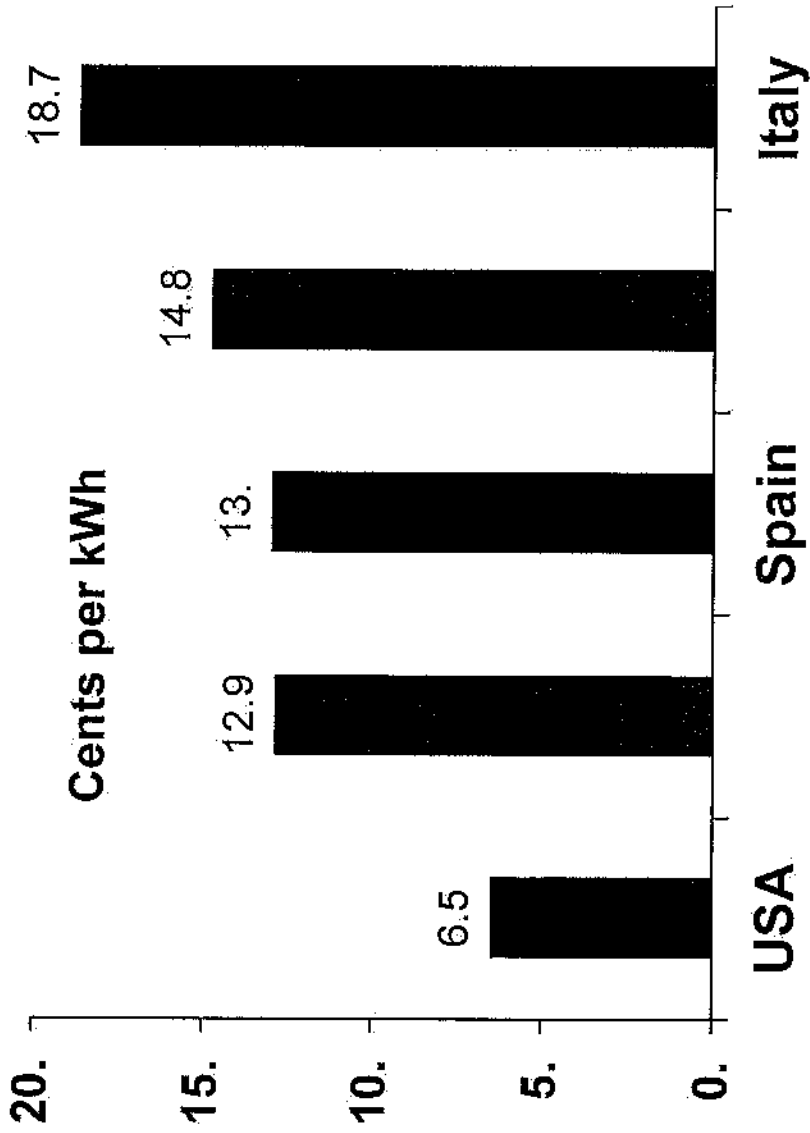
## Emissions Trading System Debacle

- 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

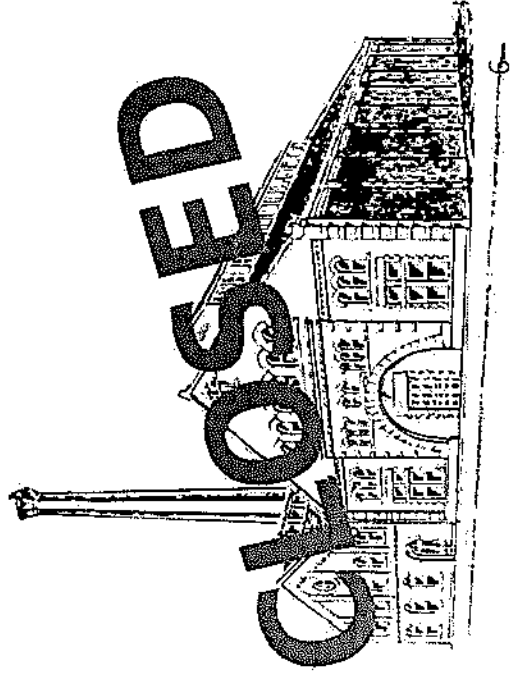


**“There is little evidence pointing towards a causal link between emissions reductions and the EU ETS.” European Environmental Agency**

# ETS = HIGHER ELECTRICITY PRICES FOR EUROPEAN INDUSTRY

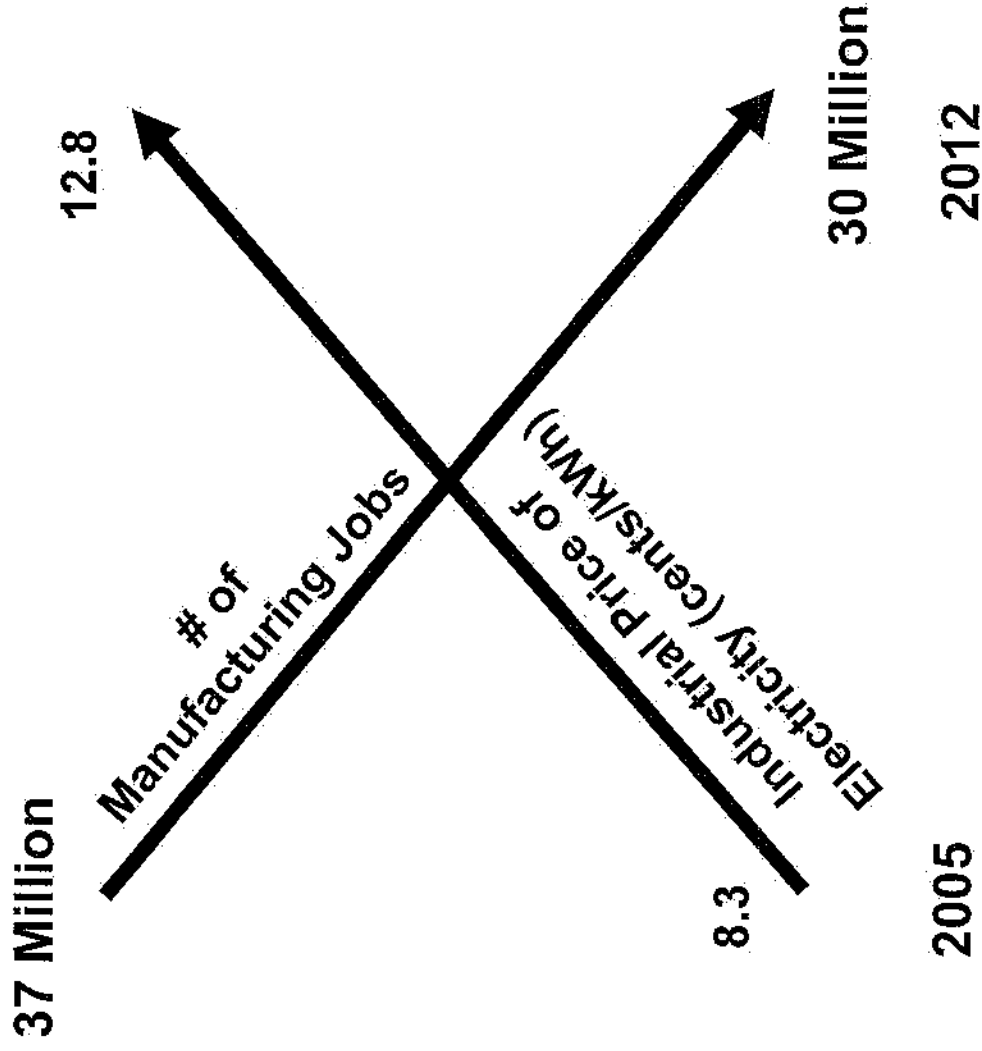


“Energy intensive industries are not going to stay here with the ETS and other climate policies driving up the cost of energy.”  
Matthew Sinclair, Director,  
Taxpayers' Alliance



Sources: Europe's Energy Portal; EIA.

# HIGHER EU ELECTRICITY PRICES = LESS MANUFACTURING JOBS

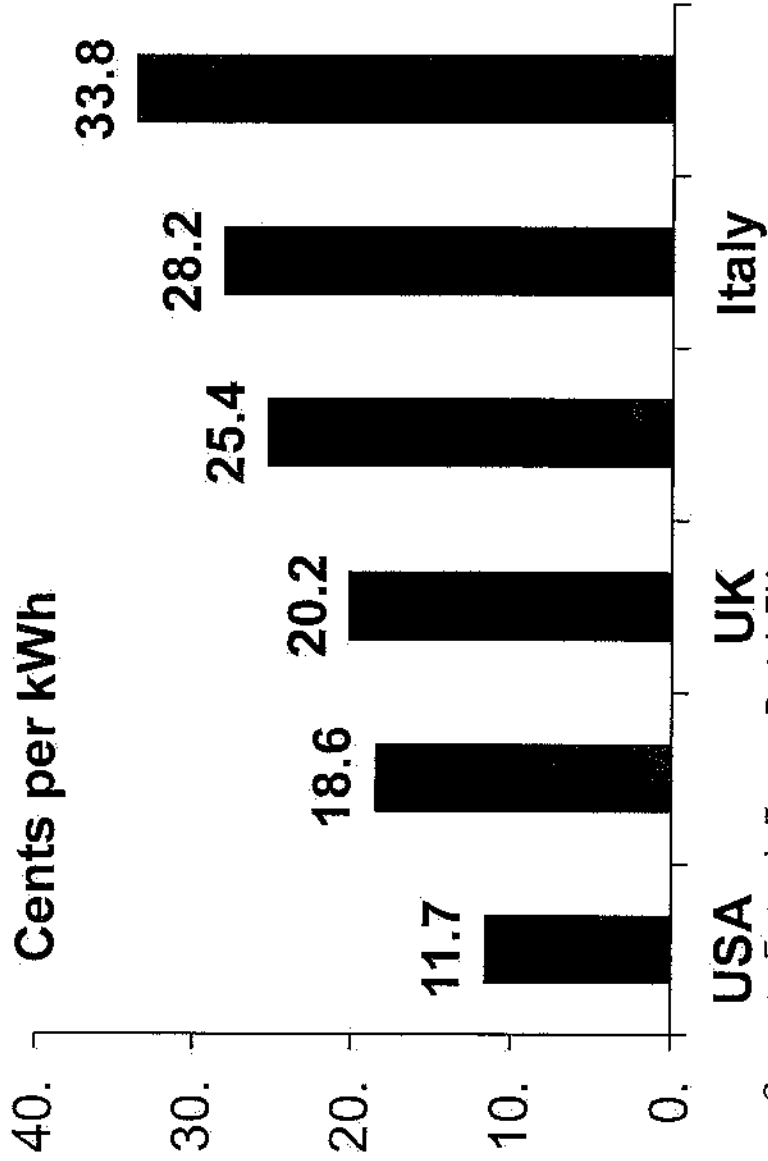


“The EU’s climate policy is endangering our industry. Our factories are closing and investments have come to a standstill.” Robert Jan Jeekel, Director of Energy, European Metals Association



Sources: European Commission, Eurostat.

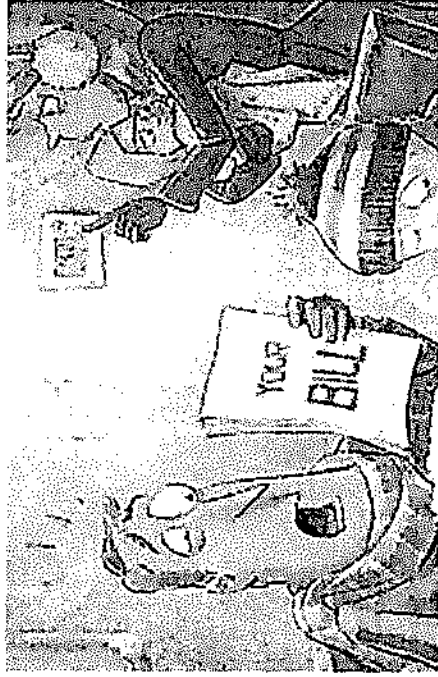
## ELECTRICITY PRICES FOR FAMILIES UNDER EU-ETS



Sources: Europe's Energy Portal; EIA.

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

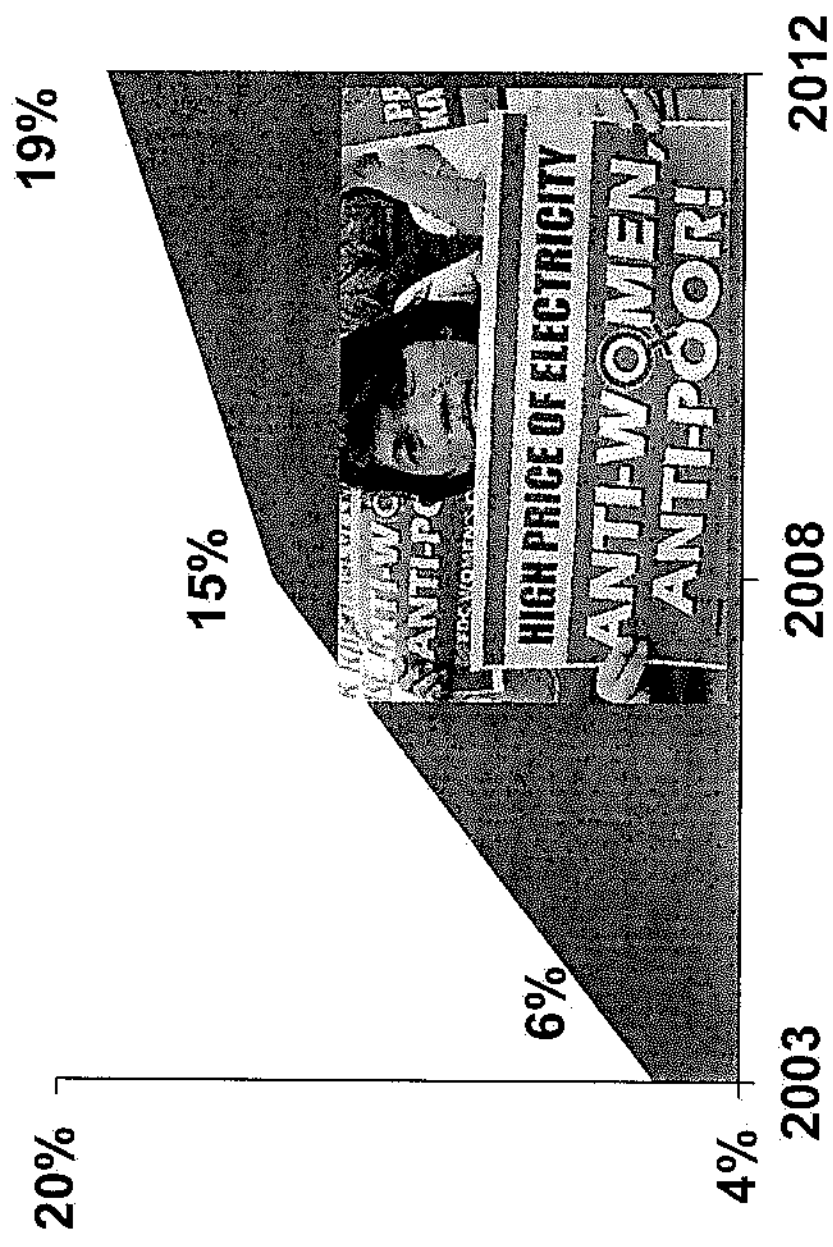
**“German policy has declared energy to be a luxury. The poorest will notice first.” Prof. Helmut Alt, University of FH Aachen**



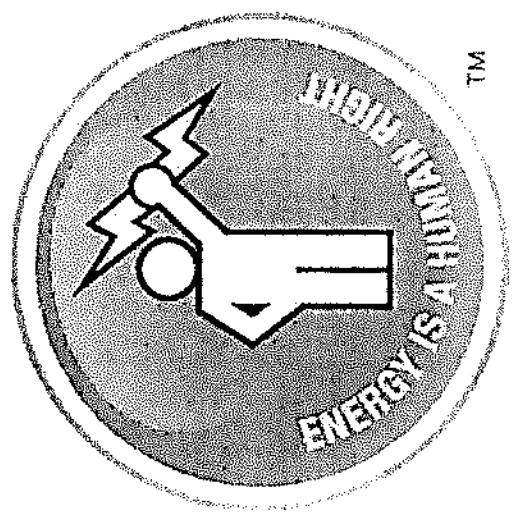


# PERCENTAGE OF ENGLISH FAMILIES IN FUEL POVERTY

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

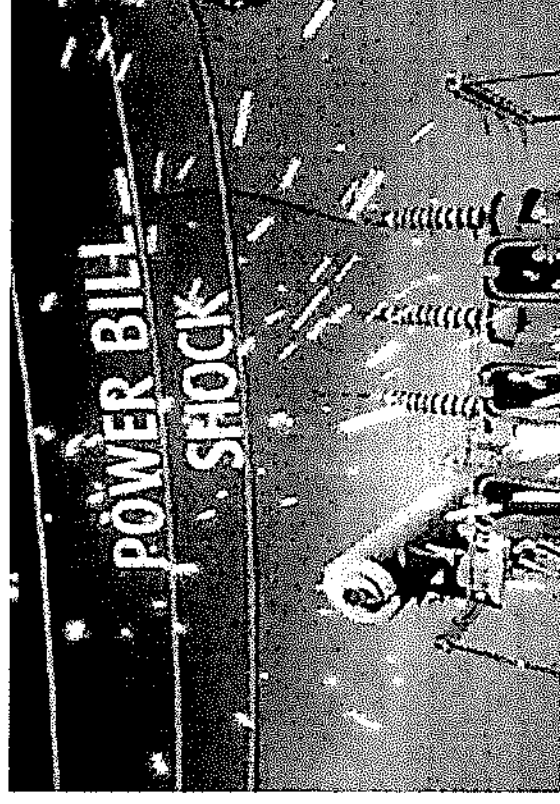


Source: UK Fuel Poverty Monitor.



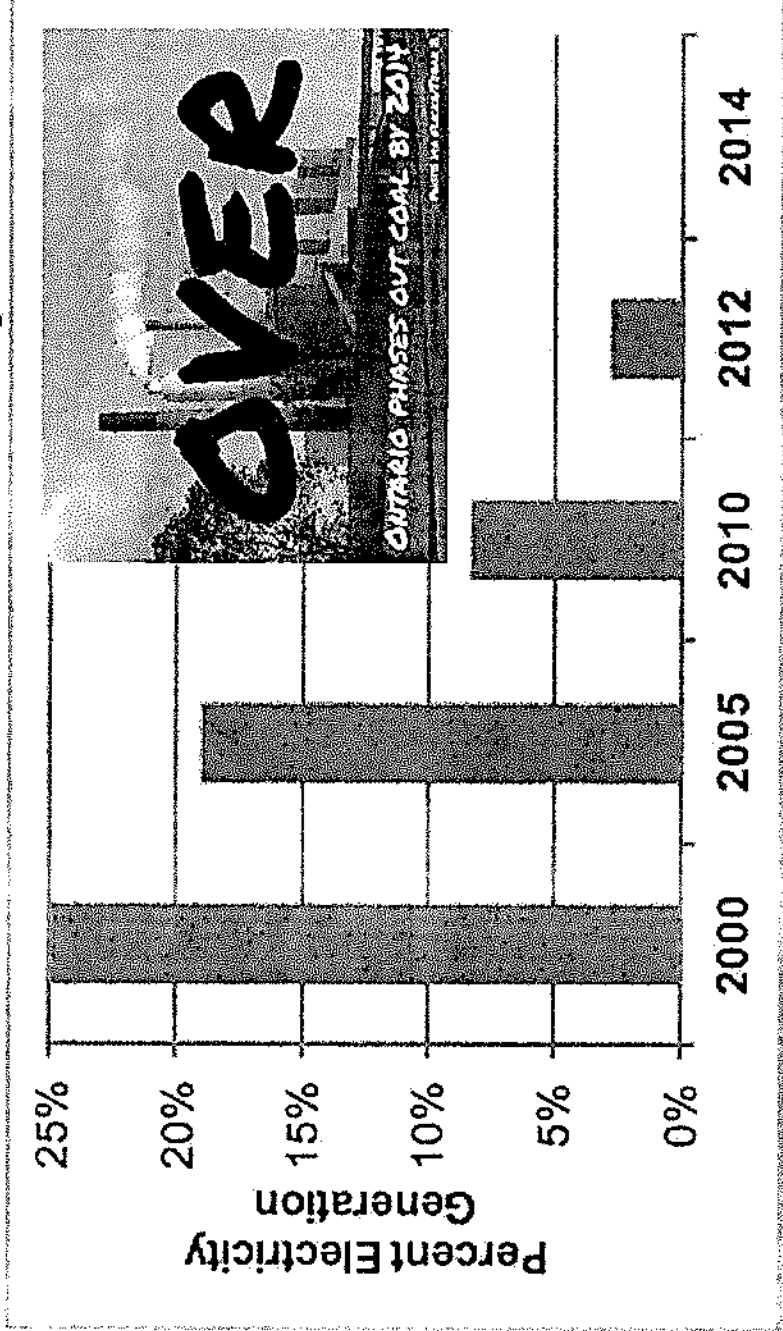
# ONTARIO ELECTRICITY RATE SHOCK

- 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

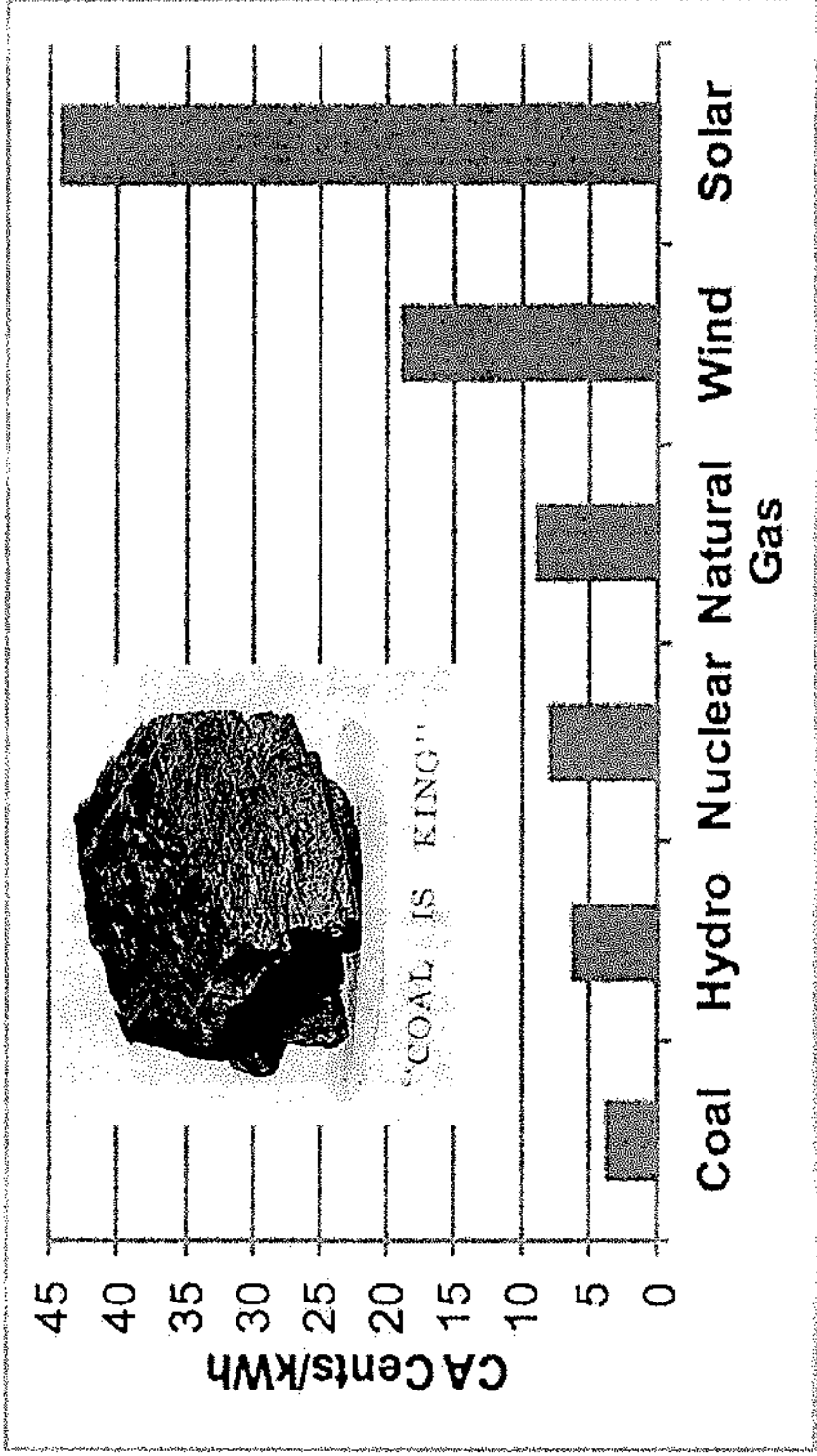


Source: Ontario Independent Electricity System Operator.

**“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

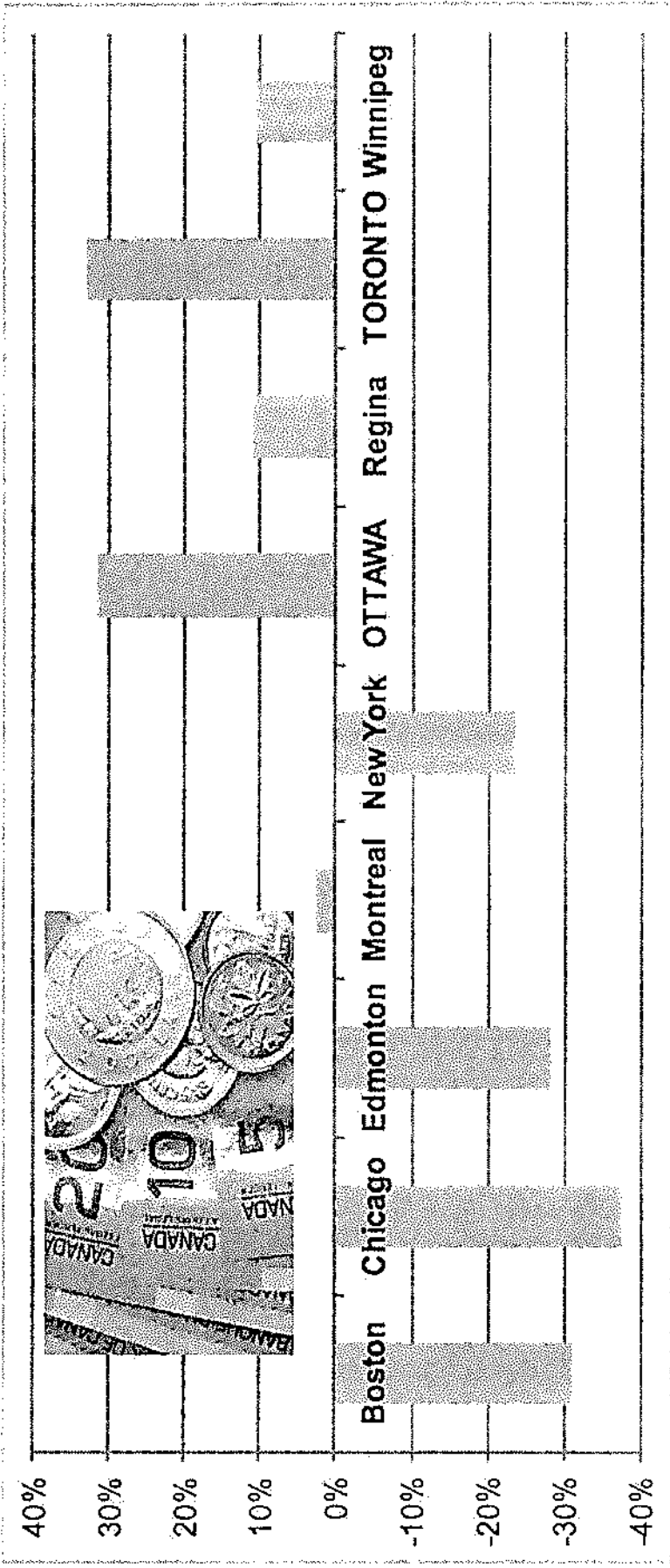


Source: Ontario Power Authority and Sarnia Construction Association.

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



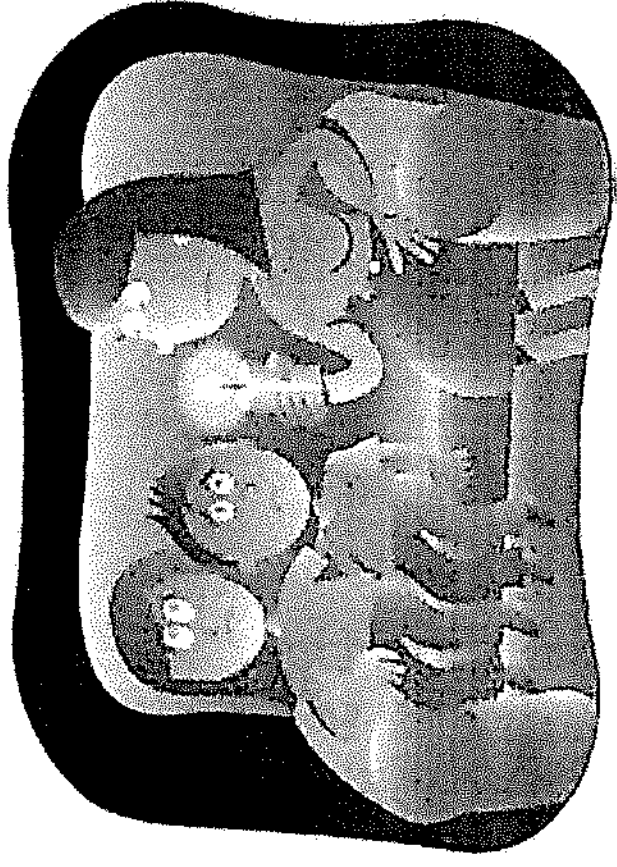
Source: Hydro Quebec.

"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

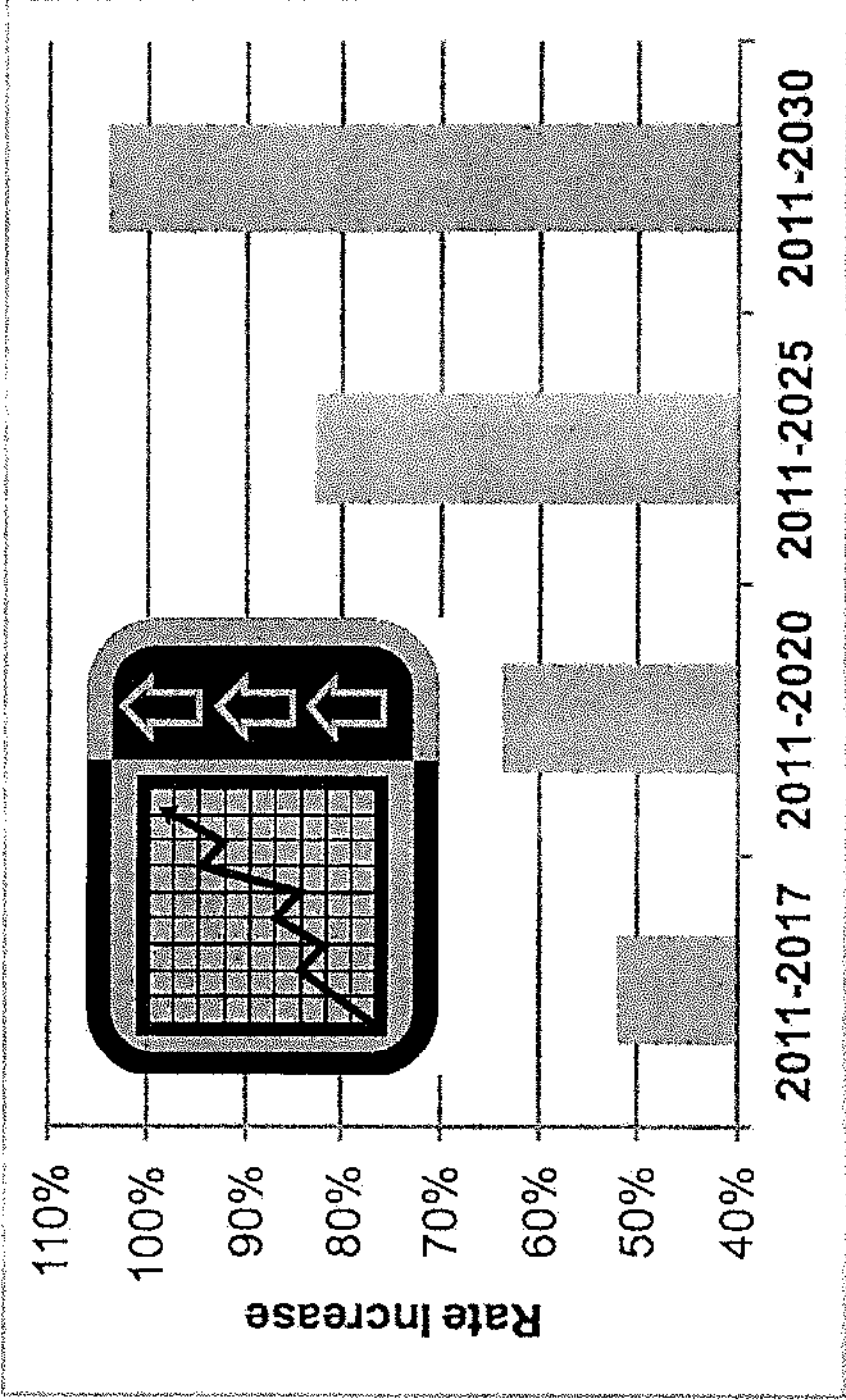
- Ontario's goal is to eliminate energy poverty
- Instead, **1/5 of Ontarians struggle to pay energy bills**
- 20% Ontario renters risk homelessness due to energy costs
- Energy costs 2<sup>nd</sup> most prevalent cost of evictions – after inability to pay rent
- Low-income Ontarians forced to choose 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

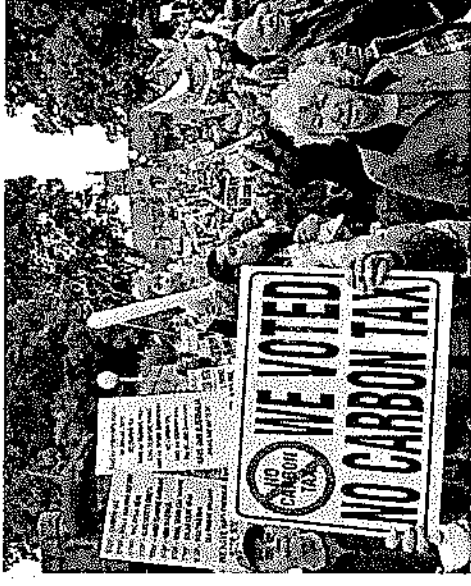
## Ontario Real Residential Rate Forecast Through 2030



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



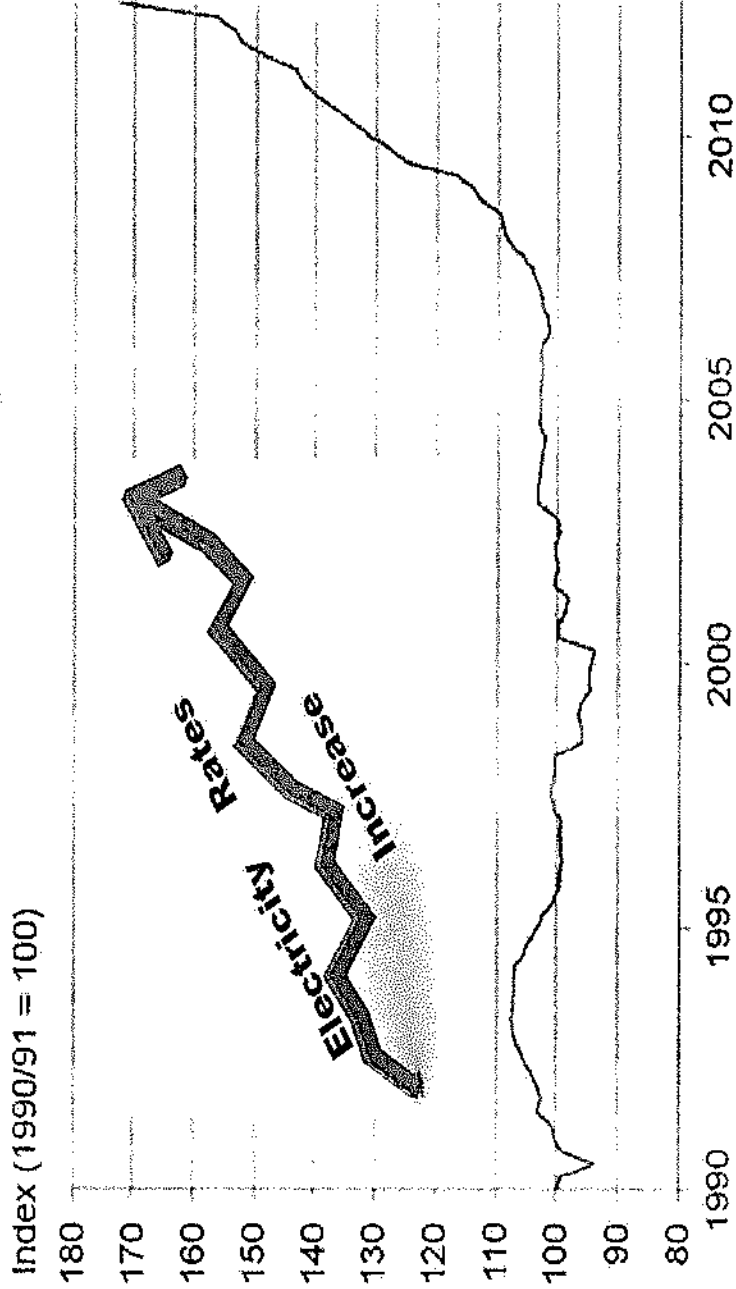
- Australia's carbon tax:
  - Carbon tax of \$23/ton; rose on 7-1-13 to \$24.15; to rise again July 2014
  - From 2015 will be linked to European price, set by markets
  - Was major election issue: Helped defeat Labor Party
  - New PM Tony Abbot vows to repeal it in 2014
- State policies such as Mandatory 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

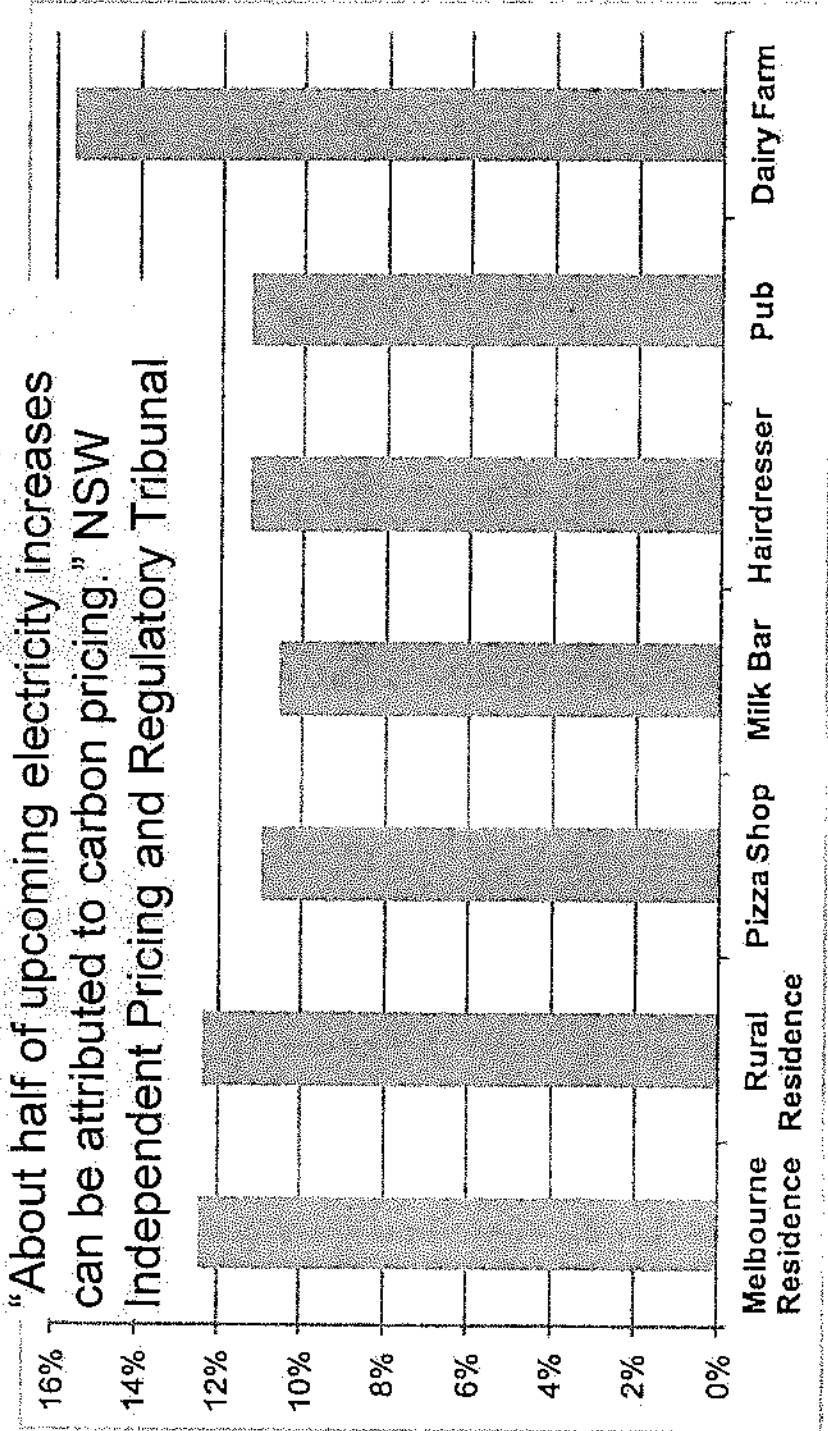


Source: Australian Bureau of Statistics.

**“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)

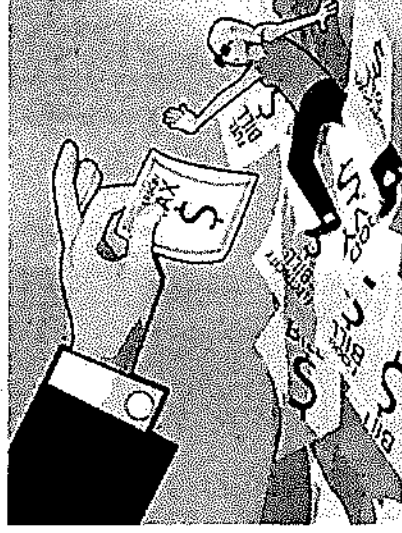
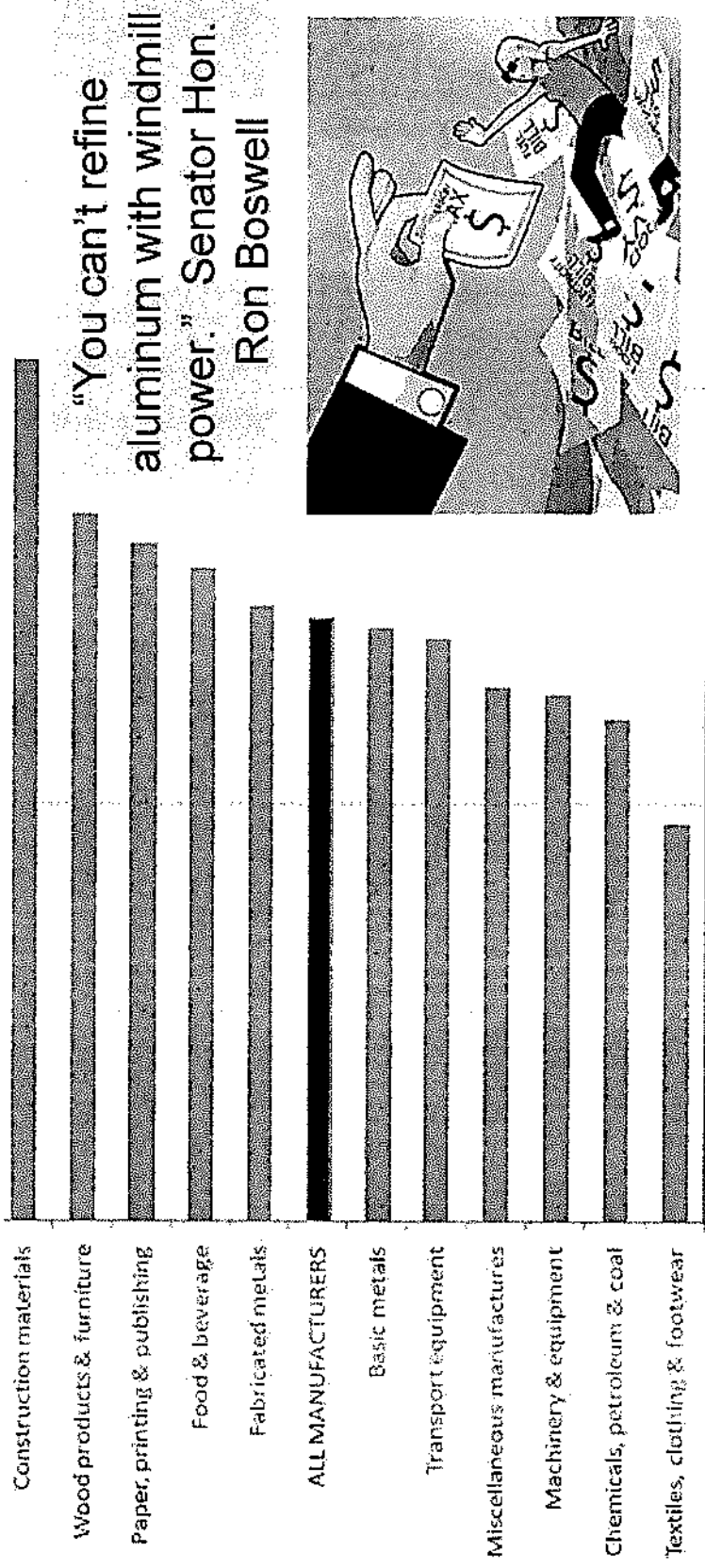


Source: Australian Institute of Public Affairs.

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



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

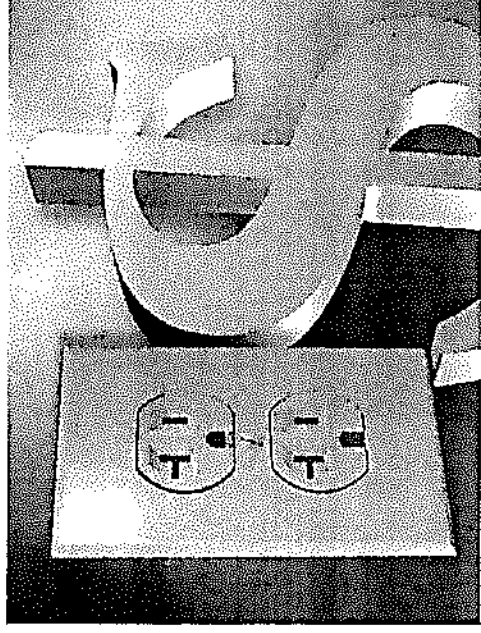
- “Fuel Poverty”: Household has to spend > 10% of its income on fuel
- **Energy price increases are highly regressive, & energy bills crowd out food, health, clothing, & other basic necessities**
- Problem in Australia:
  - Energy bills are greatest cause of rental arrears
  - ~ 40% of lowest household 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**



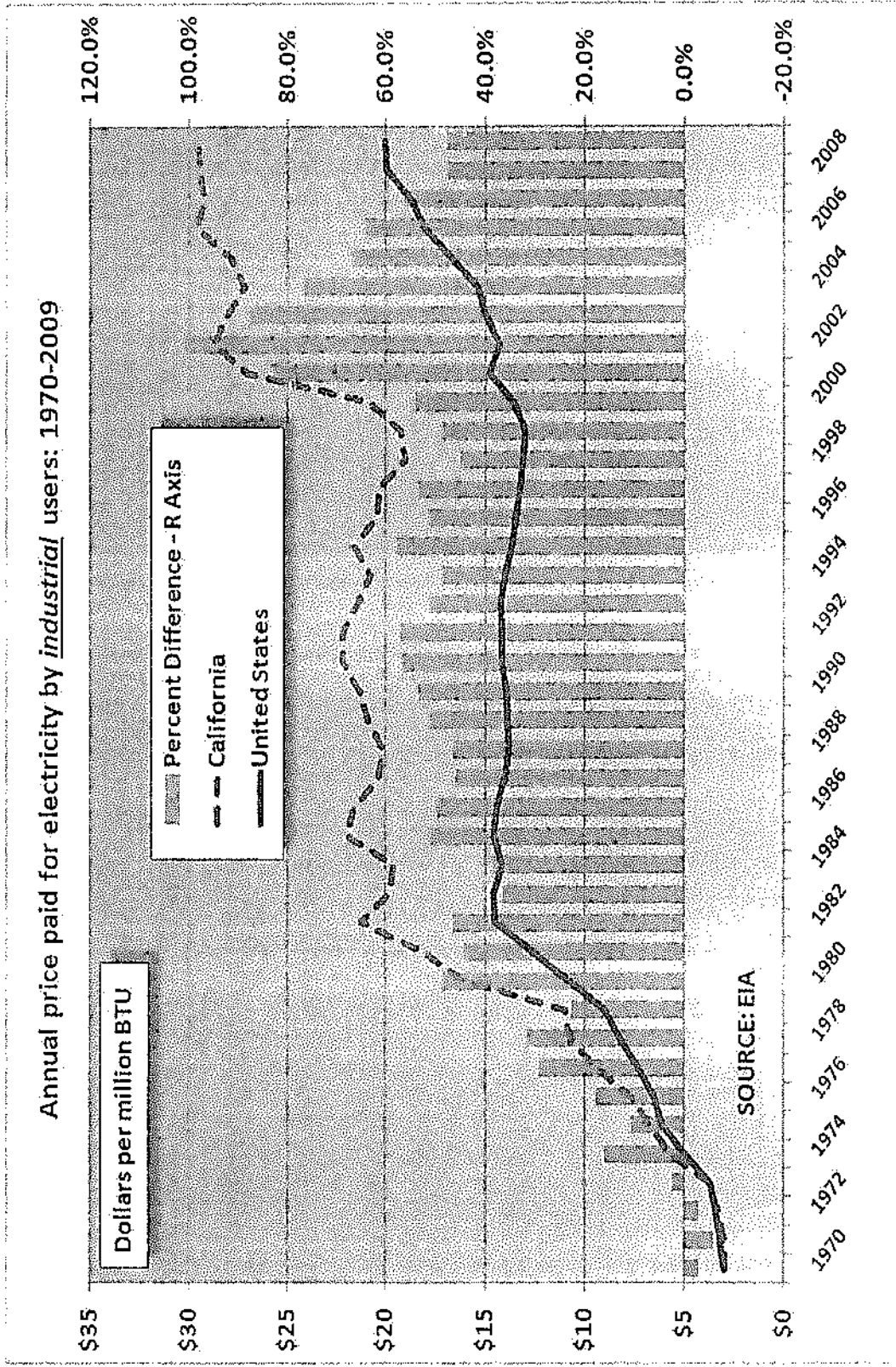
“Carbon pricing increases costs of energy and consumer goods and disproportionately affects low income earners.” Queensland Council of Social Service

## 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's energy & environmental legislation
- CPUC forecasts electric rates will increase 5% to 7%/yr. through 2020
- CA natural gas prices projected to double by 2020

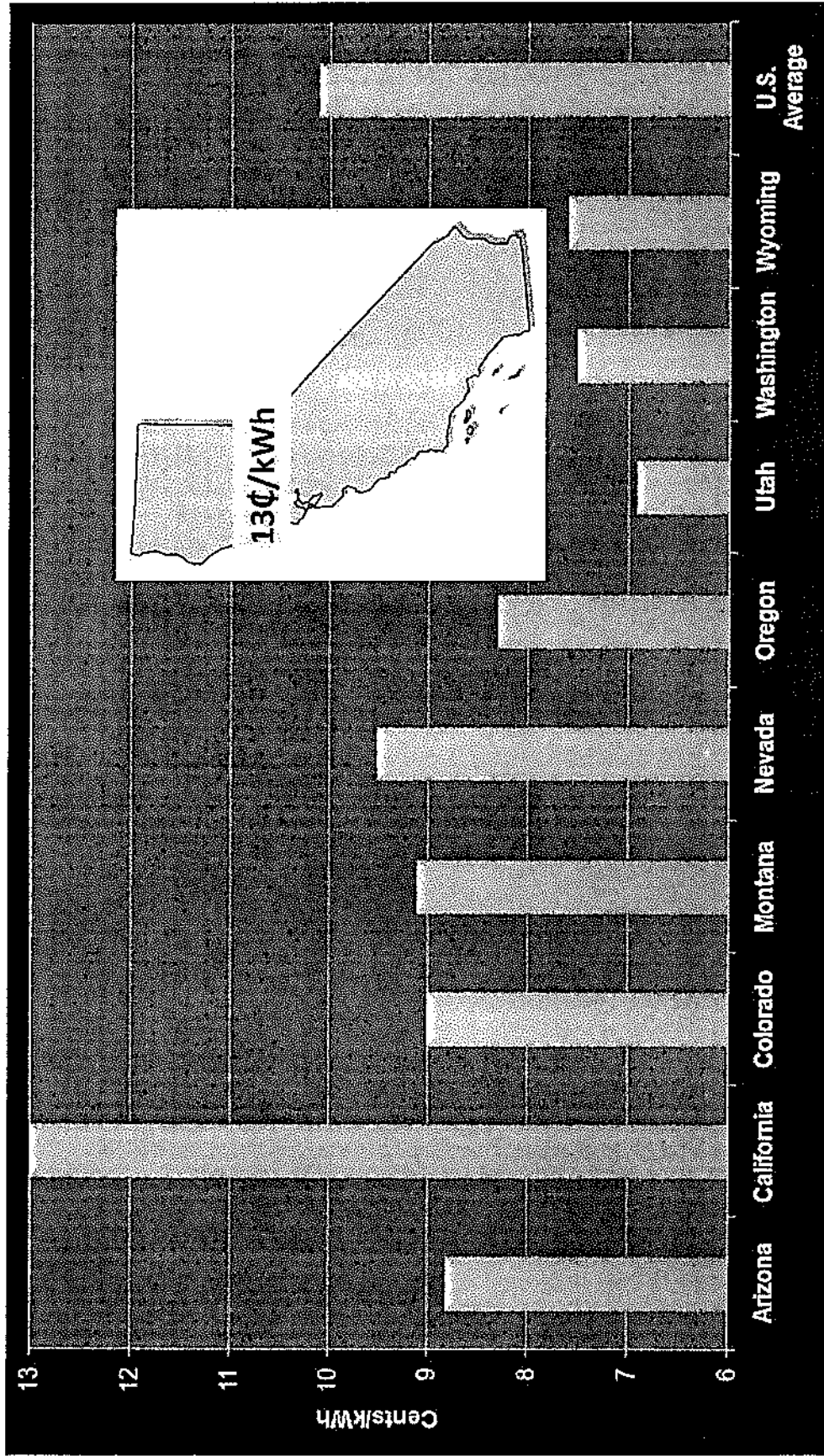


# CA INDUSTRIAL ELECTRICITY RATES HAVE INCREASED MUCH FASTER THAN U.S. AVERAGE



“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.

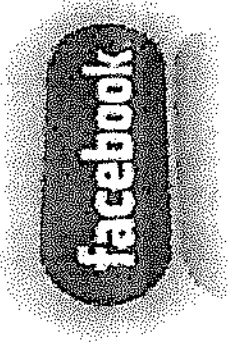
**California experiencing fastest rate ever recorded of companies leaving -- energy costs cited as a major reason**



# 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



**Adobe**



**Edwards Lifesciences**



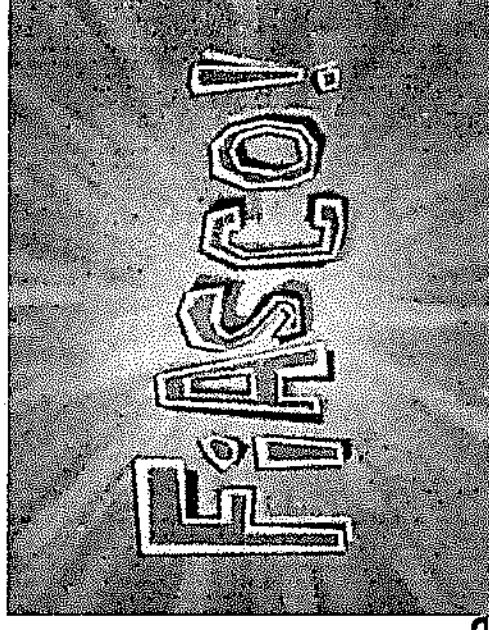
**Genentech**  
IN BUSINESS FOR LIFE

**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.**



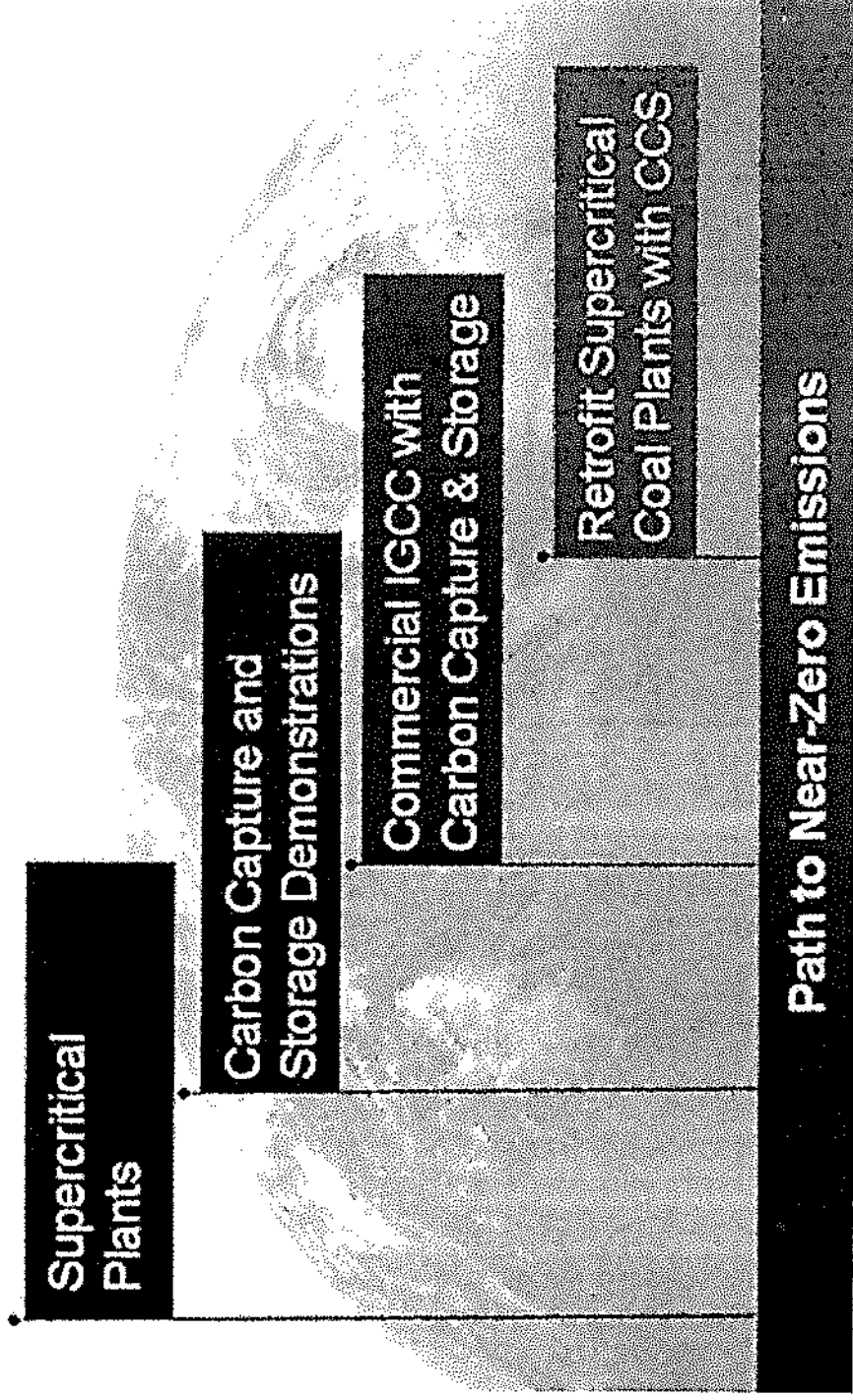
Definition of insanity is “doing the same thing over and over and expecting different results.”

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 CO<sub>2</sub> emissions & are carbon capture ready, demonstrating carbon capture & storage (CCS) & then deploying commercial-scale CCS projects

## STATEMENT

THERE HAS BEEN MUCH ATTENTION AND SPECULATION ABOUT THIS SELECT COMMITTEE I WILL MAKE A STATEMENT AND WE WILL BEGIN WITH OUR FIRST PRESENTATION. THERE WILL BE NO QUESTIONS UNTIL THE END OF ANY PRESENTATION.

AS THE CHAIR LET ME CLEAR UP A FEW MYTHS AND IT SOME CASES HYSTERIA ABOUT WHAT THE SCOPE OF OUR WORK WILL BE.

COLORADO HAS BEEN AT THE EPICENTER OF ENERGY DEVELOPMENT IN THIS COUNTRY SINCE BEFORE MY TIME IN THE LEGISLATOR. FROM THE NAVAL OIL SHALE RESERVES IN MY HOMETOWN OF RIFLE COLORADO THAT BEGAN IN THE 50'S TO AN UNDERGROUND NUCLEAR TEST THAT WAS USED THOUSANDS OF FEET BLEOW THE EARTH NEAR PARACHUTE COLORADO IN 70'S, WHICH WAS AN ATTEMPT EXTREME FORM OF FRACKING TO SAY THE LEAST.

TODAY WE FIND OURSELVES WITH TRILLIONS OF CU FT OF NATURAL GAS MILLIONS OF BARRELS OF OIL AND NATURAL GAS LIQUIDS ALONG WITH THOUSANDS OF WIND TURBINES AND SOLAR PANELS MAKING UP ONE OF THE MOST DIVERSE ENERGY ECONOMIES IN THE UNITED STATES

DEPENDING ON YOUR IDEOLOGY WE ARE AT THE FOREFRONT OF AN ENERGY REVOLUTION OR AT THE END OF OUR EXISTENCE OR SOMEWHERE IN BETWEEN.

REGARDLESS OF YOUR POLITICAL STRIPES ONE THING IS UNDENIABLE...COLORADO IS A LEADER IN BOTH EXTRACTION AND TECHNOLOGY. SOME 270 COMPANIES MAKE THEIR HOME IN COLORADO IN ALL ENERGY SECTORS, NOT TO MENTION ALMOST 200,000 JOBS THAT ARE SUPPORTED BY ENERGY IN OUR STATE AND LITERALLY BILLIONS OF DOLLARS IN WAGES AND TAXES PAID EACH YEAR

THIS COMMITTEE IS CHARGED WITH THE RESPONSIBILITY OF REVIEWING FACTS NOT FICTION NOR A COMMITTEE THAT MEETS WITH LITTLE FANFARE LATE AT NIGHT.

BUT RIGHT IN FRONT OF THE CAMERA'S AND THE PUBLIC. WE WANT EVERYONE IN COLORADO TO FULLY UNDERSTAND EACH ENERGY SECTOR, WHAT IT MEANS TO THE EACH CITIZEN, WHAT THOSE REVENUES DO FOR EACH COLORADAN AND OUR INFRASTRUCTURE AND COMMUNITY DEVELOPMENT AND HOW IT HAS AND WILL IMPACT OUR STATE BUDGET IN THE FUTURE.

TODAY THE FACTS ARE RIGHT IN FRONT OF US. TOMORROW A NEW PRESIDENT OF THE UNITED STATES IS SWORN IN, LIKE IT OR NOT RURAL COLORADO SENT A MESSAGE, NO THE NEW PRESIDENT DID NOT CARRY COLORADO METRO AREAS?? BUT HE DEFINITELY SPOKE TO THE 44 COUNTIES IN COLORADO THAT ARE DISTRESSED ECONOMICALLY AND HAVE SUFFERED THROUGH THE WORST 8 YEARS IN THEIR HISTORY. THOSE 44 COUNTIES, FOR THE MOST PART, HAVE THE ABILITY OR SUPPORT ENERGY PRODUCTION IN MANY WAYS.

THOUSANDS OF COLORADANS FROM PUEBLO TO GRAND JUNCTION AND CRAIG ARE OUR BROTHERS AND SISTERS AND THEY DESERVE BETTER AND SHOULD NEVER SUFFER AGAIN DUE TO MISTAKEN POLICY BY EITHER PARTY.

WE WILL GATHER AS MUCH INFORMATION AS POSSIBLE ON ALL ENERGY SECTORS, AND LET COLORADANS DECIDE ALONG WITH US WHAT OUR ENERGY PORTFOLIO SHOULD LOOK LIKE AND HOW WE CAN SUPPLY ENERGY THAT CAN AND... MUST BE PRODUCED TO KEEP COLORADO MOVING FORWARD ECONOMICALLY WHILE KEEPING OUR MOST VALUED PUBLIC LANDS REALLY PUBLIC NOT BARRED FROM RECREATION OR COMMERCE.

THIS WILL NOT BE FORUM FOR ARGUMENT BUT FOR EDUCATION, I WILL NOT ALLOW GRANDSTANDING FOR ANYONE OR ANY IDEOLOGICAL GROUP EVEN THOUGH WE HAVE DIFFERENT BELIEFS THE DATA AND FACTS WILL BE PRESENTED SO WE HAVE THOUGHTFUL INFORMATION FROM WHICH TO PRESENT TO OUR COMMITTEE OF REFERENCE AND MORE IMPORTANTLY ALL COLORADO CITIZENS.

MANY IN THIS BUILDING AND THROUGHOUT COLORADO HAVE CONGRATULATED YOU THE MEMBERS OF THIS COMMITTEE FOR HAVING THE COURAGE TO ACTUALLY SET ASIDE POLITICAL PARTISAN SHIP AND LET THE FACTS MAKE THE DECISIONS NOT SPECIAL INTEREST GROUPS.

WITH THAT SAID LETS BEGIN