eudaimonia

(n.) lit. "human flourishing"; a contented state of being happy and healthy and prosperous

pronunciation | "U-de-'mOn-E-a

ENGLISH | ORIGIN: GREEK

Michigan Energy Policy

MACKINAC CENTER
FOR PUBLIC POLICY

Environmental Policy Initiative

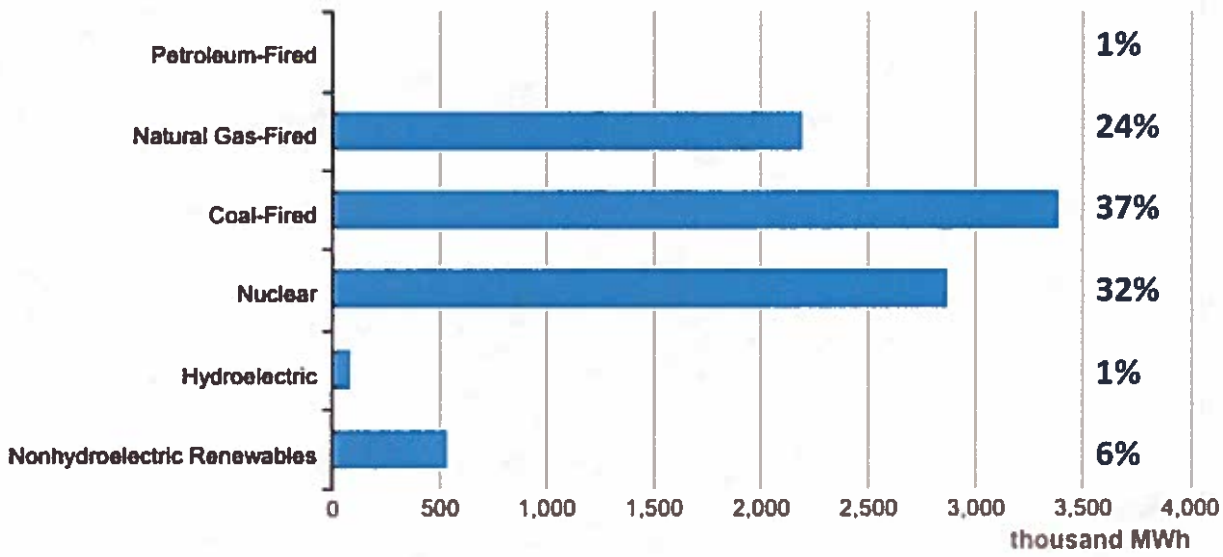
- Human-centered
- Prosperity is healthy
- Economic Freedom & Free Markets
- Property Rights & Personal Liberty
- Science-based & Site specific
- Positive benefits at an efficient cost

MICHIGAN ELECTRICITY

Consumption by Source | Consumption by Sector | Production | Electricity | Prices

Michigan Net Electricity Generation by Source, Sep. 2016

DOWNLOAD



eia Source: Energy Information Administration, Electric Power Monthly

What is choice?

- Michigan Public Act 141 of 2000
- Residents can access deregulated electricity market
- "AES" (alternative electric supplier) provides electricity
- Similar to choice present in cable or cellular markets

Government Protected Monopolies

DTE Energy

Consumers Energy

- Public Act 286 of 2008 amended P.A. 141
- Guaranteed 90% of total electric distribution market
- Rates set by Michigan Public Service Commission

Power Prices Increasing

- MPSC approves DTE rate case
  - $184 million & 10.1% ROE in Jan 2016
  - $233 million & 10.3% ROE in Dec 2015

- Net income
  - 2014 - $905 million
  - 2015 - $727 million
  - 2016 - $868 million

Power Prices Increasing

- MPSC approves Consumers Energy rate case
  - $113 million & 10.1% ROE in Mar 2017
  - $165 million & 10.5% ROE in Nov 205

  - Net income
    - 2014 - $551 million
    - 2015 - $523 million
    - 2016 - $477 million

Power Prices Increasing

2015 Retail Electricity Price

Illinois - 12.5

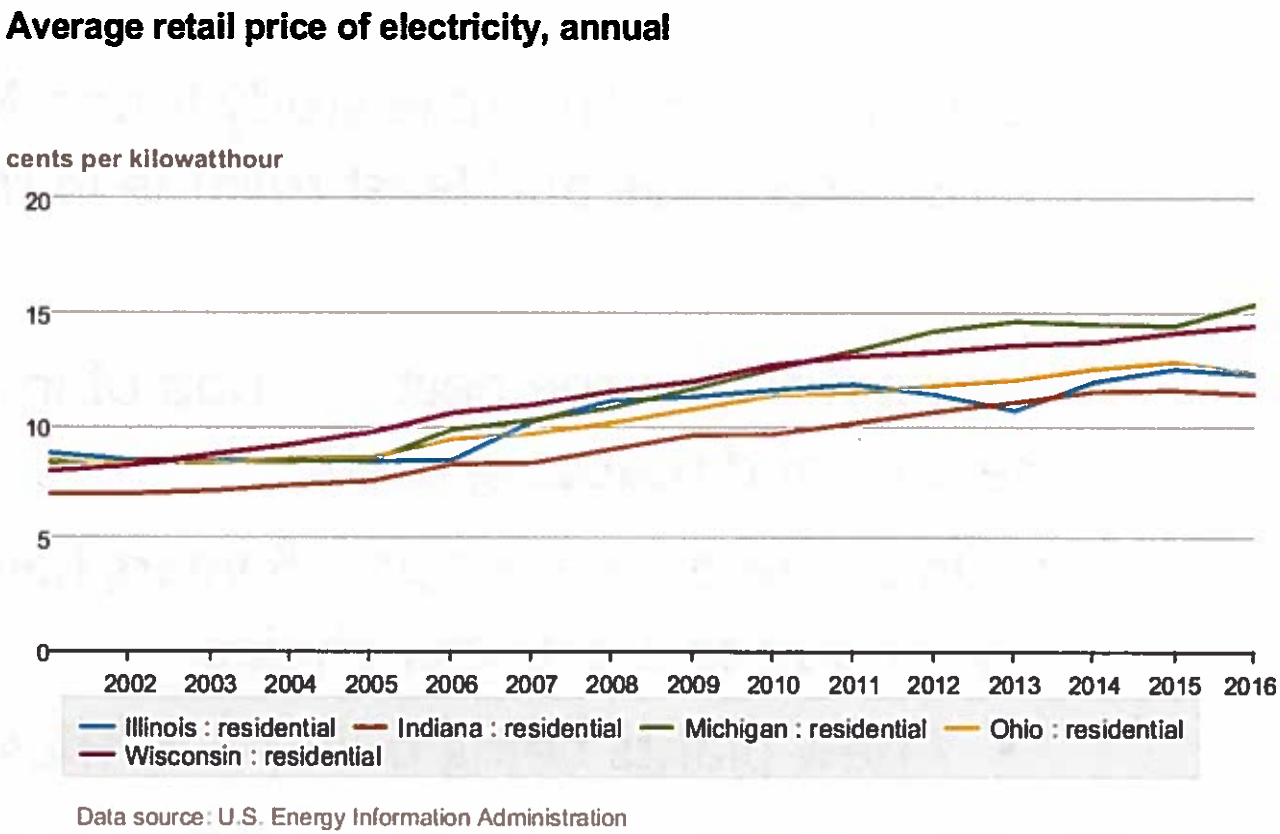
Indiana - 11.57

Michigan - 14.42

Ohio - 12.8

Wisconsin - 14.11

U.S. avg. - 12.65



Power Prices Increasing

- Gary Wolfram, Hillsdale study found MI electricity system most expensive and least reliable in the Midwest

- Competition is the best method of improving customer service and reducing costs
  - Ohio rate payers for past 5 years have saved ~$3 billion/ year due to electricity choice
    - 7 new plants being built / 1 of those being built by DTE

Electricity Choice saves public school $$

- Numbers familiar to the chair

- Bay City schools save $200,000 annually
- Oakland County schools save $500,000

- Midland schools prohibited by law from enjoying those same savings

Michigan Energy Legislation

- P.A. 341 & 342 of 2017 - passed Dec. 15, 2016
- Appears to protect "electricity choice" - but maintains 10% cap on choice
- Expands RPS to 15% by 2021

Michigan Power Shortages?

- 2015 - 2016 Many warnings about brown-outs and (possible) black outs
  - "System stability" a key reason for passage of PA 341 & 342

So why?…

- Planned coal plant closures - 2.2 GW
- Jan 2017 Palisades nuclear plant (800 MW) closure announced

Michigan: What's coming?

- DTE & Consumers Energy plan - "keep building renewables and … retire our coal fleet"
  - regardless of how regulations may change

State Reliability Mechanism

- MPSC - March 10 - Consumers Energy (Case No. U-18239) and DTE Electric (Case No. U-18248) directed to file applications by April 11 to implement an SRM
- "To address long-term adequacy of the state's electric resources."

- The reasonable question to ask is "Why have a 10% cap anymore?"

Time to Open Up the Market

- Dow Chemical 30% lower electricity rates than Hemlock semi-conductor
- Midland Cogeneration Venture must sell its electricity to Consumers and then Consumers marks up the price and sells to Hemlock
- Open the market - let MCV build lines to Hemlock

ENERGY

ENERGY, IT'S KIND OF IMPORTANT!

- Foundational resource
  - Direct linked to quality of life
  - Economic prosperity
  - Environmental improvement
- Global energy demand growing
- 1.2 billion lack access to electricity
- >2.7 billion still rely on solid biomass for cooking
- U.S. regulations driving energy costs higher

SIERRA CLUB: STOPPING ENERGY

Opposes

- Coal
- Nuclear
- New Large Hydro
- Incineration of Municipal Solid Waste
- Landfill Gas
- Natural gas
  - "use as little natural gas as possible … wean ourselves from most fossil fuels, including natural gas, as swiftly as possible and by no later than 2050"

Oppose 87-95%

Prefers

- Renewables, Distributed Generation - On & Offshore Wind,* Central Station Solar, Low-Temperature Geothermal
- Combined Heat and Power [not coal-based]

Acceptable

- New Small Hydroelectric Plants
- Ocean Energy Resources
- High Temperature Geothermal

Prefer or accept 5-13%

Source: Sierra Club 2015 Official Energy Policy Directive

* Must be "sustainable" - can't impact endangered species, etc.

NEWS > CALGARY

NEWS - Calgary

Calgary rec centre eyes turning off arena heaters due to carbon tax

Shawn Logan
Yesterday at 10:15 AM

Life in a CO_2 constrained world

"Hockey fans at a southeast recreation centre are being advised to bundle up and bring blankets to games as the non-profit facility looks at ways to cope with Alberta's new carbon tax."

Source: Calgary Sun 01/04/2017

WITHOUT FOSSIL FUELS

Compare - U.S.A.

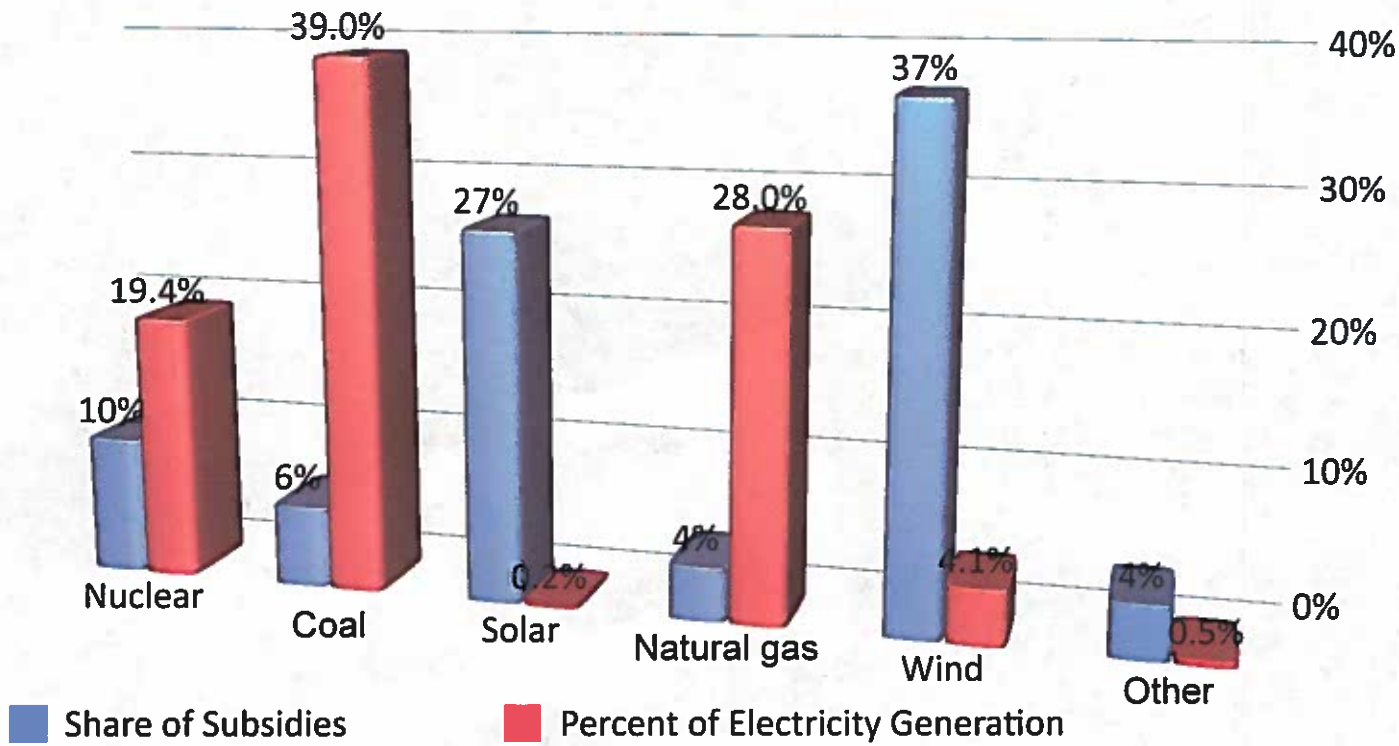
- ~35% energy from natural gas & ~35% from coal
- U.S. - 13.4 cents/kWh (2016)
- Detroit - 16.7/kWh

Germany & Denmark

- 39 cents/KWh
  - Massive wind & solar subsidies
  - Post -Fukishima opposition to nuclear
- **Built 10.7GW coal 2011-2015**

Source: EIA and Jo Ann Emerson, CEO NRECA

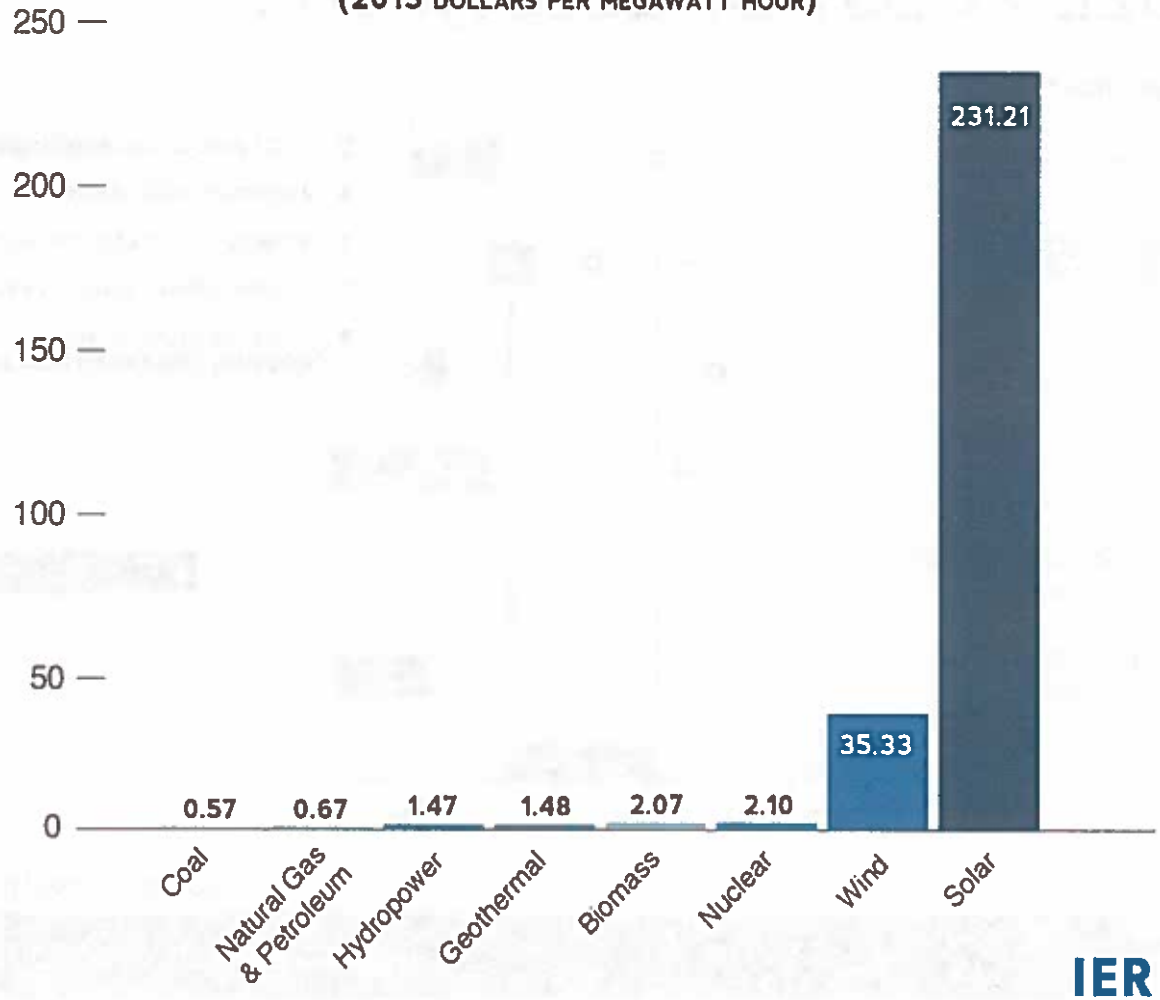
2013 ENERGY SUBSIDIES vs GENERATION



Source: US EIA, Utah University Institute of Political Economy, Strata Policy

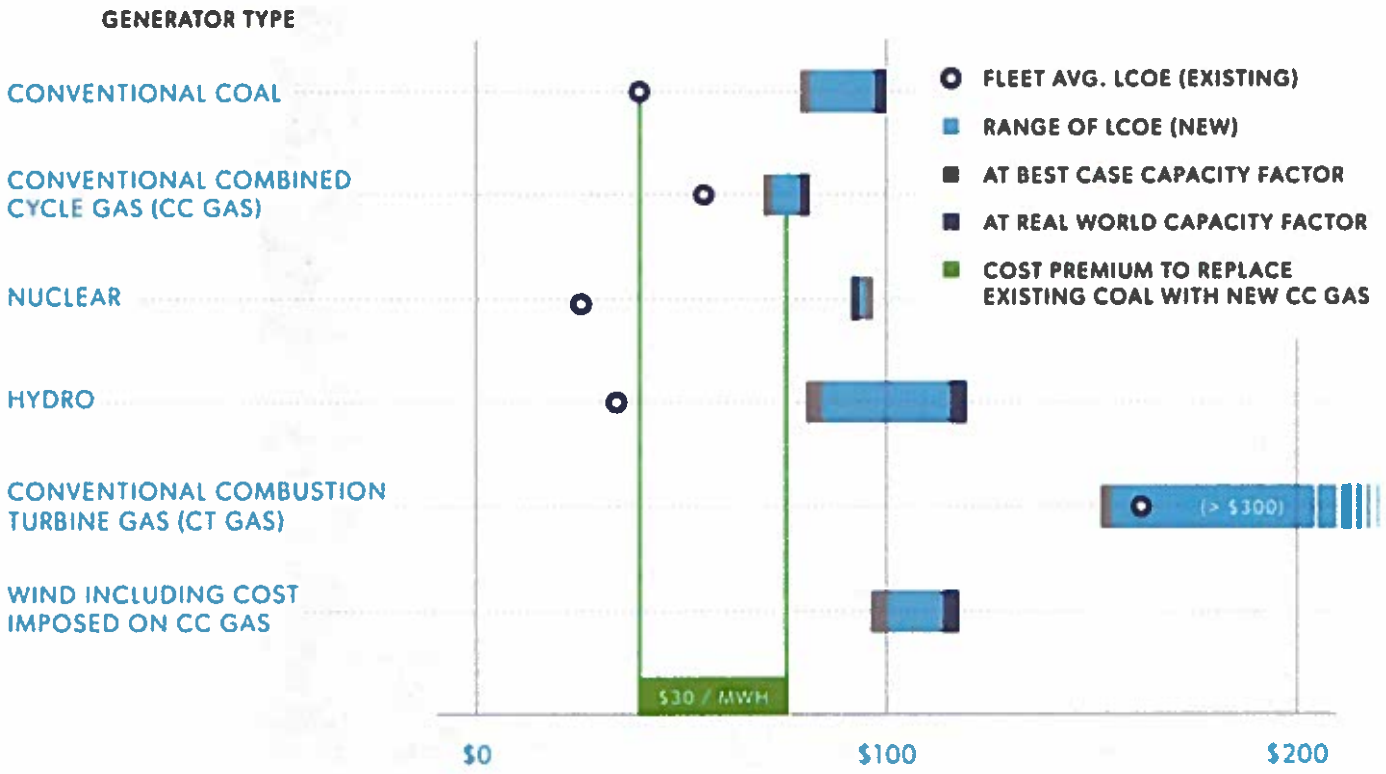
Federal Electric Subsidies Per Unit of Production, FY 2013

(2013 dollars per megawatt hour)

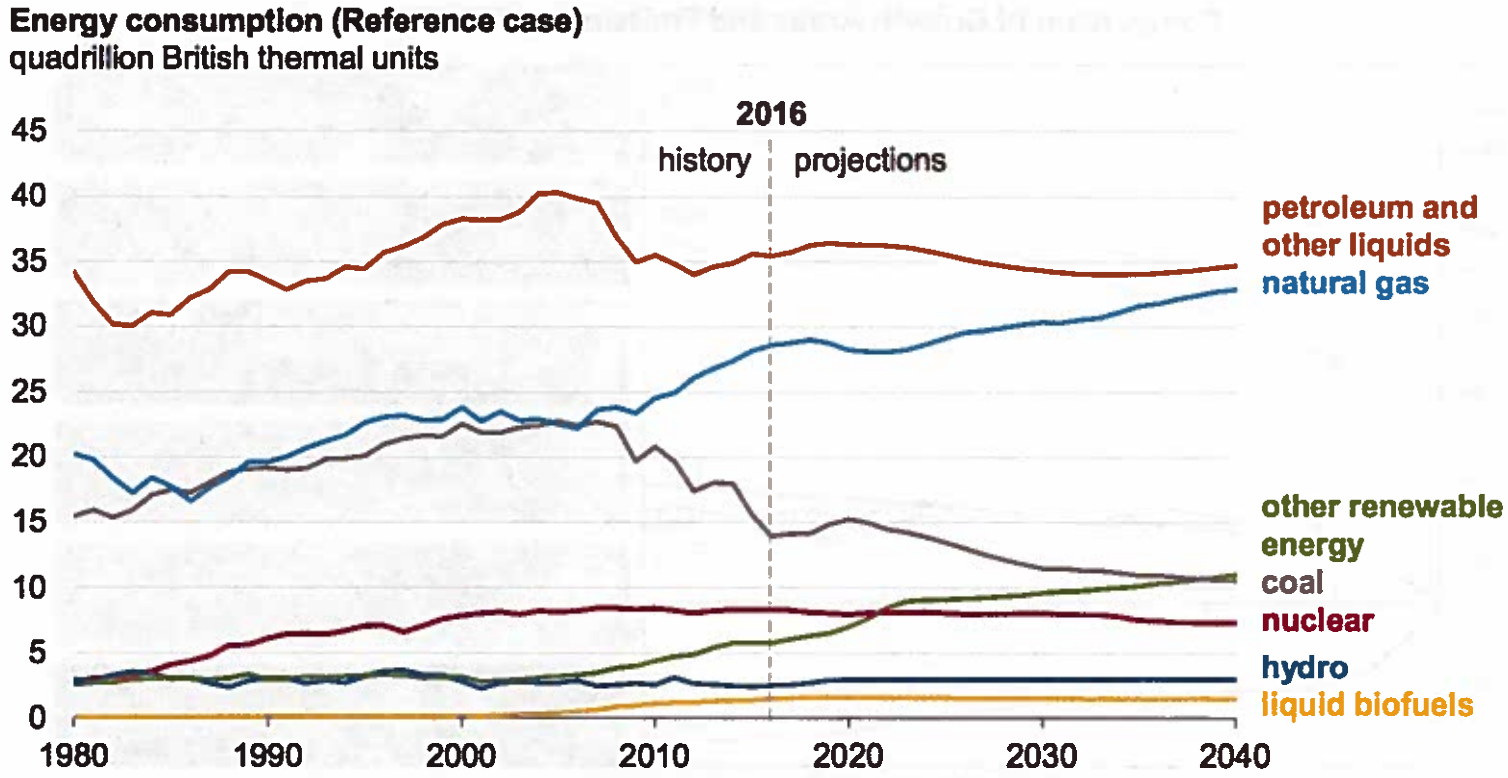


IER INSTITUTE FOR ENERGY RESEARCH

LEVELIZED COST OF ELECTRICITY



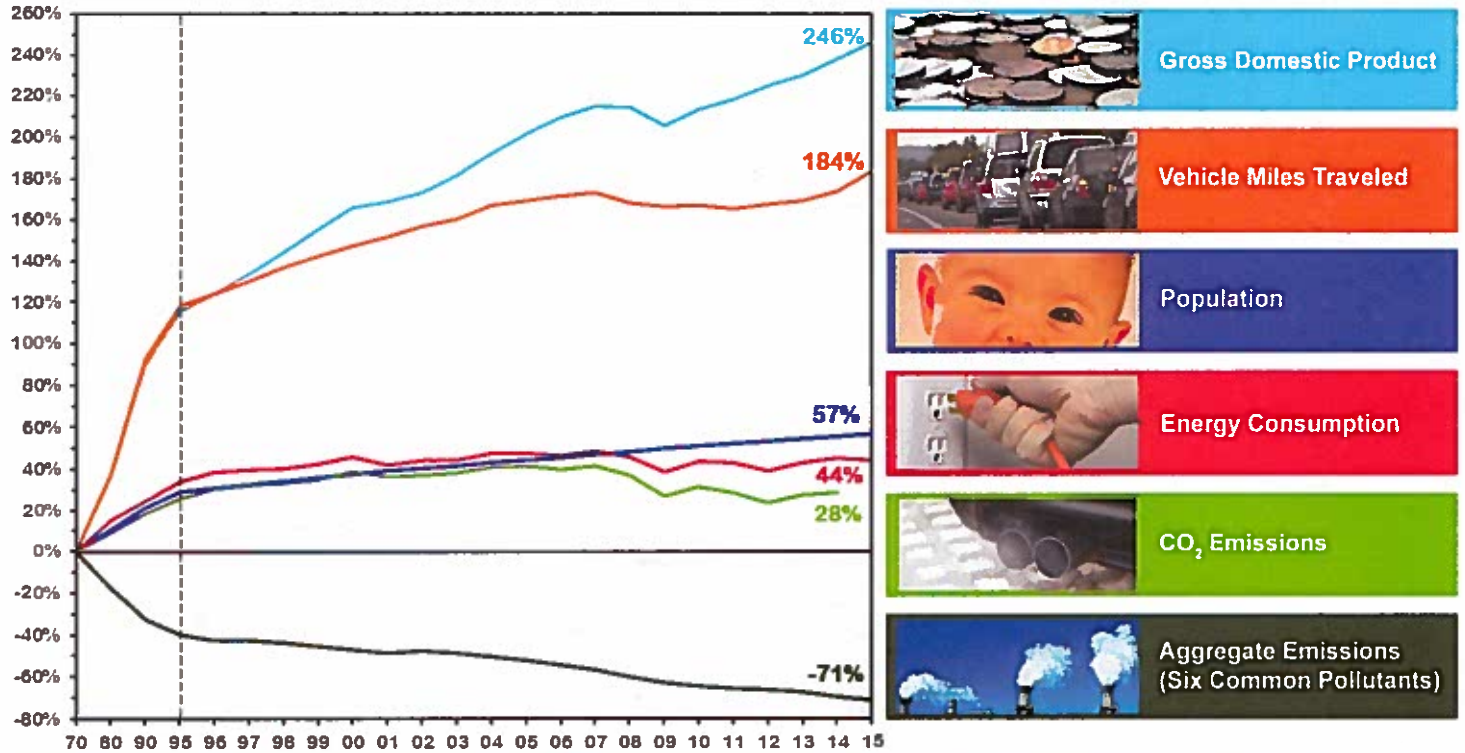
Source: Institute for Energy Research, 2015



Overall energy use flat

Source: EIA, Annual Energy Outlook 2017

Comparison of Growth Areas and Emissions, 1970-2015



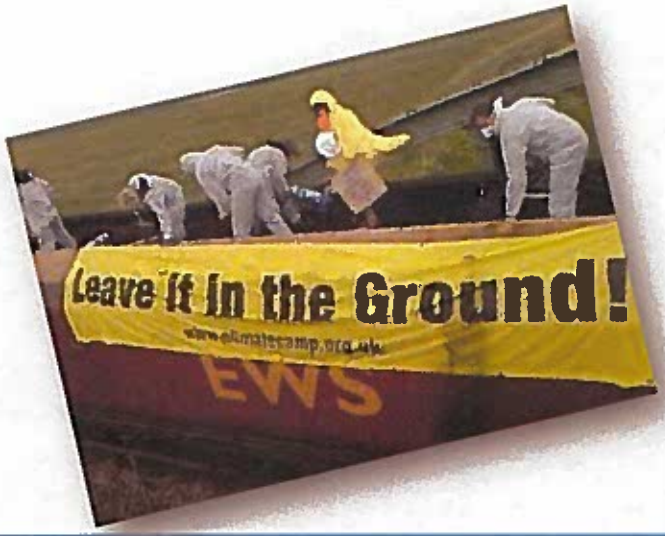
Source: EPA

All forms of energy have costs
Source: The Commentator

DEFINE BY NEGATIVES OR RECOGNIZE BENEFITS?

"The electric power industry has come to be defined by its discharge, rather than its product (electricity) and the benefits of electricity."

Jason Makansi, Pearl Street



THOUGHTS ON SUSTAINABILITY

"Building an environmentally sustainable future requires restricting the global economy, dramatically changing human reproductive behavior, and altering values and lifestyles. Doing this quickly requires nothing short of a revolution."

Lester Brown, founder Worldwatch Institute

"Current lifestyles and consumption patterns of the affluent middle class – involving high meat intake, the use of fossil fuels, electrical appliances, home and workplace air conditioning, and suburban housing – are not sustainable."

Maurice Strong former Secretary General of the UN Conference on the Human Environment
and the first executive director of the United Nations Environment Programme

THOUGHTS ON SUSTAINABILITY

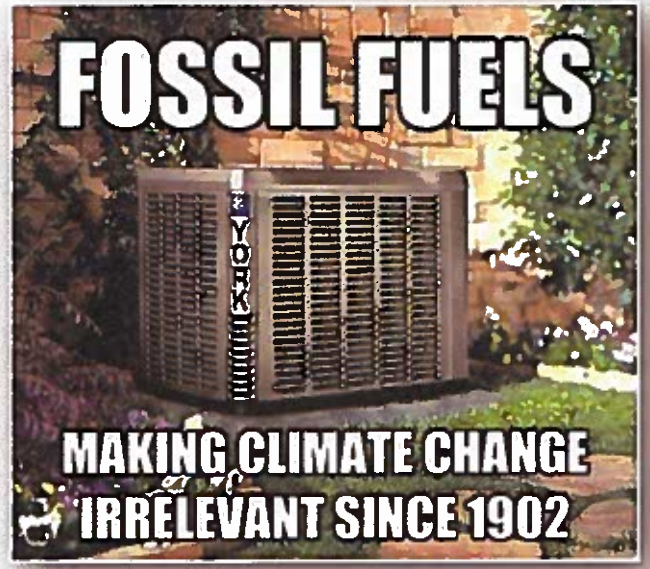
"Minor shifts in policy, moderate improvements in laws and regulations, rhetoric offered in lieu of genuine change, these are all forms of appeasement, designed to satisfy the public's desire to believe that sacrifice, struggle and a wrenching transformation of society will not be necessary."

Former Vice President Al Gore

A LITTLE PERSPECTIVE

"…**(CO2) benefits clearly outweigh any hypothesized costs by, literally, orders of magnitude: Anywhere from 50-to-1 to 500-to-1.** Normally, B-C ratios in the range of 2-to-1 or 3-to-1 are considered very favorable. In other words, the **benefits of CO2 overwhelmingly outweigh the estimated CO2 costs** no matter which government report or discount rates are used. In fact, any of the SCC estimates are relatively so small as to be in the statistical noise of the estimated CO2 benefits."

Bezdek, "Social Benefits of Carbon", 2014

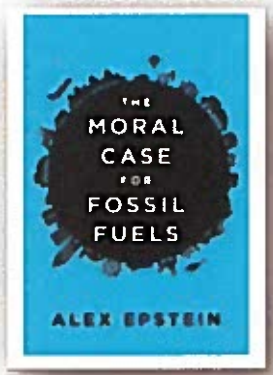


"Fossil fuels don't make a safe climate dangerous for humanity, they make a dangerous climate safe for humanity."

Alex Epstein, Center for Industrial Progress

The Moral Case for Fossil Fuels – Chapter One available for free!

http://www.moralcaseforfossilfuels.com/



WHAT DO YOU VALUE?

"How much do you value human life? …
The amount of carbon you use is directly proportional to the length and quality of human life. … When energy is affordable and available your people will live longer and better lives."

Climate Scientist John Christy, April 18, 2014 interview comments

A 'transmission line' for much of the world

Source: Frank Clemente, Penn State

Jason Hayes, M.E.Des.

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