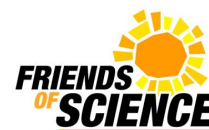


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“Post Paris: Climate Talks and Geopolitics”

A TRIO OF PAPERS ON THE SOCIO-POLITICAL AND ECONOMIC FACTORS
DRIVING THE CLIMATE CHANGE GRAVY TRAIN

By William Kay | A Triptych of Socio-Political Influences | December 21, 2015



A Primer for the Paris Climate Talks

By William Kay

Intro

From November 30 to December 11, 2015 the Parisian suburb of Le Bourget hosted the \$180 million dollar United Nations Framework Convention on Climate Change Conference of the Parties. “COP21” induced spectacular displays of eco-activist anguish, round-the-clock political wrangling, and unprecedented global warming media hype. The following articles may serve as an interpretive guide to what it was really all about.

Part I - “Climate Change and European Energy Independence” pivots on a 200-page analysis of the world’s energy industry by the International Energy Agency; a document prepared as a reference text for COP21 delegates. This document, and certain communiques from the European Union, expose with surprising candidness the main motive behind the Climate Change campaign. Europe is regularly importing over \$500 billion a year worth of fossil fuels from economic rivals who also enjoy cheaper energy costs due to their natural fossil fuel endowments. Forsaking fossil fuels is an existential struggle for Europe.

Part II - “Big Climate” profiles the climate-industrial complex that has emerged in response to the subsidies and incentives lobbied into place by Climate Change campaigners. Tens of thousands of businesses build and install wind turbines, solar panels, electric vehicle chargers, and bio-fuel digesters etc. Best estimates place the climate-industrial complex’s revenues in the \$1.5 trillion a year range. This commercial activity simply would not exist but for the Climate Change campaign.

Part III - “A Tale of Two Places” compares how the Climate Change campaign impacts fossil fuel rich Alberta and fossil fuel poor Denmark.

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Climate Change and European Energy Independence

Climate Change and European Energy Independence

The International Energy Agency's (IEA) 200-page World Energy Outlook Special Report (2015) is a must-read for COP21 negotiators. This was certainly its authors' intent:

“This World Energy Outlook Special Report has the pragmatic purpose of arming COP21 negotiators with the energy sector material they need to achieve success in Paris in December 2015.” (1)

The authors, IEA's Directorate of Global Energy Economics, toiled under the glare of a seven-member High-Level Advisory Panel whose most notable member was France's Climate Negotiations Ambassador. One of his co-panelists was Environmental Defence Fund's Fred Krupp.

Additional input came from 76 outside experts drawn from three types of organizations:

- a) Environment and Energy & Climate Ministries of IEA countries;
- b) Corporations such as Vestas, Volkswagen, Shell, Deutsche Bank, Toshiba, Siemens, Munich Re, Toyota and Electricity de France; and
- c) Enviro-movement pillars like Natural Resources Defence Council, World Wildlife Fund, United Nations Environment Programme, Climate Works Foundation, and European Climate Foundation.

Big Green doesn't get any bigger.

IEA is a Paris-based think-tank employing 240 modelers, statisticians, energy experts and support staff. IEA answers to its 29 member countries all of whom belong to the 34-member Organization for Economic Cooperation and Development (OECD). (The same two

dozen European countries constitute the core and bulk of the European Union and NATO.)

IEA was established within the OECD framework in 1974. Its founders were overwhelmingly concerned with stockpiling oil and otherwise confronting supply shortages resulting from the “energy crisis.” Although no one was yet speaking of Global Warming, the early shoots of the Climate Change campaign can be seen in IEA’s founding charter. Article 41 states:

The Participating Countries are determined to reduce over the longer term their dependence on imported oil for meeting their total energy requirements. (2)

Article 42 empowered an IEA Standing Group to report on “*conservation of energy*” and “*reducing the growth of energy consumption.*” This Group was further mandated to look into “*alternative sources of energy.*” Designated ‘alternatives’ consisted mainly of nuclear and hydro power, and domestically produced fossil fuels; however the Standing Group was also instructed to research: solar energy, hydrogen fuel, and power from municipal waste. (3)



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Over the years IEA narrowed and greened its permit. It now promotes energy security amongst member countries through coordinated responses to supply disruptions AND through researching “clean” energy.

IEA’s greening is confirmed by its affiliates: the International Low Carbon Energy Technology Platform, the Renewable Industry Advisory Board, and the Energy Business Council (EBC). One of EBC’s 89 members is the World Council on Sustainable Business Development (WCSBD). Most EBC members also belong to the 200-member WCSBD. Half of WCSBD’s members are giant European multinationals like BMW, Daimler, Volkswagen, Siemens, Total, Shell, Statoil, and BP etc.

IEA’s definition of “energy security” was tweaked to eschew reliance on energy sources deemed incompatible with international environmental requirements. Nevertheless, old-school “energy security” concerns constitute a *Special Report* motif; for instance:

“The dependence of countries on fossil fuel imports is one indicator of energy security. In 2013, the European Union spent around \$555 billion on the import of fossil fuels...” (4)

The authors exquisitely betray themselves in an obiter paragraph beginning:

“Japan’s dearth of domestic fossil-fuel resources has underlain its long-standing focus on energy efficiency and relevant policy actions have put Japan among the world’s leaders.” (5)

The paragraph goes on to warmly reminisce about Japan’s frantic exertions during the 1970s; its mandatory energy management protocols for industry and its stringent conservation efforts in road transport, before concluding:

“Actions across sectors that help to reduce Japan’s fossil-fuel demand bring benefits not only in terms of emissions, but also in terms of energy security...” (6)

Two points leap out. First, substitute the word “Europe” for “Japan” in the above quotes and both statements remain true. Second, this war-like effort to conserve energy and subsidize alternatives predates the Climate campaign by a decade.

(Japan remains in the same boat as the EU, with a 2013 fossil fuel import bill of \$259 billion.) (7)

Energy security concerns re-appear in the introductory section of the EU’s 2014 Climate and Energy Framework communique:

“Fossil fuel prices remain high which negatively affects the Union’s trade balance and energy costs. In 2012, the EU’s oil and gas import bill amounted to more than 400 billion euros or approximately 3.1% of the Union’s GDP... industrial users are increasingly concerned by rising energy prices and price

differentials with many of the Union's trading partners most notably the USA." (8)



Not only is Europe hemorrhaging cash; this cash is flowing to their economic rivals. Moreover, the hydrocarbon-fueled economy creates an uneven playing field whereupon Europe's rivals enjoy lower costs. If hydrocarbons continue to fuel the world then Europe is doomed to second-tier status.

Such dreads surface again in the European Commission's "Energy Security Strategy" webpage which commences:

"The European Union imports more than half of all the energy it consumes. Its import dependency is particularly high for crude oil (more than 90%) and natural gas (66%). The total import bill is more than 1 Billion Euros per day." (9)

Topping their list of solutions:

“Increasing energy efficiency and reaching the proposed 2030 energy and climate goals. (10)

In other words, solving Europe’s fuel problem requires implementing the global Climate Change agenda. Remarkable coincidence.

The *Special Report* compares three scenarios:

- a) The Intended Nationally Determined Contributions (INDC) Scenario is based on pledges that have been, or are likely to be, submitted by the countries attending COP21;
- b) The 450 Scenario is an environmentalist wish-list allegedly capable of keeping atmospheric CO₂ concentrations below 450 ppm;
- c) The Bridge Scenario is a compromise platform between the other two. The Bridge Scenario is endorsed by the *Report’s* authors.

The key Climate policy involves placing punitive levies on the consumption of hydrocarbon fuels and the channeling of the subsequent revenues toward fuel substitution and renewable electricity. In the INDC Scenario the price of CO₂ emissions in the EU increases from \$8/tonne to \$53/tonne (in constant 2013 dollars) by 2030. In the 450 Scenario carbon pricing spreads out from Europe across OECD countries and rises to \$140/tonne by 2040.

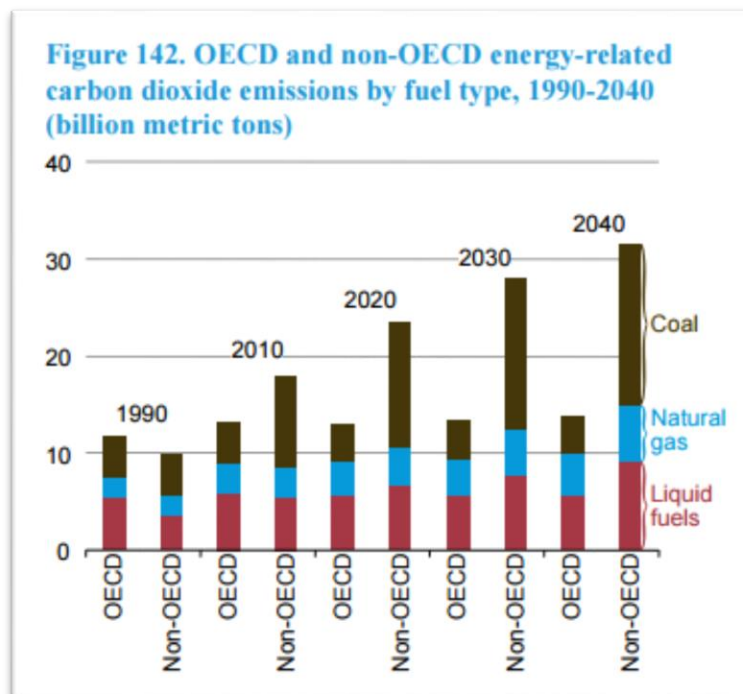
The Bridge Scenario phases out economical coal-fired power plants and jacks-up global investment in renewable electricity generation from \$270 billion to \$400 billion per year by 2030! (11)

In the INDC Scenario fuel import bills for most industrialized countries stabilize by 2030. In the Bridge Scenario fuel import bills are even lower. The Bridge Scenario would reduce EU fuel imports by \$60 billion per year compared to INDC Scenario.

The *Special Report* mentions other advantages of climate action; over and above saving the Earth:

“The adoption of energy efficiency measures offers a wide range of benefits, well beyond their contribution to climate policies. These benefits include increases in disposable income and improved industrial productivity (with positive effects for economic growth), improved local air quality (with associated health benefits) and poverty alleviation.” (12) (Emphasis added.)

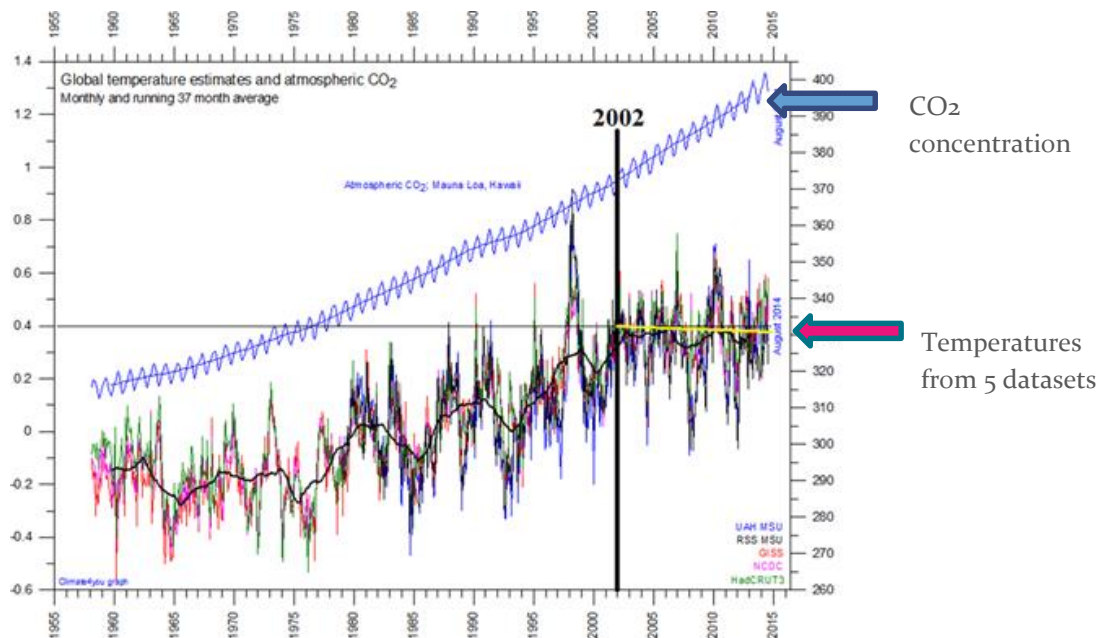
Elsewhere the *Special Report* hypes collateral Climate action benefits such as: improved standards of living, cost savings, and enhanced industrial competitiveness. Said benefits accrue only to chronic fuel importers.



Europe is the main beneficiary of the Climate campaign. Unsurprisingly, Europe leads the implementation of the Climate agenda. Most COP21 participants have done nothing on this file beyond promulgating non-binding platitudes and begging for handouts. Europe, on the other

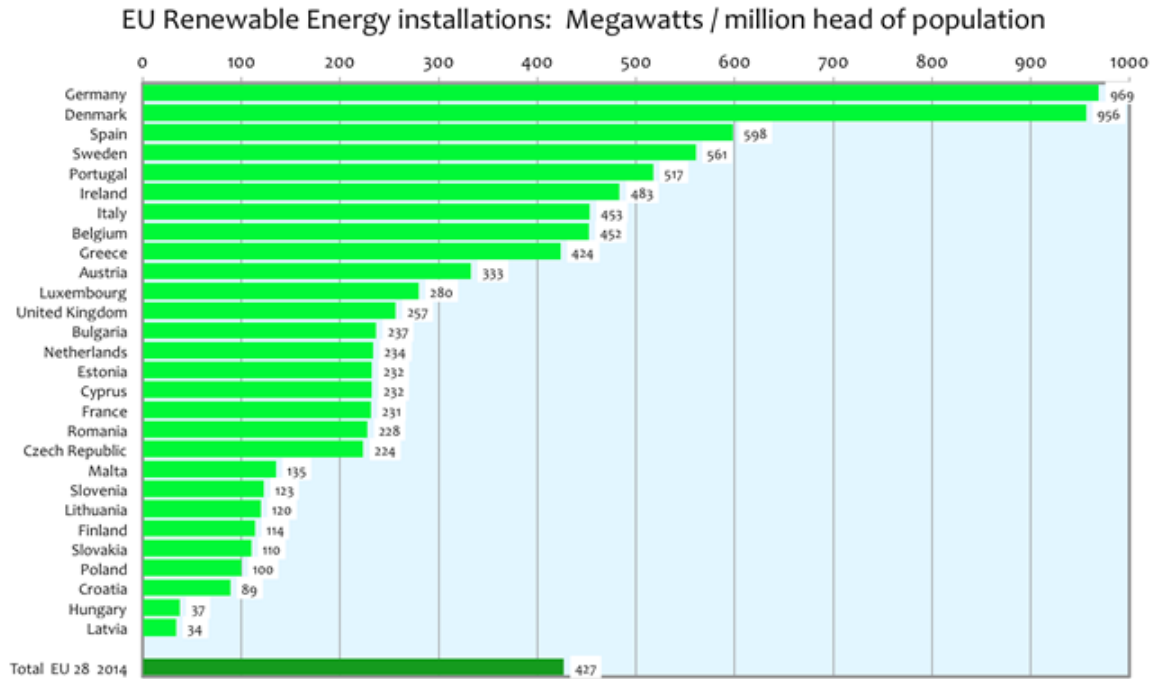
hand, is well into the midst of re-engineering its entire fuel and electrical system through a maze of carbon markets, capital grants, tax breaks, production subsidies, fuel taxes and performance standards.

Since 1990, despite Global Warming hysteria, global industrial emissions of the demonized greenhouse gases have risen 50%. Even in erstwhile climate concerned countries like the USA and Japan emissions increased. Only in Europe have emissions been proactively reduced. The coveted decoupling of economic growth from emissions growth occurred only in Europe. (13)



Europeans held the line on residential electricity demand over the last decade partially due to mandated efficiency improvements of appliances and heating equipment. (14) This sweeping program of planned obsolescence intensified after the 2012 passage of the EU’s Energy Efficiency Directive (EED). The EED imposes minimum energy use standards on boilers and household appliances. The EED makes smart meters, and stringent eco-labeling, obligatory. Every EU member must transpose the EED into enforceable national legislation. The EU’s INDC pledge presumes that EED models of pumps and fans etc will be, on average, 30% more efficient than current models.

The Energy Performance of Buildings Directive (2010) requires energy performance certificates be attached to all building sale and rental advertisements. Government incentives and penalties will ensure that all buildings constructed post-2020 are zero-energy. Compulsory heating and cooling system audits enforce minimum energy performance requirements.



Power prices skyrocket in countries with the most renewable energy

The Renewable Energy Directive (2009) stipulates that 20% of the EU’s energy must come from renewables by 2020. Individual country targets are as high as 49% (Sweden). As of 2012, 44% of the world’s renewable (non-hydro) electricity capacity sat on EU soil. (15) Only two places can manage high proportions of intermittent renewables: the EU and India.

The value of the EU’s Emissions Trading System surpasses the value of all other carbon markets in the world combined. (16) In 2015 the EU announced plans for a reserve fund to buy surplus allowances to bolster carbon prices.

The IEA’s *Special Report* boasts:

“The EU has been a leading proponent of policies to increase efficiency and reduce emissions in the transport sector, such as through increasingly strict fuel-economy standards and policies to encourage modal shifts for passengers and freight.”
(17)

The amount of oil used for transport in Europe has declined since 2007. (18) This happened nowhere else. All EU countries’ transport systems must be 10% renewable-powered by 2020. In only three places do biofuels constitute a significant proportion of the fuel supply: the EU, USA and Brazil.

Europe leads the transition to electric vehicles. In Norway electric vehicles make up 12% of new car sales (19). Electric vehicle fleet purchases by European taxi, bus and delivery companies are increasing. The largest fleet is owned by France’s nuclear behemoth, EDF. In 2014 the EU double-downed on its commitment to build alternative transport infrastructure, especially battery charging stations.

European COP21 pledges are by far the most ambitious. Their pledge to cut emissions by 40% by 2030 (relative to 1990 levels) will make the EU the world’s least carbon-intensive modern economy. The only other countries with similarly ambitious pledges are Switzerland and Norway.

Currently, EU’s electrical generating capacity is 11% wind and 7% solar. They pledge to change this to 23% wind and 12% solar by 2030. (20) Renewables (including hydro and bioenergy) will account for over half the EU’s generating capacity by 2030. Coal-fired capacity will decline 40% (however gas-fired capacity will increase 33%). (21)

The EU promises to invest \$50 billion per year in renewables – mostly to wind power. By 2030 the EU will be investing an additional \$30 billion per year upgrading and expanding its electricity transmission network, largely to accommodate renewables. (22)

In contrast, China and India are not planning to reduce fuel consumption at all. They are unlikely to even reduce the annual rates at which their fuel consumption is growing.

The *Special Report* presumes the electricity and fuels revolution will take hold in Europe then, in imperial fashion, spread across the globe. Europe will pioneer this transformation then commercially exploit their first-hand know-how as they impose the new techno-infrastructure upon the world.

Climate Change is a ruse.

Big Climate

SIZING UP THE CLIMATE-INDUSTRIAL COMPLEX -A MESSY BUSINESS



Contributed By William Kay @2015



Big Climate

William Kay

From outer space the 1990s must have looked like the decade when Earth grew a fungus of wind turbines. The outbreak began in and around Germany then spread across the globe. The following decade brought a rash of solar farms proliferating along the same pattern as the turbines. Such are the manifestations of the climate-industrial complex's climb.



Sizing up the climate-industrial complex is a messy business. The digit currently bandied about the internet is \$1.5 trillion a year. This particular quantum traces back to gleanings from *Climate Change Business Journal*, a project of Environment Business International (EBI). One emphasizes “gleanings” because EBI’s full explications are buried in \$4,000 reports. Their website graciously tosses out a few freebee factoids that enviro-sceptics brandish like medallions but about which subscribing environmentalists seldom breathe a word.

\$1.5 trillion a year

The \$1.5 trillion estimate comes with uncertainty for several reasons.

1. The climate complex contains multiple industries operating in dozens of currency zones.
2. Climate industries' revenues are inconsistently provided in wholesale or retail prices and these prices are always warped by governments.
3. Tallying both carbon trading flow-throughs and renewable investments may lead to double counting.
4. Double counting may occur as revenues accrued by renewable energy producers are re-invested into renewable infrastructure.
5. Determining what activities rightly belong within the climate-industrial complex is problematic.

An example of the latter conundrum is the natural gas industry in the USA where switching from coal-fired electrical generation to gas-fired generation is an act of climate rectitude. Yet, in countries like Algeria electricity has always been gas-powered for reasons that have more to do with proximity to gas deposits than combatting Global Warming.

In any event, EBI's grand tally jibes well with figures from United Nations Environment Programme (UNEP), International Energy Agency (IEA), International Renewable Energy Association, Energy Information Administration and renewable energy associations. UNEP recently pegged the global market in "low carbon and energy efficient products" at \$700 billion per year (a volume UNEP hopes will balloon to \$2 trillion by 2020). (1) However, their conception of climate industry is narrower than EBI's.

EBI's climate industry has 9 sectors and 38 sub-sectors. "Climate consulting" alone is a \$1.9 billion per year affair. The key climate sub-sectors are: wind turbines, solar photovoltaics (PV), bio-fuels and electrical vehicles. (2)

The climate complex's COP21 position, the Bridge Scenario

The climate complex's COP21 position, the Bridge Scenario, would have governments facilitate increases in annual investments in renewable electrical generation from today's \$285 billion to \$400 billion by 2030. Much of this will go toward wind and solar power. These investments will be marshalled via feed-in tariffs, feed-in premiums, tax credits and subsidies etc. (3)

The Bridge Scenario will benefit Denmark's Vestas. This corporation pioneered modern wind turbine technology in the 1970s when national energy independence, not Climate Change, was the rationale for government preferment. Vestas has since built and installed 43,000 turbines around the world. (4)



"Turbine Blade Convoy Passing through Edenfield" by Paul Anderson.

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https://commons.wikimedia.org/wiki/File:Turbine_Blade_Convoy_Passing_through_Edenfield.jpg#/media/File:Turbine_Blade_Convoy_Passing_through_Edenfield.jpg

The wind boom began January 1, 1991, when Germany's Electrical Feed Act took effect. This Act forced grid operators to make priority purchases from local renewable power producers. Consumers then had to pay premium prices for this electricity. The German state-owned bank, KfW, made low-interest loans readily available to rural land-owners wishing to install wind turbines.

The first towering 1 megawatt (MW) wind turbine was completed by the German firm, Nordex, in 1995. Today, a typical utility-scale turbine is in the 1 MW to 3 MW range. They can be purchased and installed for \$3 to \$4 million. (5)

Nordex and two other German corporations (Enercon and Siemens) have built and installed 50,000 wind turbines (20,000 in Germany). Other top wind turbine manufacturers are Mitsubishi, and two Spanish and two Chinese firms. USA's largest wind turbine manufacturer, GE, has 16,000 units to its credit. (6)

By 2010 global investments in wind power had surpassed \$70 billion a year. (7) Between 2000 and 2014 wind capacity increased from 17,300 MW to 369,600 MW. (8) This translates into 200,000 towering turbines. During these years USA went from hosting a few thousand 1 MW turbines to hosting 30,000 larger models. (9) Wind energy's manufacturing division employs 20,000 American workers at 500 factories. The total number of wind jobs in the USA is 73,000. (10)



"Toro de Osborne" by Jesus Martinez - Toro de Osborne.

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Solar PV experienced even more dramatic growth

Solar PV experienced even more dramatic growth. Between 2000 and 2014 global installed capacity of PV panels exploded from 1,000 MW to 175,000 MW. (11) USA's solar capacity expanded from 18 MW to 12,000 MW. (12)

Annual investments in solar PV now hover around \$100 billion. (13) PV panels may end up on the rooftops of suburban "prosumers" (homeowners who buy and sell power) or among sprawling arrays on solar farms. Sunpower Inc.'s 579 MW Solar Star facility in California spreads 1.7 million panels over 13 square kilometres.

Europe's climate gnomes underestimated Asia's manufacturers. Chinese PV production increased 80-fold between 2000 and 2010. Most PV production is now done in China, Taiwan and South Korea. While the lower prices helped the industry, European plans of being the PV suppliers to the world have been shelved.



*"Electrical and Mechanical Services Department Headquarters Photovoltaics"
by WiNG - Own work.*

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https://commons.wikimedia.org/wiki/File:Electrical_and_Mechanical_Services_Department_Headquarters_Photovoltaics.jpg#/media/File:Electrical_and_Mechanical_Services_Department_Headquarters_Photovoltaics.jpg

Global annual biofuel (ethanol and bio-diesel)

Global annual biofuel (ethanol and bio-diesel) revenues exceed \$80 billion (14). Biofuel production and consumption are concentrated in Europe, Brazil and the USA. In 2014 USA ethanol sales totalled 13.4 billion gallons, at \$1.50 a gallon. (15).



"Combine-harvesting-corn" by Unknown (USDA)

<http://www.usda.gov/oc/photo/95cs2504.htm>

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<https://commons.wikimedia.org/wiki/File:Combine-harvesting-corn.jpg#/media/File:Combine-harvesting-corn.jpg>

Absent the climate regulations that force gasoline and diesel retailers to blend bio-fuels into their products, the bio-fuel industry would not exist. These regulations not only subsidize farmers, they sustain a mini-industrial complex that builds and installs bio-fuel refining, shipping and storage equipment.

The electric vehicle (EV) industry

The electric vehicle (EV) industry is important mainly for its potential. Worldwide sales of EVs (plug-in hybrids and battery-electric vehicles) hit 320,000 in 2014; less than 1% of new car sales (16). At an average price of \$30,000 per car this comes to \$10 billion; enough to attract offerings from Nissan, Toyota, Ford, GM, Mitsubishi and VW. (17)



"Nissan Leaf and Tesla Model S in Norway cropped" by Norsk Elbilforening –

This file was derived from Nissan Leaf and Tesla Model S in Norway.jpg.

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https://commons.wikimedia.org/wiki/File:Nissan_Leaf_and_Tesla_Model_S_in_Norway_cropped.jpg#/media/File:Nissan_Leaf_and_Tesla_Model_S_in_Norway_cropped.jpg

These firms are more interested in getting in on the ground floor of a transportation transformation. IEA predicts annual EV sales of 80 million units by 2040. By then Europe's roads will be 100% traversed by EVs while the American, Chinese and Indian car markets will be EV-dominated. (18)

Phasing out the internal combustion engine requires a massive expansion of the re-charging infrastructure, especially fast chargers. (Slow chargers take 8 hours to charge up a car.) IEA bemoans how our planet only has 15,000 fast chargers while the USA alone has 120,000 gasoline stations (19). Thus, another mini-industrial complex is born i.e. building and installing fast chargers. IEA presumes spending on re-charging stations will soar to \$20 billion a year by 2040.

Other notable climate-industrial complex sub-sectors

Other notable climate-industrial complex sub-sectors include: carbon emission trading, smart meters, gas-fired electricity, green buildings and energy efficient appliances.

Carbon emission trading exchanges, and/or carbon taxes schemes with revenues earmarked for green investment, exist or are planned in 39 national and 23 sub-national jurisdictions. (20)

The intermittent nature of renewable electricity, and the needs of prosumers, necessitate a new generation of meters. The EU hath decreed a roll-out of 200 million “smart meters.” Installation should be nearly completed by 2020 at a cost of \$40 billion. (21) As renewable electricity goes global so will smart meters; at least so hope the meter mongers.

Because burning natural gas releases 40% less CO₂ per unit of heat energy than coal, gas is pitched as the climate-friendly fuel. Gas producers, like BP and Shell, and gas generator manufacturers, like GE and Siemens, have gamed gas’s climate-friendly status into capturing market share from coal.

One of the climate-industrial complex’s largest sectors, “green building and retrofitting,” equips buildings with energy saving features while relying heavily on tax incentives and government rebates.

Climate-friendly home appliances are marketed, particularly in Europe, in lockstep with government imposed energy-use minimums. As was seen with the phase-out of incandescent light bulbs, these policies front sweeping programs of consumer-be-damned planned obsolescence.

*

The term “complex” implies a confluence

The term “complex” implies a confluence of commercial, governmental and non-governmental organizations (NGOs). Prominent among climate-industrial NGOs are IEA’s 89-member Energy Business Council and the 200-member World Business Council on Sustainable Development (WBCSD). (Additionally, IEA recently made a cryptic reference about an unnamed coalition of 1,450 corporations that by 2013 owned \$170 billion in low-carbon investments.)(22)

WBSCD members include: GM, Du Pont, 3M, Nestle, Coca-Cola, Sony, Honda, Mitsubishi, Nissan, BMW, Daimler, Volkswagen, Siemens, Ford, Total, Statoil, BP, and Shell etc. In 2014 they had combined revenues (from all lines of business) of \$8.5 trillion. They have 19 million employees. (23)

WBCSD’s Global Network initiative pulls together 70 national and regional alliances (representing 35,000 businesses) in order to “*enhance WBCSD’s influence with governments.*” (24)

Not all WBCSD’s green activism relates to climate but their two busiest offshoots are the Low Carbon Technology Partnership Initiative and the Climate and Energy Cluster. WBCSD will lead the business discussions at COP21 at a parallel conference with a full itinerary. Their contributions are endorsed by the French Presidency.

Also in preparation for COP21, the Obama Administration, on October 19, 2015, unveiled its ‘American Business Act on Climate Pledge’ with 81 corporations vowing to save the climate. These firms collectively employ 9 million Americans and reap combined annual revenues of \$3 trillion. Berkshire Hathaway pledged to double its \$15 billion renewables portfolio. Goldman Sachs boasted of arranging \$33 billion in solar, wind and smart grid financing since 2012. (25)

Another set of climate NGOs

Another set of climate NGOs, like World Council on Renewable Energy (WCRE), focus on academia and governments. Seven WCRE directors head-up coalitions such as American Council on Renewable Energy and the Japan Renewable Energy Foundation. WCRE's executive chairman, Dr. Harry Lehmann from Germany's Federal Environment Agency, is a top Eurosolar officer as are 5 WRCE directors. (26)

Eurosolar began life in 1988 as the European Association for Renewable Energy before morphing into an alliance of 13 national associations. Eurosolar helped found IRENA (International Renewable Energy Association). The concept of a global renewable energy think-tank originated at the 1981 UN Conference on Renewable Sources of Energy. Eurosolar vigorously pushed this concept at the 2004 International Conference for Renewable Energy, but it was not until after the 2009 International Parliamentary Forum on Renewable Energy that IRENA emerged. (27)

None of these NGOs are large. The central Eurosolar organization has 7 employees. IRENA has a staff of 20 who compile data and hold conferences. Climate NGO's influence results from there being hundreds of such groups tightly integrated with one another and with industry, academia and government.

This organizational structure of coalitions of coalitions

This organizational structure of coalitions of coalitions re-occurs at the industry association level. Half of the World Wind Energy Association's (WWEA) 100 members are national associations with scores of member organizations of their own. The other half are interlocking university and government research agencies.

The collective function for all such groups is lobbying for: a) government policies guaranteeing the profitability of renewable energy and; b) government subsidies for renewable energy research.

Worldwide government funding for renewable energy research and development is around \$40 billion a year. (28) One example (of hundreds) is the USA's National Renewable Energy Laboratories which rakes in around \$400 million a year in taxpayer largesse. (29)



"NREL" by Courtesy of DOE/NREL –Timmerman, Bill

http://www.nrel.gov/data/pix/searchpix.cgi?display_type=verbose&max_display=1&skip_hf=1&query=^14964 Licensed under Public Domain via Commons - <https://commons.wikimedia.org/wiki/File:NREL.jpg#/media/File:NREL.jpg>

The climate lobby takes many forms

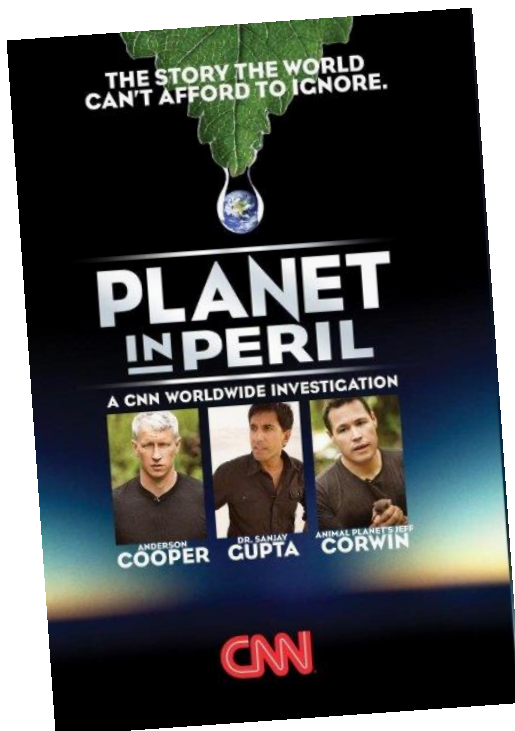
The climate lobby takes many forms:

By 2009 US enterprises with climate-related investments had 2,430 professional lobbyists on their payrolls; a three-fold increase since 2004. (30)

The American Wind Energy Association recently mobilized 2,000 enterprises to lobby for an extension of the wind production tax credit.

The UK subsidiary of the German conglomerate, RWE, bankrolled a 'Climate Cops' program whereby elementary schools students were equipped with police officer style notepads so they could issue citations to energy wasting family members. (31)

Vestas paid for CNN's "Planet in Peril" documentary series. (32)



In a sweeping four-hour documentary about the threats to the world's environment, Planet in Peril takes viewers to places where environmental change is not a theory or just a future forecast, but a crisis happening in real time.

Vestas's patronage notwithstanding, the climate lobby's media influence is usually more subtle. The names of media giants, including ones with obvious green bias, do not appear on corporate climate

activist lists; the exceptions being New York Times, Walt Disney and Bloomberg.

Neglected is the fact that climate activist corporations are major advertisers. Ten of the world's top 25 advertisers figure prominently on climate-industrial lists. Toyota, L'Oréal, GM, Coca-Cola, Volkswagen, Nestle, Ford, Proctor & Gamble, Sony, and Nissan collectively spend \$45 billion a year on advertising. **Firms openly affiliated with the climate lobby supply most of European and American television network revenues.** (33)

When you're this big your ads appear as unsponsored news stories. The daily drumbeat of extreme weather events that the public is being pounded with are really just commercials from the global climate-industrial complex.

Footnotes

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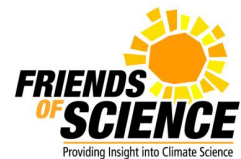
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A Tale of Two Places

ALBERTA, CANADA AND DENMARK, EUROPEAN UNION

Contributed By William Kay @2015



A Tale of Two Places

This article discusses the Climate Change campaign's impact on two places: the Canadian province of Alberta^{1 2} and the EU member state, Denmark.^{3 4}

Note:

A. All currency amounts are in US dollars.

B. One barrel contains 169 litres.

C. 1,000 kilowatts (KW) is a megawatt MW. 1,000 MW is a gigawatt (GW).

A Tale of Two Places

¹ "Alberta in Canada" by TUBS - Own work This vector graphics image was created with Adobe Illustrator .This file was uploaded with Commonist. This vector image includes elements that have been taken or adapted from this: Canada location map.svg (by Yug).. Licensed under CC BY-SA 2.5-2.0-1.0 via Commons - https://commons.wikimedia.org/wiki/File:Alberta_in_Canada.svg#/media/File:Alberta_in_Canada.svg

² Pumpjack image licensed from Shutterstock

³ "Middelgrunden wind farm 2009-07-01 edit filtered" by Photo by Kim Hansen. Postprocessing (crop, rotation, color adjustment, dust spot removal and noise reduction) by Richard Bartz and Kim Hansen. - Own work. Licensed under CC BY-SA 3.0 via Commons - https://commons.wikimedia.org/wiki/File:Middelgrunden_wind_farm_2009-07-01_edit_filtered.jpg#/media/File:Middelgrunden_wind_farm_2009-07-01_edit_filtered.jpg

⁴ "EU-Denmark" by NuclearVacuum - File:Location European nation states.svg. Licensed under CC BY-SA 3.0 via Commons - <https://commons.wikimedia.org/wiki/File:EU-Denmark.svg#/media/File:EU-Denmark.svg>

Alberta, Canada and Denmark, European Union

William Kay

Alberta



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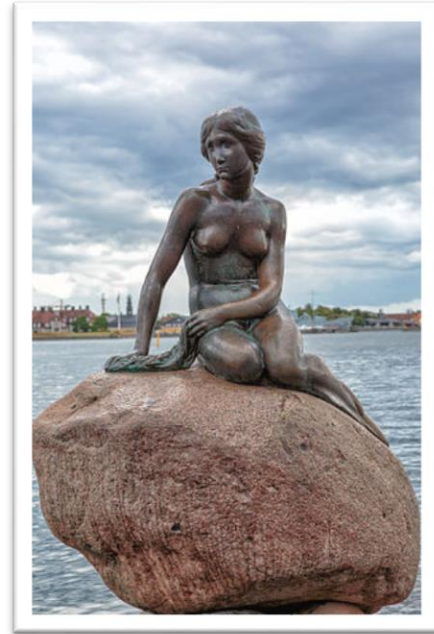
Alberta and Denmark are technologically modern, culturally liberal, constitutional monarchies with democratic customs. Their populations are roughly the same size. Alberta has 4.2 million citizens and Denmark, 5.6 million. Both are wealthy. Alberta has a per capita GDP of \$60,000 and Denmark, \$48,000.

Denmark, European Union



"Vor Frelsers Kirke-view8". Licensed under Public Domain via Commons -

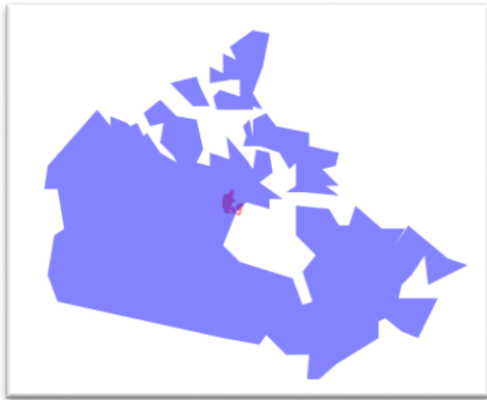
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"Copenhagen - the little mermaid statue - 2013" by Avda-berlin -

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Alberta is more ethnically diverse than Denmark. About 25% of Alberta's population are "visible minority" (of non-European extraction). The remaining 75% hail from a dozen European peoples. Denmark is 90% ethnic Dane. Denmark is also more religious, and much more religiously homogenous, than Alberta.



How Denmark fits into Canada



How Denmark fits into Alberta

The real differences between the two polities arise from the territories they control. Denmark covers 42,916 square kilometers. Alberta is 15

times larger (661,848 square kilometres). Moreover, the two territories have qualitatively different fossil fuel endowments.

Denmark's stake in the North Sea yields 55 million barrels of oil per year, but beyond that, Denmark has no oil or coal. To contrast: in the richest of Alberta's three main oilsands deposits, the Athabasca, petroleum is often close enough to the surface to be mined by open pit methods. The Athabasca field spans 40,000 square kilometres – an area the size of Denmark.



Alberta Oil Sands Mammoth Truck –
Resource work in Alberta involves temperature extremes from $-40^{\circ}\text{C}/\text{F}$ to $+35^{\circ}\text{C}$

Calculating the size of a fossil fuel resource requires estimating both the “ultimate” amount of the resource and then the amount that can be profitably extracted in the near future at contemporary prices with existing technology. A century ago coal mining was a pick, shovel and wheelbarrow affair; hence recoverable reserves were smaller than today. As technology progresses reserves increase.



Coal rich deposits in Canada in areas of light pink (Source: Coal Assoc of Canada)

Alberta’s “ultimate” coal resource is 2 trillion tonnes. The “potential” resource is 620 billion tonnes. “In-place” reserves are 94 billion tonnes. “Initial reserves” are 35 billion tonnes. This is low-sulphur, clean-burning, highly volatile, black coal.

In 2014 coal production was 34 million tonnes. Thus, even by the most parsimonious definition, Alberta’s reserves will last over 1,000 years. The “ultimate” coal resource will last 60 times longer.

Alberta is the world’s fourth largest natural gas producer. Conventional gas reserves are pegged at 223 trillion cubic feet. Coal bed methane reserves are 500 trillion cubic feet. Annual gas production is 4 trillion cubic feet.

Conventional oil reserves are somewhere between a “volume in-place” of 81 billion barrels and “established reserves” of 1.8 billion barrels.

Conventional oil production declined slowly from 1974 until 2011 when horizontal drilling and fracking reversed this trend. Current conventional oil production exceeds 200 million barrels per year.

Alberta's oilsands contain 1.6 trillion barrels of "unconventional" petroleum (bitumen). Proven reserves are 166 billion barrels. In 2014 oil sands output was 840 million barrels. This will rise to 1.5 billion barrels per year by 2024 if projects currently under development come to fruition. Since 1999 about \$150 billion has been invested in the oilsands.

In 2014 the Alberta Government received 30% of its revenues (\$7 billion) from oil and gas royalties. In that year upstream oil, gas and oilsands production employed 133,000 Albertans. Although there is much hand-wringing about over-dependence on unprocessed fuel exports, Alberta does host a substantial downstream petro-chemical industry.

*



Extensive refining capacity In Alberta's Industrial Heartland:

http://lifeintheheartland.com/issue_industrial.html

Coal-fired Power Drives Industry in Denmark and Alberta

Affordable in Alberta – Expensive in Denmark

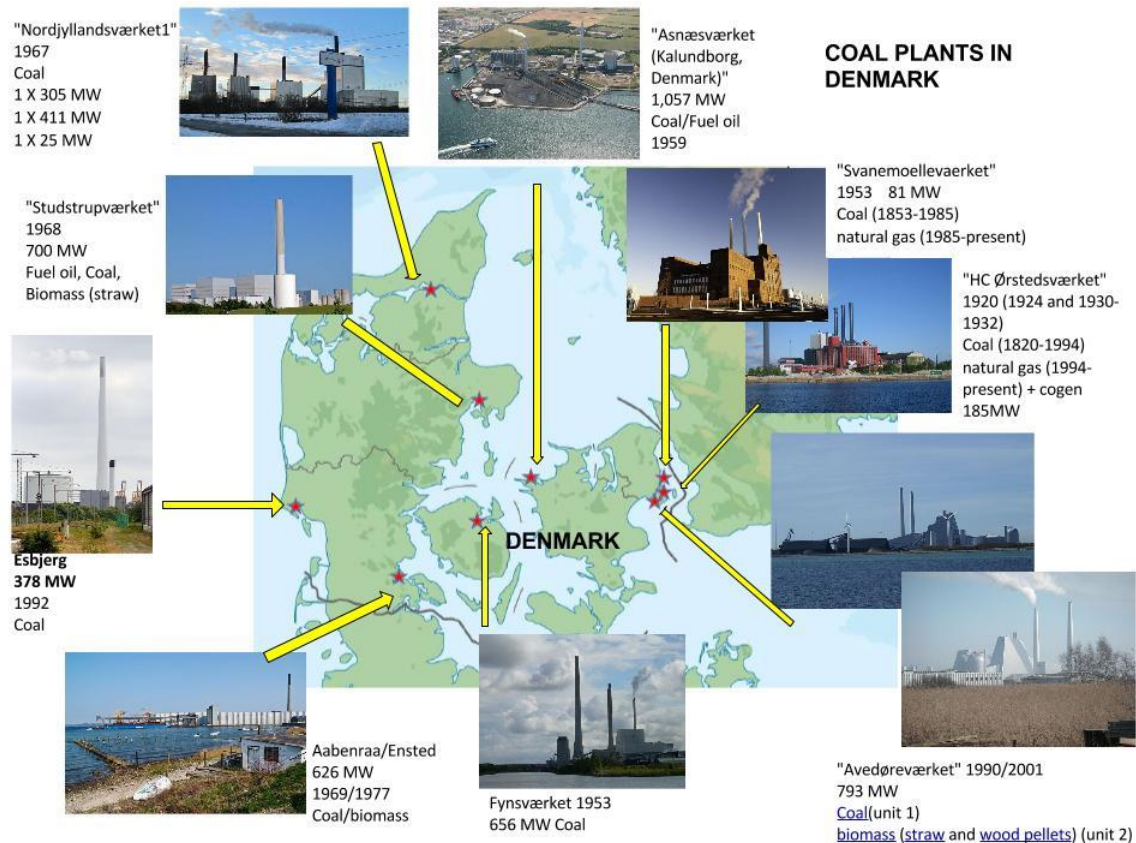
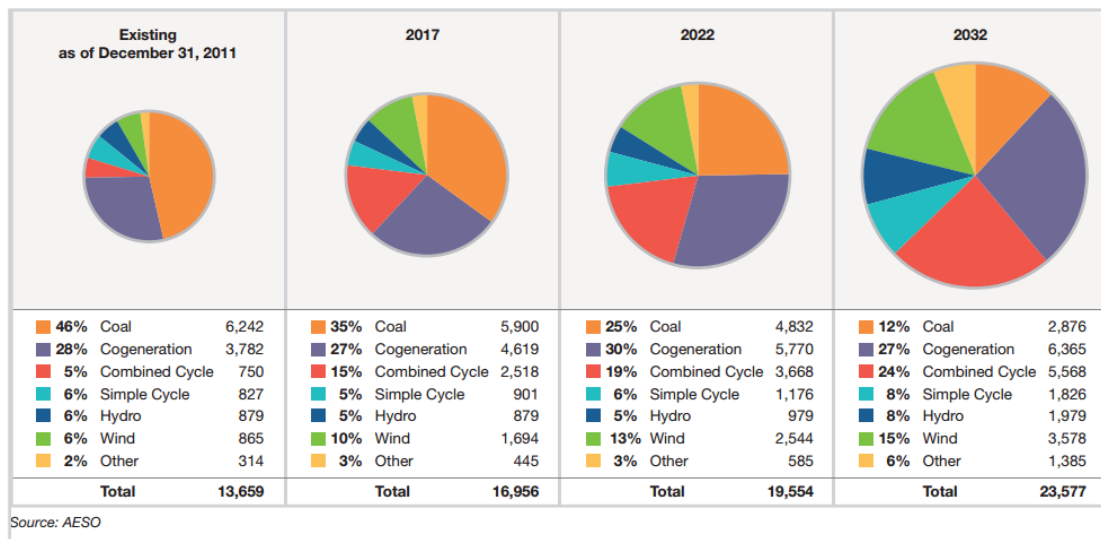


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Both Alberta and Denmark rely heavily on coal for electrical generation and neither has significant hydro-electric capacity. Denmark is densely populated and has no large rivers, hence its hydro-electric potential is nil. Sparsely-populated Alberta is traversed by seven large rivers but no significant hydro projects have been undertaken because the abundance of coal and gas renders hydro uneconomic.

(Alberta’s under-development is high-lighted by comparing its Peace River with Europe’s legendary Rhine. The Peace is 1,923 kilometers long and discharges 2,100 cubic metres of water per second. The Rhine is 1,230 kilometers long and discharges 2,500 cubic metres per second. Fifty cities line the Rhine. Four towns, with a total population of 10,000, grace the banks of the Peace.)

Figure 5.3.5-1: Generation Outlook – Installed Capacity (MW)



Alberta’s electrical generation mix forecast

Alberta has electrical generating capacity of 16,242 MW. Broken down by power source this is: natural gas (44%), coal (38.5%) and wind (9%). There are also small amounts of biomass, hydro and solar power. Renewables of all types account for 18% of capacity. Alberta’s 8 coal-fired power plants can generate 6,270 MW. Most of the 9,000 MW of capacity added since 1998 has been gas-fired.

“Capacity” refers to the maximum potential amount of electricity that can be generated from the source. Wind and solar rarely deliver their nameplate capacity as doing so requires perfect breezes and sunny skies. Actual electrical generation by source is: coal (55%), gas (35%), wind (5%), biomass (3%) and hydro (2%).



Southern Alberta Wind Farm

To appease the climate gods Albertans built Canada's first wind farm in 1993. They completed what was then Canada's largest wind farm (150 MW) in 2012.⁵ Presently, Alberta's 37 wind farms corral 941 turbines with a combined capacity of 1,471 MW. Beyond installing and maintaining imported turbines, Alberta has no wind industry.

⁵ Blackspring Ridge at 300 MW capacity opened in 2013 or 2014.

DENMARK



"DanishWindTurbines". Licensed under CC SA 1.0 via Commons - <https://commons.wikimedia.org/wiki/File:DanishWindTurbines.jpg#/media/File:DanishWindTurbines.jpg>

Denmark's 5,252 wind turbines have a combined capacity of 4,890 MW. 3,620 of those MWs are generated on land; 1,270 from off-shore. Wind accounts for 39% of actual domestic electrical usage; the highest percentage in the world. During periods of low demand wind power surges exceed 100% of demand.

Denmark's first commercial turbine began twisting in the wind in 1979. It was a Vestas 30 kilowatt model. Vestas is now installing 8 MW, 220 metre-high, off-shore models. The tower and turbine of these units weigh 1,300 tonnes. Their anchoring foundations weigh 4,000 tonnes.

Denmark's wind energy industry employs 29,000 workers and enjoys annual revenues of \$9 billion (not including electricity sales). 150,000 Danes either own turbines outright or, more commonly, own shares in local companies that own turbines.

Vestas, Siemens and DONG Energy dominate Denmark's wind industry but hundreds of small specialized firms work the supply chain. Research

and development into wind energy is financed by the big three, and by universities.

Vestas has built and installed 69,000 MW of wind turbines across 74 countries. Siemens Wind Power has 21,000 MW to its credit. (Siemens Wind was originally a Danish firm acquired by the German conglomerate in 2004. Most of its 7,800 employees remain in Denmark.)

DONG Energy, a 76% government-owned utility, supplies half Denmark's electricity from several coal and gas-fired plants. One third of the world's off-shore wind projects were built by DONG. Their 660 MW wind farm off Britain's west coast will be the world's largest. When DONG finishes the 2,080 MW of off-shore projects currently under construction they will have installed 5,089 MW off-shore.

As a sop to environmentalism, Denmark's fossil fuel power plants (7 coal and 2 gas) were accessorized with small bio-mass and wood-chip fired generators. Denmark also has 548 MW of solar PV capacity. Renewables of all types account for 20% of Denmark's total domestic energy usage and over 40% of its electrical generation.

Nevertheless, Danish electricity remains 48% coal-fired. Co-generation from coal plants also heats boilers for centralized home-heating operations. **Denmark imports all its coal, at \$60 a tonne.**



"Lego Color Bricks" by Alan Chia - Lego Color Bricks.

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ALBERTA



Coal Valley Mine – near Edson, Alberta

<http://westmoreland.com/location/coal-valley-mine-alberta/>

Alberta digs up all its coal from Alberta Government-owned coal fields. Mine operators pay royalties averaging 20 cents a tonne.

Electricity prices in Alberta vary from **5 to 10 cents** per kilowatt hour.

Electricity costs **33 cents** a kilowatt hour in Denmark.

The Climate campaign hammered Alberta, in 2012, when, with minimal parliamentary discussion, the Federal Government announced its *Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations*. The enabling legislation was the Environmental Protection Act (1999). The regs have not been constitutionally challenged even though historically electrical generation has been a provincial responsibility.

Effective July 1, 2015 proposed coal-fired generators are limited to 420 tonnes of carbon dioxide emissions per GW hour. Coal-fired generators typically emit 950 tonnes per GW hour. New coal-fired plants will require carbon capture and storage attachments which are prohibitively

expensive. Hence, no new coal-fired plants will be built anywhere in Canada; but it is Alberta where coal is most relied upon.

Climate campaigners struck again in November 2015 when Obama shot down the Keystone XL pipeline which would have piped diluted bitumen from Alberta's oilsands to US refineries. Keystone is one of five oilsands pipelines stymied by environmentalists whose principal pretext is Climate Change.

The image is a screenshot of the official website of Denmark. At the top, the logo 'DENMARK.DK' is displayed in green and black, with the tagline 'THE OFFICIAL WEBSITE OF DENMARK' below it. To the right, there is a navigation menu with links for 'Contact', 'Media', 'Visit', 'Study', 'Invest', and 'Work'. Below the logo, a secondary navigation menu includes 'QUICK FACTS', 'SOCIETY', 'LIFESTYLE', 'MEET THE DANES', 'GREEN LIVING', and 'V'. The main content area features a prominent article titled 'INDEPENDENT FROM FOSSIL FUELS BY 2050'. The article text discusses the Danish government's commitment to achieving energy independence from fossil fuels by 2050, highlighting the 'Energy Strategy 2050' and the role of renewable energy sources like wind and biomass.

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QUICK FACTS SOCIETY LIFESTYLE MEET THE DANES GREEN LIVING V

INDEPENDENT FROM FOSSIL FUELS BY 2050

It is the Danish government's clear opinion that the green road is the one we all need to travel eventually. There is no denying, that there are strong reasons for action. In the coming decades more and more people around the world will achieve the means to a modern lifestyle, that they aspire to.

The global need for energy will continue to rise as a car, a fridge, a city break will become part of the lifestyle of many more people. Our lifestyle has in the past been driven by cheap and easy access to oil, coal and natural gas. That road is not an option, which will be open to us in the future. We will face ever increasing pressures from the twin forces of climate change and the hunt for finite and ever more marginal sources of fossil fuel. One would think, that these two forces ought to be a sufficient spur for action.

The Danish government having seen the writing on the wall has set an ambitious target of weaning Denmark off fossil fuels by 2050. Heeding the words of Winston Churchill, that "however beautiful the strategy, you should occasionally look at the results", the Danish government recently presented "Energy Strategy 2050", also referred to by the Danish minister of Climate and Energy, Dr. Lykke Friis, as a declaration of energy independence – independence from oil, coal and gas.

The strategy clearly defines the first steps towards this ambitious target. Most importantly it will lead to a decrease in Danish dependence on fossil fuels by 33 % in the coming 10 years alone. From 1980 till 2010 the share of renewable energy in Denmark rose from 3 % to 19 %. With this strategy the rise will continue to 33 % by 2020, meaning a full third of our energy will be produced by green energy primarily wind and biomass. Nuclear is – it should be mentioned - not a part of the fossil free Danish equation.

How large a share of wind power is compatible with a stable energy system? In the case of Denmark, that ceiling has not yet been reached. By 2020 nearly half of Danish electricity will be provided by wind power alone. Another 20 percent will come from biomass. By tying our electrical grid into a regional framework and by having a spare capacity backed by biomass, Denmark will continue to have a stable energy system.

Denmark is solidly on the other side of the barricade. A Danish Government web-page headlined: “*Independent from Fossil Fuels*” heralds a revamped government strategy to completely forsake fossil fuels by 2050. The primary components of this strategy are bicycling and wind power. Bicycling has a long history in Denmark but received state-sanctioned revitalization after the 1970s oil crisis. Their wind industry took off at the same time and for the same reasons.

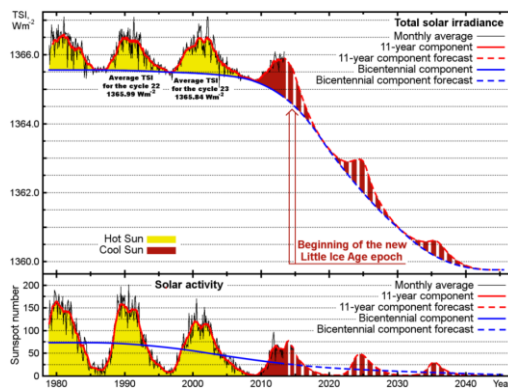
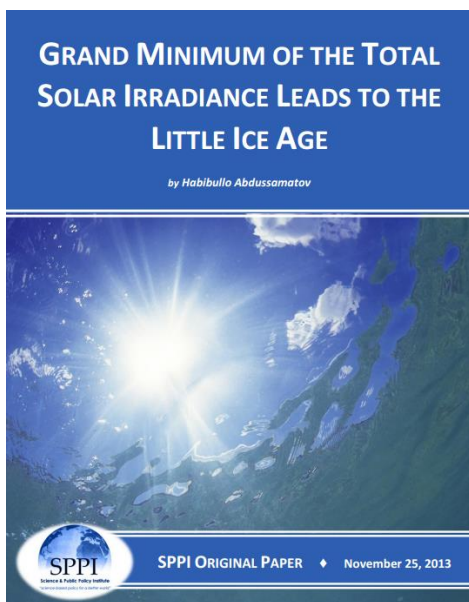
In Alberta “independence from fossil fuels” would cause economic collapse. Two thirds of its population would emigrate.

The Climate Change campaign favors regions without fossil fuels and with cultivated stakes in the renewable energy industry. The Climate campaign hurts regions rich in fossil fuels and possessing substantial infrastructure based on those fuels. Catastrophic Anthropogenic Global Warming is a premeditated, self-serving tissue of lies disseminated by governments from the former regions.

Conclusion

Climate sceptics were recently roused by the Reuters' report: *Russian Media take Climate Cue from a Skeptical Putin* (October 29, 2015). Here we were reminded that Russia's COP21 carbon dioxide emissions reduction pledge, decrypted, actually proposes to increase emissions. Russians will also, again, demand generous discounts for the alleged role their forests play as carbon sinks.

This brushing-off of Climate Change re-appears in Russia's media. While they do not engage in "climate silence" – as some critics allege – Russian journalists regularly air doubts about global warming. Because their media either ignore or question Climate Change, the Russian public generally disbelieve human action is causing catastrophic global warming.⁶



Russian scientist Habibullo Abdussamatov foresees imminent global cooling on the scale of a Little Ice Age.

The Russian media's treatment of this topic conforms to the opinions of Russia's political elite. A former senior advisor of Putin's recounts how

⁶ Many Russian scientists foresee an imminent cold spell of long duration "A Cold Spell Soon to Replace Global Warming" <http://sputniknews.com/analysis/20080103/94768732.html> Habibullo Abdussamatov predicts new Little Ice Age http://scienceandpublicpolicy.org/images/stories/papers/originals/grand_minimum.pdf

in the early 2000s his team extensively studied Climate Change only to conclude “*the anthropogenic role is very limited*” and “*the evidence presented for the need to ‘fight’ global warming was rather unfounded.*”

Putin, himself, on several occasions has quipped about the benefits of a warmer Russia. One critic bluntly asserts that Putin believes: “*there is no global warming, that this is a fraud to restrain industrial development of several countries including Russia.*”

This description of global warming is bang-on accurate; but we need not speak in generalities about which “several countries” are the targets of this exercise in neo-colonial under-development. Nor need we be coy about who is driving the Climate Change campaign; that would be Europe, aided and abetted by Japan, and by certain regional elites in the targeted countries. The targets are Russia, Brazil, Venezuela, and most importantly: the former colonial countries of the English-speaking world.

Europe (meaning the 28 EU members plus Norway and Switzerland) has a population of 521 million and a territory spanning 4.7 million square kilometres. The principle countries of the former colonial English-speaking world (USA, Canada, Australia and New Zealand) have a combined population of 396 million and a combined territory of 27.8 million square kilometres. Their population is 75% of Europe’s but they control six times the territory. Land mass provides natural resources including energy assets.

The USA has far larger coal deposits than any other country. Australia comes in forth regarding coal deposits and Canada tenth. Australia has by far the largest uranium reserves, followed by Canada, with the USA in fifth. Canada has the third largest petroleum reserves; the USA has the eleventh. Both Canada and the USA, separately, contain greater flows of fresh water than does Europe, and by quite a margin. These rivers bring an enormous untapped potential for hydro-electricity that Europe lacks. These countries are natural energy superpowers.

Few European countries possess exploitable coal reserves. Germany has the largest reserves but this is low-grade brown coal. Germany is actually a major coal importer. Europe's only coal exporter is Poland. Europe's oil reserves are found mainly in Norwegian and British North Sea deposits; but neither of their reserves make it into the global top 20. Europe's share of global uranium production is 0.4%.

Looking forward we see a world where access to reliable, affordable, abundant energy will be the primary economic advantage. This world will be powered petroleum, coal, uranium, natural gas and large-dam hydro-electric. Present trends continuing, the natural energy superpowers will drain Europe of its investors, entrepreneurs, tradespeople and laborers. The political campaign to suppress these energy sources, particularly oil, coal and gas, is an existential struggle for Europe. Herein lies the principal motive for the green energy revolution.

A parallel and overlapping motive arises from the eternal struggle between the landed estate and industrial capital. The green energy shift from petroleum to bio-fuels gives a windfall to rural landowners because it redirects cash flows away from petroleum corporations and toward wealthy farmers whose overpriced crops are squandered as fuel. Likewise, the green energy shift away from centralized power plants toward decentralized wind and solar projects also benefits landowners, especially rural landowners near major electricity markets, upon whose lands wind turbines and solar farms are usually situated.

First came the regulations and subsidies, then came the artificial constituency of industrial firms specializing in green energy infrastructure and services. These firms now number among the chief drivers of the Climate Change campaign. These firms are in great measure, directly or indirectly, owned or controlled by European governments and Europe's landed estate.

The climate-industrial complex is a construct of European governments overpowered by a resurgent landed estate. Painstakingly, meticulously, girder by girder, subsidy by subsidy, they assembled a towering edifice; impressive in scale, but alas, lacking in utility. Eiffel's tower is an apt symbol for COP21.



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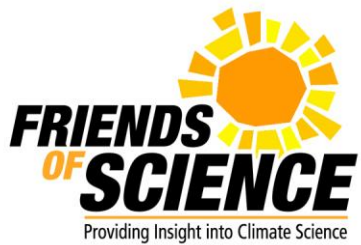
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“Post Paris: Climate Talks and Geopolitics” is a trio of research papers contributed to Friends of Science Society by William Kay © 2015. Mr. Kay is author of the website “Environmentalism is Fascism.” <http://ecofascism.com/>

These are Mr. Kay’s opinions based on his research.

About

Friends of Science Society is a non-profit, run by a volunteer board and funded by individual members. The organization has no industry affiliations and researches the evidence over the ideology on climate change science and policy. Friends of Science Society has spent a decade reviewing a broad spectrum of literature on climate change and have concluded the sun is the main driver of climate change, not carbon dioxide (CO₂). Friends of Science welcomes earth, atmospheric and solar scientists, engineers and citizens who challenge the alleged consensus on climate change.

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