California Water and Infrastructure Report

Formerly, the "California Drought (and Flood) Update"

For November 14, 2019

by Patrick Ruckert

Published weekly since July, 2014

An archive of all these weekly reports can be found at both links below:

http://www.californiadroughtupdate.org

https://www.facebook.com/CaliforniaDroughtUpdate

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"California's real concern is not merely to "keep the lights on" or prevent forest fires. Our future is not akin to the legendary boy who placed his finger in the dike to temporarily prevent disaster. Rather, as the nation and the world move into the space-faring age, California must look to dramatically increase its energy production and usage, per-capita and per-square kilometer. This will require a change in the culture, a return to the human optimism and can-do outlook of the Kennedy Apollo era.

"This will also require a national change in outlook and policy. The usury, the financial looting and the dead-end murderous green mentality must go. In California, PG&E must be returned to an orientation of producing abundant inexpensive electricity, utilizing the most advanced technologies, including nuclear, modular nuclear and eventual fusion energy approaches. In his "Four New Laws" Lyndon LaRouche specifies the precise measures, and the thinking behind them, which are now required. In his proposal for a "New Bretton Woods System," LaRouche defines the economic methodology necessary to create cooperative relations among nations that will make rapid increases in human productivity a cornerstone for the world economy.

"The current PG&E debacle denotes the lawful end of a failed paradigm. The new paradigm is awaiting our intervention."

The concluding paragraphs of my article: "Green Insanity and Electricity Dereg Set California on Fire."

A Note To Readers

We do hope the intensity of the crisis that has ripped through the state for the past month is now over. And it appears that we are back to our never ending California Water Wars. More on that below.

But first to note that the article I wrote last week on California fires and electricity, and was the only item in this report last week, has been published in the November 15, 2019 issue of *Executive Intelligence Review.* Here is a link to the article, followed by the first page:

https://larouchepub.com/eiw/public/unlisted/2019/eirv46n45-20191115/ckkPlReL-89B5498M77Ffse/4645-green-insanity-and-electricity-dereg.html?utm_source=sendinblue&utm_campaign=EIR__November_15&utm_medium=email

AS HALF OF THE STATE GOES DARK

Green Insanity and Electricity Dereg Set California on Fire

by Patrick Ruckert

This article appears in the November 15, 2019 issue of ***Executive Intelligence Review.***

Nov. 7—For three weeks now, the state of California has been plunged into an unprecedented crisis. Millions of residents have lost their electricity, for extended periods, and tens of thousands of others have been forced to flee their homes, as raging fires have swept through cities, towns and rural areas.

As in what happened in the city of Paradise last year, entire sections of cities have burned to the ground. At the same time, the loss of electricity has not been a mere inconvenience. Businesses have closed; schools have closed; manufacturing companies have thrown thousands out of their jobs. Those on electrical-powered medical equipment in their home are immediately at risk. The sick, the elderly and vulnerable infants have been trapped in their homes, with no lights, no refrigeration, often with no running water or even telephone service. There is no way to keep food from spoiling; no way to cook, wash or use the bathroom, as both sewage treatment plants and ground-water pumping stations have gone offline.

Imagine a satellite map of California at night. While the southern part of the state is brightly lit, much of the northern half is dark. Many towns are no longer visible at all. This is the process which sets in with the breakdown of modern infrastructure. Nothing like this has occurred before. California, which once dazzled the world as the epitome of everything that is new and optimistic, now has all the characteristics of a "failed state."

None of this is "natural," normal or the result of "climate change." Rather, the misery now afflicting the people of the state can be laid at the doorstep of those decisions made by elected and other officials over the last 40 years to impose on California the twin evils of environmentalism and deregulation. California is now broken, and it will require a fundamental shift in outlook and policy to fix the problem.

In the Rest of This Week's Report:

It begins with the U.S. Drought Monitor. To note: The portion of the state that falls under the classification "Abnormally Dry" increased over the past week from 18% to 81%.

Two rounds of the never ending "California Water Wars" are reported on this week. Round 1 is, "In January Water Use in California Changes Dramatically, which is the beginning of the implementation of the Sustainable Groundwater Management Act, signed into law in 2014. That act will set new limits

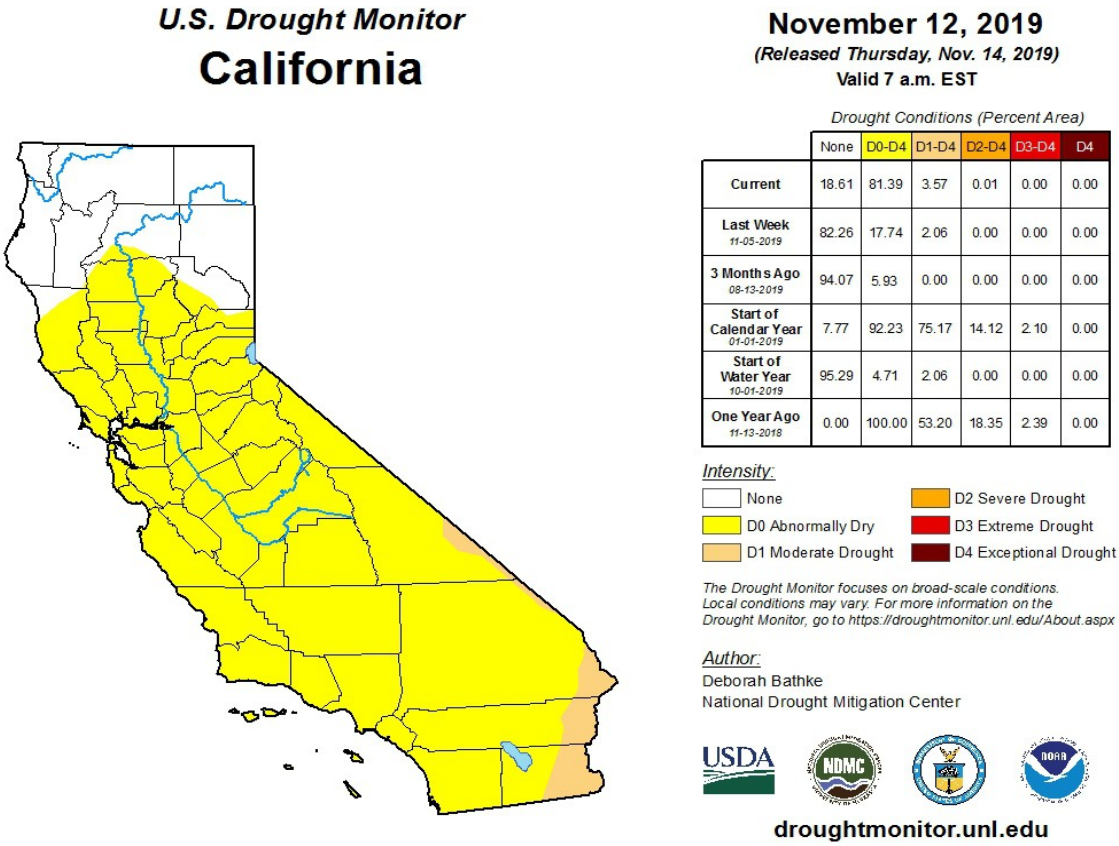
on how much groundwater can be pumped out of wells. It is forecast that the law may result in as much as one million agricultural land being fallowed.

Round 2 began with the Interior's Bureau of Reclamation posting a notice on its website Oct. 25 which will implement a 2016 law that allows Westlands and other water districts to lock in the water contracts for good if they repay the federal government for their share of the Central Valley Project's costs. The environmentalists, of course, cry foul.

The final section of this weeks report is, "Science, Technology, Infrastructure and Some Truth About CO2," which includes an array of articles on the topic.

U.S. Drought Monitor

We begin with the U.S. Drought Monitor. To note: The portion of the state that falls under the classification "Abnormally Dry" increased over the past week from 18% to 81%. While little of the state is officially in the category of drought, yet with a very dry October and now half of November the same, that we should be in the rainy season now, is worrying.



And we wait. 81% of California abnormally dry as seasonal rains fail to materialize

Kurtis Alexander Nov. 14, 2019 Updated: Nov. 14, 2019 7:07 p.m.
https://www.sfchronicle.com/environment/article/And-we-wait-81-of-California-abnormally-dry-as-14836236.php

California's drought-prone hills and valleys are on the verge of another troubling dry spell.

The U.S. government's Drought Monitor on Thursday classified more than 80% of California as abnormally dry because rain has eluded the state for most of the fall. Forecasting models, meanwhile, suggest little change in the near future — maybe some drizzle late next week, maybe not.

But weather watchers aren't ready to panic. While the lack of precipitation remains worrisome for firefighters, who continue to sweat the tinder-dry landscape, waiting for rain in autumn is simply an annual ritual for Californians. And with a changing climate, scientists think the wait just might be getting a little longer.

"It's been a slow start to this water year, to be sure," Anderson said. But "we know things here can turn pretty quickly."

For much of the fall, a ridge of high pressure over the Pacific has blocked east-moving storms from hitting California. It's a pattern that's common during dry periods, and was often present during the state's five-year drought earlier this decade.

The U.S. Drought Monitor, which assesses the nation's water picture based not only on precipitation but other factors, such as soil moisture and river levels, reported that 81% of California is "abnormally dry." It's the category just shy of drought.

Last week, only 18% of the state fit the classification, a stark change that reflects how much an ongoing delay of the rains can dry out California.

A sliver of desert down south, which represents just under 4% of the state, has already slipped into drought, according to the Drought Monitor. On the other hand, California's northernmost counties remain entirely free of abnormal dryness.

The biggest concern about the dry conditions, at least for the time being, remains wildfire.

"It's a bit stressful for everyone here," said Steve Leach, fire meteorologist at the Northern California Geographic Area Coordination Center, a joint federal and state firefighting operation in Redding. "The more days we go without rain, the more days that fuels are staying dry — in fact, extremely dry."

The strong offshore winds that can quickly turn a small wildland fire into a catastrophic inferno have, fortunately, not been present lately, Leach said. However, he worries that the menacing gusts could return before the rains arrive.

The state's water managers are a little more at ease.

Because last winter was wet, California's big reservoirs are in good shape. Lake Shasta was 71% full on Wednesday, holding 20% more water than it usually does this time of year. Trinity Lake was 80% full, with 23% more water than average for the date.

California Water Wars

Round 1: In January Water Use in California Changes Dramatically

In 2014 then Governor Jerry Brown signed into law a groundwater management bill, that will restrict the amount of water that can be pumped from the aquifers of California, many of which are seriously over-drafted. As much as one million acres are threatened with being fallowed, though the full implementation of the law is stretched out over the next 40 years.

Here are three reports on the law and its implementation, followed by a report that does delve into the question more deeply and targets the potential abuse of the law in the process of selling "water rights."

All three reports are excerpts from the original articles.

New groundwater law will have significant impact on Valley farmers starting in 2020

By Dale Yurong
October 17, 2019
https://abc30.com/business/2020-groundwater-rules-will-have-significant-impact-on-farmers/5626937/

FRESNO, Calif. (KFSN) -- The new year will bring new concerns over how much water farmers, cities, and school districts will be able to pump out of the ground.

A groundwater sustainability plan drawn up during the California drought will take effect in January, which will set new limits on how much groundwater can be pumped out of wells.

The impact of the Sustainable Groundwater Management Act, or SGMA, will be significant. Hundreds of thousands of acres of farmland are expected to be fallowed as a result of the new law.

"Preliminary estimations on the impact SGMA is gonna have on the whole Central Valley is gonna be between 800,000 and 1,000,000 acres coming out of production," says Gary Serrato. He now heads the North Kings Groundwater Sustainability Agency. Serrato was previously the general manager of the Fresno Irrigation District.

California will be divided into Groundwater Sustainability Agencies. Each will be expected to generate reports to the state with water table information and what steps were taken to conserve water, such as the use of groundwater recharge facilities.

Concerned farmers have been attending information sessions.

"It's been said, up and down the valley, that one out of three acres could potentially go out of production," says Farm Bureau CEO Ryan Jacobsen. "That's astronomical, in particular when you look at the economy of the Valley, so tied to agriculture."

Some growers already have an idea of whether they'll be impacted.

"If you're in an area where there is no surface water to be able to augment, your number's going to be a little less," says Serrato.

Areas with low water tables and incidents of subsidence (where land is sinking due to over-pumping) are likely to see pumping limits.

The practice of flooding fields to recharge the underground aquifer will still be allowed.

Groundwater: Deadline nears for completion of local plans

Issue Date: November 13, 2019

By Christine Souza

http://www.agalert.com/story/?id=13429

> *With roughly two and a half months remaining before a state-mandated deadline, local agencies overseeing critically overdrafted groundwater basins are working to finalize sustainability plans as required by a 2014 state law.*

The deputy director of statewide groundwater management for the California Department of Water Resources, Taryn Ravazzini, said she expects that once plans are submitted, local groundwater

agencies will begin implementing them immediately. After plans are submitted, DWR has 20 days to post them to its website; that posting triggers a 60-day public comment period.

"DWR has two years from submission to evaluate and assess the plans," Ravazzini said. "Approved GSPs (groundwater sustainability plans) will continue to be implemented and can be improved through time."

If plans are determined to be incomplete, she said, agencies will be given 180 days to take "corrective actions." If a local agency doesn't meet the Jan. 31 deadline, the State Water Resources Control Board would then consider what Ravazzini called "the appropriate next steps for intervention."

Madera County pistachio and almond farmer Gary Foth said he is concerned about SGMA.

"Everybody is confused, scared—I mean, it's our livelihood," said Foth, whose farm relies on groundwater exclusively. "When you start talking about idling 40% of your ground, that's a little scary, because you've worked your whole life to build up something, take care of your family and maybe pass that on."

Enough is Enough: Governor Brown Passes the Sustainable Groundwater Management Act "SGMA"

In 2014, after suffering several years of drought and nearly a hundred years of groundwater overdraft, Jerry Brown created the Sustainable Groundwater Management Act "SGMA" pronounced "SIGMA". SGMA requires that by January, 2020 all critically overdrafted water basins in the state--like the Kern Water Authority in the Central Valley--will need to curb their groundwater use so that state aquifers can be sustainably managed by 2040. The SGMA Law will then enforce restrictions on groundwater pumping in order to replenish groundwater aquifers. The law will also create mechanisms to accurately measure and enforce ground water withdrawals. Hallmarks of SGMA are as follows:

1) All farmers in a given water district are given a per acre groundwater pumping allocation based on the amount of acres they own.

2) Mechanisms will be put in place to measure and monitor groundwater pumping. These measures will likely be a combination of satellite photos, and a review of energy consumption rates (i.e., pumping groundwater requires a fair amount of energy per acre, and is a distinctive signature of groundwater vs. surfacewater use).

3) Effective penalties will be put in place for groundwater pumping in excess of an allocation.

Since many acres of farmland in the central valley are almost entirely dependent upon groundwater pumping for their crops, the Public Policy Institute of California has indicated that nearly 3/4 of a million acres of farmland should be fallowed.

Farmageddon In California: Why J.G. Boswell Is Set To Benefit From California's 'Catastrophic' Water Law

Nov. 12, 2019 10:00 AM ET
James Duade
https://seekingalpha.com/article/4305691-farmageddon-california-j-g-boswell-set-benefit-californias-catastrophic-water-law]

In 2014 California passed the Sustainable Groundwater Management Act "SGMA" in order to curb excessive groundwater pumping. The law goes into effect for parts of California in January, 2020.

Many farmers in California are 100% reliant on groundwater pumping. Their crops require approximately 3 acre feet of water, but SGMA will only allow 0.15 acre feet of pumping.

The Public Policy Institute of California has indicated that up to 750,000 acres of California farmland may need to be fallowed, that's approximately the size of Rhode Island.

Groundwater and surface water markets are poised to explode as water demand will far outpace water supply in wet years, let alone dry years.

J.G. Boswell, which owns 400,000 acre-feet of surface water rights and ample groundwater rights, will benefit significantly from SGMA. Boswell has contracted to sell 100,000 acre-feet in FY2020.

Round 2: Largest Water District in the Country Seeks to Secure its Water Supply

And the environmentalists, of course, cry foul. The first article below states the facts of the case. The second article is almost hysterical. Well, read the articles excerpted, and then at the end, the item from Families Protecting the Valley show that the Westlands District is just following the law.

Enough Water To Supply More Than 2 Million California Households

Interior's Bureau of Reclamation posted a notice on its website Oct. 25 of the proposed contract and the 60-day public comment period, which ends over the Christmas holiday. Other water districts are lining up behind Westlands to negotiate their own permanent contracts.

Westland's contract would give it permanent claim to enough water to supply more than 2 million California households, although federal suppliers in practice typically divvy up water each year based on available supply. The water comes from the federal Central Valley Project, a massive, federally built network of dams, tunnels and canals that pipes water from greener Northern California to farms and cities of the more populated south.

The 2016 law allows Westlands and other water districts to lock in the water contracts for good if they repay the federal government for their share of the Central Valley Project's costs.

Interior said in its statement Thursday that Westlands owes the federal government $480.7 million. Environmental groups say the rural California water district has been seeking to bargain down the payback amount, and want to see what the contract obliges Westlands to pay.

Danko, the Interior spokeswoman, said the proposed deal would result in the government being paid back a decade early.

Environmentalists Oppose Westlands' Bid to Secure Water

AP News
November 8, 2019
https://gvwire.com/2019/11/08/environmentalists-oppose-westlands-bid-to-secure-water/?utm_source=ActiveCampaign&fbclid=IwAR2h9OE5B3itg_fj38xdjXcp4luNl6iCfvbC0vTKe3ZFNpiJggV2gOX2hVY

WASHINGTON — The Interior Department proposes to award one of the first contracts for federal water in perpetuity to a powerful rural California water district that had long employed Secretary David Bernhardt as a lobbyist.

Conservation groups are demanding fuller disclosure of financial terms and an environmental review of the proposed deal for Westlands Water District, the nation's largest agricultural water supplier. The

water district serves some of country's wealthiest and most politically influential corporate farmers.

Bernhardt served as a lobbyist for Westlands until 2016, the year before he joined Interior, initially as deputy secretary.

"The Interior Department needs to look out for the public interest, and not just serve the financial interests of their former lobbying clients," said Rep. Jared Huffman, a Democrat from California. Huffman is a former senior attorney for the Natural Resources Defense Council.

Responding to questions, Interior spokeswoman Carol Danko said the handling of the Westlands' contract was delegated entirely to California staffers of the Bureau of Reclamation, which is under the Department of Interior. The agency will make a final decision after the legally mandated public comment period, she said.

The 2016 Law Sought for Decades by California Water Districts

Bernhardt's past lobbying work — much of it for industries with business before Interior — has led environmental groups and Democratic lawmakers to accuse him of lack of transparency and the appearance of conflict of interest in his work at the agency.

As a lobbyist, he was involved in negotiations on a contentious 2016 federal law that made the Westlands' proposed deal possible, allowing water districts to lock up permanent contracts for water from California's federal water project.

The 2016 Water Infrastructure Improvements for the Nation Act (WIIN Act) had been sought for decades by water districts in California, where frequent droughts sometimes led to water rationing and dying crops. It reshaped the federal handling of water in the U.S. state with the largest economy.

Westlands Water District, which has some of the most productive farmland in the nation, has long struggled to secure a reliable water supply. (wwd.ca.gov)

Huge Water Contract

From Families Protection the Valley

Conclusion: It looks like they just followed the law and made a deal.

Nov 12, 2019

http://familiesprotectingthevalley.com/news.php?ax=v&n=5&id=10&nid=797

According to the L.A. Times, the "Westlands Water District, a sprawling San Joaquin Valley farm district with ties to the Trump administration, is poised to get a permanent entitlement to a massive quantity of cheap federal irrigation supplies."

How much are they supposed to get? "1.15 million acre-feet of water."

BUT..."There is no guarantee it will get that, since Westlands is low in the federal project's pecking order and is among the first cut in times of shortage. Since 1990, it has received its full allotment in only four years." ***Conclusion: Even with all the water available last year they only received 55%.***

*The article goes on to say "long-term control would also allow Westlands to make lucrative water sales to thirsty cities and other agricultural agencies"...****Conclusion: BUT, "To date Westlands hasn't sold any water outside of its district. We don't sell the water for a handsome profit."***

Why were they able to make the deal? "Westlands asked for the new agreement under provisions of the 2016 WIIN Act, which opened the door for all reclamation contractors across the West to convert their water service contracts to permanent contracts if they repaid what they still owe federal taxpayers for construction of a federal water project." ***Conclusion: So, they followed the law.***

So, how much do they still owe? "In a letter to Westlands, the reclamation bureau last year estimated that the district owed the government $320.5 million as of June 2018."

BUT, "In 2015 Westlands struck a settlement over drainage services that courts had ruled the federal government was legally obligated to provide...Under the settlement, Westlands agreed to assume drainage responsibility, said it would permanently retire 100,000 acres of badly drained land and would also accept a 25% cut to its water contract."

SO, "In return, the government agreed to forgive Westlands' construction debt — then roughly $350 million — and give the district a permanent contract for the reduced delivery amount."

Conclusion: If you follow the story you can see the federal government had some obligations with regard to drainage, and made a deal for Westlands to assume the responsibility in exchange for the water contract.

The headline - ***Feds set to lock in huge water contract for well-connected Westlands Water District*** *- would have you believe Westlands is getting something because of their powerful connections.*
Conclusion: It looks like they just followed the law and made a deal.

Science, Technology, Infrastructure and Some Truth About CO2

Some Sanity From the Defense Department

Nov. 1, 2019 (EIRNS)--Michael Brown, director of the Defense Innovation Unit (DIU) at the Pentagon, told a Wall Street Journal Tech Live conference on Oct. 23 that while the U.S. has a lead in certain technologies, the list of technical areas in which China has the edge is extensive, including: 5G cellular networks, drones, batteries, hypersonic systems, wind and solar energy, as well as cryptocurrency. "And even with the technologies where the U.S. is ahead, the lead isn't insurmountable," Brown said. He blames this on the failure of the US government to fund basic research, especially compared to China.

The DIU is responsible for identifying techologies needed for defense. In 2017, Brown co-authored a DOD paper that warned that Chinese government investment in private tech startups gave China a growing lead in tech developments. That warning was turned into "policies restricting Chinese investments in startups and was also criticized as stereotyping Chinese investors as potential spies."

But Brown said that was wrong, and had not been his intention. He identified the problem in the same way Lyndon LaRouche has always emphasized in regard to infrastructure development -- the

government was cutting basic research, leaving it to the private sector. But, Brown said, "The private sector isn't necessarily going to take the risk to invest in long-term technologies where the payoff is uncertain. That is the role of government."

Brown also praised China's "concerted government approach," noting: "They are very focused on technology transfer because they see that as a way to economically transform their society."

Further, Brown hit out at the efforts (being lead by FBI chief Christopher Wray) to drive Chinese scientists out of the country and making it hard for others to come here to work. "The ability to attract and retain global talent has been key to Silicon Valley's success over the decades," he said, adding that an environment unwelcome to immigrants would ultimately backfire.

"The concern I have is that [his earlier paper] is used too much as a justification for protectionist ideas and not enough for stimulus for further investment," he said.

Chinese Cities Planning Ambitious Maglev Connectivity

Nov. 14 (EIRNS)—China Daily reports today that high-speed maglev lines with trains traveling at 600 kph or faster are taking shape between some Chinese cities in a bid to boost regional integration and economic growth.

Chengdu, capital of Sichuan province, is considering a high-speed maglev line with a top speed of 800 kph to Chongqing, about 320 km, according to the city's latest development plan. The train is expected to cut travel time between the two cities to 30 minutes, down from 73 minutes on the current maximum 350 kph high-speed service.

Wuhan, Hubei province, is also eyeing a maglev train, with China Railway Siyuan Survey and Design Group, a subsidiary of China Railway Construction Corp., to begin construction work next year, Wuhan Evening News reported.

A team led by the Chinese Academy of Engineering is also conducting a preliminary feasibility study on a high-speed maglev line in the Guangdong-Hong Kong-Macao Greater Bay Area, with a designed maximum speed of 600 kph, said Academy Vice President He Huawu, speaking in July at the 2019 World Transport Convention in Beijing. The Greater Bay Area is, and will remain for the near future, the biggest construction site on the planet, with billions of dollars invested in new transport and housing infrastructure, factories, power and water supply.

Jia Limin, an engineering professor at Beijing Jiaotong University and head of China's high-speed rail innovation program, told China Daily that such velocities are much closer to cruising speeds for commercial airliners. "Maglev is the future of ultrafast trains, since it's fast, safe, reliable and low maintenance," Jia said. "It can fill the service gap between the high-speed rail network and aviation, which will further boost the flow of talent in neighboring provinces and even nationwide, and thus propel regional economic growth and prosperity."

A New LaRouche PAC pamphlet:

'CO_2 Reduction' Is a Mass Murder Policy Designed by Wall Street and the City of London

https://larouchepub.com/special_report/2019/2019-eir-special-report-co2-redux-is-murder.pdf

Contents

The truth must be told! Climate activism is one of the greatest threats to the future of the human species. Believing themselves to be brave avengers against injustice committed against the Earth itself, millions of people (most unencumbered by anything approaching a detailed understanding of the much-cited "science" of climate) have taken to the streets and other fora to demand radical changes in human life, changes whose actual effects would be devastating to the people of the world.

This report is written to expose and counteract this grave danger to the continued survival of the human species—the climate change narrative, which, to varying degrees, claims that rapid, dramatic, extremely costly changes to human activity must be made in order to avert catastrophic changes to the climate.

Here, the LaRouche PAC dissects the climate change catastrophe narrative, showing that its origins lie not in science, but in politics; that its greatest promoters are not socialists or concerned youth, but rather the greatest centers of financial power—Wall Street and the City of London; that the supposed existence of a scientific "consensus" fades when challenged; that proposed means of achieving zero net carbon will impose devastating social costs worldwide, with particularly harmful effects upon those living in the world's least developed areas; and that with ambitious programs for exploration and

discovery in space and in nuclear fusion, there are no fixed limits to human growth!

As Lyndon LaRouche emphasized throughout his life, human beings are not animals, and no insight derived from the study of animal ecology can be directly applied to our species. Other forms of life have limits to the resources available to them and are subject to barriers in their population growth—such as a lack of resources or increased predation. But human beings are the only known form of life to create new resources.

Several examples illustrate the case. Before the bronze age, the mineral malachite was used as a blue-green paint. With the discovery of metallurgy, it became a resource for the creation of metals. Petroleum, which today powers the great majority of forms of transportation, was no resource at all before the development of the engines and economy that enabled it to be used. Before the nuclear era, uranium was used to tint glass. Now it is able to produce power with orders of magnitude less mining and material than the production of coal, oil, gas, windmills, or solar panels. Even the food we eat today has been shaped by generations of our forebears, whose cultivation of these plants made them into the nutritious resources they are today.

African Energy Ministers Slam as 'Criminal' Green Efforts To Stop Africa Using Its Fossil Fuels

Nov. 12 (EIRNS)—A record number of cabinet ministers, 23, and 1,839 delegates attended the annual "Africa Oil Week"—Africa's largest oil and gas event—in Cape Town, South Africa last week. Ministers of numerous countries presented plans for expanding oil and gas exploration, transportation and refineries, for which they sought investment.

Extinction Rebellion activists protested outside, demanding African nations stop exploiting fossil fuels, in the name of "fighting climate change."

Officials from a continent nearly half of whose inhabitants—600 million people—still have no access to electricity, and where the poor quality of power supply that does exist makes it difficult to power industry, and thereby provide meaningful employment, would have none of it.

Gabriel Obiang Lima, Energy Minister of Equatorial Guinea, told reporters: "Under no circumstances are we going to be apologizing.... Anybody out of the continent saying we should not develop those [oil and gas] fields, that is criminal. It is very unfair."

Gwede Mantashe, Energy Minister of South Africa and national chair of the ruling African National Congress, said bluntly: ***"Energy is the catalyst for growth. They even want to tell us to switch off all the coal-generated power stations. Until you tell them, 'you know we can do that, but you'll breathe fresh air in the darkness.' "*** *Mantashe declared that ensuring a secure supply of oil for the nation is "not negotiable. We want to supply energy at a cost-effective level, because if it is too expensive I can tell you that it becomes 'a nice to have,' but people do not access it," S&P Global Platts quoted him saying.*

Noel Mboumba, Minister for Hydrocarbons of Gabon, declared oil to be a major driver of its development, affirming, "we will do all in our power to develop it."

Somalia's Minister of Petroleum and Mineral Resources Abdirashid Mohamed Ahmed was succinct: "We all share the common objective of facilitating the crucial investments that will power Africa's economies, build communities and shape societies."

The World is Not Going to Reduce Carbon Dioxide Emissions by 50% by 2030, Now What?

By Roger Pielke

October 27, 2019

https://www.forbes.com/sites/rogerpielke/2019/10/27/the-world-is-not-going-to-reduce-carbon-dioxide-emissions-by-50-by-2030-now-what/?fbclid=IwAR2JuE3lZ6Gfg8e6hm3HIroUsAud143cz_rOe4JSNomKOO5tTOH5QEnlboo#2ebf10c37940

Last year, the Intergovernmental Panel on Climate Change (IPCC) reported that "limiting global warming to 1.5°C would require rapid, far-reaching and unprecedented changes in all aspects of society." Specifically, "Global net human-caused emissions of carbon dioxide (CO2) would need to fall by about 45 percent from 2010 levels by 2030, reaching 'net zero' around 2050." Since then, many advocates and policy makers have proposed that target as a political goal.

Here I'll show you the simple mathematics of what achieving the 2030 target entails. The evidence shows clearly that the world is far from being on a path that will come anywhere close to that goal. That is not an opinion, it is just math.

Of course, climate change poses risks to our future, and aggressive mitigation and adaptation policies make good sense. So getting policy making right is important.

Let's begin with a few key numbers as starting points. According to the 2019 BP Statistical Review of World Energy, in 2018 the world consumed in total almost 14,000 million tonnes of oil equivalent (mtoe). That energy supports the lives, hopes, aspirations of more than 7 billion people.

Like wealth, energy consumption is deeply unequal around the world, and many who do not have access to a full range of energy products and services are working hard to secure that access. So we should expect energy demand to continue to grow over the next decade. From 2000 to 2018, according to BP, consumption grew at about 2.2% per year, and ranged from a drop of 1.4% in 2009 to an increase of 4.9% in 2004. In the analysis below, I use an assumed 2.2% growth per year to 2030.

Here I focus on carbon dioxide from the consumption of fossil fuels, coal, natural gas and oil, and ignore emissions from the use of land. When combusted, fossil fuels emit different amounts of carbon dioxide. Coal by far emits the most. In 2018 about 27% of total global energy consumption came from coal, but according to the Global Carbon Project, coal accounts for about 40% of carbon dioxide emissions from fossil fuels.

To simplify the analysis, I assume that emissions reduction targets will be met through reductions in fossil fuel consumption which occur across all fossil fuels. That allows us to equate a reduction in fossil fuel consumption with a reduction in carbon dioxide emissions. It also keeps us from misinterpreting a reduction in emissions from a switch from coal to natural gas. If the ultimate goal is net-zero carbon dioxide, then eventually all energy consumption will have to be carbon-free, meaning that carbon dioxide-emitted natural gas will have to also be eliminated.

I'll also ignore the possibility of technologies of "negative emissions" which would allow the continued use of fossil fuels. The main reason for ignoring such technologies is that they don't presently exist at scale, and don't appear to be just over the horizon.

OK, with these starting points in place, let's now look at the IPCC target for 2030. A 45% reduction in emissions from 2010, implies an allowance of about 5,950 mtoe of fossil fuel consumption for 2030, and a reduction of about 5,800 mtoe from 2018. If consumption grows by 2.2% per year to 2030, that means that the world will consume about 4,200 mtoe more in 2030 than in 2018. So the grand total of new, carbon-free consumption by 2030 needed to hit the 45% reduction target is about 10,000 mtoe.

That means that the world will need add about 1,000 mtoe of carbon-free energy every year over the next decade. Over the past decade, the world added about 64 mtoe of carbon-free energy every year, and in 2018 it added a record 114 mtoe. So the world would need to accelerate the deployment of carbon-free energy by 9 times or more the rate observed in 2018, and about 15 times greater than that of the past decade.

The deployment of new carbon-emitting energy would obviously have to cease immediately. Over the past decade fossil fuel consumption has increased annually by an average of about 150 mtoe. Last year's record increase of 114 mtoe of carbon-free energy was dwarfed by an increase in fossil fuels of more than 275 mtoe. It is accurate to say that the world's growing supply of carbon-free energy is additive, and not replacing fossil fuels.

Discussions of climate policy often center on the deployment of carbon-free energy supply, but rarely discussed is the corresponding requirement for the decommissioning of fossil fuel energy. As I have argued in a previous column, the magnitude of the net-zero by 2050 challenge is equivalent to the deployment of a new nuclear plant every day for the next 30 years, while retiring an equivalent amount of fossil fuel energy every day. Emissions reductions for 2030 consistent with the IPCC view of the 1.5°C temperature target require a much great rate of deployment than one nuclear power plant worth of carbon-free energy deployment every day, because about half of the required emissions reductions are squeezed into the next 10 years.

The bottom line of this analysis should be undeniable: There is simply no evidence that the world is, or is on the brink of, making "rapid, far-reaching and unprecedented changes in all aspects of society" that would be required for the deep decarbonization associated with a 1.5°C temperature target. Anyone advocating a 50% reduction in emissions by 2030 is engaging in a form of climate theater, full of drama but not much suspense. But don't just take it from me, do the math yourself.

Despite the overwhelming evidence on the unlikelihood of meeting the 2030 target, such realism has yet to take hold in climate policy discussions. Some even go so far as to claim that presentation of this type of analysis amounts to climate denial. For those making such claims, I've got news for you – the world is going to miss the 2030 target whether we talk about that reality or deny it, so we had better get to work on rethinking climate policy.