



California Water and Infrastructure Report

For December 19, 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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First, for some overall perspective let's recognize that about 80 percent of all U.S. energy (always measured in BTUs) comes from fossil sources, with another 8.6 percent contributed by nuclear. Total energy from "renewables," a term which probably doesn't mean what you imagine it does, amounts to 11.4 percent. Of that total U.S. energy amount, solar and wind combined contributed barely over three percent.

"Green Energy' Capacities Are Overblown Hot Air."

A Note To Readers

So the Democrats in the House impeached the President yesterday. Now what? Well, unless as reported this morning Pelosi stalls sending the impeachment to the Senate, the President would be quickly acquitted there.

Meanwhile from the billionaires, like Sir Michael Bloomberg, to the socialists like Bernie Sanders, the Democratic presidential candidates have only offered what most Americans already reject: Policies that shutdown even our now moribund economy. As the last item in this report makes clear, more than 80% of the energy we use comes from fossil fuels. And they want to shut all of that down!!

Torturing the nation, rather than getting on with building and rebuilding the broken-down infrastructure of the nation, must stop now.

Whether it is called the Green New Deal, or, as the head of the Bank of England Mark Carney said unequivocally at Jackson Hole, Wyoming in August, a dictatorship over governments by central banks

for “greening the world economy,” the result will be the kind of population reduction that would make the British-led “Depopulation Lobby,” like Prince Phillip, blush: **Report: 'CO₂ Reduction' Is a Mass Murder Policy** https://action.larouchepac.com/green_fraud .

The alternative is a return to the system of national development created by Benjamin Franklin and Alexander Hamilton, and advanced by Abraham Lincoln, FDR, and Lyndon LaRouche. To totally defeat this unrelenting coup, the American People must support President Trump's adoption of the American System of development defined today as [LaRouche's Four Laws](#), and lead the world to a new era of prosperity and peace. Let's have some fun and revive the true United States!

In This Week's Report

We begin with a report on the snow and rain, and yes it is much more than most Decembers and means, well not too much. For predicting what the rest of the winter will bring is an exercise for fools.

'The water wars have begun,' so reads the first words of one article in the next section of this report, which focuses on the completely insane attempt to divide up the state's water when there is not enough of it for people, agriculture, fish and whatever else we wish to use it for.

That section is followed by this week's report on PG&E. But, since over the past few months this report has covered the “PG&E Saga” of fires, electricity cut-offs, bankruptcy and the vulture funds attempting to take over the company. I think many readers here may be tired of it. So, this week I shall just give you the titles of articles and their links, which cover the bankruptcy process, the governor's attempts to steer that and a few other odds and ends.

Since “A Real Economy Is Not a Financial Bubble,” the alarm bells are beginning to ring as the Federal Reserve is slated to pump into the banking system \$2.93 trillion in short-term loans over the next month. Yes this is an echo of 2008, which is the last time the Federal Reserve intervened into the “Repo Market” shortly before the crash.

Next, under the headline “Infrastructure,” you will find reports on the deficit of \$1 trillion in deferred maintenance, small nuclear reactors, China's Move South Water North Project, and more.

This week's report concludes with an article by Professor Larry Bell, “‘Green Energy' Capacities Are Overblown Hot Air.”

December is Wet and Cold-- Is This Still California?

Strong storms boost California snowpack to highest December level since 2015



Squaw Valley is blanketed with snow on Dec 3. The Sierra Nevada snowpack — a key source of the state's water supply — measured 113% of average for the date this week. (Ben Arnst / Squaw Valley Alpine Meadows)

By [Hannah Fry](#), Staff Writer

Dec. 19, 2019

<https://www.latimes.com/california/story/2019-12-19/strong-storms-boost-california-snowpack-to-highest-december-level-since-2015>

In a boost for California's water supply, a series of recent storms that blanketed the Sierra Nevada in snow has built the state's snowpack to its highest December level since 2015.

The snowpack — a key source of the state's water supply — measured 113% of average this week, roughly 40% higher than the snowpack during the same time in 2018, according to the Department of Water Resources.

Data show the snowpack on Monday — the most recent date statistics were compiled — was also 182% higher than the same day in 2017, which was a banner year for precipitation that pulled large swaths of Northern California out of persistent drought conditions.

Officials say the early build-up is the result of a series of late autumn storms that dropped significant precipitation across the state and dusted mountain ranges with powder. Downtown Los Angeles got 2.12 inches of precipitation last month, [its wettest November since 2011](#), according to the National Weather Service.

Still, experts say it's too early to predict whether it'll be a good snow year. The snowpack still has a long way to go to reach the levels needed to help sustain the water supply through the dry summer months, said Lauren Bisnett, a spokeswoman for the California Department of Water Resources.

Will The California Water Wars Become a “Shooting War?”

Not literally, of course, but when they start suing, then solutions become impossible.

As I have repeatedly stated here, unless a new source of water is developed for the state, then there is no solution to the perpetual shortages that have gone on now for almost three decades. It is necessary to mention, once again, that only three years since about 1990 have the water contractors for agricultural water districts received the full allocation they have requested. Sometime they have received as little as 5% of what they have contracted for.

Just to repeat, for those who may be new to this report, a few dozen nuclear powered desalination plants must be built and the North American Water and Power Alliance project must begin.

So, what follows are some newer developments in the water war:

Gov. Newsom's threat to sue Trump upends peace talks on California water wars

By [Ryan Sabalow](#) and [Dale Kasler](#)

December 19, 2019 05:10 AM

<https://www.sacbee.com/news/california/water-and-drought/article238511218.html>

Even before he was sworn into office, Gov. Gavin Newsom threw his weight behind a series of tentative deals, brokered by his predecessor, that were intended to [bring lasting peace to California's](#) never-ending battles over water and endangered fish.

The deals, designed to reallocate water from the state's major rivers, have yet to be finalized a year later.

Now, one of the nation's most powerful farm irrigation districts says it will back out of the agreements completely if Newsom follows through with a [pledge to sue President Donald Trump](#) over a federal plan to pump more water to farmers from the Sacramento-San Joaquin Delta, the fragile estuary on Sacramento's doorstep.

The agreements are intended to resolve a more than decade-old dispute over how much water should be left in the state's major rivers to prop up endangered fish populations. Those same rivers also supply California's massive farm belt and cities from San Francisco to San Diego. It's one of the most contentious, complicated issues facing the new governor.

Last week, Tom Birmingham, the general manager of the Westlands Water District, told Newsom's top environmental policy appointees the massive Fresno-based water district was going walk away from the water-sharing deals if Newsom sues Trump.



Westlands Water District

“The state’s threat of litigation places those far-reaching changes at risk, and until the issues that gave rise to this threat are resolved, it will be impossible to reach a voluntary agreement,” Birmingham said in a December 10 email to Wade Crowfoot, secretary of the Natural Resources Agency, and Jared Blumenfeld, secretary of the state Environmental Protection Agency. “At this point, the ball is in the state’s court.”

Jeff Sutton of the Tehama-Colusa Canal Authority in Willows, a major Sacramento Valley irrigation district, made a similar threat to state officials the same day.

The new threats significantly complicate the tentative deals brokered by former Gov. Jerry Brown shortly before he left office. His administration described them as a grand water-sharing agreement that would bring an end to the dispute between farmers, cities, fishermen and environmentalists over how much water should be left the state’s two most important rivers, the Sacramento and San Joaquin, which flow into the Delta and out under the Golden Gate Bridge.

With the threat last week, Westlands has aligned itself even more closely with Trump and his aims for California’s water system, which would send more water from the Delta to Westlands. The water district already has close ties to the president — their former chief lobbyist, David Bernhardt, is now Trump’s Interior Secretary.

Fish populations at risk

From the start, Brown's agreements have been controversial. Environmentalists argued the plan didn't go nearly far enough. The State Water Resources Control Board last December, just before Brown left office, sided with environmentalists and voted in favor of a more aggressive plan to increase flows in three key San Joaquin Valley rivers, in spite of Brown's compromise.

Westlands a 'bully'

At the heart of the debate are the two massive Delta pumping stations near Tracy that supply water to irrigation districts like Westlands and to the state's major cities as far south as San Diego. One set of pumps is run by the state; the other by the federal government. Environmentalists say decades of pumping have ruined populations of salmon, smelt and other species.

As Newsom has tried to balance these forces, the Trump administration had been moving ahead on its own Delta pumping plan designed to send more water to Westlands and other farm districts, fulfilling a pledge Trump made to San Joaquin Valley farmers while campaigning in Fresno three years ago.

The plan, developed by the U.S. Fish and Wildlife Service and National Marine Fisheries Service, would overhaul the rules governing the Delta to allow more water to be pumped south to San Joaquin Valley farms such as Westlands.

Last month, Newsom's administration said Trump went too far, and he promised to sue to protect the environment.

'The water wars have begun.' Some wonder how water plan will impact Merced County farms

[By Abbie Lauten-Scrivner](#)

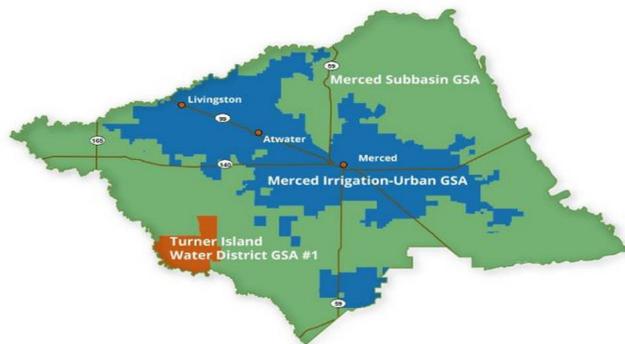
December 15, 2019

<https://www.mercedsunstar.com/news/article238205984.html>

Agricultural and urban groundwater users in Merced County may soon have to sacrifice for the future, if a new state-mandated sustainability plan that limits consumption moves forward.

The changes will come if the [Merced Groundwater Subbasin Sustainability Plan](#) is approved by local agencies and cities. The 20-year [plan](#) aims to achieve sustainable groundwater over the long-term.

"The water wars have begun," Atwater Mayor Paul Creighton said before City Council passed a resolution supporting the plan. "If we're good stewards now, we'll continue to be able to grow."



The Merced Groundwater Basin is one of 21 in the state identified as critically overdrafted, and one of 48 identified as high priority. A basin is critically overdrafted when the average annual amount of groundwater extraction exceeds the basin's annual water supply. Most San Joaquin Valley basins are critically overdrafted.

The 2014 Sustainable Groundwater Management Act (SGMA) requires local groundwater sustainability agencies (GSAs) to develop a long-term plan for such basins by Jan. 31, 2020.

“The goal is to bring the basin into balance by increasing recharge and decreasing demand,” said Merced County Water Resource Coordinator Lacey Kiriakou. “The intention is that by 2040, we’re going to have a sustainable groundwater basin.”

Farmers have concerns

But California farmers are anxious. While the plan aims to create a steady and sustainable water supply for the Central Valley, groundwater limits will change its economic future. The Valley is sustained off its fertile land, with agriculture making up 20% of economic output and 18% of jobs.

In areas of nearby Tulare County, farmers will have to cut groundwater use by 40%. Some farmland will be forced to shrink, while others will not survive. An uncertain future and the Central Valley’s higher than average unemployment rate is making Valley farmers nervous for their livelihood.

Despite Trump promise and a wet winter, California farmers don’t get full water supply

Posted by SDD Contributor on December 14, 2019 at 10:04 pm

<https://stockdailydish.com/despite-trump-promise-and-a-wet-winter-california-farmers-dont-get-full-water-supply/>

In spite of one of the wettest winters on record and a sympathetic president in the White House, California farmers in one of the country’s most productive agricultural regions were told Wednesday they’d receive only two thirds of their federal water allotment for the upcoming growing season.

The U.S. Bureau of Reclamation announced the sprawling agricultural irrigation districts on the west side of the San Joaquin Valley were getting 65 percent of the historical maximums they can receive from the networks of pumps, dams and canals in the federal Central Valley Project.

That’s much more than the districts received during California’s five-year drought. Last year, the districts received just 5 percent of their contracted amounts. The previous two years they received no surface water from the federal government. West side growers haven’t received a 100 percent allocation since 2006.

But the figure is far lower than farmers were hoping for after a wet winter on pace to break records.

“If 100 percent is not possible this year, when, if ever, will it be possible?” asked Johnny Amaral, a spokesman for the Fresno-based Westlands Water District, which represents 1,000 square miles of farmland in Fresno and Kings counties. “The narrative that past allocations are due to drought, this should eliminate all that discussion. We have a regulatory problem, and this year is the evidence.”

Bureau officials didn’t offer an immediate explanation why the west side farmers didn’t get a full allocation, but said in a press release that “this initial allocation is based on a conservative estimate of the amount of water that will be available for delivery.”

Meanwhile, customers of the State Water Project, which is operated by California runs parallel to the federal CVP system, have been told to expect at least 60 percent allocations this year, although that figure could rise. The state’s contractors, including major cities in Southern California, received 60 percent last year.

Blatant Sellout?

<http://familiesprotectingthevalley.com/news.php?ax=v&n=5&id=10&nid=802>

Environmental groups have all kinds of people throughout government agencies like the EPA, DOI, BLM, Natural Resources, Conservation, Fish&Game, DWR, and probably a lot of others we can't even remember. People who have been in the NRDC, the Sierra Club, the Environmental Defense Fund, Audubon Society, the Nature Conservancy and others move back and forth to and from government agencies in numbers too great to calculate. It goes without any kind of criticism from the media.

But let a couple of people from organizations opposed by these environmental groups into a government agency and you would think it's the end of the world. That is what's behind the article below ([The cronyism and conflicts behind Trump's attack on California](#)) in the San Francisco Chronicle. We'd like to see just once the media point out the conflicts of interest these so-called environmentalists have in their decision making.

Instead, they point out that "nowhere is this blatant sellout to corporate interests more evident than the Department of the Interior's [proposal](#) to award a permanent water supply [contract](#) to the Westlands Water District, the powerful California water agency." If you want to know more about the Westlands deal you can read this article ([Some Facts Not Reported About the Westlands Contract](#)) by Don Wright at WaterWrights.

But, back to the Chronicle article that says, "the proposed [contract](#) would permanently grant the water district up to 1.15 million acre-feet of water a year from the Sacramento-San Joaquin River Delta, enough to supply [2 million California families](#) for the same amount of time." This newspaper always backs decisions by the State Water Resources Control Board (which until recently had as [Chairwoman Felicia Marcus](#), formerly Regional Director for the NRDC...no problem. She also was the administrator of the Environmental Protection Agency Region IX in the Clinton Administration. Before that she headed Los Angeles' Department of Public Works). The SWRCB with her as Chairwoman sent tens of millions of acre feet of water straight through the Delta and out to sea. No problem. No conflict. But give a water district 1-million acre feet and it's a 'blatant sellout' and 'ludicrous misallocation of limited water supplies.'

We would also like to point out that Westlands rarely receives all the water in their contract, often getting 10 or 20%([only three full allocations since 1993](#)). Last year when water was everywhere they only got 55%. They've agreed in the current contract to cap at 75% no matter what, so the million is really 750,000 at most. They've also taken 100,000 acres out of production and will take another 100,000 out because of this agreement. Another 24,000 will be used for a solar farm. And we'll wait to see what the Sustainable Groundwater Management Act does to the total acreage farmed.

We'd just like to see the same kind of scrutiny given to people like Felicia Marcus as they are giving to current Secretary of the Interior David Bernhardt. But, don't hold your breath.

The cronyism and conflicts behind Trump's attack on California

By Robert Weissman

December 9, 2019

<https://www.sfchronicle.com/opinion/openforum/article/The-cronyism-and-conflicts-behind-Trump-s-14890377.php>

Good News!-Bad News!

It's about to get a lot tougher to farm in California.

Dec 12, 2019

<http://familiesprotectingthevalley.com/news.php?ax=v&n=5&id=10&nid=801>

It's always nice to see some good news when it comes to farming in California and the Central Valley. According to the Fresno Bee, the recent signing of a proposed trade agreement between the U.S., Mexico and Canada will mean "significant long-term economic benefits" for farmers in Fresno County and the San Joaquin Valley." This is one of the few things Democrats and Republicans in Washington D.C. can agree on as "both the White House and Democratic leaders said the new agreement is a significant improvement over NAFTA in how trade occurs between the three countries."

Vice President Mike Pence said he and the White House believe "USMCA will add 176,000 jobs in the U.S. And, "according to conservative estimates, American exports to Canada will increase by \$19 billion, and exports to Mexico are going to increase by \$14 billion." That's good news.

But, along with the good news there's also bad news. The bad news is the Sustainable Groundwater Management Act (SGMA) which was discussed recently at the 38th annual Agribusiness Management Conference at Fresno State University. In an article recently published in Ag Alert they cite Moderator Laura Ramos, manager with the California Water Institute at Fresno State who talked of the "likelihood that as much as a fifth of the 5-million acres of farmland in the Central San Joaquin Valley could be taken out of production because of SGMA constraints." In case your math isn't too good, that's a million acres.

So, while it's nice to see good news on the trade front, the obstacles put in front of farmers by the SGMA will make it difficult for farmers to produce the products to export. Not many businesses get hit with a 20% penalty by the state to begin a new year.

The Saga of PG&E

Over the past few months this report has covered the "PG&E Saga" of fires, electricity cut-offs, bankruptcy and the vulture funds attempting to take over the company. I think many readers here may be tired of it. So, this week I shall just give you the titles of articles and their links, which cover the bankruptcy process, the governor's attempts to steer that and a few other odds and ends.



PG&E Is One Step Closer to Getting Out of Bankruptcy

By Alexandra Scaggs

December 13, 2019

<https://www.barrons.com/articles/pge-one-step-closer-getting-out-of-bankruptcy-51576251139>

PG&E fails to get governor's approval on restructuring proposal

By [Tal Axelrod](#) - 12/13/19 11:19 PM EST

<https://thehill.com/policy/energy-environment/474560-california-governor-rejects-pges-restructuring-proposal>

PG&E sidesteps California Gov. Newsom by amending \$13.5B settlement with wildfire victims

By [Brittany De Lea](#) *FOXBusiness*

December 17, 2019

<https://www.foxbusiness.com/money/pge-amends-settlement-wildfire-victims>

Judge Approves PG&E \$24.5 Billion Plan For Wildfire Victims And Insurance Companies

December 17, 2019 11:28 PM ET

<https://www.npr.org/2019/12/17/789181882/judge-approves-pg-e-24-5-billion-plan-for-wildfire-victims-and-insurance-compani>

[Richard Gonzales](#)

Editorial: California has power over PG&E. Use it

<https://www.latimes.com/opinion/story/2019-12-18/california-pg-e-power-wildfire-blackout>

By [The Times Editorial Board](#)

Dec. 18, 2019

PG&E, Newsom Clash Over a Clause That May Allow State Takeover

By [Scott Deveau](#) and [Mark Chediak](#)

December 18, 2019

<https://www.bloomberg.com/news/articles/2019-12-18/major-obstacle-in-pg-e-newsom-talks-is-prospect-of-a-takeover>

A Real Economy Is Not a Financial Bubble

2008 Revisited?

Fed Doubled Bailouts Again Dec. 13 in Out-of-Control Crisis — Trump Being Set Up for Crash?

Since September 17, the Federal Reserve has been pumping up to \$100 billion per day into the Repo Market. The Repo Market is that in which the banks loan to each other for one day or a week. Because something has gone wrong (like a major bank in trouble), and the banks will not loan to each other, the

Federal Reserve has stepped in to be the lender of “last resort.”



That is not all.

On Dec. 13, the New York Fed made new announcements, added to its continuing daily, two-week, and 42-day loans and securities purchases:

Liquidity loans from Dec. 13-Dec. 30: “At least \$125 billion”

One-day loans on Dec. 30: “at least \$75 billion”;

Dec. 31-Jan. 2 loans: “at least \$150 billion”;

Jan. 3-14, 2020 loans: “at least \$120 billion”.

The Fed will now be substituting itself for at least 15% of the \$1.1 trillion/day interbank lending market, meaning that 15% of that market is unable to function. The biggest banks can’t, or much more likely refuse to lend that much to some other financial firms and/or banks EVEN FOR 24 HOURS, for fear of intraday insolvency of their counterparty.

One analysis, that of the “Wall Street on Parade” blog, is that “the New York Fed announced that over the next month it would shower the trading houses (primary dealers) on Wall Street with a total of \$2.93 trillion in short-term loans ... for a Wall Street liquidity crisis that has yet to be explained in credible terms.” Whatever the Fed chooses to call it, this is really massive, effective secret, quantitative easing (“QE4”).

It is easy to trace this to hedge funds which are liquidating, to unpayable corporate debts in the \$15.5 trillion U.S. corporate debt bubble, and perhaps to one or more major banks ready to go. These all constitute the fuse: The bomb is these banks’ exposure to hundreds of trillions of dollars in derivatives bets, of which the worst exposure is to foreign exchange derivatives.

The American people cannot let President Donald Trump, fighting what is really an intelligence agency coup, get set up to be hit with a ‘2008’ financial crash or worse. It can be prevented. The four key actions proposed by the late economist and statesman Lyndon LaRouche are the essential means. Break up Wall Street banks with Glass-Steagall and establish a national credit institution, high-technology new infrastructure, a crash Moon-Mars mission for NASA.

These actions mean the U.S. economy can recover instead. If Americans mobilize and force them on the Congress as a way to ‘rehabilitate’ itself, the President is in a position to deal with China, Russia and India for a new international credit and monetary system that extends the new infrastructure and science projects into the developing countries.

Sitting still and waiting for the Federal Reserve to “plug” a vast liquidity hole in the Wall Street banking system, bigger than anything since the Lehman Brothers blowout and being kept almost entirely secret, is not a good alternative.

For more:

<https://larouchepac.com/20191217/fed-doubled-bailouts-again-dec-13-out-control-crisis-trump-being->

[set-crash](#)

https://wallstreetonparade.com/2019/12/new-york-fed-plans-to-throw-2-93-trillion-at-wall-streets-trading-houses-over-next-month-as-new-york-times-remains-silent/?fbclid=IwAR1D4NFrOuYZcmWqXa6VX19JrNJapZ7U68XhOyfZ0gBVnrRBFzGtKjy_vE8

Infrastructure

First a report on the existing deficit of more than \$1 trillion just for deferred maintenance of existing infrastructure. Some may remember the report by the American Society of Civil Engineers which puts the price tag for repairing and building infrastructure at over \$3 trillion.

Next are two reports on small nuclear reactors: One on the technical progress of the R&E, and the second of an important step in authorizing the building of these reactors at the Tennessee Valley Authority complex.

When the California Central Valley Project and the California State Water Project were completed in early 1970s, the state's water management system was the largest and most complex in the world. Now, China has completed two-thirds of its massive South-North water diversion project, and just that now is the largest and most complex, and serves 120 million people. A short report and video below presents this.

The last item in this section is an example of how the failure called the California high-speed rail project is, by its managers, doubling down on its failure. Obscene?, yes.

America's Trillion-Dollar Repair Bill

There is a non-profit report issued Nov. 20, "America's Trillion-Dollar Repair Bill: Capital Budgeting and the Disclosure of State Infrastructure Needs", which estimates the mere deferred maintenance -- repairs -- expense of state and local economic infrastructure to be \$1 trillion. This, although 80% of the actual total national spending on infrastructure since 2000 has been by those municipal governments, only 20% by the Federal government. Two things become clear from this. First, these needed repairs have nothing to do with the nation's new infrastructure missions or purposes, such as nuclear desalination, electrification of freight rail and creation of high-speed rail, water transfer and water creation, major storm protection infrastructure, new locks and dams and flood control systems -- and science drivers like Moon-Mars and fusion power.



The Depressing State of US Infrastructure

<https://steemit.com/writing/@doitvoluntarily/the-depressing-state-of-us-infrastructure>

Therefore \$1 trillion is but a small fraction of the needed investment by a new Hamiltonian national

credit institution over the coming decade. Secondly, that Federal institution will have many, many opportunities and requirements to lend long-term and low-interest, as a large commercial bank, to municipal infrastructure agencies.

CAPITAL BUDGETING AND THE DISCLOSURE OF STATE INFRASTRUCTURE NEEDS

November 2019

<https://www.volckeralliance.org/sites/default/files/attachments/Americas%20Trillion-Dollar%20Repair%20Bill%20-%20Capital%20Budgeting%20and%20the%20Disclosure%20of%20State%20Infrastructure%20Needs.pdf>

EXECUTIVE SUMMARY

STATE AND LOCAL GOVERNMENTS PROVIDE about 80 percent of US public infrastructure spending. But reported infrastructure spending may not sufficiently address America’s critical need to repair public assets, such as roads, highways, waterworks, and buildings, that are vital to the functioning and growth of the nation’s economy. In its annual Truth and Integrity in State Budgeting studies, the Volcker Alliance has found that few states have disclosed the immense cost of these needed repairs in their budget documents. We estimate that the cost of making deferred repairs at the state level may be as large as \$873 billion, equivalent to 4.2 percent of US gross domestic product, or almost three times the value of all investment by states and localities in nonresidential fixed assets. Combined with a reported federal backlog of \$170 billion, the national total deferred maintenance cost may be at least \$1 trillion. The sum may be even larger because while states disclose voluminous information about their general fund budgets, the same cannot be said for their capital budgeting practices, which vary widely among states.

In contrast to general fund budgets, which pay for recurring operating expenditures such as education, public safety, and, sometimes, routine maintenance of infrastructure, capital budgets typically include costly, long-lived assets involving one-time expenses whose payment is spread over years to equalize funding needs over time and stabilize taxes. But reporting standards, such as the type of assets included and the information disclosed, differ from state to state, and few report infrastructure conditions and needs in their budget documents. To help states close this critical information gap and improve their decision-making processes, we offer a ten-point action plan based on best practices relied upon by several states and the District of Columbia. Implementing the plan will help policymakers set common standards; improve asset management; make information consistent, updated, and available; and build a better-informed decision-making process for capital projects.

NuScale’s 12-Module Small Modular Reactor Technical Review Takes a Firm Step Forward

Dec. 13 (EIRNS)— The U.S. Nuclear Regulatory Commission (NRC) has completed the fourth phase of its review of the design certification application for NuScale’s small modular reactor (SMR). With two final phases remaining, this marks the near-completion of the technical aspects of the review.

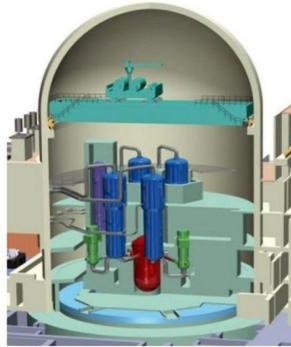
“The completion of Phase 4 of the NRC’s design review certification process is an unprecedented step forward for our company and for the advanced nuclear industry overall,” NuScale Chairman and CEO John Hopkins said. “We appreciate the tremendous effort the U.S. Nuclear Regulatory Commission has dedicated to its thorough and rigorous review of our groundbreaking technology thus far,” World Nuclear News reported.

Phase 5 entails a review by the NRC’s Advisory Committee on Reactor Safeguards (ACRS), an

independent advisor to the regulator that reviews and reports on safety studies and reactor facility license and license renewal applications. The sixth and final phase of the review is the preparation of the final Safety Evaluation Report (SER), which will incorporate confirmatory items from the Phase 4 advanced SER and comments raised by ACRS in Phase 5. The final SER is scheduled for completion in September 2020.

Typical Pressurized-Water Reactor

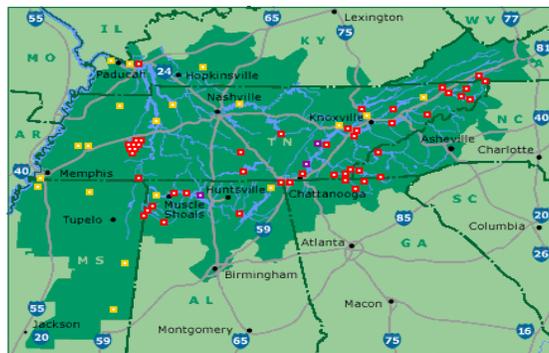
NuScale's combined
containment vessel
and reactor system



*Source: NRC

NuScale's SMR design features a fully fabricated power module based on pressurized light water reactor technology. Each module can generate up to 60 MWe, and the scalable design can be used in power plants of up to 12 individual modules. It is the first—and so far only—SMR to undergo a design certification review by the NRC. (See EIR, “Mass Production of Modular Nuclear Reactors To Industrialize Developing Countries,” Nov. 16, 2018.)

TVA gets nation's first approval to potentially build and operate small modular nuclear reactors



TVA Facilities Map

by [Larry Pearl](#)

Dec. 18, 2019

<https://www.utilitydive.com/news/tva-gets-nations-first-approval-to-potentially-build-and-operate-small-mod/569298/>

Tennessee Valley Authority (TVA) will soon be the first U.S. utility to get permission to potentially build and operate small modular reactors (SMR), after the Nuclear Regulatory Commission authorized the issuance of an Early Site Permit for the utility's Clinch River site.

The commission expects the Early Site Permit to be issued in the next few days. It will be good for 20 years and allows for a nuclear facility at the Clinch River site near Oak Ridge, Tenn. with a capacity

up to 800 megawatts.

“The early site permit is a significant step in the potential development of small modular reactor technology,” Dan Stout, director of nuclear technology innovation at TVA, said in a statement.

TVA applied for the permit in 2016, addressing site safety, environmental and emergency preparedness requirements, and NRC began its formal review in January 2017.

The utility now has until 2039, with the possibility of an extension, to decide whether to go ahead and pursue construction of small modular reactors. “Another NRC application is required to build and operate this kind of facility,” TVA noted.

“The decision to build will be based on energy needs and economic factors” TVA Chief Nuclear Officer Tim Rausch said in a statement.

“SMRs are more attractive where load growth is slow, and they provide a more affordable option than the higher up-front capital costs associated with larger nuclear facilities,” Stout added.

China's massive South-North water diversion project serves 120 million people

https://www.youtube.com/watch?v=WmYpQyL8_bY&feature=youtu.be&fbclid=IwAR0jXznV7r-NWYRrqFQMDG3O3q1FY8Ko_j0AN8NkPmkbWbLhOgFnjIMERhE

China says its ambitious South-to-North Water Diversion Project is now serving more than 120 million people. On the fifth anniversary of the opening of the east and middle routes, China's Water Resources Ministry said it's working hard to complete the project in full. The south-to-north water diversion project is the world's largest of its kind. In China, water is abundant in the south, but scarce in the north – so this massive infrastructure project aims to resolve water shortage issues in cities like Beijing. Here are some more facts about the project.

Troubled California Bullet Train Eyes biggest Contract Ever

December 16, 2019 By Ralph Vartabedian

http://www.capoliticalreview.com/trending/troubled-california-bullet-train-eyes-biggest-contract-ever/?fbclid=IwAR1vQu2oeYC_OcHBWf1Kf0KGwe8cqO93MgsblLuVHLFP6CK0db-uR4KDBFw



The California bullet train authority is moving ahead with an aggressive plan to issue its biggest contract in history, steering into sharp criticism by federal regulators and even the state-appointed peer review panel that it is overreaching.

The agency took a key step last week toward issuing a 30-year-long contract to install track, set up high-voltage electrical lines, create a digital signaling system, build a heavy maintenance train garage and obligate future maintenance of the equipment and track.

It would cover future track from San Jose to Bakersfield, more than half the proposed Los Angeles-to-San Francisco system. It would lock the state into a maintenance contract, as well as equipment, on segments that it currently does not have money to build. ...

[Click here to read the full article from the L.A. Times.](#)

'Green Energy' Capacities Are Overblown Hot Air

By Larry Bell

December 9, 2019

<https://www.newsmax.com/larrybell/wind-fossil-petroleum-solar/2019/12/09/id/945107/>

Democratic candidates who have committed to the goal of achieving net-zero greenhouse gas emissions by 2050 are premising disastrously costly and destructive social and economic policies upon "renewable energy alternative" fantasies.

Briefly summarized, I'll highlight three basic realities their campaigns aren't informing you about.

Current and Future Wind and Solar Contributions Are Vastly Overrated:

First, for some overall perspective let's recognize that about 80 percent of all U.S. energy (always measured in BTUs) comes from fossil sources, with another 8.6 percent contributed by nuclear. Total energy from "renewables," a term which probably doesn't mean what you imagine it does, amounts to 11.4 percent. Of that total U.S. energy amount, solar and wind combined contributed barely over three percent.

In 2018, nearly two-thirds of total U.S. electricity (64%) — not total energy — came from fossil fuels, and most of the rest (20%) from nuclear. Of those so-called renewables, wind accounted for only 6.5 percent - about the same as hydro (7%). Solar contributed a piddling 1.5%.

According to the US Energy Information Administration (EIA), nearly two-thirds of the energy that goes into the U.S. electrical power is lost through conversion to mechanical energy and transmission distribution before it reaches users.

All combined, those renewables provide 17 percent of U.S. electricity . . . an energy sector which, in turn, comprises a little more than one-third (37%) of America's total energy consumption. The rest of total energy is distributed fairly equally between industrial, transportation, and residential-commercial sector end uses.

Wind Operational and Maintenance Life Cycle Costs Are No Bargain:

Wind promoters aren't generally eager to mention some negative cost –benefit ratio drivers that warrant big "buyers beware" warnings.

They don't advertise, for example, that breezy intermittent outputs require access to a "shadow capacity" typically provided by an equal "spinning reserve" of natural gas-fueled turbines that enables utilities to balance power grids when wind conditions aren't optimum . . . which is most of the time.

Such second-by-second grid management to insure uninterrupted power transfer becomes increasingly

complex and inefficient as more and more intermittent sources are added to the power supply mix. This requires that the fossil-fueled turbines must be constantly throttled up and down to balance the grid, much like driving a car in stop-and-go traffic.

Remarkably, Green New Deal proponents somehow propose that wind and solar — which together provide just slightly over three percent of America's total energy — will eliminate a need for fossil sources which produce 80 percent.

This dramatic non-fossil transition presumably includes replacing the natural gas spinning reserve capacity essential to balance the power grid; requiring the constant availability of two different equal capacity sources to do the job of one.

This also somehow includes replacing petroleum-fueled vehicles with plugged-in electric marvels that can mysteriously be recharged when the wind isn't blowing and sunshine isn't available — nighttime, for example.

Wind turbines are also short on longevity, long on maintenance.

A major 2012 Edinburgh University study of nearly 3,000 on-shore British wind farms found that the turbines have a very brief 12 to 15 year operating life, not the 20 to 25 year lifespans applied in politicized government and industry projections.

The report also concluded that a typical turbine generated more than twice as much electricity during its first year than upon reaching 15 years of use. Performance due to saltwater deterioration for off-shore installations is even far worse.

Environmental Benefits Versus Costs Don't Add Up Either:

Along with lifecycle investment and operations costs let's also add environmental costs to the mix of considerations.

No, it's certainly not just "dirty" coal, oil and natural gas, that are being challenged . . . or those "hazardous" nuclear plants. Many self-proclaimed environmentalists aren't all keen on wind turbines either. A Sierra Club official described them as giant "Cuisinarts in the sky" for bird and bat slaughters.

Nearby landowners are fighting wind projects in the courts for un-neighborly human offenses.

"Not in My Backyard" (NIMBY) opposition typically arises from an aesthetic perspective where turbines and associated transmission lines dominate scenic vistas.

Other local wind critics have legitimate health concerns about land-based installations. Common symptoms include headaches, nausea, sleeplessness, and ringing in ears resulting from prolonged exposure to inaudibly low "infrasound" frequencies that even penetrate walls.

Wind and solar power also require huge amounts of land and expansive transmission lines to deliver electricity from remote sites (plus additional power transmission losses.) Two 2018 papers published in the journals *Environmental Research Letters* and *Joule* by Harvard University researchers David Keith and Gordon McKay concluded that transitioning from wind or solar in the U.S. will require five to 20 times more land than conventionally thought.

Socialist green dreamers argue that their proposed new dealings are worth any cost necessary to save the planet from climate-ravaging capitalism. Let's finally awaken from that nightmare of nonsense.