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Comments for CEC webinar on July 12, 2019

Additional submitted attachment is included below.

Comments to be submitted before the July 12th CEC webinar at <https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-ERDD-01>

Optimistic targets to replace the 9% from nuclear and the 34% from natural gas, with wind and solar, currently at 9% and 10% respectively.

California Total System Electricity Generation

in GWh	2013		2014		2015		2016		2017	
	Gen	Share	Gen	Share	Gen	Share	Gen	Share	Gen	Share
Nat Gas	131,423	44%	132,157	44%	129,750	44%	105,992	36%	98,315	34%
Coal	23,193	8%	18,888	6%	17,735	6%	12,006	4%	12,075	4%
Petroleum	52	0%	61	0%	68	0%	431	0%	442	0%
Large Hydro	23,009	8%	16,037	5%	15,948	5%	29,681	10%	42,987	15%
Nuclear	26,217	9%	25,220	8%	27,251	9%	26,670	9%	26,519	9%
Wind	25,356	9%	23,991	8%	24,107	8%	26,321	9%	27,442	9%
Solar	5,389	2%	12,594	4%	17,629	6%	23,574	8%	29,796	10%
GeoThermal	13,192	4%	13,030	4%	12,883	4%	12,717	4%	12,705	4%
BioMass	7,929	3%	7,554	3%	7,546	3%	6,553	2%	6,874	2%
Small Hydro	3,813	1%	3,098	1%	2,616	1%	4,796	2%	7,867	3%
Unspecified	37,055	12%	44,433	15%	39,873	13%	41,825	14%	27,017	9%
Total	296,628	100%	297,063	100%	295,406	100%	290,566	100%	292,039	100%

Source: California Energy Commission - http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html

Note: This data includes imports from other Western States, Mexico and Canada.

In 2013 California already shutdown the continuous nuclear facility of SCE's San Onofre Generating Station which generated 2,200 megawatts of power and will be closing PG&E's Diablo Canyon's 2,160 megawatts of power in 2024 getting ready for the renewable replacements.

Most recently Los Angeles Mayor Gil Garcetti announced the [forthcoming closures of three DWP natural gas-powered plants](#), located at El Segundo, Long Beach, and the Los Angeles Harbor, again getting ready for those renewables. If this wasn't so scary, it would be laughable.

California is phasing out nuclear reactors that generates zero emission continuously uninterrupted electricity, with a focus on intermittent electricity generation from Wind and Solar.

The inability of our politicians to communicate their grand plans, inclusive of the Green New Deal, and gain the buy-in from blue collars, before jumping off the cliff is a guaranteed primrose path to failure. The recent rejection of a one-million-acre solar farm in San Bernardino, California, along with similar expected actions from other local communities will most likely squelch the idea of a Green New Deal and a “super grid” from ever coming to fruition.

Recently the [San Bernardino County's Board of Supervisors slammed the brakes on big solar projects](#) and highlighted a challenge California could face as it seeks to eliminate the use of fossil fuels. San Bernardino locals soundly voiced their objections to those land devouring, eco system disrupting, unsightly monstrosities that lead to higher electricity prices and lower property values for nearby residents, saying not-in-my-back-yard! So, with no places to locate the renewables farms, what's next?

Forget technology on wind and solar, as there's no land available in California for those huge farms.

In the most likely event there will not be enough land permitted to build those huge intermittent electricity farms, and with continuously uninterruptable electricity generation now supplied by nuclear and natural gas disappearing from the grid, more electricity will be required to be imported from other states, currently already at 29% in 2017, to make up the deficiencies of limited in-state generation, obviously at a premium price for the 40 million residents of the state.

The goal to have 100% intermittent electricity by 2045 has already driven up the cost of electricity to residents and businesses to be well above the national average. The scary trends for funds and oil are both fueling (no pun intended) the growth of the poverty, homeless, and welfare populations in California.

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2017 Total System Electric Generation in Gigawatt Hours

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	California Energy Mix (GWh)	California Power Mix
Coal	302	0.15%	409	11,364	12,075	4.13%
Large Hydro	36,920	17.89%	4,531	1,536	42,987	14.72%
Natural Gas	89,564	43.40%	46	8,705	98,315	33.67%
Nuclear	17,925	8.69%	0	8,594	26,519	9.08%
Oil	33	0.02%	0	0	33	0.01%
Other (Petroleum Coke/Waste Heat)	409	0.20%	0	0	409	0.14%
Renewables	61,183	29.65%	12,502	10,999	84,684	29.00%
Biomass	5,827	2.82%	1,015	32	6,874	2.35%
Geothermal	11,745	5.69%	23	937	12,705	4.35%
Small Hydro	6,413	3.11%	1,449	5	7,867	2.70%
Solar	24,331	11.79%	0	5,465	29,796	10.20%
Wind	12,867	6.24%	10,015	4,560	27,442	9.40%
Unspecified Sources of Power	N/A	N/A	22,385	4,632	27,017	9.25%
Total	206,336	100.00%	39,873	45,830	292,039	100.00%

In 2017, per the CEC chart above, California imported 29% of its electricity into the state from the Northwest and Southwest. Another issue is storage for the lost power from nuclear and natural gas plants that Garcetti is shutting down, i, e, more imported electricity.

In California alone, [intermittent electricity](#) from low power density renewables is expensive to consumers. It has already contributed to [California household users paying more than 50% more, and industrial users are paying more than 100% more than the national average for electricity.](#)