



Figure 1-7: Hypothetical spatial footprint of 18 GW of PV compared to the San Francisco metro area  
(Credit: Lucid Catalyst LLC)



#### 4. Impact of differing operating patterns on capacity value of Diablo Canyon

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**From:** Pruder Scruggs, Kathryn M (BPA) - E-4  
**Sent:** Monday, May 23, 2022 10:27 AM  
**To:** Koehler, Birgit G (BPA) - PG-5  
**Subject:** RE: can we make a map like this?

Got it.

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**From:** Koehler, Birgit G (BPA) - PG-5 <[bgkoehler@bpa.gov](mailto:bgkoehler@bpa.gov)>  
**Sent:** Monday, May 23, 2022 10:26 AM  
**To:** Pruder Scruggs, Kathryn M (BPA) - E-4 <[kpruder@bpa.gov](mailto:kpruder@bpa.gov)>  
**Subject:** RE: can we make a map like this?

Katie,

I'm not sure if Rob is working on a map or not, but we can always put a placeholder in your ppt (maybe a copy of the Diablo Canyon map) and ask them to try to create something similar. (Maybe not overlay on the LSN reservoirs, because they are a large area themselves).

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**From:** Diffely, Robert J (BPA) - PGPL-5 <[rjdiffely@bpa.gov](mailto:rjdiffely@bpa.gov)>  
**Sent:** Monday, May 23, 2022 9:00 AM  
**To:** Koehler, Birgit G (BPA) - PG-5 <[bgkoehler@bpa.gov](mailto:bgkoehler@bpa.gov)>; Pruder Scruggs, Kathryn M (BPA) - E-4 <[kpruder@bpa.gov](mailto:kpruder@bpa.gov)>  
**Cc:** James, Eve A L (BPA) - PG-5 <[eajames@bpa.gov](mailto:eajames@bpa.gov)>  
**Subject:** RE: can we make a map like this?

Here is a high level estimate based on NREL. [Land Use by System Technology | Energy Analysis | NREL](#)  
E3 studies rely mostly on gas/H2 and wind. For offshore, the NREL report [Offshore Wind Market Report: 2021 Edition \(energy.gov\)](#) – I used the estimated acres from 5 projects in the New York Bight



	E3						
	S0 No Policy	S1 100% Clean Retail Sales	S1a 100% Clean Retail Sales (no carbon price)	S2 - Deep Decarb	S2a1 - Deep Decarb no combusti on	S2a2 - Deep Decarb no gas	S2a3 - Deep Decarb emerging tech
Year	2035	2035	2035	2035	2035	2035	2035
Reliability Metric	PRM	PRM	PRM	PRM	PRM	PRM	PRM
Gas (MW)	2300	1800	2200	2000			1500 (H2)
DR (MW)							
Solar (MW)		-500			1500	1600	
Batteries (MW)		100	100	200	6000	300	
Wind (MW)	200	1300		600	9400		600
Offshore Wind (MW)						13000	
Pumped Storage (MW)					300		
Conservation (MW)					10	10	
SMR (MW)							600
Wind (Sq Miles)	7.8	50.8	0.0	23.4	367.2	0.0	23.4
Offshore Wind (Sq Miles)						1204.4	
Solar (Sq Miles)		-1.3	0.0	0.0	4.0	4.3	0.0

**From:** Koehler,Birgit G (BPA) - PG-5 <[bgkoehler@bpa.gov](mailto:bgkoehler@bpa.gov)>

**Sent:** Monday, May 23, 2022 8:29 AM

**To:** Pruder Scruggs,Kathryn M (BPA) - E-4 <[kpruder@bpa.gov](mailto:kpruder@bpa.gov)>; Diffely,Robert J (BPA) - PGPL-5 <[rjdiffely@bpa.gov](mailto:rjdiffely@bpa.gov)>

**Cc:** James,Eve A L (BPA) - PG-5 <[eajames@bpa.gov](mailto:eajames@bpa.gov)>

**Subject:** RE: can we make a map like this?

E3 provided the amount of solar already. Not sure when we will get the land area from them. We could ask this afternoon.

For Rob's FYI: Katie is working to improve the E3 non-technical version of the ppt. We're hoping to get that done very quickly because it is urgent that we get back to CEQ and DOE as quickly as possible.

In fact, we should discuss with E3 (and amongst ourselves) if we are far enough along that we can schedule that meeting. Many people would be happy if we could do it next week.

**From:** Pruder Scruggs,Kathryn M (BPA) - E-4 <[kpruder@bpa.gov](mailto:kpruder@bpa.gov)>

**Sent:** Monday, May 23, 2022 7:56 AM

**To:** Diffely,Robert J (BPA) - PGPL-5 <[rjdiffely@bpa.gov](mailto:rjdiffely@bpa.gov)>

**Cc:** Koehler,Birgit G (BPA) - PG-5 <[bgkoehler@bpa.gov](mailto:bgkoehler@bpa.gov)>; James,Eve A L (BPA) - PG-5 <[eajames@bpa.gov](mailto:eajames@bpa.gov)>

**Subject:** RE: can we make a map like this?

Great! Thanks for your quick response.

**From:** Diffely,Robert J (BPA) - PGPL-5 <[rjdiffely@bpa.gov](mailto:rjdiffely@bpa.gov)>

**Sent:** Monday, May 23, 2022 7:56 AM

**To:** Pruder Scruggs,Kathryn M (BPA) - E-4 <[kpruder@bpa.gov](mailto:kpruder@bpa.gov)>

**Cc:** Koehler,Birgit G (BPA) - PG-5 <[bgkoehler@bpa.gov](mailto:bgkoehler@bpa.gov)>; James,Eve A L (BPA) - PG-5 <[eajames@bpa.gov](mailto:eajames@bpa.gov)>

**Subject:** RE: can we make a map like this?

Sure

E3 is planning to provide the land use (number of acres) across their scenarios, so we should have these numbers soon.

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**From:** Pruder Scruggs,Kathryn M (BPA) - E-4 <[kpruder@bpa.gov](mailto:kpruder@bpa.gov)>

**Sent:** Monday, May 23, 2022 7:53 AM

**To:** Diffely,Robert J (BPA) - PGPL-5 <[rjdiffely@bpa.gov](mailto:rjdiffely@bpa.gov)>

**Cc:** Koehler,Birgit G (BPA) - PG-5 <[bgkoehler@bpa.gov](mailto:bgkoehler@bpa.gov)>; James,Eve A L (BPA) - PG-5 <[eajames@bpa.gov](mailto:eajames@bpa.gov)>

**Subject:** can we make a map like this?

Hi Rob,

I'm helping Power make the E3 presentation less technical so regular folks can understand it. Would you help make a map like this, to show the solar foot print in the PNW if the lower Snake River dams are removed? This visualization is something that BPA execs have pointed to as a good example of how we could communicate the impacts. [An Assessment of the Diablo Canyon Nuclear Plant for Zero-Carbon Electricity, Desalination, and Hydrogen Production | Energy \(stanford.edu\)](#)