

DOCKETED

Docket Number:	21-ESR-01
Project Title:	Energy System Reliability
TN #:	244612
Document Title:	Jennifer Klay Comments - Keep Diablo Canyon open
Description:	N/A
Filer:	System
Organization:	Jennifer Klay
Submitter Role:	Public
Submission Date:	8/11/2022 6:00:09 PM
Docketed Date:	8/12/2022

*Comment Received From: Jennifer Klay
Submitted On: 8/11/2022
Docket Number: 21-ESR-01*

Keep Diablo Canyon open

Additional submitted attachment is included below.

Public Comment for the Joint-Agency Workshop - Diablo Canyon Power Plant August 12th, 2022

Docket #: 21-ESR-01 Project Title: Energy System Reliability

My name is [Jennifer Klay](#). I am a professor of physics at Cal Poly and a resident of San Luis Obispo. I am a nuclear physicist by training and I study nuclear collisions at both high and low energy so that we can better understand how the universe works and make nuclear reactor fuel more efficient.

As a scientist I base my decisions on facts, data and evidence. The evidence is clear. Nuclear power is the [safest](#), [most reliable](#), [cheapest](#), [low carbon](#) energy source we have and Diablo Canyon is the jewel of California's clean electricity grid. In the face of the overwhelming evidence of global climate change and the urgent need for us to achieve net zero CO2 emissions as quickly as possible, I strongly encourage the state of California to prioritize the preservation of Diablo Canyon Nuclear Power Plant by *clearing all pathways to relicensing and extension of this critical asset in our path to deep decarbonization*.

All [rigorous studies](#) that take into account lifetime costs, CO2 emissions, environmental footprint, reliability, and safety of energy generation recognize the crucial role that nuclear power must play in helping us reach our climate goals while keeping costs low for consumers and preventing life-threatening blackouts. Diablo Canyon produces 15% of California's in-state clean energy and nearly 10% of its electricity, powering nearly 3 million homes with an up-time of over 92% of the year. We simply can't afford to let that reliable baseload power go offline, especially when we are facing shortfalls and extreme weather induced by climate change.

Figure 1 of this comment shows the supply and demand (upper panels), and CO2 emissions (lower panels) from the California electricity grid for two days in 2022, using publicly available data on the [CAISO Today's Outlook webpage](#). While we produce a significant portion of our mid-day needs from **low-carbon sources including nuclear power from Diablo Canyon**, high-carbon sources such as imports from other states and natural gas currently make up the bulk of our night-time supply. These are also the largest sources of CO2 emissions on our grid. The arrows highlight the large gap between what we say we want (low carbon electricity) and what we actually have.

If we are to meet our climate goals AND electrify the transportation sector, we need substantially more reliable baseload low-carbon sources. We certainly can't afford to go backward by losing the 2200 MW of power provided by Diablo Canyon.

I urge California policymakers to educate themselves on the fragility of our electric system and the danger of legislating clean energy mandates without fully evaluating their implications to the management of our fragile grid. Author and energy analyst Meredith Angwin's book [Shorting the Grid](#) should be required reading (or listening) for all members and their staff who write or vote on California energy policy. It clearly lays out the challenges of managing the complex system of electricity generation, transmission, and distribution, and provides guidance for policymakers in creating **the grid that we want: reliable, affordable, and low-carbon**.

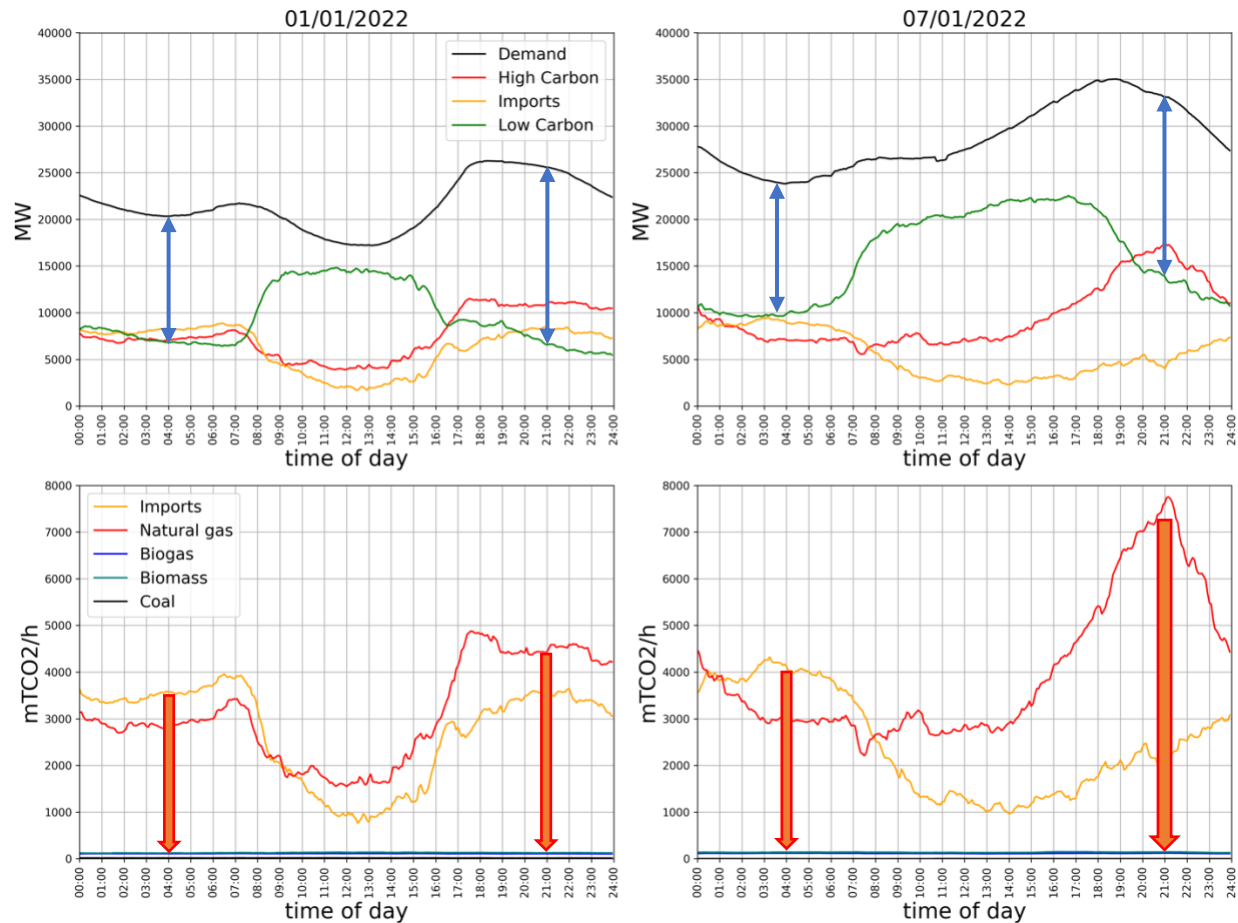


Figure 1: California electric grid supply and demand (top panels) and emissions by source (lower panels) for Jan 1, 2022 and Jul 1, 2022. Data from [CAISO Today's Outlook](#). The arrows show where we need more low-carbon baseload like nuclear power to reduce our emissions and meet our electricity needs.

We must do everything we can to keep Diablo Canyon operating well into the future and invest in **all** clean-energy generation, including **new** nuclear power plants. We must show our leadership by embracing examples of [demonstrated decarbonization](#), not the empty promises of 100% “renewables” advocates who ignore the emissions and costs of the backup sources (whether natural gas and imports or storage) that are necessary to prop up the intermittency of wind and solar. The low-carbon electricity systems implemented in Sweden, Ontario, and France in the 1970s and 1980s should light the way forward, not the [failed Energiewende of Germany](#), whose consequences are even clearer with the devastating Russian invasion of Ukraine.

In summary, please clear all bureaucratic barriers to keeping Diablo Canyon open. California’s leaders must take action to ensure that our electric system is 1) reliable and robust against the impacts from climate change, 2) helps us arrest runaway CO2 emissions, and 3) can grow to meet future demand from electrification of our industrial and transportation sectors while being equitable and affordable for all Californians.