DOCKETED	
Docket Number:	18-IEPR-09
Project Title:	Decarbonizing Buildings
TN #:	223972
Document Title:	Meeting CA climate targets requires electrification
Description:	N/A
Filer:	System
Organization:	John Elliott/Lawrence Berkeley National Laboratory
Submitter Role:	Public
Submission Date:	6/27/2018 11:20:58 AM
Docketed Date:	6/27/2018

Comment Received From: John Elliott
Submitted On: 6/27/2018
Docket Number: 18-IEPR-09

Meeting CA climate targets requires electrification

Meeting California's climate targets requires aggressive energy efficiency, decarbonizing the electricity grid, AND moving loads served by fuel onto the decarbonized grid. See a concise summary of this by Williams and others ("The Technology Path to Deep Greenhouse Gas Emissions Cuts by 2050: The Pivotal Role of Electricity," Science 2012).

At Berkeley Lab, we are currently constructing a new 80,000 square foot laboratory that uses electricity for all space and water heating. This is feasible and cost effective. The building uses heat recovery chillers on the chilled water return with air-source heat pump back-up, and local on-demand heaters for domestic hot water.

Building a building that relies on natural gas is not consistent with the State's climate targets. Just this week, a review paper in Science by Alvarez and others confirms that methane emissions from the US oil and natural gas supply chain produces radiative forcing comparable to carbon dioxide emissions from natural gas combustion ("Assessment of methane emissions from the U.S. oil and gas supply chain," Science 2016).

I urge the Commission to maintain its resolve to aggressively phase out natural gas use in buildings to decarbonize and meet state climate targets.

Thank you,
John Elliott
Chief Sustainability Officer
Lawrence Berkeley National Laboratory