

DOCKETED

Docket Number:	19-BSTD-06
Project Title:	Local Ordinances Exceeding the 2019 Energy Code
TN #:	232104
Document Title:	Sierra Club Comments - In support of reach code approvals
Description:	Scientific reasons why approval and support of local reach code ordinances is necessary
Filer:	Andrew Earl Ferguson
Organization:	Sierra Club
Submitter Role:	Public
Submission Date:	2/19/2020 10:56:11 AM
Docketed Date:	2/19/2020

California Energy Commission
Warren-Alquist State Energy building
1516 Ninth Street
Sacramento, CA 95814

Re: Local Ordinances Exceeding Reach Code #19-BSTD-06

Sirs:

I strongly urge the approval of local ordinances as referenced.

Recently, The Global Carbon Project, a large network of climate scientists that track greenhouse gases, published information that the leakage of natural gas is now the main cause of continuously increasing ghgs in the atmosphere. The recently published graph indicating this increase can be seen here:

<https://www.globalcarbonproject.org/carbonbudget/19/infographics.htm>

In addition, a team from Colorado State University and other institutions headed by Zachary Weller and Joseph von Fisher completed a study that shows that natural gas leaks from gas mains in the USA are vastly greater than previous estimates, emitting 700 million tons of natural gas per years in the USA. This is more than five times previous estimates. Also, the researchers found that utility companies are only finding about 30% of the leaks in gas mains instead of the 85% claimed. The cost of repairing and maintaining gas lines going forward is prohibitive and the switch to clean energy sources is essential.

A paper by Etminan et al. (2016) shows that estimates of atmospheric radiative forcing (heating) due to methane have been systematically underestimated and should be increased by about 25%. In their paper here: <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2016GL071930> entitled "Radiative forcing of carbon dioxide, methane, and nitrous oxide: A significant revision of the methane radiative forcing" the research group shows that the Intergovernmental Panel on Climate Change (IPCC) estimates of the total forcing by methane during the years 1750 to 2011 should be increased by 25%. The revision is due to the fact that not all emitted electromagnetic spectrum energy is accounted for in previous measurements. This substantially raises the amount of global warming attributable to natural gas. Previously, methane's estimated radiative forcing was 0.97 W m^{-2} (watts/square meter) compared to 1.68 W m^{-2} from CO₂ in the period 1750 to 2011. Thus methane was previously thought to have provided about 37% of the total of man-made warming by these two largest GHGs. The revision calculated by Etminan increases methane's contribution to approximately 46% of the radiative forcing by these two gases. As methane emissions have increased since 2011 relative to CO₂, the contribution of methane as a GHG has gone up further, and thus may now approach as much as 50% or more of man-made atmospheric forcing. While scientists will not state that methane is the main cause for recent climate catastrophes, it is worth noting that the large increase in methane emissions from natural gas correlates strongly with recent wildfire and weather phenomena. For a graph showing the previous estimates by the IPCC on this topic see page 14 of the Summary for Policy Makers (SPM) (2014) downloadable here: http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf

For these and other reasons, local efforts to reduce the use of natural gas must be supported.

Yours truly,

Andrew E Ferguson, Sierra Club, Petaluma, CA