

[This is the third post in a series expressing my view of why California's actions on climate change are so important and how they will change the world. The [introductory post](#) provides an overview and some general context.]

Energy usage associated with buildings is substantial. There are different ways to calculate it, but the California Energy Commissions estimates that [buildings in California](#) account for over 25% of the total GHG emissions, including both fossil fuel consumed on-site (for example, gas or propane for heating) and emissions associated with electricity consumed in existing buildings (for example, for lighting, appliances, and cooling). So, [SB 350](#) requires that energy efficiency in California buildings be doubled by 2030.

For new buildings, we are well on track. New residential and commercial buildings must be net zero emitters by 2025 and 2030, respectively, and California's building codes reflect those requirements. The difficulty lies with the 14 million or so existing buildings. So far, we haven't done as well as we would like in reducing emissions in this sector.

The California Energy Commission has adopted an [extensive plan](#) to meet the doubling requirement, so I won't repeat it here. The key elements are:

- Requiring further appliance efficiency to reduce load
- Setting separate targets for electricity and natural gas efficiency
- Requiring much greater data and usage transparency and reporting
- Focusing on large building benchmarks and reductions initially
- Providing funding and incentives for residential units
- Fuel substitution
- Focusing on disadvantaged communities
- Improving technology

With the exception of appliance efficiency, California probably has more to learn from other jurisdictions that it has to teach at the moment. (California has a long history of leading on appliance efficiency, and continues to set the most aggressive appliance efficiency standards where it is not preempted by federal action or inaction.) The expectation is that California will double efficiency in buildings over the next twelve years, regain its leadership role and be in a position to share the knowledge widely.

Next blog: Oil and Transportation

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