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Energy Efficiency and Building Decarbonization are not the same thing

As we start the next IPER process, we urge you not to allow $\hat{a}\in$ ebuilding decarbonization $\hat{a}\in$ to piggyback on energy efficiency, like load management has, when it comes to determining the cost effectiveness of proposed program activities And budgets. Energy efficiency needs to be treated as a separate activity, and load management and building decarbonization, or electrification, need to be treated as separate standalone activities.

Energy efficiency programs, for the most part (as we ran them in the 1980s and 1990s) involve installing permanent energy efficiency measures like attic insulation, caulking, weather stripping, higher efficiency replacement windows, higher efficiency appliances, etc. in peoples homes, and higher efficiency equipment and appliances in individual businesses facilities. As such, energy efficiency produces long term measurable energy savings. If properly enforced, the CECâ \in TMs building and appliance efficiency standards do the same thing.

Demand management, on the other hand, is all about trying to convince energy customers to temporarily change their behavior, by lowering their thermostats or turning off their TVs or computers. These temporary behavioral changes may or not save measurable amounts of energy, and may or may not persist over time. As such, determining the cost effectiveness of demand management. The promoters of demand management solved this problem by convincing the CEC and the CPUC to lump demand management in with energy efficiency when the states energy strategy was updated. That way, the permanent avoided cost of installed energy efficiency measures were attributed to both energy efficiency and demand management, blurring the costs and benefits of both activities.

Now, in the new IPER update process, the CEC appears to be making the same mistake by lumping building decarbonization in with energy efficiency. Building decarbonization is going to be all about preventing natural gas appliances from being installed in new homes and may also focus on removing or disconnecting gas appliances in existing homes and replacing them with all electric appliances. Those appliances may run off electricity generated by rooftop solar, or by central station utility power generation plants, which may run on natural gas, wind turbines, or solar PV fields.

In any case, we will be trading reductions in natural gas demand for increases in electricity demand. As such, building decarbonization may or may not save measurable amounts of energy. The legislature and the regulatory agencies should work together to identify new benefits associated with reductions in carbon associated with cutting natural gas combustion by electrifying new and existing buildings, and count those benefits against the costs of new decarbonization mandates and retrofit efforts, without mixing up the permanent energy savings produced by energy efficiency with the as yet unidentified benefits of proposed decarbonization efforts.

This approach will send clear signals to legislators, regulators and energy customers of the comparative costs and benefits of these three separate program types: efficiency, demand reduction and decarbonization. Those signals will help ensure that program budgeting produces the correct mixture of activities to maximize statewide benefits while minimizing costs to utility customers throughout California.

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