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Written comments from Decarb workshop 5-22-20

Additional submitted attachment is included below.



We would like to provide the following written comments in response to the CECs Decarbonization Workshop held on May 22nd, 2020.

Efficiency First California (EFCA) is a non-profit trade organization that represents energy efficiency contractors in California. EFCA is also the program administrator for Sacramento Municipal Utility District (SMUD), residential rebate programs. Together, EFCA and SMUD have developed one of the first rebate programs in the country to support decarbonization.

Comments:

1. Energy efficiency is an essential consideration in the decarbonization effort. Much of the current energy policy conversation has shifted from energy savings to greenhouse gas reduction. EFCA supports decarbonization and wants to make sure that energy efficiency continues to be an essential part of the solution. Please consider the following energy efficiency measures and their role in decarbonization.
 - a. Load reduction. Reducing energy consumption in buildings is the foundation of energy efficiency efforts. As we add more electric devices to buildings, the demand for electricity will increase. Encouraging basic energy efficiency measures as part of electrification will allow the existing distribution grid to support additional buildings without significant infrastructure upgrades.
 - b. Electric appliances are more efficient. Replacing fossil fuel appliances with electric devices makes sense from an energy efficiency standpoint. Electrical appliances, such as heat pump space heaters and heat pump water heaters, are significantly more efficient than their fossil fuel counterparts. Based on their efficiency alone, electric appliances are the right choice for energy efficiency and decarbonization efforts.
 - c. Building envelopes are critical. We need to start considering our buildings as batteries. High-performance building envelopes allow buildings to "store" energy by reducing the amount of heat or cooling escaping the building. Controlling energy losses enables a building to maintain consistent temperature over time. An efficient building can "glide," which means it can maintain temperature, over a duration of time, without additional heating or cooling. The ability to glide allows advanced savings measures such as pre-cooling and demand response. Energy-efficient buildings can facilitate new distribution-grid strategies that take advantage of the electricity supply when the carbon content is lowest.
2. Electric service panels. Many studies have identified service panels as a barrier to electrification. In most cases, the capacity of the service panel is a concern. For example, many older homes have 100amp service panels that need to be upgraded to meet the additional loads due to electrification. Capacity is one problem; the other is physical space. Panel upgrades might be required even if there is reserve capacity. Electric appliances often require a dedicated breaker by code. Many service panels don't have the physical space to accommodate the number of new circuit breakers, as are necessary for an all-electric building. One final note on service panels, many utilities are reluctant to fund panel replacement programs as there is no energy savings or



greenhouse gas reduction associated with panel upgrades. Upgrading panels should be considered an enabling step toward electrification and will require funding.

3. Consumer awareness. We must build a market and increase consumer awareness to meet the state's goals. Public knowledge and awareness of electrification and decarbonization are virtually non-existent. Consumer awareness and education need to be a central concern of the decarb effort. We cannot count on local governments or contractors to create demand for decarbonization. Building a market for decarbonization will require state-level funding.
4. There must be value for all stakeholders. A solid value proposition for all parties will be crucial to adoption, including:
 - a. Manufactures – We can't expect manufactures to develop new products without proving the market potential of these products. We need to establish purchase agreements with manufacturers and share the risk of providing new technologies to the market.
 - b. Building owners – Homeowners and building owners need to be able to buy low carbon solutions at equal to or less cost than their fossil fuel counterparts. The electric device should match or exceed the performance of the device they are replacing. Effective rebate programs and substantial upfront incentives will be required until we reach wide-scale adoption.
 - c. Contractors – Much of the success of any effort to decarbonize will rely on the success of contractors. The majority of contractors in California are small businesses with limited resources. We cannot expect contractors to change their business models and lose money to support of decarbonization. Incentives will be required to achieve market transformation. Contractors need to be involved in policy conversations from the design stage through implementation. Rebate programs should help build sustainable business models that can thrive once the incentives are depleted or are no longer necessary. And finally, existing regulations must be enforced to create a level playing field. We will never reach full adoption of all-electric buildings if unlicensed and unscrupulous contractors are allowed to participate in the market at a far lower cost than legitimate businesses.
 - d. New business models – We must remove barriers that are preventing new business models. Many new approaches to clean energy include some form of sharing resources due to the high upfront capital costs. Community solar, community energy storage, micro-grids, and fuel cells are encouraging new technologies. Outdated legislation is preventing widespread adoption of new business models and technologies. We need to review our current policies and remove barriers restricting new business models.
 - e. Financing – Access to funds for building owners is critical. We cannot expect building owners to carry the financial burden alone. There need to be innovative financing options for building owners to facilitate the adoption of electrification. Low-interest loans and new financing models, such as on-bill finance, will be required to support investment in the decarbonization effort.



5. Build a workforce – The state can legislate goals and encourage solutions, but if we do not concentrate on educating and promoting a new workforce, uptake will struggle. The effort to decarbonize the electric supply in California will create thousands of jobs. Most of the new positions available will require an educated and well-trained workforce. We must learn from the past and build a market and the workforce at the same time. California's construction industry is currently facing shortages of workers. Meeting the state's goals for clean energy will require thousands of new workers. We need to consider where these workers will come from and what skills will be necessary for them to be successful.
6. Help consumers connect to qualified contractors – One of the challenges of promoting electrification is helping building owners find skilled contractors. Frequently, several different trades are required to convert a building from fossil fuels to all-electric. To date, building electrification is not a specific trade. These factors make it difficult for building owners to convert their buildings once they have decided to move forward. Converting a building to all-electric may require the services of a plumber, an electrician, an HVAC specialist, and potentially several other tradespeople. We receive at least one inquiry per week from property owners looking for referrals for their projects. We need to have a statewide resource to help connect qualified contractors to home and building owners looking to reduce their GHG emissions via electrification.

EFCA feels strongly about the need for a statewide contractor directory. We are so committed to the concept that we are currently using our limited resources to fund the development of a statewide contractor directory tool. The directory will be similar to the one we rolled out for the SMUD contractor network in January of this year. We intend to make this directory available to all parties supporting decarbonization and ensure that it is free for the building owners and contractors. The first group of contractors in the directory will be those involved in electrification. We plan to add other contractor groups as the list grows, such as energy efficiency and zero net energy. The primary objective of this directory is to provide connections between contractors and building owners. We are approaching this project as a long-term, sustainable effort. Our goal is to help make contractors profitable, facilitate the development of a clean energy workforce, and to encourage quality work. We would be happy to provide more details on this effort at a later date.

We appreciate your efforts and look forward to continuing the conversation

Regards,

Charles Cormany
Executive Director