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Comments of NRDC and Sierra Club on the BUILD Implementation Plan

Additional submitted attachment is included below.

Comments of the Natural Resources Defense Council (NRDC) and Sierra Club on the Building Initiative for Low-Emissions Development (BUILD) Implementation Plan

Docket Number 20-DECARB-01

Submitted: August 7, 2020

Submitted by: Merrian Borgeson (NRDC) and Alison Seel (Sierra Club)

The Natural Resources Defense Council (NRDC) and Sierra Club appreciate the opportunity to comment on the Building Initiative for Low-Emissions Development (BUILD) program Implementation Plan. NRDC is a non-profit membership organization with more than 95,000 California members who share an interest in expanding affordable energy services while reducing the environmental impact of California's energy consumption and transitioning to a thriving climate-safe society. Sierra Club is a non-profit, member-based California corporation with more than 165,000 members in California and a mission of promoting the responsible use of the earth's ecosystems and resources, including working to speed California's transition to a clean energy future.

I. Bill Savings Methodology

We acknowledge the staff's effort in thinking through the many complex variables that must be considered when doing a bill impact analysis for a yet-to-be-constructed building. The assumptions proposed seem directionally correct, but are quite general and obscure the actual bill impacts of the **occupants**. For example, combining common area bills and occupant bills obscures the occupant's likely costs. The *monthly* bills will also matter to an occupant if they cannot afford their bills for several months (whereas the analysis proposed is annual).

The statutory language focuses explicitly on the bills for the occupants, not the owners of the building, which makes sense given the economic vulnerability of these occupants. This focus on occupant bills should be reflected in the implementation of BUILD. We recommend the following:

- **Only measures which impact occupant bills need be included in a bill impact analysis.** In general, common area utility costs and central water heating and HVAC systems need not be considered because they are not included in occupant bills. For example, central water heating is paid for by the owner and therefore moving to all-electric water heating in this case does not impact occupant bills. In deed-restricted affordable housing, rents are also controlled, so building owners cannot increase housing

costs paid by the occupant beyond the maximum allowed. If the builder has previously built all-electric except for central water heating (which is common) and proposes to upgrade to electric central hot water in new buildings, then no analysis would be required because it would not "result in higher utility bills for building occupants" (PUC § 921.1.(d)(3)).

- If the builder is using in-unit electric technologies, such as for water heating, space heating, and induction cooking, then **the monthly occupant bill impact should be considered as compared to the gas alternatives**. Here a "standard" bill estimate should be used, along the lines of what is proposed by the CEC (but perhaps simpler because the analysis could focus on the specific technology "switched" to use electricity) with a focus on the occupant bill to the extent possible.

- **Calculate bill savings using the most beneficial electricity rate that applies.** The Implementation Plan proposes that "the rates used in this bill saving methodology as proposed are the baseline CARE/low-income rates" (p. 27). As CARE customers can enroll in (and receive their CARE discount on) any rate offered by their utility, it is unclear which "baseline" rate will be used in the analysis. The rate chosen will have a large impact on the results of the bill savings analysis, and a utility's default residential rate may not necessarily be the most suited to or beneficial for electrified homes. We recommend that the most beneficial rate for the electrified appliances be used for the analysis, whether that is the utility's default time of use rate, or special rates open only to customers with heat pump space and water heating, such as SCE's TOU-D-PRIME rate or similar rates in development by SDG&E and PG&E.

- **Allow the affordable housing provider to demonstrate bill savings through an alternative methodology.** The affordable housing provider should also have the option to demonstrate stable or reduced utility costs via the California Utility Allowance Calculator (CUAC) or through another method that they may propose.

- **"Extra" services provided by heat pumps, namely air conditioning, should be assumed as available in both the "baseline" project and the proposed project**. To ensure an apples-to-apples comparison, the "baseline" project and proposed project should have equivalent services, so that heat pumps are not penalized for enabling air conditioning.

II. Incentives

We appreciate the staff's clear dedication to enabling streamlined and accessible incentives through BUILD. We offer the following additional feedback:

- **The CEC should reach out directly to low income housing providers to get feedback on what timing of incentives is needed to influence project design.** CEC staff notes that it is attempting to design BUILD to provide for progress payments before project completion, but has not yet determined a viable process that meets all state funding requirements and ensures the completion of projects supported by BUILD funds. It is important to proactively solicit feedback from developers on this issue before finalizing the program guidelines to ensure the design meets their needs.

- **Incentive amounts should also consider what is needed to trigger changes in the new construction market.** The staff proposal states that it will "tie incentives to the cost of equipment, incremental cost difference for builders, and estimated GHG emission reduction level with prioritization given to projects in low-income and disadvantaged communities" (page 12). Focusing on the incremental cost is important for some technologies – central heat pump water heating in particular – where electric technology can be more expensive. However, for other building types and technologies, electric technology is not more expensive than gas equipment. Instead, the barrier is the lack of familiarity and experience with the electric technology, as well as non-technology costs builders face in changing their standard practices –for example, updating standard home designs and marketing practices. The CEC must therefore also consider what level of funding is needed to incentivize builders to adopt technologies that may be new to them and to ultimately transform the market, which is the overriding intention of SB 1477.

- **Kicker incentives should be awarded based on greenhouse gas reductions, even if the technology is used for a compliance credit under the Energy Code.** The Implementation Plan currently proposes that if a project uses a technology for compliance credit under the Energy Code, the technology will not be eligible for BUILD kicker incentives. This approach is problematic because under the performance path for Energy Code compliance, which is used for the vast majority of production building, all appliances are used to earn compliance credits. We are concerned that adopting this approach would have the unintended effect of restricting kicker incentives only to technologies that are not included in the Energy Code compliance software. The goal of kicker incentives is to develop the market for the lowest-emission technologies, and adding this restriction based on the compliance software would add unnecessary barriers.

- **Heat pump clothes dryers on the ENERGY STAR Most Efficient list should be eligible for kicker incentives.** We support providing a kicker incentive for heat pump clothes dryers, which represent a significant emissions reduction opportunity that is not regulated in the building energy code Title 24 Part 6. We encourage the CEC to clarify which models are eligible. We recommend using ENERGY STAR Most Efficient for

clothes dryers, version 2020 or the latest version available at the time of application.[1] This is a performance-based certification that essentially requires heat pump-only or hybrid heat pump technology, and has product availability in both compact size and full-size models, providing size options for builders and customers. Allowing hybrid heat pumps to qualify for the kicker incentive is important because 1) they are much more efficient than conventional electric models; and 2) they are the only technology currently available for full-size dryers. Allowing full size dryers to qualify ensures builders and customers don't need to compromise on amenity to qualify for kicker incentives.

- **Higher kicker incentives should be offered for low-GWP refrigerants.** We agree with providing a kicker incentive for mid-GWP refrigerants (GWP < 750) as it is important to encourage early adoption of these refrigerants ahead of CARB regulations. However, it is also important to encourage market development of low-GWP refrigerants (GWP < 100) with higher incentives. There are water heating products already in the market or being introduced in the market, and many others available internationally that California would greatly benefit from having brought into the California market. A higher kicker incentive, e.g. double the mid-GWP incentive for the same product type, would send a clear signal to the market, and provide a strong enough incentive to encourage manufacturers to introduce such technology in California.

- **Kicker incentives should be considered for hybrid VRF (variable refrigerant flow) systems**: The amount of refrigerant in the system per heating capacity also matters: a hybrid VRF system (a.k.a. hydronic VRF) with refrigerant flow limited to an indoor heat exchanger and using water for distribution throughout the building may have significantly lower refrigerant charge and risk of leakage than conventional VRF systems. This type of innovative technology should be encouraged, e.g. by setting a "refrigerant charge per ton of heating" threshold for kicker incentives.

III. Technical Assistance and Outreach Plan

We strongly support the plan to provide technical assistance (TA) to builders early in the process (pre-application) and to allow flexibility in how the TA provider works with prospective applicants. We offer the following additional feedback:

- While we support the CEC staff in doing some outreach directly through their own channels, **it is vital to hire a third party that works directly with affordable housing organizations on a regular basis to recruit participants**. This should be done through a

[1] See: https://www.energystar.gov/partner_resources/energy_star_most_efficient_2020_criteria

joint RFP for TA and outreach, which could attract teams of applicants with the range of skills required to connect with and support applicants through the process.

- **Some items described under "outreach" do not make sense as activities that should be prioritized.** The plan states that "CEC staff will provide additional outreach assistance to project developers if requested to inform the community of the details of BUILD-supported projects, availability of project units for rent or purchase, and recruiting of tenants/owners" (page 31). We support the CEC providing the public with details of the BUILD program impacts, but we see no reason that staff resources should be directed to advertising the availability of units or recruiting tenants. This is not an appropriate or needed role for the CEC staff and this should be removed from the Implementation Plan.

- **Providing TA but no incentives to market rate builders does not have obvious merit.** CEC staff proposes that "technical assistance funds be made available for market-rate developers to improve industry knowledge of all-electric residential development." It is unclear why market rate builders would seek out TA without incentives, or that TA providers with expertise in affordable housing will be the same as for market rate builders. We recommend the CEC engage directly with market rate builders to understand what needs they have. For example, market rate builders might benefit from training and support modeling all-electric buildings in Energy Code software. If included, the final Implementation Plan should include more detail on what type of TA would be provided to market rate builders and this should be informed by builders.

Thank you for considering these comments.

Merrian Borgeson
Senior Scientist
Natural Resources Defense Council
111 Sutter Street, 21st Floor
San Francisco, CA 94104
Email: mborgeson@nrdc.org

Alison Seel
Associate Attorney
Sierra Club
2101 Webster St., 13th Floor
Oakland, CA 94612
Email: alison.seel@sierraclub.org