Comments of the Natural Resources Defense Council on AB802 Implementation
Contact: Peter Miller; pmiller@nrdc.org
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I. Introduction

The Natural Resources Defense Council (NRDC) submits the following informal comments in response to the request for comments at the January 26, 2016 workshop. NRDC appreciates the opportunity to provide comments on this important issue. The legislative guidance provided in AB 802 expressed a clear need for rapid and ambitious action to increase the efficiency of existing buildings. We appreciate and support the CPUC's prompt response to this direction and are committed to working with staff and other stakeholders to ensure a successful outcome.

II. General recommendations

NRDC supports a thoughtful and measured approach that focuses on using customer funds wisely to maximize cost-effective energy saving.

To enable a solution that is effective and aligns with state climate goals, it is important to place AB 802 in the context of California's overall policy goals. Last year, the state's commitment to ambitious climate action was reaffirmed and expanded with the passage of SB 350 and the adoption of a goal of a 40% reduction in emissions relative to 1990 levels by 2030. Energy efficiency is a critical strategy to meet these goals, and AB 802 supports these policies by ensuring the state does not leave savings on the table while also requiring thoughtful analysis to make sure the law results in real and additional savings.

Furthermore, California's building stock was constructed over many decades at a much lower level of efficiency than is achievable today, often with equipment that no longer performs as efficiently as when it was installed. Bringing those buildings up to modern levels of energy efficiency will convey significant environmental and economic benefits.

In this context, the legislature directed the CPUC and CEC to authorize additional efforts to capture the significant energy efficiency potential in existing buildings that are not otherwise being captured. To achieve this, NRDC agrees that the CPUC needs to understand the potential energy savings and how the state currently accounts for savings. By being measured and thoughtful, the CPUC can spur projects that capture these additional savings while making sure customer funds are being used wisely.

We caution that being unduly conservative could undermine the opportunity to bring buildings up to and beyond code. The passage of AB 802 is a clear statement that the current approach is not promoting upgrades of the most inefficient buildings. The CPUC should continue to exercise appropriate deliberation and oversight. But a process that is too complicated or restrictive ends up costing customers far more by forcing utilities to rely on more costly and dirtier conventional energy resources.

NRDC offers the following recommendations to address the challenges with implementation of AB 802.

A. **Focus on promising opportunities**: The population of existing buildings is very diverse with a wide range of building types, vintages, and locations. Many of these buildings offer a large potential for efficiency savings that is likely to persist for years without focused action. Others offer relatively little potential for incremental savings. AB 802 does not require the Commission to treat all of these buildings identically. By focusing on the most promising opportunities (e.g., buildings in underserved communities, local government buildings without sufficient capital, buildings with equipment that is being repaired indefinitely, or upgrades that are suited to a pay for performance model) and using policy approaches that are tailored to address the needs of specific markets, the Commission can maximize the benefits to customers of upgrading these facilities.

B. **Learn by doing**: AB 802 also does not require the Commission to limit implementation to actions that can be taken by September 1. As with other programs and policies, this effort can and should expand and improve over time in response to experience and results. Therefore we recommend that the Commission launch the effort focused on those buildings in the most need of upgrades, and enable opportunities for review and expansion over time.

C. **Learn from others**: Many jurisdictions have had to deal with the challenge of improving the efficiency of existing buildings and identifying how to establish the baseline. While other regions may not have as stringent building codes as California, the general issue is the same and some of the solutions could be transferable. The northwest and the northeast states have been working on these issues for years and could help and/or partner with California to develop solutions to address this challenge.

III. Policy recommendations

In the recent staff workshop, parties raised a number of concerns with implementation of AB 802. NRDC believes that these concerns can be best addressed through adoption of a transparent and well-designed policy framework. NRDC offers the following principles as the foundation of an effective policy framework for moving forward.

A. **Prioritize maximizing benefits to customers and meeting state goals:** Existing legislation and Commission decisions provide clear guidance to the Commission on the principal objectives of the energy efficiency portfolio, including procurement of all cost-effective efficiency and doubling of total cumulative savings by 2030. Some parties have raised concerns that implementation of AB 802 could result in programmatic support for savings that would have happened anyway. NRDC agrees that programs should be designed to minimize free ridership, but the principal objective of the Commission should remain focused on maximizing net benefits to customers and ensuring that cost-effective efficiency is exhausted before relying on supply-side resources.

B. **Adopt appropriate and transparent methods to address uncertainty:** The large number of measures, diverse applications, and need to account for a counterfactual baseline imposes a unique set of analytical requirements on energy efficiency policies and programs. Effective implementation requires that policymakers address these issues with analytical methods that are accurate and data driven. Yet this approach needs to avoid "paralysis by analysis," particularly with regard to the development of baselines and counterfactual assumptions. There are two keys to success drawn from other regions that are leaders in capturing efficiency. First, since it is impossible to "measure" a counterfactual, it is more effective to acknowledge and manage uncertainty, rather than try to eliminate it. For example, as described below, the Commission could update baselines regularly based on contemporaneous market data, rather than trying to get precise estimates of net-to-gross ratios that are significantly delayed and not applicable to programs that have already been redesigned. Second, open and transparent processes – such as the California Technical Forum – can help to increase credibility and accuracy.

C. **Use up-to-date market data to guide programs:** As mentioned above, a targeted approach is best suited to capturing effectively the greatest savings in the diverse population of existing buildings. In order to develop that targeted approach, up-to-date and detailed market data is needed. Therefore, the Commission should include in its strategy an expanded role for collection and presentation of current market data to help guide program design and facilitate a focused implementation on those buildings or areas that are in the most need.

D. **Increase transparency and coordination with demand forecast:** Many parties have raised the need to increase transparency and coordination with the demand forecast to improve accuracy and avoid double counting and undercounting. The Commission should continue its efforts to drive improvements in this area, although here too the primary focus should be on maximizing benefits to customers rather than over allocate resources to determine credit for program administrators.

IV. Program recommendations

The Commission has already initiated implementation of AB 802 with the HOPPs effort. Further action on AB 802 should build on this initial effort. As noted above, we encourage the Commission to see implementation as a process that will evolve and grow over time. However, it is critical that there be additional near-term program opportunities to comply with the requirements of the legislation and in order to test out new approaches and programs that can be refined and expanded over time.

NRDC recommends the Commission focus its near term efforts on two specific areas, as outlined below.

A. Rely on a "dynamic baseline" approach instead of retrospective attribution studies

The Commission relies heavily on retrospective attribution studies to establish baselines. As has been noted by many parties, this approach is both limited by the ability and willingness of program participants to accurately express their motivation; and it also creates uncertainty that limits the willingness of administrators to try new program ideas. Our current methods also do not provide useful information for program planning as the information collected is too late and often the evaluated program has already substantially changed. Retrospective attribution studies are particularly problematic for programs targeting comprehensive retrofits of existing buildings because it requires trying to untangle a complex decision-making process around multiple, interacting building components.

Deploying a dynamic baseline approach uses up-to-date market data to develop forward-looking baselines that account for current and expected rates of measure adoption. The forward looking baselines can be updated regularly to reflect market changes, ensuring that programs are informed by and evolve to reflect current conditions. Energy savings evaluated after the fact are then measured and compared to this initial baseline to determine how much the market activity was moved by the intervention.

The dynamic baseline approach has been tested and proven, and is in use in the Pacific Northwest. In contrast to the retrospective approach employed by the Commission, it relies on timely market information, provides a firm foundation for program design and implementation by eliminating the uncertainty associated with retroactive changes adopted after the program has been implemented, and it is easier to align with the demand forecast which already is based on forward-looking projections about electricity consumption in various end uses. NRDC recommends the Commission move forward with developing the dynamic baseline approach to launch in September. The Commission could work with other regions that have been implementing this approach for years to figure out how best to adapt the concept for California and should request input from the California Energy Commission to ensure coordination with the existing forecasts.

B. Focus on program priorities that are most easily identified as projects that would not happen without intervention

NRDC recommends focusing on the following areas that offer opportunities for new and/or expanded initiatives to provide cost-effective savings in existing buildings that are not already upgrading their facilities.

1. **Expand upon approved HOPPs projects:** As noted above, the Commission has already begun implementation of the requirements of AB802 through the HOPPs effort. This effort should provide the starting point for identifying program opportunities for full implementation of AB802. In particular, the proposals for HOPPs projects that are submitted and approved should be considered candidates for expansion in size and scope.

2. **Allow for programs that reach repair indefinitely measures:** The California Technical Forum has identified a set of measures in specific markets that tend to remain in place for far beyond their attributed lifetimes. Rather than be replaced with newer, more efficient equipment, these measures are usually kept in service indefinitely and repaired if and as needed. Examples of these "repair indefinitely" measures include windows and boilers in multi-family buildings, due to the high first cost associated with replacement, the split incentives between landlords and tenants, and the ability to keep the measures operating long past assumed lifetimes.

   For repair indefinitely measures, use of an existing conditions baseline will provide an accurate indication of the benefits provided to customers and to the utility system as a whole. There are a number of different programmatic approaches that could be employed to go after these savings as well as existing programs in the field that could be expanded.

3. **Behavioral, retrocommissioning, and operational (BRO) measures:** There is a large opportunity for cost-effective efficiency savings from improving the operation of existing buildings, both from the perspective of equipment and from the behavior of the people that occupy them. Both AB 802 and SB 350 specifically identify BRO measures as a key energy efficiency opportunity. The Commission should take advantage of this opportunity by empowering program administrators and implementers to field programs that improve the operational efficiency of existing buildings relative to how they are typically occupied and operated.

4. **Pay for performance programs:** There is significant untapped potential for growth in energy efficiency with programs that provide compensation for savings based on metered savings. California is at the leading edge of a new market opportunity that takes advantage of the widespread distribution of smart meters and advanced analytical techniques to increase savings. The Commission should take the lead by developing an effective and credible regulatory framework to oversee P4P programs. The framework should include a transparent and efficient process that allows companies to compete at providing services to utility customers, with the goal linked to utility customer savings.

5. **Supplement Proposition 39 projects in underserved school districts:** Another area of opportunity is to focus on schools in disadvantaged neighborhoods. These schools are chronically underfunded and buildings are typically both in disrepair and – despite the valuable, but limited funding from Proposition 39 – unlikely to get brought up to and beyond code on any reasonable timeframe. Further, the California Energy Commission (CEC) already uses an existing conditions baseline for Proposition 39 implementation. Focusing on schools in disadvantaged neighborhoods would provide significant savings and equity benefits while also complying with the direction of AB 802. In addition, this option would provide administrative cost savings by allowing programs to use consistent baselines with Proposition 39 program requirements and could build on programs or projects already in place.

6. **Expand existing small and medium business programs in underserved communities:** Another opportunity is small and medium sized businesses (SMB) in disadvantaged communities. The Commission provided previous guidance to the program administrators to provide opportunities to these customers and current programs already exist. These customers generally have limited expertise and access to capital, likely have not upgraded their facilities to current standards, and would greatly benefit from utility bill savings and improved efficiencies.