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Energy Solutions Comments on Compliance Initiative Workshop 24-BSTD-05

See attached document.

Additional submitted attachment is included below.

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October 19, 2026
California Energy Commission
Docket Unit, MS-4 Re: Docket No. 24-BSTD-05
715 P Street Sacramento, CA 95814-5512
Public Comment Submission for Docket No. 24-BSTD-05

Dear Commissioners and Staff:

Energy Solutions would like to thank the California Energy Commission (CEC) staff for their work on the 2025 Energy Code Compliance Initiatives (see docket 24-BSTD-05). Energy Solutions respectfully submits general comments to the docket in response to calls for engagement and feedback in the proceedings during Workshop #2 on Code Compliance held on September 30, 2025.

Energy Solutions is a California-based energy efficiency / demand side management program implementer that has been in operation for over 30 years. The company is driven by a mission to create large-scale environmental impacts by providing market-based, cost-effective energy, carbon, and water management solutions to our utility, government, and commercial customers. On behalf of the California Statewide Utility Codes and Standards Program, Energy Solutions has supported updates to the California Energy Code (Title 24, Part 6), and the California Appliance Efficiency Standards (Title 20) since 2001. Energy Solutions has supported the California utility compliance improvement program since 2019. In addition to our California codes and standards expertise, Energy Solutions manages large incentive programs in California such as the TECH Clean California Initiative, and the Statewide Point-of-Sale Foodservice Program. We also run the Statewide Electric Emerging Technologies Program, CalNEXT. Outside of California, Energy Solutions and our staff have supported codes development, adoption, and compliance throughout the country for over 20 years. We also manage midstream incentive programs in 22 states for HVAC, water heating, etc. With a deep understanding of Title 24, visibility into code compliance initiatives nationwide, firsthand experience navigating building-efficiency upgrade challenges, and a realistic understanding of forthcoming technologies, we offer a balanced view of both regulatory intent and on-the-ground implementation. From this vantage point, Energy Solutions offers seven suggestions to improve code compliance in California, which are explained in detail in the sections below:

1. **Implement effective interventions while conducting compliance evaluation.**

   Acting on common sense measures concurrent with continued study will result in early energy savings and GHG reductions.

California is mandated to reduce greenhouse gas emissions to 40% below 1990 levels by January 1, 2030[1] – a mere 40 months away. If the CEC fails to immediately pursue pathways to achieving verifiable savings, California's ability to achieve these climate targets will be seriously jeopardized. We agree with comments made by Commissioners Skinner, McAllister, and Hochschild during Workshop #2 on September 30, 2025, and urge the CEC to implement changes in the near-term while also completing the additional gap analysis study. In addition to pathways discussed in the workshop, including continuing efforts to simplify the building code, re-writing compliance manuals to improve readability and accessibility, and increased focus on support for compliance with covered process requirements, we urge the CEC to prioritize the following six recommendations.

2. Prioritize energy-based compliance

The intent of the California energy code is "…to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy…"[2] Prioritizing activities to evaluate actual energy performance is essential to determining the success of the energy code.

There are several ways to define and measure energy code compliance, and we understand the real-world challenges that impact both building performance and compliance with the administrative requirements in the code. The distinction between process-based compliance (e.g., proper design, permitting, documentation, and inspection), and energy-based compliance (e.g., building energy performance outcomes) establishes a common terminology to discuss compliance issues. Consistent with the intent of the energy code, we encourage the CEC to emphasize buildings' actual energy performance (*energy-based compliance*), as the primary metric to measure compliance. This will allow the CEC to measure the code's ability to achieve energy performance benefits more directly than focusing on process-based compliance. We'd like to highlight that there are methods and data that are *currently available* that can assess energy-based compliance, which we outline below. Gaining a more detailed understanding of actual energy performance will be critical as California develops effective building performance standards that are harmonized with the energy code, which we also address in more depth below.

3. Begin compiling and analyzing available data *now,* while scoping the centralized data warehouse

Leveraging data and technical approaches from existing sources—while ensuring appropriate governance, privacy protections, and alignment with public objectives—could meaningfully accelerate the development of a statewide data warehouse and reduce the time and cost to begin making data-informed decisions to improve both energy-based and process-based compliance.

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[1] CA SB32, Sess. of 2016 (Pavley, 2016), California Global Warming Solutions Act of 2006. https://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_0001-0050/sb_32_bill_20160908_chaptered.htm

[2] CA Pub Res Code § 25000 (1974), Warren-Alquist State Energy Resources Conservation and Development Act. https://www.osti.gov/biblio/5743662

The lack of reliable data is inhibiting the state's ability to confidently categorize the current state of code compliance with the granularity that is needed to design tailored interventions. We strongly agree that developing a centralized data warehouse and conducting robust analyses will be critical to the CEC's ability to effectively understand the current market, identify causes of compliance challenges, and strategically address those challenges. Through our work supporting programs such as California Distributed Generation Statistics and the TECH Clean California Initiative, Energy Solutions has experience developing and managing secure and robust data warehouses that house sensitive and granular data and is used to create useful data visualizations. While we understand and support the need to scope and develop the centralized code compliance data warehouse thoughtfully, the CEC can, in the interim, utilize data that is already available to measure and track compliance before the full data warehouse is available.

There are many existing data sources that could provide insights into **energy-based compliance**. Utilities already collect data on building characteristics (building type, building vintage, building floor area, and existing equipment), energy consumption (electric and gas meter data), and local conditions (climate zones and disadvantaged communities). These data could be compared with buildings' simulated energy use data, such as modeled data generated from Automatic Building Energy Modeling (AutoBEM), to gather more information about expected and actual performance. With these data, analysts could identify which buildings' energy use is in range and likely built to comply with the Energy Code, and which buildings use more energy than would be expected of a code-compliant building (for a given vintage, building type, and climate zone, etc). Analysis of these data would allow targeted field studies to investigate root causes of higher than anticipated energy consumption (and potential non-compliance with the Energy Code).

Additionally, incentive program data can provide valuable insights into energy-based compliance. For example, program data that documents detailed retrofits that have occurred at specific locations can be used as an additional data point to help us understand probable energy-based compliance even in the absence of process-based compliance records. If the CEC builds an equipment sales data set, it could provide insights into compliance with both appliance standards and building codes, particularly if sales data has information about where the equipment will be installed.

The California Energy Code Compliance Gap Analysis (TN# 265065) recommends that the CEC conduct targeted field studies as the *primary* research method for energy-based compliance and notes that these studies could be supplemented by data-driven methods. Given the wealth of data that is already available, we recommend instead that data-driven methods be the primary research method, supplemented by targeted field studies.

There are also data available to inform **process-based compliance**. Commercially available permit intelligence platforms, such as Shovels, already provide many data elements that could inform process-based compliance. These platforms systematically collect building permit records, inspection activity, and related public sector datasets from thousands of local jurisdictions, normalize disparate formats, apply quality controls, and integrate permit data with building characteristics and contractor information to enable portfolio level analysis across geographies. These AI-powered platforms transform

fragmented, jurisdiction-specific records into standardized, analytical datasets. The CEC might be able to collaborate with these emerging organizations to access reliable data on process-based compliance, allowing the CEC to skip the step of creating datasets using raw local data or from CEC-managed registries.

To stress, the data required to access improved insights into code compliance (energy and process) already exists. The CEC should start by pursuing partnerships that would allow them to gain access to the data insights from existing sources in the near term, rather than waiting years to scope and build a comprehensive data warehouse from the bottom-up. Evaluating existing data sources now will allow the state to benefit from data-based insights and move meaningfully closer to achieving its climate goals on time.

4. Align energy code compliance with forthcoming building performance standards

Ensure newly constructed buildings that meet Energy Code requirements also align with the forthcoming building performance standards (BPS) to reduce costs and additional bureaucratic hoops for building owners and the State.

The CEC has recently developed an Existing Building Performance Report that explores the possibility of establishing mandatory BPS in California. Further, ten jurisdictions in California have passed or are considering BPS. One of the key factors in establishing a BPS, on a statewide or local level, is confirming that a BPS that applies to existing buildings works cohesively with Energy Code requirements. Specifically, newly constructed buildings that just meet Energy Code requirements should be capable of meeting BPS requirements. The BPS targets need to be established so that a building that is minimally compliant with the Energy Code does not need to undergo retrofits within a short period of time to meet the BPS regulations.

We recommend that the CEC Office of Compliance Assistance and Enforcement work collaboratively with the CEC's Existing Buildings Office to identify opportunities that synergistically support both code compliance and a forthcoming BPS. Focusing on energy-based compliance, for example, will allow the state to have better information to map the energy performance of minimally code compliant buildings to reasonable BPS targets. A data warehouse with identifying characteristics of buildings with actual energy use that vary from expected (modeled) energy use could help inform how modeled results could be adjusted based on factors that impact energy use (e.g., occupancy type, occupancy schedules). That is, information gleaned from a study that evaluates expected versus actual energy use and reasons for discrepancies would support informed next steps for Energy Code compliance and establishing appropriate performance targets for BPS.

There may be opportunities to harness process-based compliance data to support effective BPS implementation. While new buildings should meet the BPS targets, the energy performance of well-designed and commissioned buildings can degrade over time as mechanical equipment ages, controls fall out of calibration, and interactions between systems become misaligned. Eventually, all buildings will need attention to ensure they remain compliant with BPS targets. Data from process-based compliance records could help streamline efforts to identify building improvements or operational adjustments to allow buildings to hit BPS targets. Process-based compliance records could be used, for example,

to easily access the buildings' as-designed characteristics, or building assets. Ensuring the Energy Code and BPS targets are aligned will remove redundancy, reducing time and costs of the new BPS.

5. Actively facilitate collaboration amongst entities that have funding to support code compliance

Coordination among entities that have funding to support code compliance is essential to maximize benefits.

With limited funding for code compliance spread across multiple entities, we recommend the CEC take a more active role in tracking each program's work and facilitate effective collaboration. As the state agency responsible for code compliance, the CEC is uniquely positioned to convene partners and coordinate funded efforts so limited budget is used efficiently, avoiding duplication and maximizing impact.

As CEC implements recommendations identified in its gap analysis, it should partner with existing programs to complete each item as quickly as possible, rather than working independently of efforts already underway. For example, the gap analysis calls for clear, concise summary documents for each code update.[3] The Energy Code Ace (ECA) program—administered by the California investor-owned utilities—already develops "What's New" factsheets for each code cycle. These fact sheets could be updated to incorporate CEC feedback, then cross-promoted across existing marketing channels.

Each program has a defined scope and constraints on the work it can pursue; partnerships can help extend both the reach and value of compliance initiatives. For example, ECA's collaboration with the California Association of Building Energy Consultants (CABEC) supports training for code officials to become Certified Energy Analysts and Associate Energy Analysts, helping jurisdictions build staff capacity to enforce the Energy Code. This is the type of partnership the CEC is well positioned to help envision, encourage, and bring to fruition.

6. Work with state licensure boards to emphasize licensed professionals' legal responsibility to adhere to code and institute penalties for noncompliance

Licensed professionals are required to adhere to all laws, including building codes. Bringing awareness to their existing legal responsibilities and bringing disciplinary action for non-compliance could improve energy code compliance while reducing some burden on AHJs.

We recommend that CEC open a dialogue with state licensure boards to identify opportunities to leverage existing licensing processes to hold licensed professionals accountable for adhering to code requirements. The state agencies could start by tracking compliance with all codes, including the Energy Code. With improved data, the state agencies can offer targeted support to licensed professionals and consider enforcement and

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[3] ARUP Consulting for CEC. (2025). "Recommendations on Improving Energy Code Compliance." (p.2-3). 2025 Energy Code Compliance Initiatives. TN# 266082.

disciplinary action if deemed necessary. Our experience with these licensed professionals leads us to believe that a few well-publicized disciplinary actions would result in noticeable compliance improvements across the industry.

Lack of compliance with the Energy Code starts at the design phase. Architects and engineers are licensed by the State of California[4] to protect the health, safety, and welfare of the public.[5] It is generally considered that the foundation for this obligation is the body of building codes adopted by the state or local jurisdiction. It is a clear requirement of the Rules of Professional Conduct that an architect (or engineer) "shall have knowledge of all applicable building laws, codes, and regulations" and "shall apply the technical knowledge and skill"[6] expected of other design professionals practicing in the state. In California, as in most states, both the California Architects Board and the Board for Professional Engineers have provisions that require investigation and possible disciplinary action for "any negligence or incompetence in their practice."[7] Holding design professionals accountable for designing to code should reduce instances of non-compliance that currently must be caught by AHJs during design reviews and can support effective compliance during construction.

Although code compliance begins at the design phase, construction is where design becomes tangible and is a key stage of Energy Code compliance. The Contractors State License Board (CSLB) is charged with "enforcing the laws, regulations, and standards governing construction contracting in a fair and uniform manner"[8], and can be a partner in addressing non-compliance that occurs during construction.

As the entity charged with enforcing code, AHJs are asked to shoulder a lot of the responsibility of code compliance. However, there is a chain of responsibility that includes licensed professionals who are liable for code compliance. When these professionals play their role in complying with code, fewer projects will have lapses in compliance, and the burden on under-resourced AHJs will be reduced.

7. Collaborate with the Governor's Office and Legislature to adjust rules that govern code compliance so there are sufficient motivations and durable funding to inspire high compliance rates

Insufficient funding and limited incentives to follow code are key drivers of compliance challenges; without sustained funding and stronger motivation, consistent compliance will remain difficult.

As other comments (TN# 267713, TN# 266003, TN# 265976, TN# 266004) in this docket have noted, a large gap in the compliance landscape is a lack of sufficient resources for the entities responsible for implementing and enforcing the energy code. Similarly, because penalties for non-compliance are insignificant, the market is not receiving a clear message that code compliance is critically important. The CEC should work with the Governor's Office

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[4] California Architects Board and the Board of Professional Engineers, Land Surveyors, and Geologists
[5] Professional Engineers Act. See also parallel language regarding the practice of Architecture.
[6] California Rules of Professional Conduct for Architects
[7] Article 5, Professional Engineers Act. See also parallel language regarding the practice of Architecture.
[8] Contractors State License Board

and Legislature to elevate this issue and develop solutions. We encourage CEC to pursue approaches such as requiring minimum compliance to be eligible for state-funded programs and adjusting state budgets to provide sustained funding to both AHJs and compliance support programs. CEC should also coordinate with the California Public Utilities Commission to explore changes to utility program rules that would enable deeper investments in technical and financial support needed to meet code requirements, particularly for existing buildings. With reliable funding for local enforcement, the CEC would be in a much stronger position to hold AHJs accountable for consistently enforcing the Energy Code. Stronger market-based incentives to comply will also likely reduce the number of non-compliant projects that AHJ's must ask applicants to correct.

Energy Solutions commends the CEC for focusing on code compliance improvement and supports efforts to ensure California's energy code is not only robust on paper but also results in real-world energy savings and climate mitigation impacts. Energy Solutions urges the CEC to move forward on meaningful actions, while undertaking further studies and strengthening successful partnerships in the state. Additionally, we encourage the CEC to explore data-driven methods that can use currently available data to provide insights into both energy-based and process-based compliance, including the compliance challenges experienced during alterations. There are gaps and logical recommendations to improve compliance; we recommend the CEC proactively pursue multi-faceted interventions without delay. Prompt actions have potential to bring about significant savings in energy, money, and greenhouse gas emissions for Californians.

Sincerely,

/s/ Mike McGaraghan

Mike McGaraghan

Vice President, Policy and Ratings