

## Considerations for reviewing and providing comments on Full PA Business Plans

Please consider the following questions as you review the Business Plan chapters. The second page provides a template into which your feedback may be captured.

Prior to reviewing and commenting on the Business Plan drafts, a reviewer may wish to review the updated Business Plan Checklist found on the CAEECC [Guidance webpage](#). In addition to comparing the Business Plan contents against the Updated Business Plan Checklist, the following questions are intended to highlight those items that would be helpful in updating the business plans. These questions are food for thought; we do not expect stakeholders to specifically address these questions in their form. Please choose those that are relevant to your interests.

### 1. Structural Review

- a. Do the chapter layout and order of topics comply with NRDC compiled guidance document “outline”?
- b. Does the stylistic/visual presentation allow for easy navigation through the chapter (i.e., allowing easy comparison of the chapter against the NRDC compilation)?
- c. What examples from other PA chapters (whether same PA different sector or different PA all together) would you suggest be considered for this document

### 2. Content-Related Review

- a. Are all key pieces of information, tables, graphics, and supporting documents called for in the Updated Business Plan checklist present in the Chapter?
- b. Are your previous comments and input addressed in the document?
- c. Is the overall sector plan coherent and clear?
- d. Are proposed activities (intervention strategies) sufficiently justified by the market assessment and other data analyses presented?
- e. Are substantive assertions and conclusions supported with clear reasoning and adequate citations?
- f. Are metrics relevant, representative, and associable with future IPs and PIPs?
- g. Is material presented at the right level of detail for a Business Plan?

On the next page, please find the comment template in which substantive comments can be recorded and then submitted to [facilitator@caeec.org](mailto:facilitator@caeec.org). If you have any questions about using this form or the review process, please contact the facilitator by phone or email.

Instructions: **Please make comments specific, reference pages where appropriate, and be focused on Business Plan level strategies.**

Commenter: Please Fill In This Part Of The Form				
Comment #	PA(s)	Sector	Page #	Comment
CPUC-CF	SCE	Cross cutting C&S	4 (#1)	<p>Observation</p> <ul style="list-style-type: none"> <li>The needed focus for ZNE activities for the next ten years is non-residential, as much as if not more than for residential new construction. The point is not to be “perfect” with how ZNE-type new residential buildings are constructed or operated, but to drive towards the goal of much lower consumption via excellent building design and EE (and other features), which ZNE entails. This is particularly needed over the next 15 years with non-residential new construction buildings.</li> </ul> <p>Recommended Action</p> <ul style="list-style-type: none"> <li>Add Non res focus to this preamble, and strategy, tactics, etc. This should emphasize non-residential new construction, but also discuss strategies for existing non-residential buildings.</li> </ul>
CPUC-CF	SCE	Cross cutting C&S	11	<p>Observation</p> <ul style="list-style-type: none"> <li>Discussion falsely claims that savings opportunities in Non Res newly constructed opportunities are low. Short term savings opportunities in existing buildings are high, but the long term population growth and projected accompanying increase in new non-residential buildings expected in CA over the next 35 years makes new non-residential buildings still a major source of saving opportunities overall.</li> </ul> <p>Recommended Action</p> <ul style="list-style-type: none"> <li>- Correnct misstatement about lack of savings opps in non-residential new construction.</li> <li>- Add a chart that shows projected building growth rates and scenarios for consumption with and without aggressive C&amp;S.</li> </ul>
CPUC-CF	SCE	Cross cutting C&S	16-18	<p>Observation:</p> <ul style="list-style-type: none"> <li>Little discussion of how C&amp;S and sector incentive programs can collaborate effectively to advance mutual goals. This will become more and more of a challenge in coming years if C&amp;S strategies continue aggresively, and likewise, more and more of a need.</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>Discuss somewhere in the chapter the integration of supportive programs like New Construction, commercial, residential and public sector programs with long term</li> </ul>

CPUC-CF	SCE	Cross cutting C&S	20, 21	<p><b>Observation</b></p> <ul style="list-style-type: none"> <li>- The <b>C&amp;S Planning subprogram</b> includes the good tactic of “Support development of technology trajectories that incorporate market transformation tools available to specific EE portfolio programs to facilitate future adoption by State or Federal building and/or appliance codes. “</li> <li>- But, the <b>Building &amp; Appliance advocacy subprogram objectives</b> and tactics lower down do not articulate their own linkage to this overarching tactic. It is important to document that there must be linkages between the subprograms to make them mutually reinforcing, and that the Advocacy programs will likely need to offer support for this tactic -- in the form of contributing to planning for CASE studies, the design of demonstration building, and industry collaborations that advance long term C&amp;S/market-industry transformation objectives.</li> </ul> <p><b>Recommended Action</b></p> <ul style="list-style-type: none"> <li>- Suggest to modify the following building codes advocacy objective to reflect this, something like:</li> <li>- Increase collaboration with stakeholders to facilitate acceptance of new standards before their effective date <u>including through field collaborations with leading industry members (on demonstration projects, data collection and testing) aimed at long term C&amp;S market /industry transformation objectives</u> (or add the underlined portion to a tactic)</li> </ul>
CPUC-CF		Cross cutting C&S	22-23	Observation:

	SCE			<p>- The discussion of Appliance Standards Advocacy includes no linkages to the C&amp;S planning subprogram that we see. It is perhaps even more important that these are thought through and documented for appliance standards, given the ever-increasing proportion of loads ascribed to plug loads &amp; MELS.</p> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Suggest to take the suggested language offered above for the building advocacy program and modify it appropriately for the appliance programs. In particular, the Appliance subprogram should plan and actively support alliances and incentives with manufacturers that may accelerate adoption of certain appliance or MEL standards or practices.</li> <li>- The Appliance subprogram could add a tactic similar to the building advocacy program: “Support the updating of performance approach tools to model how <u>appliance</u> standards will support state policies aimed at zero net energy buildings.”</li> </ul>
CPUC-CF	SDG&E, SoCalGas, PG&E	Cross cutting C&S	All	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Insufficient time to read all IOUs plans</li> </ul> <p>Recommended action:</p> <ul style="list-style-type: none"> <li>- Please review comments above based on SCE’s chapter, and incorporate in your C&amp;S chapters</li> </ul>
CPUC-CF	PG&E	Commercial Chapter	5	<p>Observation:</p> <ul style="list-style-type: none"> <li>- In the Commercial chapter, PG&amp;E mentions assistance for the design and building communities for commercial buildings to advance ZNE goals; however, the Public Sector chapter did not include this strategy</li> <li>- Commercial sector strategy does not mention financial incentives to developers / building owners; does not mention targeted WE&amp;T linked to such incentives and design assistance.</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Add this strategy outlined in the Commercial sector also to the Public Sector chapter, including all related strategies and tactics</li> <li>- In addition, it seems as though this strategy should include financial assistance to first movers- to the developers and / building owners / building contractors themselves, not just the design community. Such incentive levels would need to be above the level of financial inducements aimed at gaining cooperation for data collection, as outlined in the Code Readiness Subprogram.</li> <li>- Ideally, combine this with the Targeted DSM strategy elsewhere in the chapter and locate this effort in your highest consumption counties, as discussed on page 13,</li> </ul>

				<p>perhaps using a competitive solicitation framework to solicit local government/counties as partners in the initial efforts.</p> <ul style="list-style-type: none"> <li>- The usefulness of this strategy in demonstrating the possible will more than pay for the additional kicker cost. Phase out kicker as early efforts demonstrate techniques, required support and level of incremental costs.</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	6	<p>Observation:</p> <ul style="list-style-type: none"> <li>- The 4-7 year strategy only applies to new construction and does not mention public buildings</li> </ul> <p>Recommended Action;</p> <ul style="list-style-type: none"> <li>- Extend carefully to existing buildings as discussed in previous comment</li> <li>- Add to the Public Sector chapter strategies</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	7, 37, 55	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Awareness cited as barrier above availability of trainings</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Surprised that barriers of convenience, location, timing, online offerings not mentioned; cite findings in full and address them all, including need for partnerships with existing Journeyman and regional training centers; online trainings; targeted trainings for building developers contractors committed to deep EE, ZNE levels, for example.</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	8-10	<p>Observation:</p> <ul style="list-style-type: none"> <li>- The summary of net commercial goals on page 8 does not contain columns to reflect updated annual goals once participation levels as a portion of building sub-sectors are increased as discussed on page 10.</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Add such columns to table on page 8</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	12	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Figure 5 suggests that participation rates in the Central Valley lag behind the portion of customers in this region</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Adopt geo-located participation metrics and targets in the relevant sections</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	30	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Design assistance probably inadequate to alone move buildings to ZNE levels. See comment above.</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Reflect comments above, referring to page 5, in this section on page 30 as well.</li> <li>- In addition, offering assistance and incentives only to buildings that reach ZNE or ZNE-ready levels is probably not sufficient; consider also offering, in the short-medium term, higher incentive levels to reach one or two deep energy savings</li> </ul>

				<p>advanced steps towards ZNE levels.</p> <ul style="list-style-type: none"> <li>- Coordinate the above with your Title 24 strategy to advance ZNE levels in Tile 24 by 2022 for warehouses and 2025 for schools-- and small office buildings, which should targeted for this timeframe as well</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	34	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Row on bottom-up review on on top of page 34 does not mention that this review and ongoing processes will also seek to identify opportunities for “market leading” upstream or midstream interventions (ie. aimed at market transformation), in addition to immediate RA- saving opportunities</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Clarify that the optimization of up/mid-stream activities will also include a process to identify longer-term more market-leading MT-type opportunities</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	34-35; 78-84	<ul style="list-style-type: none"> <li>- Appreciate the reflection of earlier comments here and in the Appendices</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	36	<p>Observation:</p> <ul style="list-style-type: none"> <li>- WE&amp;T requirements to advance deep EE savings, or ZNE/ZNE-Ready levels in Commercial buildings are not adequately discussed in the chapter, and are not mentioned in Table 11.</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Add Deep EE and ZNE/ZNE-ready technology, installation and operational requirements to first row of Table 11</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	36, 37	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Discussion of possible venues to highlight best practices, ZNE or deep EE, omits mention of local governments / counties as possible partners</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Be more complete in identifying potential venues to highlight champions in a way that actually created impact, such as via partnerships with leading local governments, RENs, counties; BOMA events, ASHRAE, etc.</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	41	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Surprised that this section does not identify an ideal EE savings level for these TDSM activities, nor link it to the ZNE goals</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Add the above to the discussion, and to the metrics / targets section at the end of chapter</li> </ul>
<i>CPUC-CF</i>	PG&E	Commercial Chapter	47- 51	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Metrics section does not identify geo-located goals, for instance to increase participation levels in the Central Valley to more approximate the percentage of</li> </ul>

				<p>customers in this region;</p> <ul style="list-style-type: none"> <li>- Metrics also do not indicate at what proportions of commercial the TDSM activities will occur, nor initial thoughts on the high priority locations for these types of projects</li> <li>- Metrics section does not identify need for a EE deep savings metric, for a percentage of the participating accounts;</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Add the above to the metrics section</li> <li>- Add targets for these metrics in final business plan</li> </ul>
CPUC-CF	PG&E	Commercial Chapter	51	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Market Level indicator intervention strategies do not mention the full range of strategies discussed above and in the draft chapter; missing in particular are partnerships for demonstrations, deep EE-related incentives for both existing and new buildings; targeted DSM strategies are also missing</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Add the above to Table 16</li> </ul>
CPUC-CF	PG&E	Commercial Chapter	Through-out	<p>Observation:</p> <ul style="list-style-type: none"> <li>- There are no metrics specific to LED commercial lighting, despite this being the primary measure modeled in the E3 Pathways report to lead the doubling of EE by 2030.</li> <li>- The Strategic Plan lighting chapter and Lighting Action Plan metrics are not reflected yet, and may need updating.</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Develop such a commercial lighting metric (different from KW or kWh saved) in consultation with ED and lighting manufacturers.</li> </ul>
CPUC-CF	PG&E	Commercial Chapter	Appendices	<p>Observation:</p> <ul style="list-style-type: none"> <li>- A graphic could help communicate the type of collaboration described in Appendices that summarize possible collaborations between the Commercial program and the C&amp;S program</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Consider including the graphic from PG&amp;E's C&amp;S team "Code Readiness" subprogram that illustrates the coordination needs and timing between C&amp;S and incentive programs (and other activities).</li> </ul>
CPUC-CF	All IOUs	Commercial chapter	All	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Didn't have time to make the same comments for all IOU commercial chapters.</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- All IOUs should review and incorporate the intent and ideas in the above into your commercial chapters, clarifying where such activities advance 2030 commercial</li> </ul>

				building goals, and when/where they advance other goals
CPUC-CF	PG&E	Public Sector Chapter	Metrics section, and throughout	<p>Observation:</p> <ul style="list-style-type: none"> <li>- While the chapter mentions the state building and commercial sector ZNE goals, it really provides very little information on what strategies the IOUs will take to advance these</li> </ul> <p>Recommended Actions:</p> <ul style="list-style-type: none"> <li>- <u>Adopt a deep energy efficiency retrofit metric:</u> The chapter has overall EE savings goals, but does not indicate any strategies or measurement that will occur to deepen the percentage of savings per buildings. Adopt a metric that states something like: "Achieve 20% EE savings for [NUMBER] percent of public buildings treated by [DATE], increasing this to [NUMBER] by [DATE]; achieve 40-60% EE savings for [NUMBER] percent of public buildings treated by [DATE], increasing this to [NUMBER] by [DATE]."</li> <li>- <u>Adopt a metric supporting Code Readiness activities in public buildings aimed at accelerating ZNE Title 24 building codes for small office buildings and warehouses:</u> As stated by NRDC and Energy Division staff at the Nov X CAEEC meeting in San Francisco, the draft Business Plan chapters lack synergies across each other. An example of this is that the Public Sector Chapter (unlike the Commercial Sector chapter) fails to discuss strategies to cooperate with the Codes and Standards team's work in the Code Readiness (and other subprograms) to accelerate the adoption date of ZNE Title 24 standards for Public Buildings (small office buildings; warehouses). Phasing in achievement of "ZNE" levels for Title 24 Non-Residential buildings was a primary recommendation of PG&amp;E's 2012 Study, "The Road to ZNE: Mapping Pathways to ZNE in California" (see about page 200). Given the Governor's Ex Order B-18-12 and DGS leadership, and the CPUC/CEC's 2030 ZNE goals, mobilizing public building managers to support trials of new technologies, performance or installation practices in new buildings is a key opportunity, and need. Suggest to add "tactics" to the existing Public Sector Strategies to this effect, and something like the following metrics: "By [DATE], [NUMBER OF] public sector buildings (or percent of buildings) are hosting Code Readiness trials aimed at advancing ZNE in Title 24 for small offices and warehouses from 2030 to 2022 (warehouses) and 2025 (small office buildings)."</li> <li>- <u>Adopt a metric supporting Behavioral, RetroCommissioning and Operations strategies:</u> Again, given the public commitment of the Governor's office and DGS to energy efficiency and ZNE in state buildings, it is surprising that the current draft chapter does not include consumption reduction strategies or a metric to engage the public sector in behavioral, retrocommissioning and operations management strategies. These would be appropriate to link with strategies to advance the first</li> </ul>



				metric proposed above, and for existing public small office buildings that have not yet been served and that do not plan a major retrofit for some time. In addition, the IOUs could consider launching behaviorally-driven competitions between state/local governments/ educational institutions towards this end.
<i>CPUC-CF</i>	All IOUs	Public Sector Chapter	all	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Not enough time to comment on all IOUs chapters</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Please review comments on PG&amp;E's Public Sector chapter and reflect in your final Public Sector chapters as well</li> </ul>
<i>CPUC</i>	PG&E, all IOUs	WE&T	all	<p>Observation:</p> <ul style="list-style-type: none"> <li>- The Connections program teaching energy efficiency awareness would seem to be the lowest priority of all WE&amp;T activities, as its impact is so indirect, and the IOUs can certainly pursue in-class room energy education using non-ratepayer funds if they see a name recognition benefit for this.</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Eliminate or reduce funding for Connections starting in 2018; transition (a relatively small portion of the current Connections) budget to career and workforce readiness educational activities for K-12, if prioritized</li> </ul>
<i>CPUC</i>	PG&E/ all IOUs	WET	9	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Most stakeholders prefer hands-on training, and Centergies classes typically don't offer this.</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- We would hope to see in 2018 going forward, the Centergies budgets reduced and the Partnership budgets increased, to support hands-on training via curriculum development or improvement activities with Partners.</li> </ul>
<i>CPUC</i>	PG&E/ all IOUs	WE&T	11	<p>Observation:</p> <ul style="list-style-type: none"> <li>- The Centergies programs and locations have been in place for years, so it is eye-opening to read that lack of awareness of offerings amongst key targeted audiences / industry members remains a barrier</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Add a metric to track and drive improvements in awareness</li> <li>- Decrease Centergies budgets if not able to drive currently employed, key targeted industry workers &amp; professionals to needed classes</li> </ul>
				<p>Observation:</p> <ul style="list-style-type: none"> <li>- The strategy to undertake partnerships to develop curricula or other support for already-existing training entities is the most important WE&amp;T strategy that IOUs can undertake, most likely. But, insufficient information is provided on plans</li> </ul>

CPUC-CF	PG&E / all IOUs	WE&T	13, 20	<p>Recommended action:</p> <ul style="list-style-type: none"> <li>- Adopt a metric to track the number of entities IOUs partner with, and what is provided: a) curriculum development support; b) train the trainer support; c) etc</li> <li>- Commit to a non-financially interested stakeholder Advisor Committee for this function;</li> <li>- Commit to working with CPUC EE management to ensure that this Advisory Committee includes key state and other government entities as this overall coordinated, strategic approach is critical to double EE savings by 2030</li> <li>- This effort could also establish a dedicated non-financially-interested Advisory Sub-Group solely dedicated to the unique challenges of working to integrate disadvantaged communities into EE/IDSM</li> <li>- Commit the majority of the SW (and local) IOU WE&amp;T budgets to this curricula development/ improvement and partnership function</li> </ul>
CPUC-CF	PG&E / all IOUs	WE&T	16-18	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Training programs for local building inspectors regarding new technologies in buildings advancing “ZNE” type goals is an important need but is not included here, nor information provided to cross-reference to C&amp;S plans</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Initiate action within IOUs to develop a tracking and communication for ALL IOU WE&amp;T activities, whether these are funded and developed in: 1) the dedicated WE&amp;T programs; of, 2) via other resource or non-resource programs.</li> <li>- Develop an approach to track and communicate to non-IOUs (CPUC, stakeholders, other agencies, etc) the overall allocation of training funds between these two general buckets and their overall goals, metrics and targets</li> </ul>
CPUC-CF	PG&E / all IOUs	WE&T	21	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Metrics are included to track # of partnership organizations “touched,” but not to track the effectiveness of the trainings subsequently offered that were “improved” by these IOU/ratepayer-funded touches</li> </ul> <p>Recommended Action:</p> <ul style="list-style-type: none"> <li>- Develop a standardized beginning / end of course survey for students participating in trainings for partnership groups touched by IOU/ratepayer-funded support; develop, fund and implement a standard database for partner organizations to provide this information;</li> <li>- Implement a metric to track student learning and satisfaction in partnership trainings impacted by IOU “touch”</li> </ul>
CPUC-CF	PG&E / all IOUs	WE&T	all	<p>Observation:</p> <ul style="list-style-type: none"> <li>- Chapter not clear on plans to address workforce skill needs or certifications with various installation practices touched by IOU rebates or programs</li> </ul> <p>Recommended Action:</p>

				<ul style="list-style-type: none"><li>- Clarify this in next iterations;</li><li>- Give strong consideration when doing so to working with Apprenticeship and other existing educational or certification bodies (such as architects/ designers/ energy raters, modelers programs) to develop Continuing Education requirements and curricula for these existing training/certification entities</li><li>- Work with these partner groups to incorporate up-to-date EE installation requirements and hands-on training relevant to that target group of workers as requirements for these new (or improved) Continuing Education requirements</li></ul>
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Commenter—please replace **red text** with the information you wish to provide. Please submit completed comments to **facilitator@caeec.org**