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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Examine the Commission's Post-2008 Energy Efficiency Policies, Programs, Evaluation, Measurement, and Verification, and Related Issues.

Rulemaking 09-11-014
(Filed November 20, 2009)

**ASSIGNED COMMISSIONER'S RULING
SOLICITING COMMENTS**

1. Introduction

In Decision 08-07-047, the Commission adopted interim energy efficiency savings goals for 2012 through 2020 for electricity and natural gas on a total market gross (TMG) basis. The Commission ordered that the TMG goals be updated and utility portfolio goals be established by October 2010.¹ This ruling requests parties' comments on the attached Energy Division White Paper, and recommendations regarding the schedule for the Commission's establishment of post-2012 energy efficiency savings goals and other portfolio planning matters.

2. Background

Decision (D.) 08-07-047 gave the assigned Commissioner and/or Administrative Law Judge authority to "adjust the schedule for updating and establishing new energy savings goals for 2012 through 2020."² The Commission

¹ D.08-07-047, Ordering Paragraph (OP) 5.

² *Id.*

has authorized the current 2010-2012 energy efficiency (EE) portfolios,³ with the expectation that planning activities will commence with sufficient time to prepare, review and approve the portfolios for the next cycle (presumably, 2013-2015). In D.04-09-060, the Commission stated that three-year EE portfolios are a reasonable timeframe for portfolio duration. However, the Commission subsequently extended the investor-owned utilities' (IOUs) 2006-2008 portfolios, approving a 2009 bridge year for EE funding in D.08-10-027. Thus, although three years has been the formal standard duration for portfolio cycles, the most recent Commission decision extended the period to four years.

While updating energy savings goals is a top priority for the Commission, the Commission must consider other issues when providing guidance to the IOUs' portfolio development process. For example, cost-effectiveness values, which comprise one element of the analytical underpinnings for studies of efficiency potential and goals, are also important to portfolio development. Similarly, changes in both building codes and appliance standards influence the size of remaining efficiency potential that can be tapped via voluntary programs. Parties to this proceeding have requested that the Commission address the issues that support planning for the 2013-2015 portfolio applications⁴ and clarify its plans with regard to updating the Strategic Plan.⁵

³ D.09-09-047.

⁴ For example see Pacific Gas and Electric Company's Comments on the Proposed Decision on Evaluation Measurement and Verification (EM&V) of California Utility Energy Efficiency Programs, October 18, 2010, at 6.

⁵ Also see City and County of San Francisco Reply Comments on May 21, 2010 Assigned Commissioner's Ruling and Scoping Memo, June 18, 2020, at 3.

3. Energy Division Staff Proposal

Due to extensive staff obligations associated with ensuring compliance with the Commission's decision authorizing the 2010-12 portfolios, alongside collaboration with the Energy Commission in its efforts to both deploy federal stimulus funding and carry out legislative mandates for efficiency, Energy Division staff has not yet commenced work to update efficiency goals. The Commission's Energy Division has prepared a white paper and staff recommendations, attached as Appendix A. This white paper:

1. Evaluates two options for the scope and schedule of the 2010 EE goals update ordered in D.08-07-047 and other planning activities:
 - **Option A:** Adhere to expectations for a 2013-2015 EE portfolio, and continue administering EE portfolios on a three-year cycle. This schedule would include a cursory scope of review and analysis leading up to an updated goals and policy guidance decision for the next portfolio cycle; or
 - **Option B:** Modify work plans to allow for extension through 2013 of the 2010-2012 programs, shift to a permanent four-year portfolio cycle, and plan for a 2014-2017 portfolio. This would permit a more comprehensive review and scope of analysis for updated goals and policy guidance;
2. Describes Energy Division's interpretation of the Strategic Plan update ordered in D.08-09-040 and the Strategic Action Plan Progress Report called for in D.09-09-047;⁶
3. Describes relevant updates to avoided cost data inputs and methodologies in related Commission proceedings; and

⁶ D.09-09-047 at 331.

4. Makes three recommendations:
 - a. That the Commission extend 2010-2012 EE programs through the end of 2013;
 - b. That the Commission adopt four-year EE portfolio cycles on a going forward basis, beginning with a prospective 2014-2017 EE portfolio; and
 - c. That, prior to commencing analyses to update efficiency potential and goals, the Commission and/or assigned Commissioner adopt selected updates to cost-effectiveness data inputs and methodologies to maintain consistency with relevant updates in other Commission energy proceedings.

4. Questions

Parties are asked to comment on the following questions related to the staff White Paper and recommendations:

1. Are the stated pros and cons associated with Option A accurate and complete? If not, what changes or additions would parties make?
2. Are the stated pros and cons associated with Option B accurate and complete? If not, what changes or additions would parties make?
3. Are the estimated timelines associated with Option A and Option B reasonable with regard to the timing of (a) a goals/portfolio guidance decision, (b) preparation of portfolio applications, (c) review/approval of portfolio applications, and (d) implementation of the portfolio decision?
4. One disadvantage of Option B is that a four-year portfolio cycle could mean longer persistence of programs that are performing poorly in the view of some parties. What, if any, specific procedures (e.g., trigger mechanisms) or review processes (e.g., formal or informal) do parties suggest to mitigate these concerns?
5. Do parties concur with the following Energy Division recommendations associated with Option B?

- a. Adopt an extension through the end of 2013 for the 2010-2012 efficiency programs; and
 - b. Adopt four-year portfolio cycles on a going forward basis, beginning with a 2014-2017 portfolio cycle.
6. Are there other options the Commission should consider, other than Options A and B? What are the pros and cons of these options?
7. Is Energy Division's proposal to update or incorporate each of the following cost-effectiveness data inputs or methodologies, prior to commencing potential and goals studies, reasonable?
- a. Data updates including natural gas prices, electricity prices, and temperature profiles by climate zone, per the Commission's March 2010 Report to the Governor and Legislature pursuant to Pub. Util. Code Section 2827(c)(4);⁷
 - b. New methodology for generation capacity cost, per the Commission's AB 920 Report;⁸
 - c. New avoided cost for avoided Renewable Portfolio Standard (RPS) purchases, per the Commission's AB 920 Report; and
 - d. Update to avoided carbon costs, per the most recent Market Price Referent (MPR).⁹
8. Energy Division views the Strategic Plan update ordered in D.08-09-040 and the Strategic Action Plan Progress Report called for in June 2011 pursuant to D.09-09-047 as complementary. Will jointly addressing the Commission's orders for a Strategic Plan update and a Strategic Action Plan Progress Report effectively provide stakeholders, including parties to this proceeding, sufficient guidance?

⁷ AB 920 (Huffman, 2009); The California Solar Initiative is addressed in CPUC proceeding R.10-05-004. The cost-effectiveness methodology and data sources in this solar and distributed generation proceeding were set in D.09-08-026.

⁸ See Attachments A and B.

⁹ The 2009 MPR was set in Resolution E-4298.

IT IS RULED that:

1. Pursuant to the authority granted in D.08-07-047 Ordering Paragraph 5, the timeframe for a goals update is extended until a time to be determined by a later ruling or decision.
2. Parties may file and serve Comments to this ruling by December 3, 2010, and Reply Comments by December 10, 2010.

Dated November 17, 2010, at San Francisco, California.

/s/ DIAN M. GRUENEICH

Dian M. Grueneich
Assigned Commissioner

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Dated November 17, 2010, at San Francisco, California.

/s/ LILLIAN LI
Lillian Li

N O T I C E

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R.09-11-014 DGX/jyc

ATTACHMENT A

**Energy Division White Paper and Proposal on the
2010 Energy Efficiency Goals Update and Related Matters**
Rulemaking (R.) 09-11-014
November 4, 2010

Summary

This white paper:

- Evaluates two options for the scope and schedule of the 2010 energy efficiency (EE) goals update ordered in Decision (D.) 08-07-047 and other planning activities;
- Describes Energy Division’s interpretation of the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan)¹ update and action plan progress report, pursuant to D.08-09-040 and D.09-09-047, respectively;
- Describes relevant updates to avoided cost inputs and cost-effectiveness methodologies in related California Public Utilities Commission (Commission or CPUC) proceedings; and
- Recommends:
 - Commission adoption of an extension through 2013 of 2010-2012 EE programs,
 - Commission adoption of four-year EE portfolio cycles on a going forward basis, beginning with a prospective 2014-2017 EE portfolio, and
 - Adoption by ruling or Commission decision of selected updates to EE avoided cost data inputs and methodologies to maintain consistency with relevant updates in other Commission proceedings.

1. Background

The 2008 EE goals D.08-07-047 adopted “interim” efficiency goals for 2013-2020, and directed that an update occur by October 2010, meeting certain requirements.² The 2008 Goals Study based its estimates of 2013-2020 efficiency goals for Investor-Owned Utility (IOU) programs on

¹ The Commission adopted the Strategic Plan in D.08-09-040. The Strategic Plan is available at www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf.

² D.08-07-047 (OPs 5 and 7) ordered that the goals update include (1) a review of market effects protocols and (2) a re-run of the Itron Assessment of End-Use Technologies (ASSET) model with 2006-2008 *ex-post* DEER numbers and the 2009 adopted market price referent. Market effect studies were completed for residential new construction and lighting programs in October 2007; Energy Division 2006-2008 Evaluation Report contains savings results that may be used to update DEER estimates, which was completed on July 8, 2010. The 2009 Market Price Referent (MPR) was adopted December 17, 2009.

the 2008 energy efficiency potential study commissioned by the IOUs. No new potential study has since been conducted.

Since the 2010-2012 EE portfolio decision (D.09-09-047) was delayed a year longer than anticipated (from the original 2009-2011 period), Energy Division staff (hereafter “staff”) have interpreted this to mean a one-year delay in the goals update (i.e., until October 2011) is consistent with D.08-07-047’s expectation to have updated goals in time for filing the next portfolio application. Currently, the Commission expects the IOUs’ next EE portfolio to be authorized for 2013-2015. As indicated below, the 2010 goals update would need to move very quickly to have new goals in place prior to 2013-2015 portfolio development, if the next portfolio timeframe is left unchanged.

Timing Considerations for Coordination with CEC Responsibilities

Under Assembly Bill (AB) 2021 (Levine, 2006), every three years beginning in 2007, the California Energy Commission (CEC) is required to estimate all potentially achievable cost-effective electricity and natural gas efficiency savings and establish statewide savings targets for the next 10-year period. Under Senate Bill (SB) 1037 (Kehoe, 2005), the Commission must do the same for electric and gas IOUs, *but there is no specified frequency or timeframe.*³ AB 2021 requires the CEC to base its estimates, at least in part, on information developed by the Commission for the IOUs. During the 2007 Integrated Energy Policy Report (IEPR) proceeding, the CEC first met its AB 2021 requirements and adopted targets for 2016 for “100% of cost-effective economic potential” based on the 2006 Itron potential study commissioned by the IOUs. The 2008 Itron potential study is the most recent study on which to base new AB 2021 targets. To the greatest extent possible the timing and substance of analyses to inform the CPUC’s 2010 EE goals process should be coordinated with the CEC’s AB 2021 update. Currently, CEC staff anticipates completing the AB 2021 update *for IOUs*, using estimates established by CPUC, in the 2013 timeframe.⁴ (Note: both of the options staff evaluates below would provide CEC the updated estimates of IOU efficiency potential and goals by 2013.)

³ In D.04-09-060 (OP 3), the Commission specified that the IOUs’ EE goals shall be updated *every three years* “...as appropriate, based on updated savings potential studies, accomplishment data, changes to mandatory [EE] standards and other evaluation studies and factors that staff deems appropriate.” D.08-07-047 (OP 5) gives the Assigned Commissioner and/or Administrative Law Judge authority to “adjust the schedule for updating and establishing new energy savings goals for 2012 through 2020.”

⁴ For publicly-owned utilities, the California Energy Commission (CEC) staff anticipates completing the AB 2021 update by November 2011.

The CEC, in collaboration with the CPUC, has established a Demand Analysis Working Group (DAWG),⁵ which is an informal coordinating body for interrelated issues and analysis associated with the CEC demand forecast, CPUC energy efficiency potential and goals and related AB 2021 activities, and EM&V. The DAWG is a logical forum for gathering feedback from the IOUs, the CEC, and other stakeholders on analytical studies and policy proposals for the goals update process.

Parties to Rulemaking (R.) 09-11-014 have called for the Commission to take up the issues that support planning of the (presumed) 2013-2015 portfolio applications⁶ and clarify its plans with regard to updating the Strategic Plan.⁷

2. Options for Consideration

Staff has identified two options for consideration:

- **Option A.** Adhere to current plans for a 2013-2015 EE portfolio and continue administering EE portfolios on a three-year cycle (See Figure 1 below). Because the work is not yet underway to update goals, this would necessitate a cursory review and scope of analysis for the Commission to consider in leading up to a goals and policy guidance decision for the next portfolio cycle; or alternatively
- **Option B.** Modify plans to allow for an extension of the 2010-2012 programs through 2013, accept a permanent shift to a four-year portfolio cycle, and plan for a 2014-2017 portfolio. (See Figure 2 below.) This option enables a more comprehensive review and scope of analysis.

Each of these options is discussed and evaluated below.

3. Options Analysis

Analysis of Option A (2013-2015 Portfolio)

⁵ This group was formerly known as the Demand Forecasting and Energy Efficiency Quantification Project Working Group, which was formed during the 2008 IEPR Update process with encouragement from CPUC staff, to resolve complex technical issues associated with determining the incremental impacts of the CPUC's energy efficiency goals relative to the CEC demand forecast.

⁶ For example see Pacific Gas and Electric Company's Comments on the Proposed Decision on Evaluation Measurement and Verification of California Utility Energy Efficiency Programs, October 18, 2010, at 6.

⁷ Also see City and County of San Francisco Reply Comments on May 21, 2010 Assigned Commissioner's Ruling and Scoping Memo, June 18, 2010, at 3.

As shown in Figure 1 below, the Commission would need to adopt a new EE goals and portfolio guidance decision by Q2 2011 in order to stay on schedule for a 2013-2015 portfolio cycle.⁸ In order to meet this schedule, the scope of the Commission’s review of EE goals and other portfolio guidance would need to be highly truncated. Staff believes the only new analysis permissible in the timeframe would be to update the former 2008 potential study and goals analysis with some new information from the Database for Energy Efficiency Resources (DEER), relevant results from the 2006-2008 Evaluation Report,⁹ and (possibly) calibration of goals to underlying economic and demographic drivers in the 2009 IEPR load forecast¹⁰ to produce a more realistic “IOU wedge” for the 2013-2020 period.¹¹ Even with this reduced scope, the proceeding would be in jeopardy of schedule slippage due to the short timeline to update efficiency potential and complete the goals update.

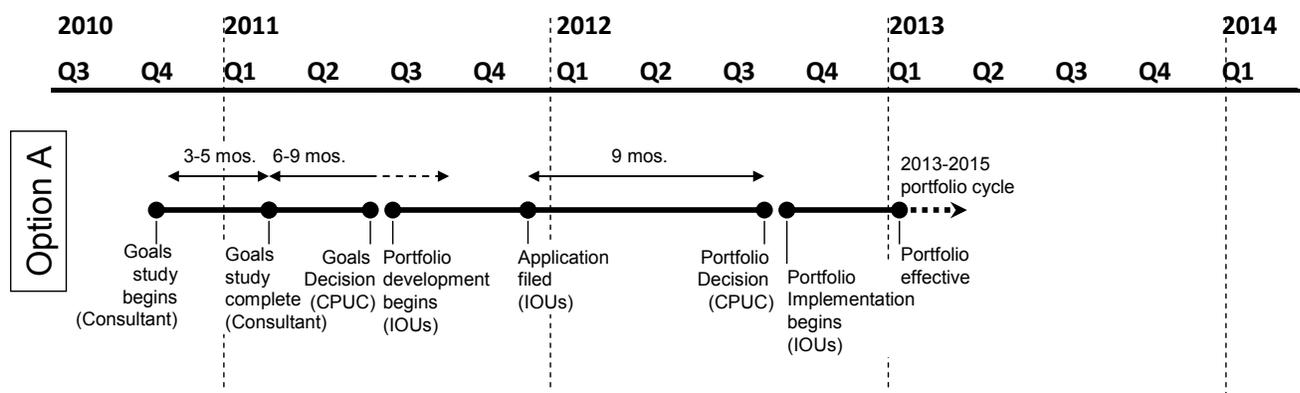


Figure 1. Conceptual timeline for Option A

⁸ As previously stated, staff believe that D.08-07-047 can be interpreted to allow for a 2010 EE goals update decision as late as October 2011, but (based on experience) this would provide insufficient lead time for the IOUs to develop their (presumed) 2013-2015 portfolios and for the Commission to review and adopt them effective January 1, 2013.

⁹ CPUC, Energy Division, *2006-2008 Energy Efficiency Evaluation Report*, July 2011. Available at <ftp://ftp.cpuc.ca.gov/gopher-data/energy%20efficiency/2006-2008%20Energy%20Efficiency%20Evaluation%20Report%20-%20Full.pdf>.

¹⁰ *California Energy Demand 2010-2020 Adopted Forecast*, CEC Publication CEC-200-2009-012-CMF, December 2009. Available at www.energy.ca.gov/2009publications/CEC-200-2009-012/CEC-200-2009-012-CMF.PDF.

¹¹ Other wedges include codes and standards and legislative mandates.

Pros of Option A

1. ***Consistent with current Commission direction.*** Option A is consistent with the schedule set forth in D.08-07-047.
2. ***Stability in Commission policy.*** To the extent that the IOUs and parties have been preparing themselves for a 2013-2015 portfolio cycle, Option A minimizes disruption of stable Commission policy.
3. ***Quick and (relatively) easy.*** Option A would likely make minimal adjustments to estimates of efficiency potential and established goals, which would be quicker and easier to implement.

Cons of Option A

1. ***Insufficient time to develop new or improved program delivery mechanisms and to update efficiency potential with any refinement.*** For example, insufficient time to:
 - a. Incorporate into the potential/goals analyses a list of updated (and new) measures/strategies represented in the 2010-2012 EE portfolios and in the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan).¹²
 - b. Update end-use baselines based on recently released 2009 Residential Appliance Saturation Survey (RASS) data.¹³ These data would need to be rigorously synthesized, vetted with parties, and incorporated into modeling re-runs – but this task cannot be completed in this timeframe. This is particularly problematic for residential lighting, given its importance in the portfolio and for which there have been significant changes in market penetration as well as technologies available in the market.
 - c. Innovate on new program designs, since portfolio development would need to begin in 2011, just a year after the new cycle commenced, and even that had some staggered starts to new or significantly modified programs. This could be partly mitigated if the IOUs diligently incorporate lessons learned from the 2006-2008 portfolio evaluation, but there would be little or no opportunity to incorporate learning from the 2010-2012 programs, including pilot projects.

¹² The Commission adopted the Strategic Plan in D.08-09-040. The Strategic Plan is available at www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf.

¹³ 2008 potential study used 2004 RASS for residential end-use baselines and 2006 Commercial End-Use Saturation Survey for commercial end-use baselines.

2. **Lower energy savings and smaller budgets.** The likely result would be lower energy savings and smaller budgets in the next portfolio cycle because:
 - a. The 2010-2012 portfolios showed narrow margins of cost-effectiveness¹⁴ and (as indicated in #1a above) there would be no chance to update efficiency potential with new measures and strategies; and
 - b. The 2006-2008 Evaluation Measurement & Verification (EM&V) results, as well as the underlying economic drivers in the 2009 energy demand forecast (which are down from the previous forecast), will likely drive down the magnitude of efficiency potential.

Given the extent to which energy efficiency is being counted on to produce greenhouse gas (GHG) emissions reductions under the AB 32 Scoping Plan,¹⁵ an accurate representation (of both upward and downward drivers of efficiency potential) is critically important. A cursory update of potential does not achieve this objective.

3. **Missed opportunity to modify the Commission's EE policy framework.** The Strategic Plan, market transformation directives in D.09-09-047, the Energy Division Evaluation, Measurement & Verification (EM&V) white paper in the Risk Reward Incentive Mechanism (RRIM) proceeding (R.09-01-019),¹⁶ and the "Total Market Gross" paradigm introduced in D.08-07-047 call for new thinking about the Commission's EE policy framework. The current system is characterized by:
 - a. Limited potential (e.g., cost-effectiveness tests are not inclusive of a wider range of benefits, such as non-energy benefits and avoided Renewable Portfolio Standard (RPS) procurement costs);
 - b. Continued focus on quantifying short-term energy impacts and insufficient alignment with meeting Strategic Plan objectives;
 - c. Unknowns about how to track and utilize market transformation. (Program performance metrics and market transformation indicators may shed some light in these areas, but these have yet to be fully articulated.);
 - d. Untapped opportunities to better integrate with procurement and tracking towards GHG targets (e.g., better alignment with the CEC demand forecast).

¹⁴ Although the actual cost-effectiveness will not be known until the 2010-2012 evaluation is completed, D.09-09-047 acknowledged that the IOUs' portfolios had total resource cost (TRC) ratios below 1.5.

¹⁵ The ARB Scoping Plan anticipates 32,000 GWh and 800 million Therms of reduced demand to achieve 25.3 million metric tons carbon dioxide equivalent savings.

¹⁶ CPUC Energy Division, *White Paper: Proposed Energy Efficiency Incentive Mechanism and EM&V Activities*, April 1, 2009, R.09-01-019. For example, the white paper recommends the savings goals with consumption targets for tracking portfolio performance relative to GHG emissions reduction goals (p. 4).

Staff believes there is insufficient time to address these critical items to any satisfactory level under Option A.

4. ***Schedule is very aggressive.*** Like Option B below, Option A assumes an 18-month time period between the goals/portfolio guidance decision and the effective date of the new portfolio.¹⁷ However, Option A allows only 8 months to complete a goals analysis and issue a goals/portfolio guidance decision. Besides limiting the scope of analysis and review, such a tight schedule would also restrict opportunities for stakeholder review and input. Even with a reduced scope due to the strict schedule, there is a significant risk that the schedule could still slip, placing the 2013-2015 portfolio timeframe in jeopardy.
5. ***Higher transaction costs for program implementers.*** Some third-party program implementers have stated to Energy Division staff that a three-year cycle imposes higher transaction costs than a four-year (or longer) portfolio cycle would, because of the time and expense of contract negotiations, workforce ramp up and training, etc.

Analysis of Option B (2014-2017 Portfolio, with 2013 Extension of 2010-2012 Programs)

As shown in Figure 2 below, if the EE goals/portfolio guidance decision were delayed until Q2 2012, there would be an additional year to complete a more comprehensive goals analysis and policy review. Option B requires a 2013 bridge year, but staff believes this not an obstacle. A mechanism for continuation of the 2010-2012 portfolios was provided for under D.09-09-047.¹⁸

¹⁷ Six months for the IOUs to develop portfolios and prepare their applications; nine months for the Commission to review and approve the portfolios; and three months to implement the decision (compliance filings, etc.) before the new portfolio goes into effect.

¹⁸ “[W]e will adopt DRA’s rolling budget trigger proposal, so that the average monthly level of expenditures for the final year of a budget cycle may continue on a month-to-month basis until the next portfolio budget is approved (or as specific in the Commission decision for the next portfolio budget cycle).” D.09-09-047 at 312.

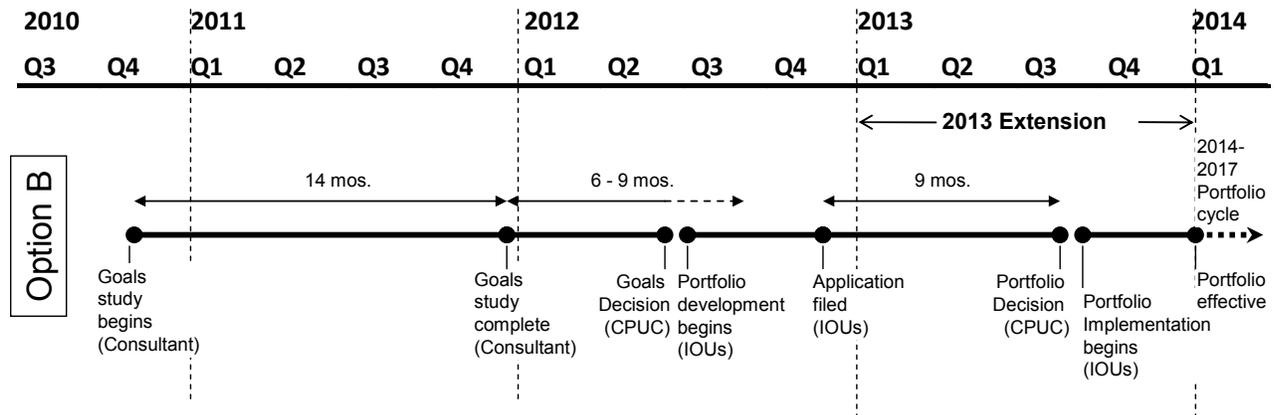


Figure 2. Conceptual Timeline for Option B

An expanded scope of work for the EE goals analysis and policy review could potentially cover:

1. Proposals on, or evaluations of, various ***approaches to estimating efficiency potential***.
For example:
 - a. Studies using models that better align with market transformation objectives and CEC end-use load forecasting; and/or
 - b. Scenario analyses of adoption rates that exceed current rates as part of a “what if” best practice-oriented potential analysis, as has been done in other jurisdictions.

2. Comparative analysis of ***options for goals frameworks***,¹⁹ including goals based on:
 - a. Modifications to the current goals paradigm (combining bottom-up potential with top-down policy scenarios), including possible use of relativistic goals (e.g., indexed or formula-based goals relative to a given demand forecast) rather than absolute (i.e., fixed MWh / MW / MMtherms) goals;
 - b. Consumption-based (e.g., percent of sales) or sector-based energy intensity (e.g., energy use per square foot); and/or
 - c. Commission approval of types of programs that support the Strategic Plan (e.g., market transformation programs)

3. Review/analysis of ***alternative approaches to cost-effectiveness evaluation***, such as:
 - a. Expanded definitions of net savings,
 - b. Estimation of non-energy benefits,
 - c. Potential use of Program Administrator Cost test in portfolio evaluation, in lieu of or in addition to the TRC test, as is being discussed in some energy efficiency literature.²⁰

¹⁹ Note: These options are not necessarily meant to be mutually exclusive.

- d. Valuation of projected decreases in technology/measure delivery costs (and uncertainty analysis thereof) for subsets of select emerging technologies and/or comprehensive delivery strategies.

Pros of Option B

1. ***Accelerate progress toward Strategic Plan goals.*** Given more time to implement and learn from 2010-2012 (2013) portfolios, the 2014-2017 portfolios are more likely to demonstrate program designs that can make faster progress toward Strategic Plan objectives.
2. ***More accurately represent efficiency potential.*** Given more time to update cost-effectiveness, incorporate new and updated measures, and consider new approaches to estimating potential, the goals update can be based on a more complete and accurate picture of remaining efficiency potential.
3. ***Address flaws and continue to show leadership on EE policy framework.*** Through the Strategic Plan, the Total Market Gross goals decision, and other directives, the Commission has set the stage for innovative approaches to advancing EE through utility regulation. But, a cohesive policy framework to fully implement the strategic direction has yet to be fully articulated. Option B provides the necessary time to continue to show leadership in these areas.
4. ***More realistic and feasible schedule.*** Option B allows at least 14 months to complete a goals analysis and issue a goals / portfolio guidance decision (as compared to 8 months for Option A). The expanded schedule would allow more opportunities for stakeholder review and input, including much closer coordination with the Energy Commission's demand forecast and setting of statewide targets for energy efficiency. It also reduces the risk of schedule slippage.
5. ***Lower transaction costs for program implementers.*** Option B supports lower transaction costs because third-party program implementers would have longer contracts and therefore less uncertainty when planning their business. These savings could be passed on to the ratepayer.
6. ***Greater opportunity to assess performance of pilot programs.*** Option B allows IOUs to develop proposals to incorporate elements of successful innovative 2010-12 pilot programs into the next portfolio on a statewide basis.

²⁰ For example, see Neme, C. and M. Kushler (2010), "Is It Time to Ditch the TRC? Examining Concerns with Current Practice in Benefit-Cost Analysis" American Council for an Energy-Efficiency Economy (ACEEE) 2010 Summer Study. Also see Galvin, Keneipp and Slote (2010), "Energy Efficiency and Regulatory Process Arizona Style: Existing Barriers and a Suggested Path Forward," ACEEE 2010 Summer Study.

Cons of Option B

1. ***Timeframe for updated potential study is still limited.*** Traditionally, potential studies take 1-2 years to complete. Staff is investigating the feasibility of completing one in 6-10 months, perhaps at a lower level of granularity (e.g., end-use level) than the traditional measure-level studies, or through other modifications.
2. ***Longer portfolio cycle could mean longer administration of programs perceived as performing poorly.*** To the extent that the Commission or parties believe that certain programs are ineffective, a four-year portfolio cycle pushes off the scheduled review of such programs by an additional year. If the IOUs believe that certain programs are ineffective, they can (and should) use existing mechanisms, such as fund shifting or program modifications, to make necessary adjustments. However, parties may wish to have greater access to, and influence on, mid-cycle decision-making about portfolio composition, if the portfolio is extended to four years.

Staff recommends that parties suggest specific procedures (e.g., trigger mechanisms) and/or review processes (both formal and informal) that the Commission might put in place to mitigate these concerns.

4. Strategic Plan Update and Action Plan Progress Report

When the Commission adopted the Strategic Plan in D.08-09-040, it called for an update to the plan “before the next round of utility energy efficiency program applications”²¹ in order to “take into account technological and market developments and the evaluation of programs already implemented.”²² The Commission stated the update should include “identified timeframes, defined end points, and processes to track progress.”²³

Pursuant to D.09-09-047, Energy Division was directed to issue a Strategic Action Plan Progress Report by June 2011 that “will assess each of the major sectors key actions, coordinated tasks and timelines necessary to achieve the goals of the Strategic Plan.”²⁴ Energy Division has made progress on the development of action plans designed to “feed into the development of the Strategic Action Plan Progress Report in June 2011.”²⁵ The first action plan for zero net energy in the commercial building sector was released on September 1, 2010.²⁶

²¹ D.08-09-040, COL 3.

²² *Id.*, FOF 4.

²³ *Id.*, at 15.

²⁴ D.09-09-047, at 331.

²⁵ D.10-09-047, at 6.

²⁶ A copy of the ZNE action plan can be downloaded at <http://www.cpuc.ca.gov/NR/rdonlyres/6C2310FE-AFE0-48E4-AF03-530A99D28FCE/0/ZNEActionPlanFINAL83110.pdf>.

Energy Division believes it is reasonable to consider the “progress report” ordered in D.09-09-047 and the “update” ordered in D.08-09-040 as complementary. This is because both activities would address the same “identified timeframes, defined end points, and processes to track progress” related to Strategic Plan activities.

5. Straightforward Updates to Cost Effectiveness Inputs and Methodologies

Regardless of which option the Commission pursues, Energy Division believes it would be prudent to make certain straightforward updates to EE avoided cost data inputs and methodologies, as well as to consider inclusion of a new avoided cost variable – avoided RPS purchases. These updates should be made prior to initiation of the EE goals analysis, whether by Assigned Commissioner ruling or Commission decision, as appropriate.

Pursuant to Public Utilities Code Section 2827(c)(4) regarding solar energy,²⁷ the CPUC recently completed an analysis, conducted by the Energy and Environmental Economics (E3) firm, of the costs and benefits of net energy metering of solar distributed generation (DG). The study used Commission-approved cost-benefit methodology for evaluation of DG adopted in D.09-08-026, which is based on the same EE avoided cost methodology developed by E3 and adopted in D.05-04-024 and later updated in D.06-06-063.²⁸ The Commission’s annual solar program report to the Governor and the Legislature describes how E3’s results were based on three updates and changes to the avoided cost inputs and methodology:²⁹

1. **Data updates.** All key inputs – such as natural gas prices, electricity prices, and 2008 temperature profiles by climate zone – were updated.
2. **Generation capacity cost.** The existing EE avoided costs use an average annual market price forecast “shaped” by the hourly market prices that were observed in the California Power Exchange from 1998 to 1999. During this period, market prices were relatively flat, but this data series has long been observed to undercount capacity during peak periods. E3 replaced this methodology with a new approach that approximates the current market structure in California, incorporating both wholesale energy market (“MRTU”) prices and generation capacity prices from the bilateral resource adequacy market. The change more accurately captures the higher on-peak value of air conditioning and other peak-saving measures.

²⁷ AB 920 (Huffman, 2009).

²⁸ E3’s avoided cost model is available for public review and may be downloaded at www.ethree/CPUC_CSI.html.

²⁹ See CPUC Report, *Net Energy Metering Cost Effectiveness Evaluation*, March 2010, pp. 43-45., Available at www.cpuc.ca.gov/NR/ronlyres/0F42385A-FDBE-4B76-9AB3-E6AD522DB862/0/nem_combined.pdf.

3. ***Avoided RPS cost.*** E3 added a new component of avoided cost to account for avoided RPS purchases. State policy requires that utilities procure 33% of retail sales from renewables by 2020.³⁰ Lower total electric load reduces the quantity of renewable energy that must be purchased, which currently is more expensive than gas-fired generation resources. E3's methodology results in a relatively small adjustment near-term (less than \$5/MWh), because these benefits are only assumed to accrue after 2020 when the "netting" effect begins to change RPS purchase requirements. Notably, this methodology is a new and different approach compared to a previously published E3 methodology that estimated incremental avoided marginal costs of \$20/MWh when moving from a 20% RPS to a 33% RPS obligation.³¹

Staff believes it is reasonable to update the EE avoided cost inputs and methodologies to be consistent with the methodologies recently used in the CPUC's Section 2827 Solar Program Report to the Legislature.

In addition, staff believes EE avoided costs should be updated to reflect the most recent avoided carbon costs in the most recently adopted (2009) MPR.³² The Assigned Commissioner has previously directed in the April 21, 2008 ruling that EE avoided costs should incorporate updated inputs for avoided carbon costs from the MPR.

6. Recommendations

Energy Division recommends Option B, because it allows time for accurate estimation of efficiency potential and thoughtful consideration of policy options to address problems with the current system. EE is at a cross-road; the groundwork for new thinking about the IOUs' role in advancing EE has been laid through the Strategic Plan, the total market gross (TMG) goals decision, and market transformation directives in D.09-09-047. But barriers such as cost-effectiveness, uncertainties about how to implement TMG goals, the need for new approaches that increase IOUs' support for market transformation, and an overemphasis on "widget-based" savings impacts continue to present challenges. Option A postpones addressing these challenges until 2014 or later; Option B begins to address them now.

³⁰ Although a 33% RPS has not yet been adopted by the legislature, Executive Order S-14-08 sets a 33% RPS target by 2020. A 33% RPS is also consistent with the Energy Action Plan II.

³¹ See Mahone, Woo, Williams and Horowitz. (2009). "Renewable portfolio standards and cost-effective energy efficiency investment," *Energy Policy*, Vol. 37, Issue 3, March 2009.

³² The 2009 MPR was set in Resolution E-4298.

In sum, Energy Division recommends:

1. Commission adoption of a 2013 funding extension for continuation of 2010-2012 EE programs,
2. Commission adoption of four-year EE portfolio cycles on a going forward basis, beginning with a prospective 2014-2017 EE portfolio, and further consideration of mechanisms (e.g., trigger mechanisms with stakeholder engagement) to support mid-cycle changes to specific programs or portfolio composition (as necessary), and
3. Updating EE avoided cost inputs based on the April 21, 2008 ruling to reflect applicable updates in other Commission proceedings, as specified in Section 4 above.

(END OF ATTACHMENT A)