

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)

**DIVISION OF RATEPAYER ADVOCATES' COMMENTS IN
RESPONSE TO THE ASSIGNED COMMISSIONER'S RULING
POSING QUESTIONS IN RESPONSE TO PARTIES' COMMENTS**

DIANA L. LEE
Attorney for the Division of Ratepayer
Advocates

California Public Utilities Commission
505 Van Ness Ave.
San Francisco, CA 94102
Phone: (415) 703-4342
Fax: (415) 703-2262
E-mail: dil@cpuc.ca.gov

CHERYL COX
Analyst for the Division of Ratepayer
Advocates

California Public Utilities Commission
505 Van Ness Ave.
San Francisco, CA 94102
Phone: (415) 703-3027
E-mail: cxc@cpuc.ca.gov

July 16, 2010

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)

**DIVISION OF RATEPAYER ADVOCATES' COMMENTS IN
RESPONSE TO THE ASSIGNED COMMISSIONER'S RULING
POSING QUESTIONS IN RESPONSE TO PARTIES' COMMENTS**

I. INTRODUCTION

The Division of Ratepayer Advocates (DRA) submits the following comments in response to the "Assigned Commissioner's Ruling" (ACR) issued July 2, 2010. The ACR summarized party responses to an earlier May 21, 2010 ACR and asked follow-up questions based on party input. It provides parties the opportunity to comment in response to questions by July 16, 2010 and then to file reply comments on July 23, 2010. DRA appreciates the opportunity to comment on revisions to the current evaluation, measurement, and verification (EM&V) framework for 2013 and beyond, especially regarding the need for a framework to measure Market Transformation (MT), a key strategy for achieving sustainable long-term energy savings.

II. DISCUSSION

DRA's responses to some of the questions in the ACR are set forth below. DRA has not responded to all of the questions or subparts, but reserves the right to comment on those questions in its reply comments.

A. 4.1. EM&V Objectives

A. Several parties suggest adding a reference to the Strategic Plan's goal of market transformation to the Commission's adopted EM&V objectives.

In particular, DRA proposes adding the following phrase to the “Market Assessment” objective adopted in D.09-09-047: “The goal of market assessment is to identify a common set of Market Transformation definitions based on CPUC assigned market indicators, which will allow the Commission to determine when market transformation has occurred for a program.” Do parties support the addition of this phrase to the Market Assessment objective?

B. Do parties support SCE’s suggestion that the Market Assessment objective be expanded to specify that the purpose of Market Assessment is to assist the Commission in “[m]onitoring and guiding progress on meeting the goals of the Strategic Plan; and guiding updates to the Strategic Plan by providing new information about what market changes are most feasible and cost-effective”?¹

C. Can the suggestions in questions 1 and 2 above be reconciled and, if so, how?

The ruling asks if parties support the addition of the following phrase as proposed by DRA:

“The goal of market assessment is to identify a common set of Market Transformation definitions based on CPUC assigned market indicators, which will allow the Commission to determine when market transformation has occurred for a program.”²

DRA would like to clarify the distinction between 1) the Tipping Point, which is the point at which a product or behavior has sufficient momentum in the marketplace and barriers have been removed in the market / society so that the product or behavior no longer requires a subsidy, and 2) Market Transformation, the point at which a product or behavior becomes standardized in the market / society as business as usual. Both are important to measure as part of market assessment. However, defining criteria for the Tipping Point is essential to in order to determine whether a program or strategy merits inclusion in an EE portfolio. The Tipping Point should be defined as a point at which the market momentum for a product is adequate to promote widespread adoption of the

¹ SCE Comments, at 5.

² Ruling, p. 7.

product without subsidies and at which point continued subsidies would interfere with the ideal operation of the market.³ The distinction between the Tipping Point and Market Transformation is important to define because it is the Tipping Point that should determine whether or not a program warrants new or continued subsidies. Whether or not subsidies are necessary should be determined based on market indicators. Therefore is critical to develop clear criteria for when that Tipping Point occurs and subsidies are transitioned to new strategies. Accordingly, in order not to confuse the strategy of Market Transformation with the measurement of key Market Transformation milestones, DRA makes the following adjustments to its proposed language:

“The goal of market assessment in the EE portfolio planning process is to identify a common set of ~~Market Transformation~~ criteria / definitions based on CPUC assigned market indicators, which will allow the Commission to determine when programs no longer require subsidies.”

In the absence of defined criteria some stakeholders may view market transformation as full saturation/penetration of an EE initiative, so it is important to clarify that ratepayer subsidies for a program should be used only to the Tipping Point at which the market takes over. Ratepayer subsidized energy efficiency (EE) programs should not compete with the market, but should instead move on to support newer and existing technologies that have not yet reached the tipping point.

B. 4.2. Macro Consumption Metrics

- A.** The NRDC supports and encourages exploration of Macro Consumption Metrics as a supplement to, but not replacement of, the current energy and demand saving metrics.⁴ Do parties agree with NRDC?
- a.** If Macro Consumption Metrics cannot replace current impact evaluation practices, do they offer other benefits?
 - b.** The NRDC suggests Macro Consumption Metrics are necessary to “help inform progress towards the state’s objective to limit

³ For example, Appliance Recycling programs currently compete with Home Depot and Sears recycling programs; CFL upstream CFL programs compete with retailers such as Wal-Mart.

⁴ NRDC Comments, at 5.

greenhouse gas emissions.”⁵ However, SCE argues that converting existing energy savings metrics to GHG emission reductions is sufficient to accomplish the same goal.⁶ Which perspective is most valid?

- B.** Do parties agree with PG&E’s suggestion that the inherent limitation of Macro Consumption Metrics is that “factors outside of the energy efficiency arena could skew the perceived effect of the energy efficiency programs themselves?”⁷
 - a.** Is it possible to control for factors like economic activity or electrification of transportation such that the impact of energy efficiency is more evident?
 - b.** Would the availability of certain data strengthen Macro Consumption Metrics? If so, what data, if any, would improve the reliability of econometric evaluations?
- C.** Would the addition of a Macro Consumption Metric comparable to that suggested by Horowitz,⁸ or other approaches, provide more certain measures of the aggregate impact of California’s energy efficiency policies than is available through existing EM&V?
- D.** Would the addition of a Macro Consumption Metric comparable to that suggested by Horowitz, or other approaches, provide evaluation results more quickly than existing EM&V?

DRA believes that consumption metrics are essential to demonstrating that EE programs are having a direct impact on consumption trends. While current impact studies are valuable in demonstrating accountability for IOU programs, EE programs that may aid in creating a rebound effect and do not actually reduce consumption will not reduce greenhouse gas emissions or lower California’s energy costs. Such consumption metrics should be designed to demonstrate the accountability of EE programs for sustained decrease in consumption or otherwise inform how to improve programs to achieve lower consumption.

⁵ NRDC Comments, at 5.

⁶ SCE Comments, at 9-10.

⁷ PG&E Comments, at 12.

⁸ “Measuring the Savings From Energy Efficiency Policies: A Step Beyond Program Evaluation.” Horowitz, M.J. April 2010. (<http://www.springerlink.com/content/120908/?Content+Status=Accepted>)

DRA believes that consumption metrics can be a complementary metric utilized by Energy Division as part of its EM&V efforts to ensure that all of the Commission's goals are measured and that program administrators are accountable for their expenditures of ratepayer dollars. However, as DRA has noted previously, without workshops with expert presentations, stakeholder dialogue, and follow-up comments, it is difficult to recommend the appropriate methodology to pursue.

C. 4.5. Market Transformation

A. D.09-09-047 directed the Commission's Energy Division to develop market transformation metrics, a process which is currently underway. Most parties agree that the Commission needs to do more to measure progress in achieving market transformation.⁹ Do parties agree with DRA's suggestion that the Commission should adopt market transformation metrics already developed by the NEEA?¹⁰

- a.** Are there available best practices from NEEA that should be adopted by California? Please be specific.
- b.** What would be the primary challenges in adopting market transformation metrics from NEEA? What strategies could be applied to overcome such challenges?

In this section DRA uses NEEA as a model for identifying the types of studies and metrics that should be undertaken in California to measure Market Transformation (MT) success. Because sudden market fluctuations can impact the ability of programs to achieve their goals, program managers should be able to react quickly to adjust program design in response to market conditions. As discussed in the following sections, key indicators that support the evaluation of MT efforts are inextricably linked to program design.

1. Background

The importance of pursuing long-term EE strategies is illustrated in Rulemaking (R.)10-05-006, which considers the current long-term procurement planning (LTPP)

⁹ Market Transformation is defined in D.09-09-047 at 86-87.

¹⁰ DRA Comments, p.7, p.10. DRA does not refer to specific metrics in its comments, but parties could look to following web address for more specific information:
<http://www.nwalliance.org/research/marketresearchreports.aspx>

process to meet California's future energy needs. The amount of long-term energy savings resulting from energy efficiency programs is an important factor in determining whether to build or procure energy resources for the future, and the absence of effective long-term "committed"¹¹ EE savings may result in increased reliance on supply side resources. The focus on short-term energy savings in previous EE cycles has resulted in short-term, low quality lighting with savings that have decayed quickly, leaving a deficit of committed savings beyond 2010.

Statements by the utilities demonstrate their resistance to counting energy savings from long-term market transformation strategies for purposes of long-term procurement planning. San Diego Gas & Electric Company (SDG&E) and Pacific Gas and Electric Company (PG&E) advocate for an EE low case scenario in LTPP. SDG&E claims that it would be unfeasible "to implement novel and untested strategies such as ...[the] BBEES."¹² PG&E acknowledges that the BBEES are important to achieving California's energy efficiency goals but contends that there has been no showing that they currently produce savings in a cost effective manner and suggests that the BBEES savings should not be included in the incremental energy efficiency forecast, and therefore ascribes zero GWh and MW savings to the BBEES.¹³ SCE states that it "agrees with SDG&E and PG&E that measure savings decay should not be included in the procurement plan" since they are skeptical that it can be done in a cost-effective manner.¹⁴

Yet the utilities continue to focus the bulk of their EE portfolios on short-term energy savings strategies. The savings from those short-term strategies will continue to decay, yet the utilities argue that they should not be responsible for making up the deficit.

¹¹ Committed EE savings refers to energy savings from programs for which funding has already been committed.

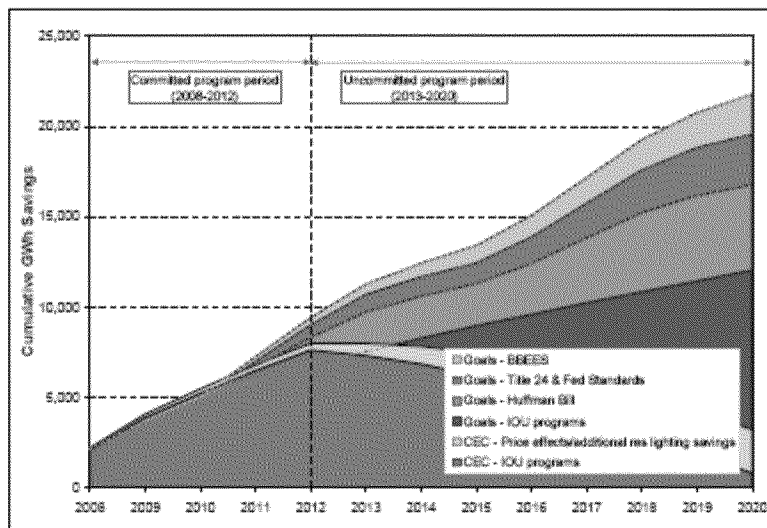
¹² Comments of SDG&E regarding Administrative Law Judge's Ruling on Resource Planning Assumptions-Part 3 (Energy Efficiency) Track 1, filed July 2, 2010 (SDG&E Comments), p. 3. BBEES refer to Big, Bold Energy Efficiency Strategies described in the California Energy Efficiency Strategic Plan. <http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>

¹³ Comments of PG&E on Resource Planning Assumptions-Part 3 (Energy Efficiency), filed July 2, 2010 (PG&E Comments), p. 2, pp. 6-7.

¹⁴ Reply Comments of Southern California Edison Company on Proposed Energy Efficiency Planning Standards and Assumptions (R.10-05-006), filed July 9, 2010, pp. 4-5.

As demonstrated by the declining committed EE savings in the graph¹⁵ below due to quickly decaying EE strategies, a risk-averse approach to long-term strategies with no accountability for savings decay caused by utility program design, could instead continually trigger additional supply-side procurement due to lack of long-term committed energy savings. This may in turn cause ratepayers to invest in redundant resources.

Figure 4-1: Summary of Energy Savings (GWh) from Committed and Uncommitted Programs - Low Goals Case



Despite the Commission’s well-established directive that the IOUs must be responsible for all of their cumulative goals,¹⁶ PG&E and SDG&E assert that the decay that was caused by their portfolio planning is now too expensive to go back and replace. SDG&E argues that “an assumption that 50% of the decay from first year impacts of IOU EE programs over the years 2006-2012 should be made up over the forecast period for resource planning does not pass the resources planning test of demonstrating the EE measures are cost-effective, reliable and feasible.”¹⁷ The utilities’ continued reliance on

¹⁵ Incremental Impacts of Energy Efficiency Policy Initiative Relative to the 2009 Integrated Energy Policy Report Adopted Demand Forecast, Attachment A: Technical Report, prepared for the California Energy Commission (CEC) by ITRON, January 2010, p. 39. (CEC Technical Report)

¹⁶ D.07-10-032, pp. 77-79; OP 13 at p.144; D.09-09-047, p. 38 and OP 49.

¹⁷ SDG&E Comments, p. 12. While SCE claims it will “make up” past savings decay, it nevertheless agrees with SDG&E and PGE that savings decay should not be included in the procurement plan. Reply Comments of Southern California Edison Company on Proposed Energy Efficiency Planning Standards

short-term savings that erode quickly and will be too costly to recover, coupled with their resistance to commit to long-term savings from the BBEES, demonstrates their inability to manage market transformation strategies.

DRA believes that in order to achieve long-term EE savings, strategies post-2012 should have multiple components. To encourage the pursuit of long-term savings and their incorporation in LTPP, those savings must be measurable. Moreover, long-term and short-term program strategies should be administered separately, but both should be guided by the Commission's Energy Efficiency Strategic Plan (EESP). The utilities would be responsible for short-term savings and downstream programs, while a market transformation entity comparable to NEEA should be responsible for long-term savings strategies and upstream EE programs.

Utilizing a single entity to focus on market transformation and long-term savings would allow economies of scale that would promote a more cost-effective means to achieving big bold long-term energy savings, in contrast to the current fractured service territory approach.¹⁸ A market transformation entity could increase EE savings overall, with an emphasis on longer term savings that are more reliable for purposes of long-term procurement planning.

- There are certain foundational elements required for effective Market Transformation. In the following sections, DRA recommends the implementation of the following components in order to promote the success of MT strategies and evaluation efforts.
- Establish an organizational framework similar to NEEA to administer the long-term components of upstream MT strategies including the BBEES, Emerging Technologies, and Codes & Standards.

and Assumptions,10-05-006, filed July 9, 2010, p. 4.

¹⁸ NEEA's approach embraces economies of scale that recognizes "[w]hen money and resources are tight, leverage needs to be maximized and duplication minimized," Northwest Energy Efficiency Alliance 2010-2014 Business Plan, Board-Approved, April 16, 2009, p. 4.
http://www.nwalliance.org/participate/docs/NEEA_BusinessPlan_Board-Approved.pdf

- Establish relevant tools needed to support long-term Market Transformation strategies including:
 - cost-effectiveness tests for long-term programs;
 - criteria to determine the tipping point for EE initiatives.
- Institute a new evaluation paradigm for Market Transformation

2. Elements to promote Market Transformation as an effective EE Strategy

a. Establish a non-profit organizational framework to administer Market Transformation efforts.

The CPUC should establish an administrative framework similar to NEEA, which would manage the long-term components of upstream Market Transformation strategies including the BBES, Emerging Technologies, and Codes & Standards. This Market Transformation organization would collaborate with IOU administration of downstream strategies. The two efforts would be guided by market assessment and the overarching Strategic Plan. Market Transformation efforts would have key elements:

- Program strategies and evaluation implemented and coordinated simultaneously to stay attuned to market changes and adjust quickly
- Longer-term program cycle to demonstrate and measure success, for example NEEA uses 5 year funding cycles for MT programs¹⁹

The benefits of a single, statewide non-profit MT structure include:

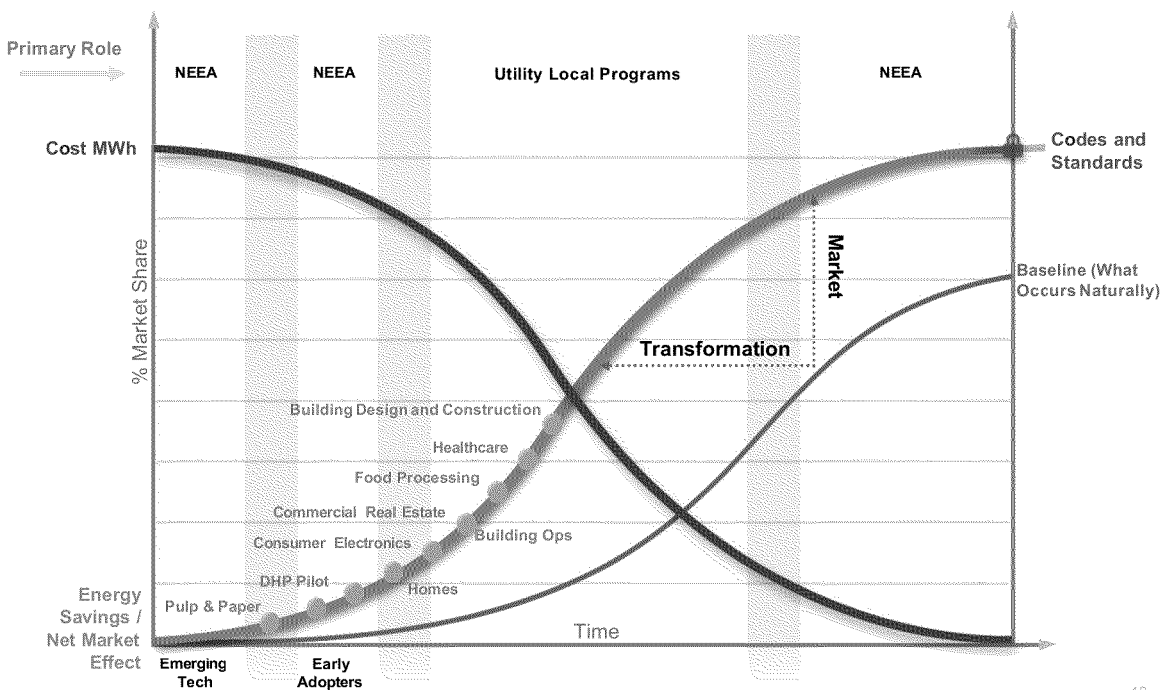
- Economies of scale – one statewide organization with streamlined administrative approach for increased cost-effectiveness
- Greater statewide leverage for the ability to achieve greater savings for California
- Opportunity to work with publically-owned utilities and other stakeholders in a single statewide approach
- Avoiding duplication of individual service territory actions and leverage cost-effective savings through unified action

¹⁹ Based on the IOUs' inability to react to the market quickly, a lack of core expertise in adapting to the demands of competitive markets and their stated risk-aversion to Market Transformation activities, DRA does not have confidence that longer term cycle IOU programs would result in increased success for Market Transformation strategies.

- Eliminating responsibility of the IOUs for long-term programs that they perceive as risky and unlikely to be cost-effective
- MT organization would be more likely to get confidential market data from manufacturers, similar to NEEA

In the context of market assessment, the Diffusion Curve should guide strategic planning and coordination of all upstream and downstream EE program efforts. NEEA delineates this accordingly across the Diffusion Curve and moves initiatives from new product development to standardization along the Curve to broad market adoption.

Diffusion Curve



18

NEEA uses a Diffusion Curve model to define strategies and determine when they have hit the Tipping Point.²⁰ Multiple program strategies will be needed along the Diffusion Curve and the varying level of market acceptance will dictate the appropriate

²⁰ "Market Transformation in Energy Efficiency: A Northwest Perspective," NEEA, June 14, 2010, slide, 18. (presentation attached as Attachment 1).

strategies of either Market Transformation or IOU downstream program implementation. NEEA divides its strategies into three phases, depending on current status along the Diffusion Curve that defines the strategic approach:²¹

Three Phases of Initiatives

New Product Development	Product Standardization	Product Diffusion
R&D, Pilot Project, Proof of Concept	Operationalization	Broad Market Adoption
Processes are “under construction”	Processes become standard	Processes are transferred to market actors
Evaluation reviews processes	Evaluation confirms initial impacts	Evaluation assesses market adoption
Any energy savings are incidental.	Per unit energy savings become predictable	Per unit energy savings are “deemed”

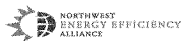
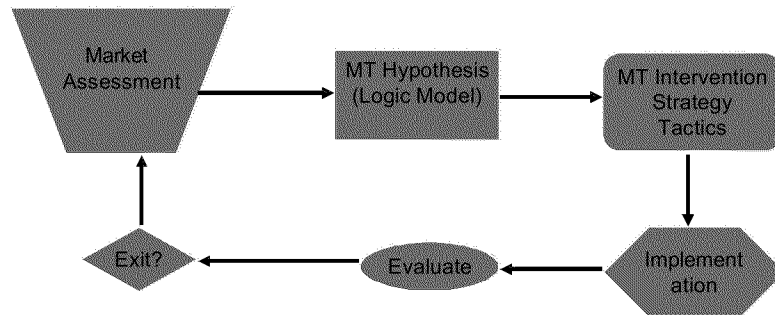


b. Develop the hypothesis

NEEA develops a hypothesis of how to address market barriers based on a market assessment prior to designing program intervention.

²¹ “Why Evaluation?,” NEEA, slide 12 (presentation attached as Attachment 2)

MT is a Process....



8

NEEA then develops the Logic Models to inform the program intervention strategy.

c. Determine through market assessment that barriers have been removed

Based on the Diffusion Curve theory that recognizes that different types of customers are motivated differently to take action,²² not all customers will be motivated by price. Accordingly, Market Transformation success must be measured using other types of indicators in addition to program strategies that provide a customer incentive or rebate (upstream or downstream). Market barriers other than price include:

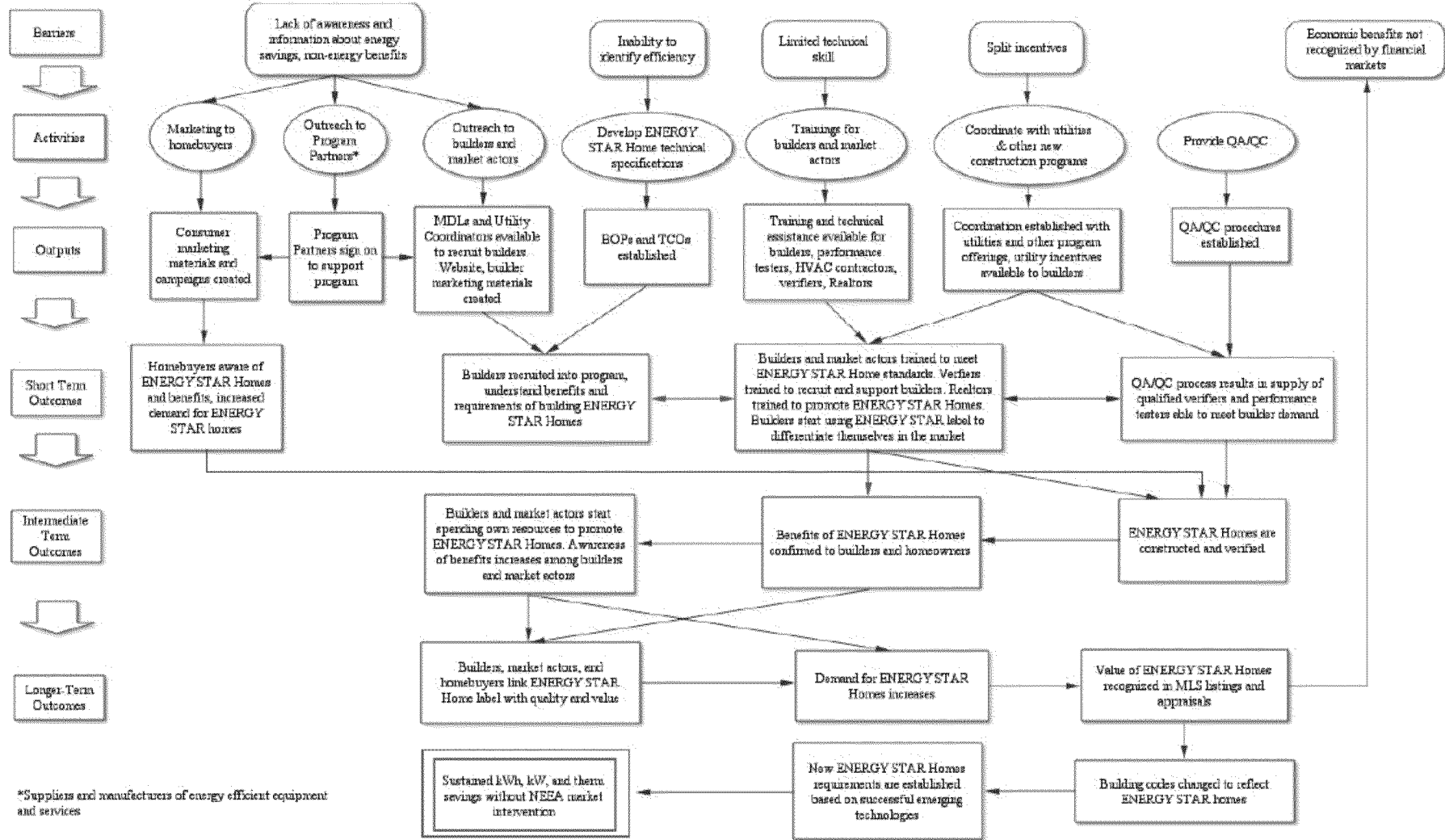
- Lack of awareness
- Lack of product availability
- Insufficient customer information
- Customer needs not addressed, including aesthetics, quality, and purpose
- Lack of distribution in various market channels

Accordingly, the removal of barriers signals whether the market has progressed to the point at which subsidies can be transitioned to new program strategies.

The CPUC is pursuing program performance metrics (PPMs) using a logic model approach, but for 2010-12 programs that already exist. Creating logic models after the fact is not the best approach. Instead, as NEEA does, the hypothesis of MT strategies should precede and guide the development of program intervention strategies. This allows the logic model to be used to hypothesize solutions based on market assessment and to measure program success as well. This supports DRA's assertion that program planning and evaluation are inextricably linked. Post-2012 EE programs therefore should first develop the Logic Models based on 1) market assessment to determine existing barriers; and 2) prior to developing programs so that the programs can be sure to address barriers based on a market assessment and justify a place in ratepayer-subsidized portfolios.

²² Innovators, Early Adopters, Early Majority, Late Majority, and Laggards are motivated differently.

Figure 1: Northwest ENERGY STAR Homes Logic Model



429038

d. Test theory and Logic Models through to final evaluation:²³

Through a variety of data collection methods, the program’s hypothesis must be continually tested to determine that the validity of program strategies are still relevant and to adjust the program theory as necessary in mid-cycle.

Data Collection Techniques Depend on Learning Objectives

Data Collection Technique	Mkt Char.	Mkt Penetration	Availability, Price	Barriers	Messaging	Causality/ Behavior Change from Intervention	Savings per Unit
On-site Data Collection			●				●
Quantitative Market Surveys	●	●	●		●	●	
Interviews	●		●	●	●	●	
Focus Groups				●	●		
Marketing Collateral/Advertising			●			●	
Automated Energy Consumption Data							●
Energy Consumption Metering							●
Self-reported data (to be validated)							●
Secondary Sources	●	●	●	●	●		●



In order to measure MT success, the Commission must change the paradigm for evaluation.²⁴ Metrics should be tied to market assessment and delineated by key market indicators.

²³ “Why Evaluation?,” NEEA, Slide 14.

²⁴ DRA does not expect that MT evaluation will replace impact evaluations, but like macro consumption metrics, would be another approach to ensure that all of the Commission’s objectives are measured.

3. Develop realistic tools to support success for long-term energy savings

a. Develop relevant cost-effectiveness tests

Stakeholders in the EE proceeding, including local governments, have long predicted that the existing focus on short-term savings would be at the expense of more comprehensive solutions that would likely be more expensive to back-fill in the future and, accordingly, might never happen at all. The decay of short-term lighting strategies that represented nearly 60% of the 2006-08 portfolio energy savings, and only lasted 2-3 years, has left California in an EE deficit. The cost of having to replace short-term savings should be factored in to a cost-effectiveness test that values comprehensive long-term energy savings. Otherwise, California will continually find itself in a vicious cycle of funding short-term energy savings that yield decay rather than reliable long-term savings, thus creating the potential for triggering additional power plants.

This is consistent with the Commission's EESP which values whole building and system approach solutions, which envisions achievement of long-term energy savings strategies through 2020 and 2030.

b. The Commission should set clear criteria to determine the point at which subsidies for programs are no longer needed

In order for ratepayers to achieve the maximum benefit from the energy efficiency investments through the strategic use of Market Transformation, the Commission should articulate criteria to determine the Tipping Point at which the operation of the market can replace subsidies to achieve energy efficiency savings. Once a program has reached the Tipping Point, that program should no longer remain in ratepayer-subsidized portfolios. In establishing criteria for measuring the Tipping Point, the Commission should specify that market progress is defined by technology, not by incremental technology improvements. For example, not every upgrade of CFL should be subsidized if there is adequate market momentum for CFLs overall.

Moreover, the Commission should clearly define what a “market” is. For example, the current EE process uses broad market sectors such as commercial, residential, etc. to define markets, but for purposes of Market Transformation, it may be more appropriate to define markets in terms of individual technologies, or something that is measurable in specifically defined units.²⁵

c. Use targeted segmentation studies of customers from ME&O, which are very detailed

In order to assess market conditions for both planning and evaluation, program managers and evaluators should work closely with detailed segmentation analysis being undertaken as part of Marketing, Evaluation, and Outreach (ME&O) with the new Engage 360 brand. These types of studies align with the Diffusion Curve in identifying how customers are motivated.

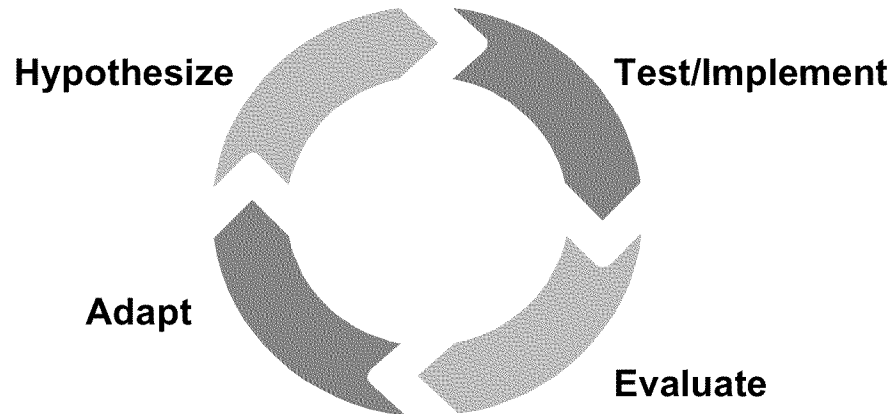
d. Broaden the scope of evaluators to include entities who understand consumer behavior, market forces, and market share

In order to support the ability to evaluate MT programs, the Commission should seek to broaden the pool of evaluators who have an expertise in market assessment by identifying companies and consultants who provide market assessment evaluation to private sector enterprises.

²⁵ Why Evaluate, NEEA, Slide 18, Design Requirement: "Standard 'Unit' Definition: Precisely What Is Being Adopted?"

3. Implement a new evaluation paradigm

Using the above tools and market-based strategies, a Market Transformation approach should continually test its hypothesis in the market in real time in order to make necessary adjustments to keep strategies relevant and effective.²⁶



Assessing the market in real-time, in tandem with program implementation, would allow evaluation of the program theory in order to determine its validity and whether adjustments are necessary. This is one of the first foundational updates that should be made to MT EM&V process. Going forward, EE implementation should establish a process where market evaluation is an ongoing process that parallels program implementation so that market fluctuations can be understood in real time and immediate program adjustments can be made to improve the program or appropriately modify the portfolio approach. The following subsections provide a model for that new Evaluation Paradigm.

b. An upstream Market Transformation strategy targeting long-term sustained energy savings would include the following objectives and characteristics:²⁷

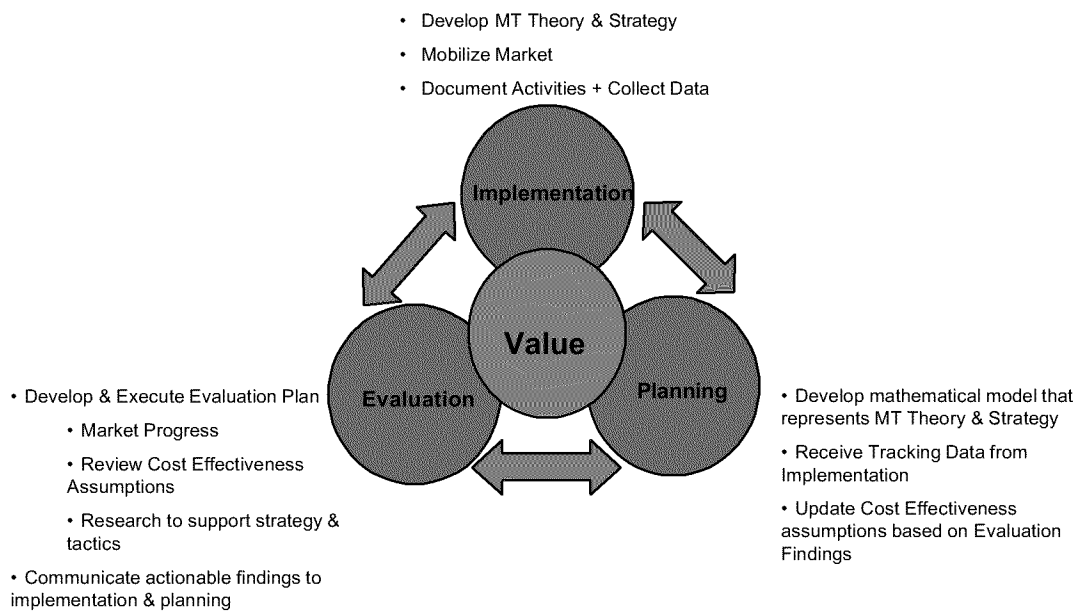
- Use market data to model assumptions and develop a forecast

²⁶ Why Evaluation Presentation, NEEA, slide 6.

²⁷ “Why Evaluate?,” NEEA.

- Set a baseline and determine market share
- Determine market progress
- Determine savings assumptions
- Identify cost assumptions
- Upstream customers are unlikely to be known (compared with downstream programs)
- Success will be based upon long-term outcomes
- Savings will be based on market projections using accepted and replicable techniques

Collaboration Required to Demonstrate Customer Value



c. Evaluation indicators

NEEA uses a variety of data collection and indicators as part of its evaluation methodology to measure success of its Market Transformation initiatives.²⁸ The market

²⁸ Why Evaluation, NEEA (Attachment 2); Energy Star Residential Lighting, Market Progress Evaluation Report, No. 2, August 16, 2004, <http://www.nwalliance.org/participate/docs/NEEAMTDefinition2008.pdf>; Northwest Energy Star Homes, Market Progress Evaluation Report #7, April 20, 2010, <http://www.nwalliance.org/research/reportdetail.aspx?ID=772>; Northwest Ductless Heat Pump Pilot Project, Market Progress Evaluation Report #1, March 17, 2010,

indicators used involve collection and evaluation of a mix of quantitative and qualitative data:

- **Validation of Energy Savings:** NEEA associates market adoption of EE behaviors with commensurate energy savings using a deemed energy savings methodology similar to the Data Base of Energy Efficiency Resources (DEER)
- **Ongoing Market Characterization:** a basis for determining opportunity and progress²⁹

Regional Building Characteristic Studies: provides a baseline for measuring improvements in buildings and market adoption of efficient behaviors with associated energy savings

- **Market Assessments:** Critical for assessing the need and opportunity for MT strategies:
 - Understand subsidized program sales and trends
 - Understand sales and trends of non-subsidized efficient products
 - Understand market share of non-efficient product
 - Forecast sales trends and sustainability
 - Identify market sectors that should be targeted
 - Identify Non-program effects on defined market
 - Quantify purchase and installation rates
 - Determine consumer satisfaction and influence on continued investment in further efficiency
- **Long-term Monitoring / Tracking:** Process for tracking the impact and progress for MT projects once they are no longer actively funded.
- **Market Progress Indicators:** Examples of indicators that are linked to activity outcomes in the NEEA initiatives logic models to monitor program progress including the short and long-term indicators below³⁰

Short-term Indicators:

<http://www.nwalliance.org/research/reportdetail.aspx?ID=773>

²⁹ Northwest Energy Star Homes, Market Progress Evaluation Report #7, April 20, 2010, p. 2. <http://www.nwalliance.org/research/reportdetail.aspx?ID=7721>

³⁰ Northwest Energy Star Homes, Market Progress Evaluation Report #7, April 20, 2010, p. 2. <http://www.nwalliance.org/research/reportdetail.aspx?ID=7721>

- Increased awareness vs. other “green” services
- Service provider uses product to differentiate themselves in marketplace
- Consumers/Service providers associate product with quality/value
- Builders convinced of long-term cost savings
- Increase in the number of participating service providers
- Market actors use their own resources to market products
- Market actors have expanded knowledge/skills
- Increase in number of buildings certified (e.g., Energy Star Homes)
- Perceived customer benefits
- Increase in retail shelf space, stocked on a regular basis with efficient products
- Increase in number of manufacturers producing ENERGY STAR products
- Increase in variety of efficient products available
- Retailers giving preference to efficient products for in-store promotions
- Decrease in product cost
- Increase in product information publically available
- Improvements in product quality and aesthetics
- Increase in saturation of products in customer homes/businesses
- Increase in market share

Long-term Indicators

- Multiple Listing Services include whether a home is certified ENERGY STAR
 - Efficiency upgrades automatically included in appraisal process
 - Market actors replace NEEA as provider of services
 - Codes are upgraded to incorporate any/all of ENERGY STAR requirements
 - ENERGY STAR adopts a new level of efficiency based on successful changes in market and new emerging technologies
 - Sustained market and customer behavior after subsidies are removed
- **Increase in market penetration / market share** (standard unit must be precisely defined):³¹ Market share should be understood in the context of the entire market: within a defined market it should determine the share of efficient

activities vs. share of non-efficient options. This sets a baseline for progress and potential.

d. Examples of evaluation of NEEA initiatives

- **Ductless Heat Pumps:** Success measured by achieving 15% market penetration.
- **Commercial Sector:** NEEA has a strategic approach that includes organizing the commercial market into groups of markets with similar characteristics. Key objectives for 2010-14 include increasing the efficiency of existing commercial building operations by 10-30%.³²
 - Healthcare Market: Building off of initial goals for measuring success by reducing energy use levels up to 30% for a third of the market, NEEA is targeting 65% of hospitals practicing Strategic Energy Management (SEM), measured by number of beds.³³
 - Real Estate Market: Goals for 2010-14 call for 50% of office real estate practicing SEM, measured by floor space.³⁴
 - Building Operations for In-House Staff and Trade Allies: Through training, NEEA plans to increase the capacity for a competent workforce in order that 50% of building operators and service providers in targeted markets reduce energy usage of at least 30%.³⁵
 - Architect / Design Engineers / Contractors: Promote improved capabilities that will result in buildings that meet 2030 goals, 50% better than current practices.³⁶
 - **Emerging Technologies (ET):** ET program has tangible deliverables and milestones:³⁷
 - Achieve 5% market share for heat pump water heaters

³¹ “Why Evaluation?,” NEEA, slide 18.

³² Northwest Energy Efficiency Alliance 2010-2014 Business Plan, Board-Approved (NEEA Business Plan), April 16, 2009, p. 31.

³³ NEEA Business Plan, p. 28.

³⁴ NEEA Business Plan, p. 28.

³⁵ NEEA Business Plan, p. 30.

³⁶ NEEA Business Plan., p. 32.

³⁷ NEEA Business Plan, p. 48.

- Manage a portfolio of ET projects estimated to deliver 300 average MW by 2030
- Design prototypes for at least 2 target markets to achieve at least 50% energy savings over current practices
- Simplified design-build approaches that become the basis for 5 real projects that will save 50% energy over current practices

Data collection and market assessment techniques such as those employed by NEEA should be similarly implemented in California if the state is to achieve long-term energy efficiency savings in order to off-set supply-side resources.³⁸ Moreover, in order to continue increasing the potential for energy efficiency savings, a fundamental paradigm shift will need to occur that recognizes that in order to achieve long-term sustained energy savings, California should institute a single statewide framework for market transformation that will increase the likelihood of cost-effective long-term strategies.

III. CONCLUSION

DRA respectfully requests that the Commission thoroughly consider the issues raised in the ACR, and discussed in DRA's comments, so that any new EM&V framework serves the ultimate objective of enhancing the Commission's oversight of energy efficiency to ensure the appropriate use of ratepayer funds.

³⁸ Other helpful resources on this subject include: NEEA's Definition of Market Transformation: <http://www.nwalliance.org/participate/docs/NEEAMTDefinition2008.pdf> and NEEA Strategic Plan: http://www.nwalliance.org/participate/docs/NEEAstrategicPlan_FinalVersion.pdf

Respectfully submitted,

/s/ DIANA L. LEE

DIANA L. LEE

Attorney for the Division
of Ratepayer Advocates

California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 703-4342
Fax: (415) 703-4432
Email: dil@cpuc.ca.gov

July 16, 2010

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of “**DIVISION OF RATEPAYER ADVOCATES’ COMMENTS IN RESPONSE TO THE ASSIGNED COMMISSIONER’S RULING POSING QUESTIONS IN RESPONSE TO PARTIES’ COMMENTS**” the official service list in **R.09-11-014** by using the following service:

E-Mail Service: sending the entire document as an attachment to all known parties of record who provided electronic mail addresses.

U.S. Mail Service: mailing by first-class mail with postage prepaid to all known parties of record who did not provide electronic mail addresses.

Executed on July 16, 2010 at San Francisco, California.

/s/ NELLY SARMIENTO

Nelly Sarmiento