

DEER2016 Update Solicitation for Comments on Scope

California Public Utilities Commission, Energy Efficiency Branch

March 11, 2015

Commission staff is soliciting comments on the draft scope of the 2016 update to the Database of Energy Efficiency Resources (DEER). Comments are due on **2/27/2015** and Commission staff team will review and respond to comments after that date.

The tentative timeline of the 2016 update is:

3/05/2015	DEER2016 Update scope webinar
5/15/2015	DEER2016 Update draft release
5/21/2015	DEER2016 Update draft workshop
6/08/2015	DEER2016 Update comments due
Q3 2015	Proposed decision to adopt DEER2016

Commission staff has identified the following specific priorities when determining what to update for DEER2016. All the priorities, listed below in order of importance, are included in the scope if and only if there are enough data and studies that have been publically vetted and reviewed to support an update area.

1. New Code Update or Code Update Not Covered in Previous DEER Updates: Recent code updates are the highest priority as these are needed to ensure that code and Industry Standard Practice baselines are properly defined.
2. Updates to Underlying Methodology: The DEER2016 Update will focus on updates and improvements to simulation and modeling methodologies to reflect latest research results.
3. Broad Updates with Applicability to DEER and non-DEER Measures: The DEER2016 update will focus on revisions with broad application across all measures.
4. Updates that Affect Large Portfolio Contributions or Large Measure Counts: The DEER2016 update will focus on updates that result in revisions to a majority of savings and other cost effectiveness values in terms of overall portfolio contribution as well as total measure counts.

Commission staff seeks input to the following questions:

1. Are there additional criteria that the Commission should consider for setting priorities?
2. Are the update areas described in Table 1 consistent with the update priorities described above? If not, should any areas be removed or revised? How should update areas be revised to align with the priorities stated above?
3. For any of the update areas described in Table 1, what additional resources or methods should be considered for these updates? Provide specific recommendations for a particular update area only if the recommended additional resources or methods include data and studies that have been publically vetted and reviewed.

4. Are there additional update areas that should be included in Table 1 that are needed to address the priorities listed above? What resources or methods should be utilized for any additional update areas? Provide specific recommendations for a particular update area only if the recommended additional resources or methods include data and studies that have been publically vetted and reviewed.

Bearing in mind that the timeline for the update only allows for two months of research and technical update, please submit comments and recommendations for additional updated areas that can actually be accommodated reasonably in the two month time period, based on resource constraints and available data.

Please post comments to <http://www.energydataweb.com/cpuc/search.aspx> and search for “DEER2016 Update Scoping Plan” in the Search Text box. Contact Aaron Lu at aaron.lu@cpuc.ca.gov with any questions or clarifications.

The ex ante review team (EAR) is considering the updates described in Table 1. Note that updates may not be comprehensive. Specifically, depending on the available information and resources, not all ex ante values may be updated for a particular measure group. For example, the DEER team may update only Unit Energy Savings (UES) values for a particular measure group.

Table 1 - Draft DEER2016 Update Priorities

Area of Update	Approach and Source	Justification for Update	Reference						Sector				Tech Group				Ex Ante Value									
			Codes	Ex Post	Market	ISP	Custom	Workpaper	Calc Methods	Gross	Res	Com	Ind	Ag	Lighting	HVAC	DHW	Envelope	Plug/Proc	UES	Load Shape	EUL/RUL	NTG	Cost	GSIA	
DEER building type characteristics:																										
Building type configurations such as activity area makeup, envelope characteristics and HVAC system types	Review building stock research	Impacts all weather dependent measures and interactive effects. Update building simulation prototypes, operating characteristics, and buildings weights to reflect latest available information; Include specific documentation on the updated and non-updated characteristics to allow for future research planning.	X	X					X	X				X	X	X										
Lighting operating hours and usage profiles	Examine logger data and related data from past EM&V lighting logger studies (sources: 06-08 and 10-12 lighting impact evaluation)			X			X		X	X				X						X	X	X				
Installed lighting technology characteristics	Review data for typical mix of technology types such as CFLs, linear fluorescent, HID as well as overall installed lighting power			X	X	X	X		X	X				X							X					
Building operating characteristics such as operating hours, HVAC operating schedules and temperatures, occupancy profiles	Review market data for differences to current assumptions. Recalibrate residential and commercial building types based on most recent conditional demand analysis research (sources: Commercial Saturation Study, Commercial Market Share Tracking, CA Lighting and Appliance Saturation Study)					X			X	X				X	X	X					X					
Updated building weights	Review building stock and construction data to revise building weights by vintage, climate zone				X				X	X										X	X					

Area of Update	Approach and Source	Justification for Update	Reference							Sector				Tech Group				Ex Ante Value							
			Codes	Ex Post	Market	ISP	Custom	Workpaper	Calc Methods	Cross	Res	Com	Ind	Ag	Lighting	HVAC	DHW	Envelope	Plug/Proc	UES	Load Shape	EUL/RUL	NTG	Cost	GSIA
Update savings values and definitions of current DEER measures:																									
<p>Lighting measures:</p> <ul style="list-style-type: none"> code and standard practice baselines for specific technologies methodologies for code and standard practices for non-DEER measures expanded technology list expanded measure list update reference impacts occupancy sensors 	<p>Review field research, codes and recent dispositions and update lighting reference measure run measure parameters; review workpapers and compliance filings for latest measure additions to programs; review and determine if reasonable to add new profiles for exterior and parking garage applications based on available EM&V and PA research and documentation.</p> <p>Update all simulation results and generate new references scale-able impacts.</p> <p>(source: 10-12 lighting impact evaluations and lighting workpapers and dispositions)</p>	<p>Updating outdated lighting measures parameters and expanding DEER measures and definitions may reduce additional work for producing work papers.</p>	X	X	X			X	X	X	X				X					X	X				
<p>HVAC measures:</p> <ul style="list-style-type: none"> boiler measure definition updates to reflect current code requirements 	<p>Update code/standard definition of boilers with respect to vintage specific atmospheric versus forced draft.</p>	<p>Existing measure definitions do not reflect current standard practice.</p>		X		X				X	X				X					X	X				

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Residential Appliances: <ul style="list-style-type: none"> review Dishwasher methodology add Clothes washer measure 	Review and revise as needed, the simulation methodologies utilized for generating reference impact values for dishwashers and clothes washers. (sources: 10-12 residential impact evaluations)	These two measure groups accounted for approximately 7.6 million therms out of 40 million therms saved by residential programs (4.5 percent of total portfolio therms savings).	X						X																
EUL and RUL Updates																									
Lighting <ul style="list-style-type: none"> CFLS 	Review of CFL EM&V and lab testing results and consider updates to the basis hours and cycling degradation factors for CFL EULs (source: 10-12 lighting impact evaluations; CFL lab testing research)	Portfolio impact of LED measures is increasing with each program year.		X	X					X	X	X	X	X	X										X
Energy Upgrade California	Develop guidelines and requirements for submitting packages of measures. The savings weighted EULs currently submitted result in incorrect lifecycle savings calculations.	Current method of developing a weighted EUL based on the relative savings contribution of each measure in a package (i.e.: insulation, lighting, water heater, etc.) yields incorrect avoided cost calculations.								X					X	X	X	X	X						X

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Net To Gross Updates																								
General NTG updates	As time and resources permit, review reports and reviews for results that indicate significant revisions. (sources: 10-12 impact evaluations and NTG evaluations)	Update to parameters based on most recent available EMV data to reflect most current conditions; Impacts all or most measures.		X		X	X	X			X	X	X	X	X	X	X	X				X		
Gross Savings and Installation Rate Adjustments																								
General GSIA updates: Update of Gross Savings and Installation Adjustments (GSIA) which include installation rates and gross realization rates. These values are not part of DEER but will be updated in parallel with the DEER update.	Review EM&V results with highest priority on lighting technologies, then other technologies as time and resources permit (source: 10-12 lighting impact evaluations)	Update to parameters based on most recent available EM&V data to reflect most current conditions; Impacts all or most measures.		X							X	X	X	X	X	X	X	X						X

The DEER team will review and consider information in a large body of completed work, including the following:

Ex Post Evaluation Measurement and Verification Work: Program evaluation reports, appendices, and data will be utilized with priority placed on the most recent available data. Any available results and data from the 2013-2014 evaluation efforts will have the highest priority, followed by 2010-2012. Additionally, there are results or data from the 2006-2008 evaluation work that have yet to be incorporated into DEER updates, most importantly the nonresidential lighting logger data.

Market Research and Baseline Evaluations: Baseline and market conditions evaluation work will be incorporated into methodology and measure revisions as well as any possible measure additions. The Commercial Saturation Survey (CSS), Commercial Market Share Tracking (CMST) and California Lighting and Appliance Saturation Survey (CLASS) reports will be the primary resources.

Industry Standard Practice Studies: A number of Industry Standard Practice (ISP) studies have been performed as part of the custom project ex ante review process. The DEER team will review these studies for information and results that can be used to include in DEER new and revised code and standard practice baselines.

Custom Project Reviews: During the 2013 and 2014 program years, the EAR team reviewed numerous custom projects. These reviews include guidance and direction for development and calculation of ex ante values. The DEER team will review custom project reviews for the types of guidance and direction that are provided most frequently and that may be reasonably included as DEER values or requirements.

Workpaper Reviews: The EAR team reviewed approximately 100 workpapers during the 2013-2014 program cycle. Workpaper dispositions often include direction for development of ex ante values. This direction varies from clarification of existing DEER requirements, newly formed staff direction for the development or calculation of ex ante values, or more explicit application of previous direction included in Commission decisions. The EAR team will review workpapers and dispositions for methods and values for additions and revisions to DEER.

Calculation Methodologies: As part of the custom project and workpaper review process, the EAR team has reviewed and provided dispositions on several methodologies and tools. In some cases, the EAR team has worked collaboratively with program administrators to develop or revise calculation methodologies. The EAR team will examine each of these reviews and consider if any of these calculation methodologies should be incorporated into DEER. An example is the occupancy sensor savings methods incorporated into the Modified Lighting Calculator.