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Workshop on Evaluation, Measurement and Verification for 2009-2011 Program Cycle



California Public Utilities Commission

Energy Division

June 17, 2009





Agenda

- Introduction and Additional Agenda Items
- Overall Goals of EM&V
- Scope of EM&V responsibilities for IOUs vs. CPUC Staff
- Stakeholder Input Process and Approval of EM&V Projects
- Cost-Effectiveness Calculations and Accomplishment Reporting
- Proposed Process for Authorizing EM&V Budgets and Projects
- Data Availability, Data Quality Improvement, and Reporting
- 2009 Bridge Funding Period
- Discussion, Questions and presentation of additional agenda items
- Next Steps





Workshop Objectives

- Facilitate discussion on Energy Division (ED) straw proposals and parties' ideas on EM&V issues for the 2009-2011 program cycle.
- Improve understanding and inform written comments that parties will file afterwards on EM&V issues (*i.e., structured brainstorming, not consensus building*).
- Certain issues are not being considered in this workshop
 - Detailed scope of EM&V projects to be developed and presented for parties' input later in the process.
 - EM&V contracting structure not appropriate for party comments.
 - Shareholder incentives handled in a different proceeding.





Workshop Process

- ED Staff will present a proposal on each agenda topic.
- Other parties may also present their respective ideas on each topic.
- Discussion on these proposals will follow.
- Order of topics and allotted time as shown in the agenda
- Discussion on additional topics and next steps at the end
- Notes will reflect major ideas raised and will be distributed to parties soon after the workshop.





Overall goals of EM&V

- Constant improvement of energy efficiency policies programs
- Support oversight functions
- Estimate energy savings
- Measure performance
- Day to day management information





Scope of EM&V responsibilities for IOU and CPUC Staff

- EM&V activities are conceptually split into four categories:
 - Measurement & Verification (M&V) and Impact Evaluation
 - Process Evaluation
 - Market Analysis and Policy Support Research
 - Financial and Management Audits





Scope of EM&V responsibilities for IOU and CPUC Staff

- Split between Impact / Process evaluations is too rigid
 - Does not capture the nuance of IOU or CPUC needs for evaluation information.
- CPUC's stake in the design and management of programs has increased relative to previous cycles.
- CPUC has a need to evaluate performance on criteria other than energy savings.
- IOUs have a need to increase early M&V to support continuous program improvements and evolution.





Scope of EM&V responsibilities for IOU and CPUC Staff

- ED to manage all research projects needed to conduct regulatory oversight and improve the Commission's energy efficiency policies
- IOUs to conduct research to support program design, program quality assurance, and to adjust programs to changing conditions





Scope of EM&V responsibilities for IOU and CPUC Staff

- Some EM&V projects that may benefit from coordination between IOU and ED:
 - ED to assign project management (either ED or IOU staff)
 - Project management team composed of ED and IOU staff to provide guidance to the project manager
 - ED has authority to supersede project manager direction to fulfill the Commission's regulatory oversight responsibilities or to ensure effective and proper use of ratepayer funds





Scope of EM&V responsibilities for IOU and CPUC Staff

- EM&V Firewall:
 - Currently prevents entities who do program implementation work from performing EM&V
 - Program implementation can collect M&V data following ED established protocols
 - Modify firewall on a case by case basis





Scope of EM&V – EM&V Project Inventory

Refer to EM&V project inventory handout

- What is on these lists that **shouldn't** be?
- What is **not** on these lists that should be?
- **Who** (ED/IOU) should manage the specific projects?
- How should the lists be **prioritized**?
- How do we **coordinate** shared (ED/IOU) projects?





Stakeholder Input Process and Approval of EM&V Projects

- Stakeholder participation in ***all*** EM&V (ED and IOU)
 - Overall EM&V Plans and Budget Approval
 - Project-Specific EM&V Plans
 - EM&V Project Implementation and Feedback
 - EM&V Technical Reports
 - Aggregate EM&V Reports





Stakeholder Input Process and Approval of EM&V Projects

- *Overall EM&V Plans and Budget Approval:*
 1. Parties comment on the EM&V project inventory.
 2. ED and IOUs develop budgets, priorities, and refinements to EM&V project inventory.
 3. Revised EM&V project inventory and EM&V plans will be circulated for comment via ALJ Ruling.
 4. ED and IOUs hold meetings to answer questions and discuss refinements.
 5. Parties file final round of comments with the CPUC.
 6. Commission issues proposed decision on 2009-2011 EM&V.
 7. Parties file comments and reply comments on proposed decision.
 8. Commission adopts decision on EM&V plans and budgets.





Stakeholder Input Process and Approval of EM&V Projects

- *Project-Specific EM&V Plans:*
 1. ED and IOUs release RFPs for specific EM&V projects as needed
 2. ED selects contractors for all EM&V projects, with some exceptions
 3. ED and IOUs work with the selected contractors to develop and distribute detailed work plans and budgets for each EM&V project
 4. Energy Division and the IOUs hold public meetings
 5. Parties submit comments on work plans
 6. ED and IOUs finalize work plans with consideration of comments
 7. Final work plans are posted
 8. Parties may file a motion with the Assigned ALJ for resolution if they continue to take issue with the final work plans.





Stakeholder Input Process and Approval of EM&V Projects

- *EM&V Project Implementation and On-going Feedback*
 1. ED and IOUs convene meeting among their staff, EM&V contractors, stakeholders, and any interested member of the public during middle of the program cycle to share EM&V results and findings.
 2. ED and IOUs hold informal meetings to discuss EM&V work progress and results as requested by parties or public.
 3. ED and IOUs convene meetings among ED staff, EM&V contractors, IOU EM&V staff and IOU program managers to discuss work progress and results.
 4. When significant results are produced by the EM&V work, and a technical report is not immediately pending, ED and IOUs will provide informal written summaries of the results to stakeholders.





Stakeholder Input Process and Approval of EM&V Projects

- *EM&V Technical Reports*
 1. When drafts of any interim or final EM&V technical reports are produced, they will be publicly distributed.
 2. ED and IOUs hold meetings to solicit input on the EM&V Technical Reports.
 3. Parties submit written comments on reports.
 4. ED and IOUs finalize the draft reports with consideration of comments.
 5. Final EM&V technical reports and comments will be distributed.
 6. Parties may file a motion with the Assigned ALJ for resolution, if they continue to take issue with the final reports, and report addenda will be prepared accordingly.





Stakeholder Input Process and Approval of EM&V Projects

- *Aggregate EM&V Reports* (note red text added since straw proposal was drafted)
 1. ED (and IOU) draft reports summarizing EM&V technical reports will be issued via ALJ Ruling comments.
 2. ED (and IOU) will hold meetings to discuss the draft report.
 3. Parties submit written comments on reports.
 4. ALJ will issue a proposed decision on the draft aggregate EM&V report.
 5. Parties file comments and reply comments on the ALJ's proposed decision.
 6. The Commission adopts a decision on a final aggregate EM&V report.





Energy Division Approval of IOU EM&V

- *IOU EM&V process enhanced with the following improvements*
 - The IOUs provide all RFPs and scopes of work to ED for review and approval
 - ED has opportunity to review proposals received by the IOUs
 - ED makes final selection of EM&V contractors
 - IOUs get input from Energy Division on EM&V work plans, schedules, methodologies, analyses, and draft reports
 - IOUs provide all EM&V project data and reports to the Energy Division as they are produced
 - IOUs develop a system for sharing EM&V work in progress





Cost-Effectiveness Calculations and Accomplishment Reporting

- Cost Effectiveness tool under development
 - Measure ex-ante CE parameters will have to come from DEER or ED Database of Non-DEER measures
 - Non-DEER submission and review process
 - DEER update process
 - Dispute resolution process





New C-E Calculator

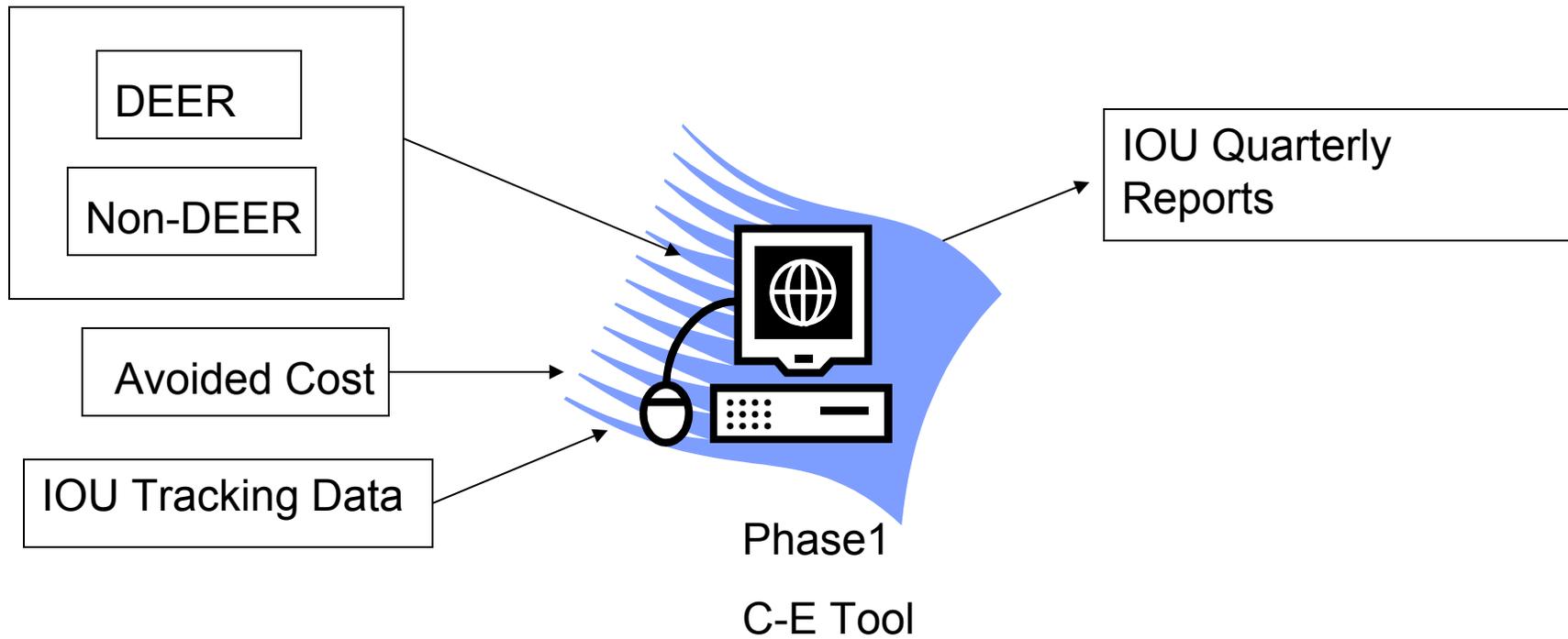
- Replaces current E3 spreadsheet style
- Software based tool installed on PC
- Used for accomplishment reporting and future cycle planning (Phase 2a and 2b done in parallel)
 - *Phase 1: Reporting*
 - *Phase 2a: Combining ED data with IOU claims*
 - *Phase 2b: Portfolio Planning (2012-2014)*
- 1st version to be released in 1st Q, 2010 in time for 09-11 accomplishment (excluding bridge funding)
- Stakeholder input on inter-face and beta-testing





INPUT

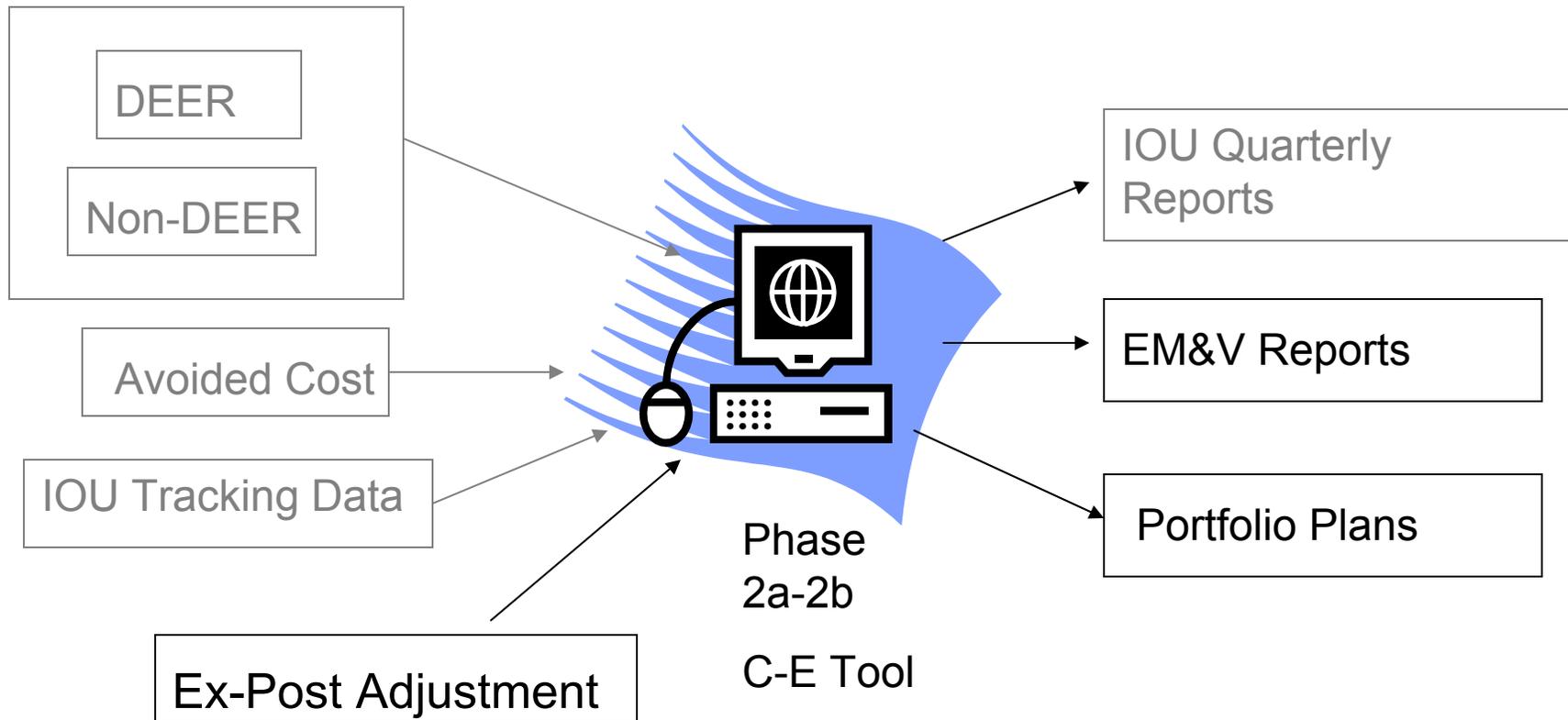
OUTPUT





INPUT

OUTPUT





Non-DEER Measures Review Process

IOUs

- electronically submit all measure CE parameter workpapers to ED for review.

ED

- will distribute workpaper templates to IOUs for submitting non-DEER measures for ED review.
 - solicit comments from other stakeholders during its review of proposed non-DEER measures.
 - accepts non-DEER workpaper measure-level detail parameter values, measures will be entered into ED non-DEER database.
 - maintain the non-DEER database for public access along with the DEER database.
- Only measures included in this database may be used in the new CE Tool.
 - IOUs may update or add new measures on an ongoing basis.





Customize measures/projects

- Energy Division will work with the utilities to develop a template for reporting.
- Primary objective is to insure that the reporting includes separation of major measure categories (such as lighting, HVAC, refrigeration, etc.) as well as sufficient measure detail to understand how the values were estimated.





Adding New DEER Measures and Updates to Existing DEER Measures

- New measures or updates to existing measures may be incrementally proposed for DEER on a rolling basis just as the IOUs non-DEER measures.





Adding New DEER Measures and Updates to Existing DEER Measures

DEER Team

- Provide draft proposed values to stakeholder for review and comments
- Take comment/suggestions into account

ED

- Review DEER Team proposal
- Solicit stakeholder comments as needed
- Make decisions on incorporating revisions





Near term Proposed DEER Additions

- New measure code baseline options for measures effected by codes and standards updates which take effect during the 2009-2011 period
- Updates to multi-family measures from the 2005 DEER: lighting, appliances, HVAC and water heaters
- Utility requested common linear florescent lighting systems:
 - retrofit of T12 40 watt lamps using older magnetic or new hybrid ballasts,
 - newest generation of T8 lamps and high efficiency ballasts.
- Anomalies with existing measures
- For use in 09-11 1st reporting period (excluding bridge fund?)





Workplan

Near Term (Around 2009-11 IOU application approval, Sept 2009)

- Develop a common measure classification and naming system, covering both DEER and non-DEER measures
- Non-DEER measure review process
- The near-term DEER measures?





Workplan (cont.)

Mid-Term (early 2010)

- New C-E tool for 09-11 accomplishment reporting





Workplan (cont.)

2012-14 IOU EE Application (Late 2010 to early 2011)

- C-E Tool for 2012-14 application (Phase 2)
 - IOU to have input on inter-face for portfolio planning tool.
- DEER Update for 2012-2014 application planning





Resolution Process

Should parties disagree with Energy Division's final DEER measure values or the reasonableness of the utility's non-DEER measures workpaper estimates, they may bring the matter to the assigned ALJ for resolution by filing a motion.





Proposed Process for Authorizing EM&V Budgets and Projects (see Slide 13)

Activity	Timeline
1. Parties comment on the EM&V project inventory	July
2. ED and IOUs develop budgets, priorities, and refinements to EM&V project inventory	August
3. Revised EM&V project inventory and EM&V plans will be circulated for comment	Late August
4. ED and IOUs hold meetings to answer questions and discuss refinements	September
5. Parties file final round of comments with the CPUC	September
6. Commission issues proposed decision on 2009-2011 EM&V	October
7. Parties file comments and reply comments on proposed decision	November
8. Commission adopts decision on EM&V plans and budgets	November





Data Availability, Data Quality Improvement, and Reporting Issues

- Data *is* available for doing EM&V
- Utility staff make good faith effort to fulfill multiple data requests (835 data requests since 3/07)

BUT:

- Tracking systems have multiple limitations and are not standardized
- E3 calculator data and tracking data do not match
- Multiple reports and databases increase data processing time
- Custom project data still stored as paper files
- Non-DEER work paper information is of variable quality and availability





Data Availability, Data Quality Improvement, and Reporting – Initial Recommendations

- ED, IOUs, and EM&V contractors to collaborate asap to examine, improve, and streamline management and sharing of program tracking data.
- Energy Division to review and approve upgrades to IOU program tracking system, which should be:
 - Uniform across the IOUs
 - Designed to contain data needed for all EM&V and reporting purposes
 - Required to use cross-IOU standardized fields, naming conventions, data elements and data validation rules consistent with DEER.
- IOUs to document their data quality control procedures and work with ED and EM&V contractors on procedure improvements as needed.
- IOUs to develop a system for making all EE project documentation in electronic format wherever possible.
- IOUs to submit program tracking and financial data on quarterly basis along with outputs from the new CE Tool.





2009 Bridge Funding Period EM&V

- No new field work or surveys on 2009 program participants strictly for the purpose of calculating program and portfolio impacts for 2009 programs.
- Use results from the final 2006-2008 evaluation reports as inputs to calculating energy impacts of 2009 programs.
- Field work or surveys using 2009 program participants may be conducted to gather additional data for DEER or to fulfill 2006-2006 sampling targets that were not fulfilled with 2006-2008 program participants.





2009 Bridge Funding Period Avoided Costs

- D.06-06-063 adopted electric and gas ACs for use in 2006-2008 portfolios but were not adopted for future cycles.
- ED proposes:
 - adoption of new set of electric ACs using the CCGT cost from recent MPR, including T&D costs. If electric AC cannot be updated, then extend the 2006-2008 ACs from D.06-06-063 for the years necessary for the 2009 period (i.e., 2030 with a 20-year maximum EUL)
 - gas price forecast updated based on one of the following options:
 - 2006-2008 interim avoided costs from D.06-06-063 and an escalation factor for years not covered in the interim values
 - Current market values
 - Market values obtained for the 2009-2011 planning values
 - GHG adder updated using the 2008 MPR value of \$30 per tonne.





2009 Bridge Funding Period CE Tool and Accomplishment Reporting

- Use the most recent version of the E3 calculators being used for 2006-2008 with:
 - The range of years required for 2009 reporting considering the allowed EUL/RUL measure life.
 - Avoided costs adopted as described in prior slide.
 - Policy adjustments such as the cost of capital discount rate values.
 - Inclusion of DEER load shares from 2008 DEER update.
- Use the updated ex-ante DEER values that were used for Energy Division's 2006-2007 Verification Report (i.e., DEER Version 2008.2.04 October 30, 2008) for reporting 2009 accomplishments.





Additional Agenda Topic

- Add at the beginning of the meeting or as they come up in the course of the meeting
- Annual report that recognizes/summarizes best practices during the period. Peer reviewed?
- Identify lessons learned re: roles over last 3 years. Should they change/stay the same?
- What has been achieved (GHG, etc.)? Roll it up with best practices and produce a positive report.
- Empower IOUs on small programs, which provide good information for remainder of cycle.
- Can we also tell the story of how far we've come?
- Final review process of reports by 'outside' parties?





Next Steps

- ALJ Ruling and parties' comments on critical EM&V issues to be addressed in Commission decision approving 2009-2011 portfolios.
- ED and IOUs to develop overall EM&V plans and budgets based, and ALJ ruling soliciting parties' comments on those.
- Commission decision approving overall EM&V plans and budgets for 2009-2011.

