

Database of Energy Efficiency Resources (DEER) and Ex Ante Regulatory Support Scope of Work

Submitted by:

James J. Hirsch
DBA James J. Hirsch & Associates
12185 Presilla Road
Camarillo, California, 93012-9243
(805) 553-9000

October 15, 2013

Note: This scope of work was originally developed by James J. Hirsch & Associates in response to RFP No. 12 PS 5125. Katie Wu of the CPUC Energy Division updated the scope of work to reflect new initiatives (e.g., the California Technical Forum) that Energy Division is considering which would require resources under the impending contract. Minor modifications were made to Work Area 2 deliverables and outdated information under Work Area 4 was updated. Additionally, any language from the James J. Hirsch & Associates response to the RFP that did not directly pertain to work the team would perform under the contract was removed. Deleted language is noted in track changes. The scope of work was prepared in a format that could be copy and pasted as Exhibit to the Standard Agreement.

1. Overview

James J. Hirsch and Associates and subcontractors (hereafter referred to as “Contractor”) will conduct the following work areas for Energy Division of the California Public Utilities Commission:

- Update the Database of Energy Efficiency Resources (DEER) measures parameter values.
- Review non-DEER measures workpapers.
- Review program administrators (e.g., investor-owned utilities (IOUs), regional energy network (REN), community choice aggregator (CCA)) custom projects.
- Conduct research and analysis in support of ED’s regulatory policy and oversight.

Project Management: The Project will be managed by the Energy Division project manager. The four work areas of this ex ante project scope of work are highly inter-related and should be managed together as a unified activity. The overall objective of this work is to improve the accuracy and reliability of the Energy Efficiency portfolio overall energy savings and cost-effectiveness estimates. The Contractor will provide the optimal EE portfolio level ex ante estimation by balancing and re-balancing the needs of all work areas throughout the contract period.

Work Areas 1 through 3 are the most tightly inter-related. The requirements for new ex ante development for DEER versus the need for review of non-DEER deemed and custom measures must be carefully balanced. Resource trade-offs must be evaluated on an ongoing basis and this activity must leverage both the Commission staff managed evaluation activity and the activities of the portfolio implementers to the greatest extent possible.

The review of non-DEER workpapers and custom project must also be approached strategically. The Commission staff review and approval of the portfolio implementers’ ex ante estimates should be approached from the perspective of using the review activity as a lever to cause ongoing improvements to the quality and consistency the portfolio implementers’ own internal due diligence activities relating to ex ante values.

The Contractor will work closely with the PM to develop strategies to bring the Regional Energy Network (REN) and Community Choice Aggregator (CCA) ex ante activities into the Commission staff ex ante review scope in an efficient manner. It is expected that these new portfolio implementers will take time to come up the learning curve on ex ante and cost-effectiveness requirements of CPUC policy.

1.1 Project Management and Stakeholder Communications

The Contractor management structure will be comprised of two main levels: project-wide and work area specific. The project-wide management activities include project administration as well as overall project management functions. These project-wide management and administrative functions are included and budgeted under the project management task area while the work area specific management functions are included and budgeted under each individual work area tasks.

The Contractor project-wide management will be comprised of three main areas: coordination and guidance, facilitation, and administration. The coordination and guidance function includes both internal Contractor interactions to better manage the project across work areas and Contractor interactions with Commission staff and management who set overall project priorities as well as guide the development of individual work area tasks and timelines. The facilitation function provides workflow tracking across the work areas to help ensure project managers are able to meet project schedules. The administrative function area provides reporting and publication support to all project work areas as well as the overall project management activity.

The Contractor will have a project manager with responsibility for all aspects of the project plus a manager for each work area with responsibility for management of tasks within their assigned work area. Senior staff of the Contractor partner companies will also participate in the overall project coordination and guidance activities. It is envisioned, from past experience, that multiple Commission staff as well as management will play active roles in providing coordination and guidance to work areas as well as other CPUC regulatory activities. Individual Contractor work area managers will work directly with Commission staff work area leads to coordinate across activities in setting priorities, respond to changes in Commission or management direction, and guide the details of tasks and deliverables to ensure that each work areas meets the CPUC's direction, expectations and requirements.

The project administrative function will provide for overall project reporting and invoicing as well as administrative support to each work area. Each work area manager will develop monthly reporting requirements in collaboration with the Commission staff work area lead. These reporting requirements will then become part of the monthly invoicing and reporting requirements for all project staff participating in that work area. Each Contractor partner company will provide monthly reporting and invoicing to the JJH administrative lead. The administrative lead, under the direction and review of the project manager, will be responsible for verification of each invoiced item and assembly of the individual invoices and reports into project invoices and reports for submission to the CPUC. Additionally, the monthly invoices and reports assembled for each work area will be required to be approved by each work area manager prior to submission to the CPUC. Discrepancies or issues with work area reporting or invoicing will first be the responsibility of each work area manager to resolve. If resolution cannot be accomplished at the work area manager level it will be escalated to the project manager for resolution.

1.1.1 Task 1 - Project Initiation Meeting

The project manager will schedule a project kick-off meeting to be held at the CPUC offices in San Francisco. Three days prior to the project kick-off meeting, the project manager will provide

CPUC with an agenda for the meeting (Kick-Off Agenda), including any additional work plan development work that the Contractor may have completed in preparation for the meeting. The project manager will solicit early feedback from Commission staff on work plan topics such as work area tasks, approaches to stakeholder collaboration, and Commission staff thoughts on process management tools and methods.

The kick-off meeting will involve Commission staff and key Contractor members. Other key staff will participate via webcast and/or teleconference or in-person whichever is most effective while being cost efficient.

The primary purpose of the meeting will be to refine the research objectives, requirements, and priorities of the Preliminary Project Work Plan. The team will review, discuss and refine the scoping plans for each task, the project management structure, budget, reporting and schedule. The group will also discuss and reach a mutual understanding regarding any unresolved issues and items. The Contractor will ensure that notes are taken and provide the meeting notes, in the form of a memorandum, to Commission staff including a summary of any key decisions, action items, and outstanding issues.

1.1.2 Task 2 - Project Work Plan and Priority Analysis

Based upon the scope of work in the RFP, the plans presented in the response to the RFP, and the discussions that take place in the project initiation meeting and subsequent meeting(s) with Commission staff, the Contractor will develop and submit to Commission staff a draft work plan. The draft work plan will include:

- A stakeholder engagement process that establishes tools and a schedule for communication with internal and external stakeholders;
- A project coordination plan for each work area that will be implemented in collaboration with the energy efficiency portfolio administrators, with the objectives of increasing transparency of the ex ante activities and results, improving the efficiency of information exchange, and enhancing the effectiveness of the ex ante review process while also finding opportunities for streamlining the process to improve timeliness without sacrificing quality;
- A plan for increased integration and coordination across the work areas of the RFP.

Additionally, the Work Plan will address, at a minimum, the elements listed below for each Work Area. The Contractor will meet with the Commission staff as needed, but no less frequently than monthly, throughout the development of the Work Plan to discuss options, to monitor changes in the regulatory directives and make decisions on adapting approaches to changing needs. The Contractor will respond to Commission staff requests and suggestions and concerns with appropriate alterations to the plan. This will include incorporating any additions and refinements requested or approved by Commission staff. Whenever possible and practical, and within time constraints for the plan development task, the Contractor will seek input from the energy efficiency portfolio administrators, primarily the investor-owned utility (IOU) administrators, on plan elements.

1. DEER Update

- a. The methodology to be used to update the DEER measure parameters.
 - b. The approach used to ensure that the energy and peak savings estimates, free-ridership, and measure effective useful lives for inclusion in DEER are appropriate.
 - c. Acceptance criteria to identify the minimum accuracy and rigor level that will need to be met before new measures or methods are added to DEER.
 - d. The tasks and milestones to perform updating based on Federal and State Codes, Standards, or Regulation updates or industry standard practice updates.
 - e. Propose and apply a set of criteria to prioritize measure update and maintenance activities that are necessary for the DEER Updates to be used by the IOUs (and other program administrators) for their energy efficiency portfolio planning.
 - f. Estimates of the time and resources that will be needed to complete each of the remaining DEER update activities.
2. **Non-DEER Workpaper Reviews and Dispositions**
- a. A process for early engagement between Commission staff and the program administrators to collaboratively develop draft workpapers for new measures and tools.
 - b. A schedule for review and collaborative development of draft workpapers, including the projected number of draft workpapers that are expected to be reviewed, the average amount of time available for the collaborative development of a draft workpaper, and the eventual preparation of the workpaper review final disposition.
3. **Custom Measure/Project Review and Disposition Process**
- a. A schedule/timeline for review and preparation of custom project review dispositions.
 - b. The projected number of custom projects that are expected to be reviewed, including the average amount of time for each review and preparation of the disposition, taking into account the number of projects for which a site visit may be required.
 - c. A process for information requests and responses between Commission staff and portfolio administrators including feedback on review dispositions.
4. **Regulatory Support:**
- a. A mechanism for Commission staff to request and Contractor to track and report status of requests for ad hoc research and analysis in support of regulatory oversight.
 - b. Criteria for prioritizing the requests for this support and strategy for balancing resources between these requests with the ongoing work of the other three work areas.

1.1.2.1 Task 2 Deliverables

- *Revised project tasks and schedule with a clearly defined end-product or deliverable for each task*
- *Proposed criteria to guide task prioritization process*
- *Work Plan(s) prioritizing DEER activities, including measures parameter updates and additions, non-DEER workpaper development and review, custom project review, and regulatory support*

1.1.3 Task 3: Coordinate regularly scheduled project management meetings

The Contractor project manager will conduct regular project coordination and guidance meetings with team members as needed. These meetings may often include Commission staff responsible for one or more work area projects. These meetings will provide a venue to discuss specific work area activity status and issues including:

- Check on work area status to ensure each work area is on target to meet project schedules;
- Provide coordination and communication between the activities within a work area;
- Discuss and resolve issues related to work area activities.

The project manager will conduct regular project status update meetings between Commission staff and the Contractor. These meetings will provide a venue to discuss the overall project activity status and issues including:

- Update Commission staff on status of ex ante team work;
- Identify and discuss issues that have arisen in project activities that require escalation to Commission staff and management;
- Coordination and/or redistribution of work among the contractor's team;
- Discuss and resolve administrative and contractual matters;
- Plan coordination with other CPUC evaluation, measurement, & verification activities; and
- Coordinate interactions between program administrators, the Contractor ex ante team, and Commission staff and management.

These meetings will be scheduled at regular intervals as agreed between the Contractor and the Commission staff project manager(s). These meetings are expected to be at least monthly but will potentially be more frequent during times of key project milestones and key CPUC energy efficiency proceeding activities. Depending upon the topics to be covered, the Contractor and Commission staff attendance may vary. Key JJH staff will be readily available to attend regular meetings in-person, as directed by Commission Staff. Webcasts will be supported by written and electronic work products as needed. The Contractor will prepare and circulate an agenda one business day prior to each meeting and will deliver (via e-mail) a written meeting summary within two days of the meeting. Meeting minutes will include a list of participants, areas of discussion and key points made, and action-item assignments.

The Contractor will produce monthly reports that meet requirements developed in collaboration with Commission staff work area leads as well as the Commission staff project manager. The Contractor will produce monthly invoices that meet CPUC and Commission staff requirements.

1.1.3.1 Task 3 Deliverables

- *Regularly scheduled project status meetings with Commission staff with prepared agendas*

- *Preparation materials for project status meetings, as needed*
- *Prepared notes from project status meetings*
- *Prepare monthly reports and invoices*

1.1.4 Task 4: Develop and implement a stakeholder engagement process

Establishing and maintaining good stakeholder relationships requires an investment for both project staff and Commission staff. This investment comes through both formal and information interactions. The formal interactions happen via scheduled public workshops and meetings. The less formal interactions happen via more private meetings, call and emails. But the cost, in terms of time and money, of these activities must be acknowledged and planned.

The Contractor will develop a plan for stakeholder engagement that will operate in a broad environment which consists of three primary constituents:

- » The first constituent is the CPUC including its Energy Division (ED) staff and management which has the responsibility for implementing effective energy policy through accurate ex ante and ex post planning and accounting procedures.
- » The second constituent is the direct stakeholder community. This constituency is broad and is typically associated with entities who are involved in energy efficiency program design and implementation. Historically, program design and implementation has been associated primarily with the IOUs, but recent decisions have expanded these constituents to include regional energy networks (RENs), community choice aggregators (CCAs) and third parties (3Ps) who implement energy efficiency programs. Publically-Owned-Utilities (POUs) also construct their portfolios largely based on the CPUC-adopted methods and values.
- » The third constituent is the energy efficiency marketplace, which is in effect another stakeholder with only indirect participation in CPUC proceedings. This marketplace is constantly transforming through the adoption of new codes and standards, a continuous stream of new technologies and constantly evolving standard practices.

For the overall ex ante activity to be successful in moving CPUC energy efficiency policy forward, the management activities of this project must also address the concerns of the two external stakeholder constituent groups described above. To accomplish this objective, the Contractor will develop and implement a stakeholder engagement process for work areas 1, 2 and 3. These plans will detail how stakeholders will be provided adequate opportunity to engage Commission staff and their contractors in an open manner regarding the work performed under this contract.

The DEER update plans, the methods and assumptions used for the updates, and any new requirements these updates will place on the portfolio administrators must be communicated well in advance with ample opportunity for all stakeholders to provide comments and suggestions during the formative process. The Contractor will implement more frequent and earlier stakeholder interactions while still maintaining the CPUC proceeding timetable and formal

adoption process. The Contractor will work with Commission staff, with input from stakeholders, to develop and implement improvements to the DEER stakeholder input process.

The Contractor will develop a stakeholder engagement plan for the non-DEER workpaper and custom project review processes that addresses the need for a wider stakeholder engagement process that provides more transparency and opportunity for input and commenting to the activity on an ongoing basis. This engagement can happen via a combination of regular public posting of review disposition summaries, providing guidance on technical and policy aspects, as well as holding regular stakeholder informational meetings and workshops to discuss possible process improvements.

1.1.4.1 Task 4 Deliverables

- *Develop and execute a stakeholder engagement plan for work areas 1-3*
- *Two to three public workshops, with subsequent topic-specific meetings, to provide input at the beginning, middle and close of the DEER update process*
- *Guidance to program administrators regarding the standards expected for non-DEER workpapers and custom project submissions*

1.2 Work Area 1 – DEER Values Updates

The Contractor will meet the objectives and complete tasks related to Work Area 1 noted in the RFP. Specifically, the major objectives and tasks for Work Area 1 are:

Objectives for Work Area 1:

- A version of DEER for use in 2015+ energy efficiency portfolio planning incorporating the latest evaluation and research results available.
- A mid-cycle DEER update for the 2015+ cycle that reflects applicable new federal and state codes.
- A version of DEER for use in the post 2015+ cycle energy efficiency portfolio planning incorporating the latest evaluation and research results available.

Tasks for Work Area 1:

- Task 1: DEER Update Plan
- Task 2: Coordinate with program impact evaluation contractors
- Task 3: Documentation and Public Meetings
- Task 4: Review of 2010–2012 and Other Latest Information/Data Available Savings Calculation and Models
- Task 5: Database & Website Maintenance and DEER Help Desk

1.2.1 Task 1: DEER Update Plan

Since there are multiple DEER updates planned over this contract period and since there are limited resources available to address all needs at any one release, it is essential that a longer term DEER update plan be produced.

The Contractor will develop a long-term DEER Update Plan which augments the overall Work Plan. This plan will consider the need for regular updates to address CS&R changes as well as the expected availability of additional evaluation and other research results. The plan will also balance the various updating needs with the available resource and provide Commission staff with a reasonable and viable plan of action over several EE cycles. This plan will augment the overall Work Plan (Task 2 of the Project Management and Stakeholder Communications work area), as many of the issues that this long-term plan will also need to be addressed in the Work Plan for this contract activity. The Update plan will address the primary issues facing each DEER update including providing:

- Guidelines for prioritization among elements of the each DEER update.
- Process for identification of Federal and State Codes, Standards, and Regulation updates which must be reflected into DEER assumptions and methods.
- Process for identification, review and analysis of recent evaluation and research information which is appropriate for use in updating DEER including guidelines for acceptance criteria for data to be used in DEER update process.
- Guidelines for the prioritization criteria for inclusion/update of measures and measure parameters.
- Guidelines for the selection of methodologies to be used in future DEER updates.
- Guidelines for DEER release contents including data, tools, documentation and support.

The DEER Update Plan will be a living document that will be itself be updated to reflect changing Commission priorities and needs.

The values contained within the DEER that require regular review and update and that will be addressed in the Work Plan are described below:

- **Annual Unit Energy Savings (UES)** include kWh, kW and therm impacts. These savings values are calculated as the baseline performance value minus the measure performance value.
- **Measure impact shapes** are used to distribute the annual kWh and therm impacts across months, days and hours such that the Commission-adopted avoided costs can be applied to provide a dollar benefit value for the annual savings.
- **Effective useful Life (EUL)** of newly installed measures and **Remaining Useful Life (RUL)** of existing conditions or currently installed measures are used to calculate lifetime savings, benefits and costs from the annual values.

There have been no impact evaluation EUL studies undertaken as part of the CPUC EM&V activities in recent years. However there is other work that may be applicable and allow updating EULs. The Contractor will undertake a search for all relevant studies; perform a review and analysis of those studies to provide recommended value changes in EULs when appropriate.

- **Net-To-Gross (NTG)** values, expressed as the ratio of net expected savings to gross expected savings, are applied to the gross savings to remove the fraction of participants

would have taken the action without the program as well as add in those who did not participate in the program but were influenced by the program to take an action.

- **Measures costs** are used along with program costs (both incentive and non-incentive) to establish overall measure cost-effectiveness. Work related to this parameter will utilize the results of the most recent measure cost study and not undertake a parallel measure cost activity. It is expected that the 2015+ cycle evaluation activity will also undertake a measure cost update that this project will utilize. If that does not happen and the Commission project manager agrees, the Contractor will reassess the measure cost update needs and project resource availability and make appropriate recommendations

1.2.1.1 Task 1 Deliverables

- *The DEER Update initial draft will be produced in 2014. The DEER Update Plan will be a living document which will be updated during the planning stages for each DEER release or as needed to reflect current Commission priorities and needs.*

1.2.2 Task 2: Coordinate with program impact evaluation contractors

The Contractor will work with the evaluation teams to review sampling specifications as well as monitoring methods and strategy (including duration) that will result in data which meets the DEER needs.

This Contractor will provide input to the EM&V planning activity to help ensure that DEER needs, including those related to producing reliable hourly (8760) measure load shapes, are met over time. The team must fill this important bridge role between the ex ante and impact evaluation activities to assist Commission staff in ensuring the data needed to improve the accuracy of both the portfolio energy savings and cost-effectiveness is available.

1.2.2.1 Task 2 Deliverables

- *The contractor will produce a prioritized list of measures and measure parameters identifying those which are most in need of data to support the update of assumptions and methods.*

1.2.3 Task3: Documentation and Public Meetings

The Contractor will develop a draft plan for the incremental release of proposed DEER update materials including presentations in workshops and other meetings. These incremental releases will be scheduled based upon the direction from the PM. It is expected that these incremental releases will be topic oriented to cover either proposed general methodology updates or proposed methods and assumptions to be used to update specific measures

1.2.3.1 Task 3 Deliverables

- *Incremental documentation and presentation materials on proposed methods and assumptions changes for each DEER Update.*
- *Presentation of the proposed DEER changes and updates in stakeholders' workshops and meetings.*
- *Notes on the details of the discussion topics and issues brought up at stakeholders' workshops and meetings.*
- *Final documentation of DEER Updates including any changes as a result of public comments.*

1.2.4 Task 4: Review of 2010–2012 and Other Latest Information/Data Available Savings Calculation and Models

1.2.4.1 Review Savings Calculations Methods and Approaches

This task, while described as a “review” in the RFP task title, also includes the activities involved with producing updated DEER versions. The Contractor will review 2010-12 and other latest information and data available to update savings calculations and models. Information to be reviewed includes updates to federal and state codes, standards, and regulations; CPUC EM&V reports and results; and other relevant research.

1.2.4.2 Access to DEER Values

The team will review the DEER interface (READI) and solicit input from stakeholders and third parties on ways to improve the interface. The team will balance the benefits of a consistent delivery mechanism with the need for specific improvements or additions to the interface.

1.2.4.3 Task 4 Deliverables

- *The schedule for DEER Updates is adopted by and pending Commission scheduled rulings, the contractor will work with the ED project manager on deliverable deadlines pending scheduled ruling decisions.*
- *The DEER Update plan (Task 2.A described in [Task 2 - Project Work Plan and Priority Analysis](#)) will include detailed descriptions of the methodological and technical issues pertinent to the issues discussed in this task.*
- *All DEER updates will be delivered in a format as consistent and readily-usable as possible. The aim is to allow the utilities to utilize the updated data within their existing processes in a manner that does not impose additional translation work.*

1.2.5 Task 5: Database & Website Maintenance and DEER Help Desk

1.2.5.1 Maintenance and Support

All of the current database and web tools used for delivering the DEER data were created by JJH team members. The Contractor will continue to develop and maintain all DEER databases, web database services, web sites, documentation, and analysis tools for the term of the contract.

The JJH DEER team will provide users assistance and support regarding the use of DEER in the planning and implementation activities of the EE portfolios for which the CPUC has oversight

responsibilities. For these users the Contractor will provide support to assist users with accessing any portions of DEER data, documentation and tools as well as provide technical support on DEER measure values and will be available to provide email and phone assistance. The Contractors will provide support for other uses of DEER at the request of the PM. The Contractor will keep records of all assistance provided to DEER users.

The “READIhelp” email address, which has fielded nearly 200 inquiries over the past year, will be maintained and will continue to provide a quick and dependable response to all DEER related issues.

1.3 Work Area 2: Non-DEER Work paper Reviews and Dispositions

1.3.1 Task 1: Selection of draft workpapers for collaborative development

The Contractor will review each program administrator’s monthly submission of workpaper development projects. The team will utilize a variety of sources to identify the potential for workpapers to represent a high portfolio contribution or important technologies, including:

1. Direct input from the authoring utility or program administrator.
2. Expected contributions of similar measures included in compliance E3 filings and program implementation plans (PIPs).
3. Potential for increased growth in portfolio contribution based on current Commission direction for policy focus (for example, Commission direction to focus on existing home upgrades, maintenance and retro-commissioning of existing HVAC systems, or increasing retail sales of energy-efficient technologies such as integral LED lamps or Energy Star consumer electronics)
4. Claims from current or previous cycles for similar technologies.
5. The potential for new ex ante methods to develop out of the collaboration process, and where these new methods may proliferate across a broad range of future methods and have a far-reaching impact on the establishment of future ex ante values. For example, the development of a new, non-DEER building type for a specific measure may then be used in the future for many more technologies and measures and potentially impact ex ante values for an ever-increasing number of measures and portions of a portfolio.
6. Per D.12-05-015, emerging and complex technologies would also be good candidates for the collaborative work paper development process

Commencement of the new contract provides the opportunity to enhance the current process. The Contractor will conduct an initial collaboration meeting to introduce new consultant staff to the IOUs and to present a preliminary analysis of potential area of collaboration established following the steps described above. The team will also provide written recommendations to

Commission staff for workpapers to be developed through collaboration. Supporting analysis will be included with each recommendation.

1.3.1.1 Task 1 Deliverable

- *As needed, written recommendations to Commission staff regarding whether there is a need to collaboratively develop a draft workpaper with the program administrator.*

1.3.2 Task 2: Collaboratively develop draft workpapers with program administrators

The Contractor will collaborate with program administrators on workpaper development activities. One potential forum to identify additional research needs and collaboratively develop workpapers is the California Technical Forum (CTF) proposed by PG&E and NRDC. PG&E and NRDC have proposed the CTF as modeled after the Northwest Regional Technical Forum, adapted to suit the needs of non-DEER workpaper development. The format and operational plan of the California Technical Forum is still under development; however, it is expected that the Contractor will play a significant role to ensure that any proposed non-DEER workpapers from the Forum meet Commission standards.

In relation to Task 2, all collaborative workpaper content will be shared with the Workpaper Project Archive (WPA) at www.deeresources.info. Project spaces will be set up for each workpaper project. With appropriate user privileges, team users can read and edit the project space content real-time, and the work paper system tracks activity in the space, including date, time, and user credentials. In order to facilitate a more transparent collaborative and review process, we will assign staff resources with the specific responsibility of keeping meeting and phone call notes and ensuring all development activities are recorded at WPA.

1.3.2.1 Task 2 Deliverable

- *Records of workpapers Commission staff developed in collaboration with the program administrators including written comments/feedback to the program administrators on the assumptions and methodologies used to develop the measure parameters estimates.*
- *Records of Commission staff participation in the California Technical Forum, provided that the Forum is formed and operational, including written comments/feedback to the Forum on the assumptions and methodologies used to develop workpapers and measure parameter estimates.*

1.3.3 Task 3: Review of non-DEER workpapers

For workpapers that have been developed through collaboration, the review process would ideally be incorporated into the collaboration. Commission staff would have the opportunity to provide review incrementally as the development of the workpaper progresses.

All workpaper reviews are covered by D12-05-015, which includes provisions for workpapers submitted with the 2013-2014 applications (Phase 1 workpapers) as well as those submitted mid-cycle (Phase 2 workpapers). Any Phase 1 workpapers that are reviewed and approved as part of the initial application review will be frozen for the entire cycle. All others will be given a status of “interim approval” and Commission staff may review any of these workpapers in the future and apply adjustments on a prospective basis.

The Contractor will review all workpapers submitted in accordance with D12-05-015. Recommendations for workpapers will be provided in a more formal disposition document as discussed in the decision. If measure parameters cannot be resolved after a single meeting with utilities, D12-05-015 provides for a biannual dispute resolution process via Commission decision.

The Contractor will enhance the interface of the Workpaper Project Archive (WPA) at the deeresources.info website so that users can view a workpaper or group of workpapers and be able to more easily identify or access related information such as the workpaper file, revisions and other related documents and other information such as its review status.

While the exact scope beyond the 2013-2014 cycle will be subject to future Commission decisions and ALJ rulings, there are likely to be the following categories of workpaper review:

1. Mid-cycle review of workpapers for the 2013-2014 cycle: These may include Phase 1 workpapers that were not reviewed as part of the initial application review. Mid-cycle review will consider any new evaluation results as they become available. These results may impact the disposition of Phase 1 workpapers that have been given “interim approval,” as well as workpapers submitted mid-cycle. 2013-2014 workpaper reviews will be conducted according to D12-05-015, which requires:
 - a. Staff-recommended revisions to parameter values within 25 days of receipt of a workpaper.
 - b. Single meeting with the submitting program administrator for the purposes of resolving disagreements over recommended revisions to parameter values.
 - c. Every six months, preparation of a dispute resolution packet covering all unresolved workpapers, for review and action by the Commission. The packet will include draft resolutions for any workpapers remaining in dispute along with staff-recommended parameter adjustments and the rationale for those adjustments.
2. Review of workpapers submitted with program administrator applications covering the program cycle beginning in 2015 (Phase 1 workpapers for 2015): For 2015, we expect significant new evaluation results will be available that can be applied to establishing new ex ante values. Consistent with D09-09-047 and D11-07-030, review of workpapers should consider any of these new evaluation results.

In addition to ensuring that the work paper reviews are delivered to meet stakeholder needs, the Contractor will develop and update QA/QC guidelines to facilitate the following objectives:

- Support the development of protocols that will ensure the quality of future work paper updates
- Ensure the quality, accuracy, and consistency of ex ante values provided with workpapers to that they can easily be merged with the existing database of ex ante values
- Provide clear documentation of database development efforts, covered under Work Area 4, so that future updates are replicable in a consistent manner.

Additional contract staff will be applied to assist the workpaper project manager in identifying bottlenecks, establishing priorities, adding additional staff resources and keeping the WPA up-to-date with the most recent transactions of all workpapers.

1.3.3.1 Task 3 Deliverable

- *Electronic dataset of all workpapers that the program administrators have submitted for review with the review status and Commission staff review disposition.*
- *QA/QC guidelines to support workpaper review*

1.3.4 Task 4: Work paper review summaries and recommendations

The Contractor will provide workpaper review summaries, recommendations and meeting notes on a regular basis. Recommendations and meeting notes will be maintained in a private online location, such as private folders on the Workpaper Project Archive, until approval by Commission staff for circulation to the utilities or the public. The team will work with the project manager to develop a standardized format for workpaper review summaries and recommendations.

1.3.4.1 Deliverables

- *Written workpaper review summaries and recommendations to ED's PM.*
- *Notes from meetings discussing workpaper recommendations with the program administrators.*

1.3.5 Task 5: Update and maintain an approved non-DEER measure tracking list

The Contractor will incorporate approved non-DEER measures into the READI tool. In order to do this, non-DEER measures will need to be classified in a format consistent with the most current READI data structures, including:

1. Measure, code baseline/industry standard practice and baseline technology classification
2. Unit energy consumption (UEC), effective useful life (EUL) and technology cost
3. Net-to-ross (NTG) references
4. Delivery mechanism (upstream incentive, downstream rebate, direct install, etc.)
5. Measure application type (replace on burnout, early retirement, etc.)

Once workpapers are approved, the technologies, measures and associated ex ante parameters can then be incorporated into the ex ante database and easily accessed using READI.

There will be some overarching review areas where general policy documentation is required. Examples of these areas are HVAC interactive effects for internal gains measures; development of new standardized building types that are different from the DEER building types; and procedures for establishing measure baselines or dual baselines. These general requirements, which come out of more specific workpaper reviews, will be compiled into a central repository such as a project area of the Workpaper Project Archive at www.deeresources.info. A summary table will be maintained that catalogs these general requirements as they are developed and placed in the central repository.

The “living document” required in the deliverable description will actually best be delivered with a combination of resources and documentation. If workpaper technologies and measures are properly classified, then previous reviews that cover similar technologies can be accessed via the electronic dataset developed under Task 3. Next, for workpaper review topics that may have broader application to multiple technologies or measure groups, a more general set of documents should be developed. As discussed under Task 3 above, additional contract staff will be applied to assist the workpaper project manager in identifying bottlenecks, establishing priorities, adding additional staff resources and keeping the “living document” current.

1.3.5.1 Task 5 Deliverable

- *Publicly available non-DEER measure list to include measures’ parameter values (unit energy savings, effective useful live, costs, etc.).*
- *Living document that establishes expectations for program administrators when developing quality workpapers and lists criteria considered when reviewing non-DEER workpapers*

1.4 Work Area 3: Custom Measure/Project Review and Disposition Process

As the CPUC notes in the RFP, the objectives of this work area are to:

- Assist Commission staff in the review for reasonableness and appropriateness of the ED-selected IOUs’ custom measures and projects; and
- Prepare review disposition findings for these selected projects for ED’s approval of the projects’ ex ante parameter values.

The CPUC expects the selected contractor to:

- Review the custom methodology for appropriateness;
- Conduct field work to perform pre/post install reviews;
- Conduct free-ridership surveys;
- Collect custom projects and measures costs;
- Conduct industry standard practices studies or surveys;
- Recommend ex ante parameters to be frozen for selected projects; and
- Maintain a Web-based custom project document depository and communications tracking system.

The Contractor will develop a three-year guidance plan and a short-term implementation plan for reviews of the bridge period custom projects. The overall guidance plan would set broader expectations that can be refined as program-cycle-specific changes are made and additional guidance decisions are issued by the CPUC. This process is expected to be iterative as the IOUs might agree to make changes in the way they currently provide custom project data to ED, change program policies, and/or seek ED’s opinion on voluntary referrals. The project plan is likely to be a living document that would reflect ongoing dialogue with the IOUs and third-party implementers as well as other stakeholders. Such interactions are likely to result in continual improvement in the review process.

The Contractor will describe the following in the overall guidance plan and the near-term plan for the Commission staff project manager's approval. Each of the tasks will be executed as described in the agreed-upon project plan.

- Project management protocols
- Communications protocols with ED, IOUs and other parties
- Coordination with 2013-14 program cycle EM&V research
- Custom project review process flow diagram
- Project-specific and aggregate data maintenance and data reporting requirements and reporting format
- Web site maintenance, enhancement, and data security plan
- Sample selection criteria
- Selection criteria for free-ridership surveys and on-site verification
- Technical approaches and guidance for conducting baseline surveys and free-ridership assessment
- Project-specific reviews – scope (full or targeted) and reporting format(s)

1.4.1 Task 1: Selection and review of utility custom measures and projects

The Contractor will review the IOUs' biweekly-submitted project lists of custom measures and projects and recommend selection to the Commission staff project manager. The sample will be selected using the sampling criteria established in consultation with the Commission staff project manager. The Contractor will sample projects using the random selection approach, supplemented by judgment. Before developing sample selection criteria, the Contractor will conduct a thorough review of the findings from previously reviewed projects as well as the findings from 2010-12 program cycle ex post evaluations of custom projects. These reviews will identify ongoing issues where the IOUs' savings parameters or documentation was consistently found weak.

The recommended sample of projects will be submitted to the Commission staff project manager via email. The Contractor will enhance the existing website (www.deeresources.info) to build capability to send the project selection notification directly from the Web site to the IOU contact.

When data are received from the IOUs on selected projects, the tracking database — currently being transformed into a Web-based tracking system — will be updated by the Contractor administrator. The availability of new data will be immediately notified through the Website to the Contractor reviewer who can begin a review immediately. The Contractor will pre-assign reviewers based on the industry, technology and modeling expertise. A reviewer assigned to a project will stay with the project through completion; thus, eliminating mid-review changes in the reviewers.

When the reviewer completes project review, written disposition will be uploaded to the Web site and the IOU contact notified of the availability of ED's review. The date of ED's disposition will be the document upload date that will be maintained in the Web-based database.

If the IOUs do not use a Web-based system, the Contractor will have to fall back to using the existing process in which data uploads and disposition transmission is done through the CPUC's secure FTP server and the EEGA Website. The project review status will be maintained in an Excel™ or MS Access™ format external to the Web site. The Contractor will discuss the following special considerations related to sample selection with Commission staff on an ongoing basis to refine the sample selection strategy and methods.

1.4.1.1 Sample Selection Approach

The team will discuss ways in which the internal and external coordination processes for custom project review can be changed to allow review of a critical mass of custom projects. The Contractor will discuss sample selection strategies with the CPUC project manager and develop a work plan that would accomplish the objectives of ex ante reviews.

1.4.1.2 Task 1 Deliverable

- *The process described above, if Web-based, will provide real time status of reviews; therefore, a specific deliverable at specific intervals will not be necessary. For a data tracking system maintained outside of the Web-based system, the Contractor will provide weekly status report to Commission staff and the IOUs that can be customized to include parameters of interest to Commission staff and the IOUs.*

1.4.2 Task 2: Custom measure / project review summaries and recommendations

The Contractor will conduct reviews for custom projects, measures, and tools that fall into two categories: (1) Comprehensive review of all aspects of a custom project, and (2) a targeted review. A comprehensive review provides findings for all parameters of a custom project — measure eligibility, program eligibility, compliance with CPUC policy, baseline selection, code compliance, savings assumptions, fuel switching, modeling method, dual-baseline calculations, EUL/RUL assignment, pre- and or post-installation measurement plans and results, project costs, and likely free-ridership. A targeted review would examine some of these aspects. It would be possible to recommend frozen savings using the comprehensive approach; however, the targeted approach would address key issues without recommending a frozen savings value, in which case, a gross realization rate of 0.9 would apply to savings estimates after all identified issues were addressed.

Targeted reviews will use the desk review method unless Commission staff believes that on-site visits would help improve the accuracy of findings from pre- or post-installation visits. Targeted reviews will be used primarily to address potential major issues that impact the project approval as opposed to savings approval. Such issues could be policy compliance, measure eligibility, program eligibility and baseline selection. Comprehensive reviews are intended to finalize savings parameters for previously approved projects. Therefore, targeted reviews often act as a screen for comprehensive reviews.

The JJH reviewer will discuss the results of its findings with the IOUs in weekly review calls, which will be memorialized via call notes to be provided to the Commission staff project manager. In addition, the Contractor will provide a monthly summary of review findings that have policy implications so that the Commission staff project manager can direct the IOUs to implement changes immediately.

1.4.2.1 Coordination with 2013-14 EM&V Research

The Contractor will coordinate with 2013-14 program cycle EM&V research on the following aspects of ex ante reviews of custom projects: industry standard practice (ISP) studies, free-ridership assessment, and pre- and post-installation measurements.

1.4.2.2 Task 2 Deliverable

Two deliverables described above from this task are

- *a summary and full archive of project-specific review and tool review findings, and*
- *a record of notes of discussion between the IOUs and Commission staff project manager.*

1.4.3 Task 3: Update and maintain an approved custom measure / project tracking list

The Contractor will maintain a Web-based and/or offline tracking database that will maintain and update a utility-specific list of approved custom measures and projects. It would not be necessary to maintain a separate database for approved measures. A flag in the database for approved measures and ongoing reviews will enable preparation of tracking reports for completed and ongoing reviews.

The Contractor will recommend criteria to be considered in selecting a sample of custom projects for review. To the extent these criteria are numeric, it would be easy to track the criteria used in the tracking system. When such criteria are supplemented with expert judgment, specific entries will have to be made in the tracking data to record the reason(s) for selection. As results from reviews of custom projects are accumulated and findings are available from other evaluations, the Contractor will recommend changing the selection criteria that will be memorialized in a living document.

1.4.3.1 Task 3 Deliverable

- *The Contractor will provide a sortable and customizable electronic tracking database the Commission staff project manager can use to identify utility-specific custom measures and projects approved under the custom review process.*
- *A living document — detailing a method to document and track custom review selection criteria used during custom measure and project review, including criteria and/or thresholds met in approved custom projects — will be provided to the Commission staff project manager as requested.*

1.4.4 Task 4: Improve Existing Custom Projects Program and Review process

To improve the custom projects program and review process, the Contractor will work with IOUs and Commission staff to ensure that the IOUs' program rules are consistent with CPUC policy, clear, and provide for appropriate due diligence for a custom project.

The Contractor will summarize inconsistency of program rules with the CPUC policies as well as clarity needed in CPUC's policies — as-encountered and in monthly reports — for Commission staff and management to consider providing directions to the IOUs.

The Contractor will continue using the weekly conference calls with the IOUs, bimonthly ex ante technical meetings, monthly team meetings, and stakeholder meetings to discuss process improvements to shorten the project review time, align expectations for proper project documentation, improve the quality of project submission, institute free ridership screening by the IOUs, and move toward full and accurate disclosure of custom projects being submitted on a biweekly basis. Contractor

The Contractor's overall approach to process improvement will include the following key aspects:

- Document the current working of the custom review process
- Identify the Commission's goals for custom project reviews and develop process improvement objectives aligned with the Commission's goals
- Assess the existing review process for alignment with the Commission's goals
- Analyze performance of the existing processes to assess success in meeting the commission's goals and process performance objective
- Conduct the root cause analysis to identify the sources of performance problems that may involve Commission staff internal processes or external processes at the IOUs or third parties
- List possible solutions for discussion with stakeholders
- Implement agreed upon solutions
- Monitor performance of implemented solutions
- Reassess goals and performance objectives if environment changes

1.4.4.1 Task 4 Deliverable

- *Review of program rules found inadequate during custom project reviews and recommendations on how to improve the program and the project review process.*
- *The contractor will work with the ED project manager on finalizing the deliverable deadline pending on the review process.*

1.5 Work Area 4: Analysis and Regulatory Support

1.5.1 Task 1: Review and Verification of Program Implementer Cost-Effectiveness Submissions

The Contractor will review and verify program implementer cost-effectiveness submissions to ensure that each portfolio is designed to meet the CPUC adopted EE goals and to be cost effective as measured by the “dual test” criteria. The dual test criteria require that each portfolio must provide TRC and PAC benefits that exceed TRC and PAC costs, respectively. The results of this review would be included as part of the deliverable “a written document on the verification of all measure inputs into the utilities cost-effectiveness calculators.” The Contractor will leverage lessons learned and best practices (e.g., analysis of measure groups, identification of ex ante sources) from previous experience reviewing cost-effectiveness submissions to ensure that the process is continually improved throughout the duration of this contract.

The development, publication and maintenance of the “frozen ex ante database” is integral to the scopes of work included in work area 1 (DEER Values Updates), work area 2 (Non-DEER Workpaper Reviews and Dispositions) and work area 3 (Custom Measure/Project Review and Disposition Process). The underlying data structure of the frozen ex ante database must support the ex ante data produced by all three of these work areas. The Contractor will work with the IOUs and Commission staff to develop a standardized format for future cost-effectiveness submissions and workpapers to build a frozen ex ante data. This will minimize staff and contractor effort to populate the database and, more importantly, speed up the review of cost-effectiveness parameters required in the first deliverable of work area 4 as well as the ex ante reviews covered in work areas 3 and 4.

1.5.1.1 Deliverables Discussion

While the deliverables are described in fairly brief fashion, the work performed under this task will likely produce a variety of written documents, analysis tools and databases.

The first deliverable - “a written document on the verification of all measure inputs into the cost-effectiveness calculators” – This deliverable will likely include a family of documents and tools that depend on the purpose of the particular cost-effectiveness review. These documents and tools may include summaries of measure sources such as workpapers, DEER references and program implementation plans (PIPs), including what information is missing from these measure sources that are needed to fully review the applications. This set of written documents could then be used as the basis of a data request for additional information needed to complete the application process.

For subsequent cost-effectiveness submittals, such as mid-cycle and final cost-effectiveness submissions, the Contractor will review calculators for data integrity and proper references to frozen ex ante values both from DEER, workpapers or documented custom project review. Due to the volume of records in reporting cost-effectiveness calculators, the team should focus on the largest contributors to the portfolio and provide written documentation that describes all areas where we believe claims are not in compliance with Commission direction or current frozen ex ante values.

The second deliverable – “a publically available frozen ex ante dataset of verified utility measure input values” – This tool already exists in a somewhat limited form. The Contractor will continue to enhance and populate the current frozen ex ante database that is accessible via READI. For future submissions, the team will work with Commission staff and utilities to develop requirements and procedures that will enable the utilities to submit new ex ante values in a standardized data format that can be more easily loaded into the frozen ex ante database. The population and maintenance of the ex ante database is covered under work area 4, while the review of submitted data to ensure the correct format is work most likely covered under work areas 2 and 3.

1.5.1.2 Task 1 Deliverables

- *A written document on the verification of all measure inputs into the utilities cost-effectiveness calculators.*
- *Produce a publically available frozen ex ante dataset of verified utility measure input values.*

1.5.2 Task 2: Integration of Ex Ante Databases with Cost-Effectiveness Calculations

The Contractor will coordinate among the developers of the current frozen ex ante database and the E3 calculator to prior to formulating options for integrating the ex ante databases with cost-effectiveness calculations.

Deliverables Discussion

The memorandum deliverable of this task will be the culmination of a significant due diligence effort to investigate different possibilities for integration. The Contractor will work with the developers of the current ex ante database and E3s to identify the opportunities for integration. The focus of this effort will be to identify approaches that:

- Improves transparency to stakeholders as to the inputs behind the cost effectiveness calculation results.
- Ensure the IOUs portfolio planning and reporting submissions are easy to review and validate.
- Can be used by all parties involved in planning and reporting including utilities, direct install contractors, third parties and local government implementers while ensuring that all measure data and cost-effectiveness parameters meet Commission policy requirements.
- Enforces consistent naming and classification.
- Enables automatic linkages to basic frozen data such as NTG, EUL, gross savings adjustments and approved workpaper archives.

It is expected that a memorandum would be subject to more than one review by Commission staff. The final memorandum will be sufficient for Commission staff to choose an integration approach.

1.5.2.1 Task 2 Deliverables

- *Memorandum summarizing options to the approach to incorporating frozen ex ante data and the avoided cost methodology data into the Commission's cost-effectiveness calculations.*
- *An integrated approach to incorporating the frozen ex ante dataset and the avoided cost methodology data into the existing cost-effectiveness calculators*

1.5.3 Task 3: Ad hoc technical support, analysis, and research

Some examples of ongoing support activities include:

- Review and comment on Commission staff managed evaluation activity plans, interim and final results and reports;
- Review and comment on program administrator planning and evaluation activity plans;
- Provide Commission staff evaluation project managers support on technical issues that arise during their oversight of evaluation activities;
- Provide commission staff and management research and analysis support for their development of recommendation to the Commission relating to energy efficiency policy;
- Assist Commission staff in the development of updates to the energy efficiency avoided cost.

The Contractor team members will provide as hoc support to the CPUC in its overall quality assurance and policy oversight responsibilities. The Contractor team will respond to requests for technical analysis, research and policy issues support as requested by Commission staff and management on an as needed basis at the direction of the PM. The Contractor will work with the PM at the project initiation meeting to set aside resources for this activity.

1.5.3.1 Task 3 Deliverable

- *Written documentation related to the various ad hoc technical support, analysis and research.*

1.6 Project Timeline

The diagram on the following page presents the tasks in each work area on a five year timeline. Higher levels of work intensity are shown in darker color. Many tasks are by their nature continuously underway. DEER work is presented relative to DEER release rather than all the sub-tasks.

