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ADVICE 2260-E-A/2041-G-A

(San Diego Gas & Electric Company; ID U 902-M)

ADVICE 4249-A

(Southern California Gas Company; ID U 904-G)

ADVICE 2588-E-A

(Southern California Edison Company; ID U 338-E)

ADVICE 3212-G-A/3852-E-A

(Pacific Gas & Electric Company; ID U 39-M)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

SUBJECT: Supplemental Joint Filing: 2010-2012 Statewide Workforce Education and Training (WE&T) Program Modifications based on Findings of WE&T Needs Assessment

In compliance with Decision (D.) 09-09-047, Southern California Edison Company (SCE), Pacific Gas & Electric Company (PG&E), Southern California Gas Company (SoCalGas), and San Diego Gas & Electric Company (SDG&E), (collectively referred to as the Investor Owned Utilities or IOUs) hereby submit for filing their supplemental joint Advice Letter (AL) proposing modifications to the existing Statewide Workforce Education and Training (WE&T) program based on the recommendations of the WE&T Needs Assessment and a request for additional information from the Energy Division. All necessary supporting documentation is attached hereto. This joint supplemental AL is being filed at the request of Energy Division and replaces the previously filed IOU ALs (SDG&E's 2260-E/2041-G, SoCalGas' 4249, SCE's 2588-E, and PG&E's 3212-G/3852-E) in their entirety. Included as Attachment B to this supplemental advice filing is a redline version comparing this supplemental AL to the original AL filed on June 3, 2011.

PURPOSE

The purpose of this supplemental advice letter is to provide the information required by the California Public Utilities Commission (Commission or CPUC) in Ordering Paragraph (OP) 36 of D.09-09-047, and with the additional request from the Energy Division, per the supplemental notice received by the IOUs on July 6, 2011.

BACKGROUND

D.08-09-040 Adopting the California Long Term Energy Efficiency (EE) Strategic Plan (Strategic Plan) provided a framework to make energy efficiency a way of life in California by refocusing ratepayer-funded EE programs on achieving long-term savings. The Strategic Plan was developed through a collaborative process between the IOUs and industry stakeholders over the course of a year. Chapter 9 - Workforce Education and Training was adopted in the Strategic Plan and included, among other requirements, the completion of a Statewide Needs Assessment:

Goals:

1. Establish EE education and training at all levels of California's educational systems.
2. Ensure that minority, low-income and disadvantaged communities fully participate in training and education programs at all levels of the Demand Side Management (DSM) and EE industry.

Strategies:

1. WE&T Needs Assessment. An in-depth formal statewide training and education resource inventory and needs assessment is necessary for long-range strategic planning and delivery. The needs assessment and resource inventory will be structured to produce short-, near- and long-term workforce strategies to support each sector defined in the Plan.
2. WE&T Web Portal. The web portal will include links to various DSM related training programs and will allow for a single point of communication. The portal will also serve as a repository for all DSM and EE training, educational conferences, and career opportunities.
3. Energy Efficiency WE&T Task Force. The Task Force, comprised of energy efficiency program administrators, the CPUC, and educational experts, will fulfill administrative functions including: developing a needs assessment RFP; selecting the third party to conduct the needs assessment; and managing the needs assessment evaluation. The Task Force members will continue to help implement the goals and strategies set forth in this Plan.
4. Identify And Implement Specific Programs. For Each Educational Sector. WE&T needs are best organized and approached by identifying the enabling or supporting educational sectors.

Key Actions:

- 1-1: Define, initiate and drive long-term WE&T development and strategic planning, including identification of funding streams and market sector specific needs.
- 1-2: Support the community college and adult education efforts to support students to develop their education based on visible career paths in EE and related fields.
- 1-3: Incorporate EE and DSM into traditional contractor and technician training, such as for plumbers and electricians, and expand training resources to produce target numbers of trained workers.
- 1-4: Create or expand college and university programs with EE focus and foster green campus efforts to apply this knowledge in clear view of students and faculty.

- 1-5: Develop K-12 curriculum to include EE fundamentals (e.g. math, science, behavior) and identify career options in energy-related fields.
- 2-1: Collaboratively identify appropriate goals and strategies to build California's EE workforce through 2020, focusing on training that increases participation from within minority, low-income and disadvantaged communities in achieving California's economic EE potential.

Following the adoption of the Strategic Plan, D.09-09-047 Approving 2010-2012 EE Portfolios and Budgets subsequently codified the statewide WE&T program as being responsible for the development, planning, and implementation of three subprograms: Centergies, Connections, and Strategic Planning and Implementation. Those programs are described in detail below:

Centergies is organized around market sectors and cross-cutting segments to facilitate workforce education and training. Energy Centers represent the largest component of this subprogram. Included in this program are the Energy Center and Food Service Center activities. WE&T Centergies activities allow potential green workforce candidates to explore EE, integrated DSM technologies and resource management techniques.

Connections is organized around downstream and upstream IOU relationships with the educational sector as well as entry- and introductory-level community-based training efforts that support workforce development in EE, energy management and new emerging green careers.

Strategic Planning and Implementation involves management and execution of several strategic statewide planning tasks identified in the Strategic Plan: a) form an IOU/CPUC WE&T Task Force, b) conduct a needs assessment study, c) facilitate Annual WE&T Public Meetings, and d) create a WE&T-specific web portal.

D.09-09-047 also further clarified direction on the completion of a Needs Assessment to study "critical workforce needs" and to identify "opportunities to help identify and fulfill those needs through collaboration and fund sharing."¹ D.09-09-047 also called for this Needs Assessment to include a "detailed inventory of...workforce education and training programs across the state and [the identification of] collaborative opportunities to make the three-year portfolio of IOU training programs responsive to Needs Assessment findings."² Through a competitive bid process, the IOUs selected University of California - Berkeley to complete the Needs Assessment study. Collaborative efforts were made throughout the study process from initiation in 2009 to 2011, including 1) updates at the quarterly WE&T Taskforce meetings, 2) updates at the quarterly California Green Workforce Coalition meeting of Workforce Investment Boards (WIBs) and other community leaders and entities, 3) bi-weekly meetings with study manager, UC Berkeley and Commission/Energy Division staff, and 4) other community meetings where appropriate. The Assessment was completed on March 17, 2011.

As mandated by D.09-09-047, a link was posted on www.engage360.com on March 17, and an invitation and questions related to a public workshop on the Assessment was noticed to service lists in A.08-07-021 et al, R.07-01-041, R.08-03-008, and R.08-05-022. Participants were provided the opportunity to give their input on how to incorporate the findings of the Needs Assessment into the existing IOU WE&T programs, both verbally at the workshop and through an informal email comment period. Notes from the workshop were also circulated and

¹ P.220

² P.220

participants were given the opportunity to respond with revisions to ensure that the notes accurately captured the comments from the workshop. These public comments were generally supportive of recommendations from the Needs Assessment, and are summarized in Sections 1 to 10 below. As a general trend, it should be noted that three overarching themes surfaced throughout the recommendations and workshop comments: a focus on Sector Strategies, better collaboration, and enhanced data tracking.

The IOUs have spent a significant amount of time during the course of the Needs Assessment and Advice Letter process considering the recommendations and public comments and herein propose changes to the WE&T Programs based on this and other program information. Included in this Advice Letter are the following:

1. Proposal of IOU changes to WE&T Programs
2. Attachment A, Timeline of Needs Assessment Process
3. Attachment B, Redline version of Advice Letter

Furthermore, the IOUs recognize and value the significance of the WE&T Needs Assessment. It provides valuable feedback and information for shaping the future of workforce education and training programs to best meet the demands of a changing workforce. In addition to the proposed changes to existing WE&T programs proposed herein, the IOUs will continue to convene during 2011 to discuss detailed statewide implementation of the Needs Assessment recommendations in helping to shape the programs in the immediate future. These IOU meetings are intended to produce objectives, goals and plans for addressing recommendations suggested in the Needs Assessment.

Finally, the IOUs note that ensuring stakeholder participation was an important and critical part of this process. In addition to the steps outlined above and in Attachment A herein, Energy Division was involved and informed throughout the Needs Assessment process and leading up to the filing of the Advice Letter and this Supplemental Advice Letter.

DISCUSSION

The WE&T Needs Assessment contains multiple sections with recommendations for a wide variety of changes to many aspects of the Workforce, Education and Training sector – many far beyond the scope mandated for this Advice Letter.³ For the purposes of this document, only recommendations relevant to the IOUs' existing statewide WE&T programs are addressed, and correspond with the ten general topics established at the April 6 Public Workshop.⁴ For each Needs Assessment recommendation, the IOUs have provided a corresponding summary of public comments followed by IOU rationale for any proposed program change. These proposed changes and corresponding Needs Assessment recommendations are summarized as follows:

Needs Assessment Topic	IOU Proposal
1. Support Sector Strategies	Develop and initiate Sector Strategies, test some proven concepts and refine as needed
2. Collaborate with Construction Trades	Engage with workforce organizations
3. Support Credentials and Certifications	Seek best comprehension and retention strategy

³ D.09-09-047, OP 36.

⁴ For full history of relevant recommendations, please see service list notice for questions in preparation for the April 6 WE&T Needs Assessment Workshop, as well as the related PowerPoint distribution.

Needs Assessment Topic	IOU Proposal
4. Restructure Classes	Assess feasibility of longer courses and series
5. Support Curricula Development	IOUs have an advisory role; can advise on how best to make curricula accessible
6. Inclusion of Disadvantaged Workers	Facilitate relationships with Disadvantaged groups
7. Evaluation of Workforce Outcomes	Seek feasible metrics
8. Collaborate with Education	This is an existing aspect of the program's strategy
9. Career Education	Incorporate career exploration into programs
10. Evaluation of K-12 Programs	Collect non-specific student data from schools

In the July 6 Supplemental Notice, the Energy Division states:

While the AL, as proposed, does not make significant changes to the WE&T program offering, it does propose changes in the activities currently being promoted by the Statewide WE&T program that will pave the way for more significant revisions to the WE&T at a later date. As such, the current AL will need to be supplemented in order to provide an adequate level of information for each of the action plan areas the IOUs have identified in response to the Needs Assessment and the associated activities being proposed for each area.⁵

In the supplemental notice, additional information was requested for each of the eleven main categories of needs assessment recommendations addressed in the IOUs' original advice letter. As discussed with Energy Division staff, because an emphasis is being placed on developing a foundation for more significant WE&T portfolio changes utilizing Sector Strategies in the next program cycle as opposed to the current program cycle, some of the requested clarifications may unintentionally preempt future Commission-adopted procedures for development of programs for the next program cycle. These requests may be addressed through the IOUs' next EE portfolio application or General Rate Case (GRC), and other proceedings, and through existing reporting mechanisms. Areas the IOUs believe to be so are described below:

Clarification Requested

Timeline including steps and activities for how current program cycle efforts will be used to inform development of the next program cycle and a schedule for providing status reports to ED via EEGA. (Information requested for sections 1 – 11)

Response

Where possible, IOUs have provided timelines and activities to be initiated during the current program cycle for which funding has been approved. IOUs note that current program cycle efforts are reviewed through the Measurement and Evaluation (M&E) process, and those results are used to inform the development of established CPUC proceedings for EE portfolio development and/or other proceedings which may impact this program.

With regard to providing status reports via EEGA, the WE&T statewide team meets with ED on a regular basis to discuss program progress. Further, IOUs will continue to submit to ED on an annual basis the reports as ordered by the Commission in the Annual Reporting Requirements Manual version 4 (EE Annual Report), D.09-09-047 (WE&T Progress Report) and Resolution E-4385 (Program Performance Metrics Report). To the extent that EEGA

⁵ Supplemental Notice, p.1.

Clarification Requested**Response**

functionality allows for direct upload of such reports by the IOUs, they will be submitted via EEGA.

Staffing plan if relevant (Information requested for sections 1-11)

Staffing plans for the next program cycle will be addressed within the established CPUC proceedings for Energy Efficiency portfolio development, and the outcome of the GRC and/or other proceedings which may impact this program.

Estimated budget, if relevant, for next program cycle consideration (can be revised as necessary during planning for the next program cycle). (Information requested for sections 1 - 11)

Estimated funding for the next program cycle will be addressed within the established CPUC proceedings for EE portfolio development and the outcome of the GRC and/or other proceedings which may impact this program.

The success metrics this activity should be evaluated on and how they plan to monitor achievement of identified metrics and use results for planning the next program cycle. (Information requested for sections 1-11)

The current Program Implementation Plans (PIPs) for the WE&T program and associated subprograms list Quantitative Program targets (Section 5.d). Modifications and additions to these targets must link to the program theory and logic model. Further, Program Performance Metrics (PPMs) were adopted for the WE&T program in Resolution E-4385. Unless otherwise noted, no changes have been made to these adopted program targets or PPMs. PPM development for the next program cycle will consider success measures for the planned Sector Strategy activities.

An outreach strategy to be initiated in the next program cycle (Section 9)

IOU strategies for program implementation in the next program cycle will be developed during the existing procedures for development of programs in the next cycle.

Based on the length of the supplemental request and repetition of the items noted above that may be addressed in the next program cycle, the IOUs have responded to the supplemental request for clarification with a strong focus on Sector Strategies as an overarching theme. In this response, we will be addressing multiple recommendations within this Sector Strategies approach, as discussed with Energy Division. In addition to the requests identified above, where there was not enough information to adequately respond to questions posed in ED's supplemental request, pending future direction from the Commission, the IOUs have indicated such.

RESPONSE

The Needs Assessment recommendations focus on Sector Strategies, collaboration, credentials and certifications, Energy Center courses, support for curricula development, inclusion of disadvantaged workers, and evaluation of workforce outcomes. The recommendations related to Sector Strategies are largely applicable to the Centergies subprogram, and are addressed below (Sections 1-6). For a discussion of the Connections subprogram, please see Sections 8-10 below. For a discussion of the Strategic Planning subprogram, please see Section 11 below.

Centergies1. Supporting Sector Strategies

Needs Assessment. Recommendations from the Needs Assessment surrounding this topic included: (1) initiating, helping fund, and partnering with other organizations to develop robust Sector Strategies in key EE sectors such as HVAC, building operators, benchmarking, and other emerging areas (as well as Low-Income Energy Efficiency or other programs undergoing review or redesign),⁶ and (2) using the CALCTP as a model, utilities should initiate, help fund, or partner with other organizations to develop robust Sector Strategies in key sectors such as HVAC, building operators, and other emerging sectors such as new energy storage, integrated DSM and commercial building.⁷

Public comments at the April 6th workshop noted that programs such as HVAC quality installation and advanced lighting controls provide a favorable model for utility collaboration in workforce development. In addition, comments were made that the scopes of programs such as PowerPathway™ need to evolve to include four-year learning institutions. It was suggested that there be continued efforts to identify methods of collaborating with trade associations to promote sector relevant training to their memberships (i.e. mailing related classes to selected contractor lists via CSLB).

Currently, IOU Energy Center support strengthening sector-focused training for HVAC, Lighting, and Building Operations. These program areas demonstrate collaborative relationships with industry and trade organizations where the IOUs co-fund and help facilitate industry training.

By fostering relationships among trade, utility and education sectors, enhanced curricula can be implemented that will serve the needs of all parties involved. This approach may also support high-quality installations providing higher potential energy savings, and additionally, better support career growth opportunities for skilled workers. As workers advance their skills working in the field, entry-level apprenticeship programs in strategic collaboration with other sector stakeholders could be an appropriate pathway to “back-fill” those job vacancies. IOUs are conduits for local and regional workforce training models across the state. Such an effort cannot occur solely from IOU funding, so a concerted effort must be made to identify partnership opportunities among other institutions and associations.

IOUs propose initiating steps to assess its application of strategic collaboration. IOUs believe that Sector Strategies could more efficiently create important and natural industry relationships for course structure changes that better support growth in certification and credential offerings. The Statewide IOU WE&T Program is an established framework for cross-sectional expansion of training curricula and related workforce training programs. Thus, an aptly applied Sector Strategies approach could necessitate IOU expertise, outreach, especially to disadvantaged workforce candidates, and foster a refined process for achieving successful workforce outcomes. IOUs will use the remainder of the current program cycle to evaluate the effectiveness of its current sector partnerships and employ lessons learned and Sector Strategy best practices to develop and implement a refined sector collaboration strategy.

⁶ 207

⁷ 207

Sector Strategy is a national movement now and could be identified as a necessary paradigm shift. The concept could help to “connect the dots” between employers and the education and training communities. Sector Strategies address the need for targeted workforce development for a particular industry segment, and should target non-traditional labor pools and disadvantaged workforce.

The goals and objectives of focusing attention on an effective Sector Strategy platform are so that workforce outcomes may be better achieved and sustained for the long-term. The IOUs recognize that the goals and objectives from employing a Sector Strategies must be clear.

Goals from a Sector Strategy approach are:

- Refined collaboration with stakeholders in support of the California energy efficiency strategic plan.
- Broader strategic collaborations to implement WE&T plans and Needs Assessment recommendations
- Strengthened connection between training and employment sectors

Objectives from a Sector Strategy approach are:

- easier industry adoption of training standards implemented in WE&T
- improved quality of workforce and work performed
- increased linkage with resource program goals/objectives
- clearer model for quickly responding to industry workforce training demands

The scope of applying a refined Sector Strategy to the existing WE&T program implementation includes determining industries with critical workforce needs that fall within the auspices of existing program policy guidelines. Likewise, the scale of applying a refined Sector Strategy to the existing WE&T program implementation is limited by available funding critical to forming strategic partnerships around emerging industry sector demands.

The plan of action is to use 2011 and 2012 to assess lessons learned and best practices of other Sector Strategy models such as those adopted by CALTCP, Builder Operator Certification, PowerPathway™, California Workforce Investment Board (CWIB), and other mostly statewide implementers. Using the results, IOUs will A) identify ways of refining its approach to existing IOU collaboration and B) establish and evolve a proven approach for implementing successful Sector Strategy relationships in the IOU WE&T statewide program for the next filing cycle.

The IOUs have begun preliminary work of splitting trade and professional level categories of training to consider Sector Strategy application. A few industries or technologies that could benefit from a Sector Strategy review and possible refinement by the IOU's WE&T programs:

Trade category

- Lighting Day-lighting
- HVAC
- Building management
- Building maintenance

- Small/Medium Business Audit
- Manufacturing/Automation
- Home Performance
- Low-income weatherization

Professional Category

- Codes & Standards enforcement agency
- Architecture/Engineering/Design
- Lighting design/consultants
- Sustainability consultants
- New Construction
- Food Service

The current program cycle will also be used to review the advantages and disadvantages of IOUs functioning in a typical intermediary role in formulating strategic collaborations through direct compliance with WE&T program implementation. Of immediate consideration in 2011 is deciding upon rationale for refining or forming new Sector Strategy relations. Criteria for such decision will be developed from review of Sector Strategy implementation models, results and effectiveness in achieving goals and objectives. Where opportunity emerges through partnership assessments to make program changes in this program cycle, such as to advance workforce outcomes, course structuring, credentialing pathways, outreach to trade and disadvantaged workers, and influence relevant curriculum, the IOUs will do so accordingly.

IOUs will continue to partner with IOU EE programs such Codes and Standards, Emerging Technologies and Energy Upgrade California. External entities that the IOUs believe could benefit from strategic collaboration within a more refined Sector Strategy are:

- Local government building, inspection and regulations agencies
- Community Colleges
- Trade organizations
- Contractor associations
- Certification bodies
- Workforce Development Agencies
- WE&T statewide Taskforce

A few criteria for considering the need and form of a Sector Strategy collaborative include whether Sector Strategy can:

- better address a specific industry workforce need
- deliver measureable and tangible outcomes
- more quickly respond to market demands
- create needed certification and credentialing
- bring together needed partners and relationships
- address gaps and needs for training skills and pathways
- advance IDSM policy

In developing partnerships, IOUs will draw on the best practices of successful models. The IOUs will need to assess the relevancy and value of Sector Strategy adoption on a case by case basis on its merits to advance statewide initiatives such as CEESP and the recommendations of the Needs Assessment while relying on the availability of metrics from which benefits of adopting a Sector Strategy can be made specific, meaningful, achievable, relevant and time-based.

Action steps to be taken in order to reach a stage of refining, adopting and implementing an effective long-term Sector Strategy approach:

Q3-Q4 2011

- IOUs establish statewide team to identify relationships that resemble Sector Strategy collaborations
- IOUs agree to a common description and application for Sector Strategy for statewide WE&T implementation
- IOUs coordinate with external adopters of Sector Strategies to assess lessons learned and best practices. This step may require the formation of working group sessions with key local Sector Strategy adopters or other technology media to work with parties who are not local

Q1-Q2 2012

- IOUs agree on Sector Strategy success factors based from lessons learned and best practices to establish IOU Sector Strategy criteria
- IOU team completes review of SW IOU implemented strategic collaborations and evaluate against Sector Strategy criteria. Refine relationship, as needed
- Identify SW IOU implemented strategic collaborations and evaluate against Sector Strategy criteria. Refine relationship, as needed
- Identify SW IOU implemented strategic collaborations and evaluate against Sector Strategy goals and objectives. Refine relationships as needed

Q3-Q4 2012

- Continue identifying SW IOU implemented strategic collaborations and refinement toward meeting IOU Sector Strategy criteria, as needed
- Continue identifying SW IOU implemented strategic collaborations and refinement toward meeting IOU Sector Strategy goals and objectives, as needed
- Have a clearly established working model for IOU formation of a Sector Strategy within the statewide IOU WE&T program implementation guidelines per established criteria, goals and objectives

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

2. Collaborations: Working with Construction Trades

Needs Assessment. Utility training centers and classes will collaborate with the contractor businesses to address EE as well as awareness of utility incentive programs. Recommendations from the Needs Assessment include: (1) expanding contractor and contractor association collaborations to building and construction trades associations that have demonstrated a commitment to investments in ongoing

workforce training, such as contributions to apprenticeship programs⁸ and (2) expanding collaborations between the Energy Training Centers (ETC) and contractor associations and building and construction trades associations. The Needs Assessment states that emphasis should be on collaborations with high-road associations demonstrating commitment to investments in ongoing workforce training, such as participating in apprenticeship programs.⁹

Public comments at the April 6th workshop focused on a desire for more focused efforts with WIBs for pre-employment training to specific green jobs opportunities and the continuation of the pursuit of connections with community colleges similar to the PowerPathway™ program. Comments also supported the enforcement (within local jurisdictions) of technology implementation to attain sustainable savings. Finally, parties proposed the development of a strategy to provide a more structured approach to technology training to unify understanding of the technology as a whole (such as HVAC).

The Energy Centers are familiar with reputable trade associations and through our IDSM Program relationships, collaborate in the development of curriculum leading to improved EE practices. These trade associations are known for their focus on best practices within their respective sectors.

IOUs propose to continue to evaluate existing training partnerships within the IOU DSM programs and external partners to look for opportunities to optimize alignment with strategic objectives and the recommendations of the Needs Assessment.

The Energy Training Centers, through the Sector Strategy development work as proposed in this supplemental, will target development of partnerships, new and existing, around the utility training center sectors (see Sector Strategies) and the partnering opportunities that emerge from those efforts. Examples of potential partner organizations the IOUs will pursue include community colleges, trade organizations, contractor associations, certification bodies, and workforce development organizations such as the WIBs by soliciting collaborative participation that will lead to progressive improvements in IDSM program participation and workforce outcomes. Additionally, IOUs propose to advance partnerships and explore models similar to PowerPathway™, through 2012 for further evaluation and possible enhancement. The recommendation from the Needs Assessment also states that programs should emphasize “collaborations with high-road associations” and focus outreach to contractors who participate in state certified apprenticeship programs because it can help the Energy Centers reach workers in the main EE occupations. IOUs support this objective, while striving to achieve program models that are inclusive and retain equitable access to all ratepayers.

Q3-Q4 2011

The plan of action is for the IOUs to form a working group to focus on partnership development, including, but not limited to, trade associations. The working group will be responsible for evaluation of existing partnerships and scoping opportunities for new and expanded partnerships with consideration of all the WE&T goals.

⁸ 205

⁹ 295

Q1-Q4 2012

Once partners are identified, IOUs will engage in dialogue with existing and prospective partners to assess the needs and opportunities, and identify the role and contribution of the utility training center programs and resources.

The IOUs propose that partnerships will be tracked via the current adopted PPMs. Through the PPM efforts in 2011, the IOUs established an understanding of how program partnerships are defined and began tracking program partners and instances of partnership activities. This effort requires modifications to tracking data fields in registration information in some sites. The IOUs also propose working with partners to gain support in leveraging their data and tracking mechanisms. IOUs need to determine appropriate measurement definitions for partnerships given the varying nature of the types of partnerships and relative outcomes.

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

3. Energy Centers' role in Credentials and Certifications

Needs Assessment. The study notes that certifications play a critical role in career development and in creating new or supporting existing partnerships with other organizations with access to a particular part of the workforce. The recommendation from the Needs Assessment is to modify the structure of classes offered by the Energy Centers, thereby increasing the number of course series that are longer in length than typical classes, focusing on a specific occupation, having a workplace-based hands-on component, and offering clear learning objectives that lead to certification. The Needs Assessment further notes that course series have a greater impact on energy savings than the typical short classes. In addition, recognized certifications for contractors and workers are expected to improve workforce outcomes as well.¹⁰

Public comments at the April 6th workshop noted that higher levels of certification are needed for various industries. Additionally, a nationally recognized certification with the flexibility to apply regional differences such as climate and similar variances as needed would be a great asset to the workforce sector.

The Energy Centers currently offering and supporting certification programs such as BOC, IHACI, HERS, CALCTP, and USGBC. These programs offer opportunities for customers and market actors to achieve industry-recognized credentials. Such course offerings vary in length dependent on the complexity of the subject matter and the time required for the average attendee to digest the pertinent subject matter. The Energy Centers also endorse adult learning principles (ALPs) for all courses funded by IOU programs, and employ ALPs for all self-funded courses. The incorporation of ALPs in seminars addresses the recommendation for a hands-on learning environment conducive to prompt work place application.

IOUs recognize that some certifications provide members of the California green building workforce required knowledge and skills for their jobs, credibility as trained and certified professionals, and can increase their employability when seeking promotions in an existing job or when seeking a new job. IOUs have supported and continue to

¹⁰ 295

support certificate programs in various ways, including connecting utility programs to certificate programs, providing subject matter experts as instructors, serving on advisory committees to help shape certificate programs, providing curriculum to support certificate training, providing meeting and classroom space for certificate training, and providing direct financial support. IOUs also recognize that some course materials can be structured and organized to support existing certificate programs, and in some cases support the creation of new certifications. Certificate programs need to be very well coordinated and thought out, and can take several months to over one year to develop.

IOUs propose continuing and increasing efforts at their Energy Centers to offer courses which lead to certifications or support certification programs. Where resources allow during the current funding cycle, IOUs will develop additional series type classes as statewide programs. For example, IOUs will explore developing educational programs in partnership with other organizations that make up a series of trainings with quizzes and tests that provide feedback to students about their comprehension and retention of the material. These programs will be developed with the intent of supporting other institutions that have certification programs. Once offered, the program may be adopted by an organization to relieve the IOUs of the legal responsibility of certification.

The plan of action is for IOUs to use the current filing period to discuss and map out their potential to partner with other organizations on certificate support and development. Where appropriate and practical, given limited resources, IOUs have begun to organize existing courses into series. An organized and cohesive series of classes with quizzes and exams can serve as a first step toward a certificate program. IOUs plan to pursue development of a certification strategy on a coordinated statewide basis, with the targeted timeline outlined below.

Q1 2010 – Q2 2011

During the current filing period, IOUs have provided support to certificate and credential programs through various efforts, including hosting certificate classes at the Energy Centers, serving on advisory committees, and providing IOU subject matter experts as instructors. Some of those efforts (BOC, CALCTP, etc.) are summarized below. IOUs have also begun to map out existing course offerings and identify potential structuring of classes into series that can be offered as series in current filing period. This will serve as a way of beginning to “test” potential of creating course series that other certifying organizations might adopt as a stand-alone certificate program or that can support an existing or emerging certification program.

Q3 – Q4 2011

IOUs will expand the existing working group to focus on course series development and industry certifications. The working group will be responsible for identifying organizations and certifications that are currently offered through the Energy Centers or that can be supported by existing and future Energy Center efforts. The working group will begin work to identify and communicate with certifying organizations to identify the nature of collaboration as well as mapping existing IOU content with industry skills needed and identify gaps in certification and training that might be filled by IOUs collaborating with industry organizations. IOUs will also explore possibilities of taking an existing IOU series (i.e. Lighting Academy) and disseminate and implement in other IOU territories. Structuring course series, developing quizzes and exams, and issuing certificates of completion represents “added value” to typical Energy Center offerings. IOUs will discuss implementing a charging structure for these series-based trainings.

Q1- Q2 2012

Through a collective effort informed by conversations with certification organizations, working group will identify a statewide, standardized set of certifications that have value in the respective industries and can be offered through industry partners such as is done to date with USGBC, IHACI, BOC, NATE, etc. As resources allow, IOUs will also begin to expand existing series to new technologies and/or sectors. IOUs will also continue to develop their existing series to include next steps toward certification such as examination development and exploration of online learning to support fundamentals.

Q3 - Q4 2012

As needed, IOUs will draft plans to formally partner with certification organizations and begin to implement plans for partnering with certifying organizations. With information gathered from these collaborative efforts, working group will draft language that can be used in program implementation planning for the next filing period according to direction in upcoming CPUC Rulings or Scoping Memos. Where possible, IOUs will also begin to offer limited courses in a series with the intent of providing a clear path toward gaining a specific skill set. In some cases, the series may be adopted by a third party implementer to create a certificate program.

IOUs will take lessons learned, progress thus far, potential steps forward, and include in Program Implementation Plan for next filing period,

The WE&T Program currently supports this approach through various IOU efforts:

BOC

The Building Operator Certification program is a nationally recognized, competency-based training and certification program that offers facilities personnel the improved job skills and knowledge to transform workplaces to be more comfortable, energy-efficient and environmentally friendly.

CALCTP

The California Advanced Lighting Controls Training Program (CALCTP) is a statewide initiative aimed at increasing the use of lighting controls in commercial buildings.

Steam License series

The series offers clear pathways from entry-level to certification-level, concluding with the professional certification, DOE Steam Specialist class and qualifying exam.

Course Series Example:

- Boiler Basics
- Boiler Water Treatment
- Principles of Combustion
- Steam System Best Practices
- LA Steam License Training Series & Exam
- DOE Steam End- User
- DOE Steam Specialist Certification & Exam.

CSU East Bay IDSM Certificate

IOUs have partnered with internal groups such as the PG&E PowerPathway™ program and colleges and universities (California State University – East Bay in this case) to serve as advisors to certificate programs that would result in better trained utility employees and energy efficiency consultants.

HERS, BPI, NATE

The IOUs work with Building Performance Institute, California Home Energy Efficiency Raters and North American Technicians Excellence and other similar providers to offer training that is preparatory instruction for certification in the areas of home performance, home audits and HVAC installation, respectively.

Course Series Example:

- NATE Test Prep and Review
- Home Performance, Putting It All Together
- Green Homes That Work
- Designing High Performance Homes with HEED
- Zero Net Energy Homes
- Air Sealing and Insulation
- ACCA HVAC Performance Series

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

4. Structure of Classes

Needs Assessment. The Needs Assessment notes that not all people learn in similar ways and standard one-day classes may not allow the instructor to deliver a comprehensive set of lessons with actionable items that the student can implement as part of his/her job. Recommendations from the Needs Assessment include: (1) modifying course offerings to expand targeted cohort-based series of classes that are longer in length, focus on a specific occupation, have a workplace-based hands-on component, clear learning objectives, and lead towards a certification¹¹. The Needs Assessment further clarifies that these course series were shown to have a greater impact on energy savings than the typical short classes. In addition, the study notes, recognized certifications for contractors and workers are expected to improve workforce outcomes as well.¹²

Public comments at the April 6th workshop included the suggestion to charge an administrative fee for participants to enroll in a Centergies course.

IOUs propose modifying the course series. Some IOUs are experimenting with this idea to expand the concept in 2011 and 2012. A high quality certification program can lend credibility to an organization and to the curriculum when well designed, delivered, and administered. IOUs may consider working with organizations to develop a course series with the intent of moving that series toward a certificate program with a third party organization.

¹¹ 205

¹² 295

The plan of action is to convene as a group in 2011 to discuss which organizations can serve as partners to inform and eventually disseminate certification curriculum developed by or advised by the IOUs. Also, IOUs will use the current program cycle to discuss and map out the potential to partner with other organizations on certificate support and development. Where appropriate and practical, given limited resources, IOUs can begin to organize existing courses into series. An organized and cohesive series of classes can serve as a first step toward a certificate program. With some exception, these past efforts have not been coordinated and discussed at a statewide level. IOUs plan to communicate better on the topic of certification.

To benefit from the complementary nature and objectives sought through course structure changes and certification/credentialing, the action steps and **timeline** generally follow those outlined for Credential and Certifications in Section 3 above.

The WE&T Program currently supports this approach through several efforts:

IHACI

The Institute of Heating and Air Conditioning Industries (IHACI) offers HVAC training with curriculum focused on design, service, installation, sales and maintenance practices to promote optimum energy efficiency.

Small-Medium Commercial Building Audits

This series is currently under development. Courses exist individually and PG&E is in the process of formalizing it as a series. This 5-day series is intended for students with no or some knowledge of energy audits for small to medium sized commercial buildings.

Existing Building Commissioning Workshop Series

During this 12-month class which meets once per month, participants are directly involved with the commissioning process in their buildings. Attendees get exposure to the planning, decision-making, and diagnostic aspects of commissioning by retro-commissioning a facility. Students experience the whole process and immediately apply what they have learned through structured, hands-on activities under the supervision of qualified commissioning experts.

ServSafe

A food safety training and certificate program administered by the National Restaurant Association

The program covers five key areas:

- Basic Food Safety
- Personal Hygiene
- Cross-contamination & Allergens
- Time & Temperature
- Cleaning & Sanitation

Sustainability Series

Consist of workshops that encompass various levels of student interest. Classes offered include "Core Concepts" which covers an introductory in sustainable design, construction and operations of buildings and communities. In an effort to assist customers with their "LEED Green Associate Training" certification that prepares

attendees for the LEED-GA exam is now offered and LEED Existing Building Operations and Maintenance Technical Review which provides a framework for developing efficiency and sustainability plans for existing buildings. As customers continue to put more emphasis on sustainability additional classes will be offered and the calendar expanded.

Lighting, HVAC, Day-lighting Academy

Academy classes are designed to be taken in sequential order, starting with the very basics of the particular technology (lighting, HVAC, day-lighting, etc.) and building on concepts learned in prior classes.

The classes will provide graduates the following skills:

- Determine lighting requirements
- Make knowledgeable lamp selections
- Apply economical retrofit strategies
- Calculate lighting quantities
- Select appropriate controls
- Make the best use of SCE incentives

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

5. Support for Curricula Development

Needs Assessment. The study notes that IOU training centers can leverage their expertise to support other organizations that are less experienced with EE or other ISDM content. Recommendations from the Needs Assessment include actively participating in (1) supporting curriculum review and updating, instructor professional development, and continuing education requirements associated with license renewal for the main “home institutions” that train building and construction professionals and trades people, including four-year colleges and graduate programs, apprenticeships and community colleges¹³ and (2) the content development, review, and updating of curricula, and support instructor professional development for the main “home institutions” that train building and construction professionals and trades people, such as apprenticeship programs, community colleges, and four-year institutions. ETC staff should be encouraged to share their expertise as appropriate to ensure that curricula incorporate up-to-date information on new technologies and practices.¹⁴

Public comments at the April 6th workshop did not address this particular Needs Assessment Recommendation.

IOUs propose continued efforts in the development and updating of training curricula. Energy Centers and IOU ISDM programs fund and lead the development of curriculum that addresses the educational needs of the various technology and construction sectors including codes and standards, and energy efficient building design and construction. These curriculums are available to the public through the many seminars

¹³ 205

¹⁴ 295

offered through the Energy Centers and in some instances, these and similar resources made available to trade and vocational organizations. IOUs can provide a supportive role in curriculum development. IOUs are already engaged with institutions to serve in advisory roles.

The plan of action is for utilities to continue engagement with IDSM Programs, training organizations and educational institutions to provide support in curriculum development and review efforts. Making Energy Center expertise available in the form of personnel, teaching tools and other resources, as-needed or requested, represents several ways of outreach.

The criteria for determining strategic collaborations for many of the recommendations prescribed in the Needs Assessment as been generally laid out in the Section discussing Sector Strategies. In the case of curriculum development, allocating resources will be primarily prioritized by relevance to near-term or long-term demand of the market, employers or in strengthening compliance with prevailing work standards. The Sector Strategies section outlines a few preliminary criteria for a Sector Strategy engagement of which a few seem particular applicable in curricula development, such as when IOU expertise can:

- Help better address a specific industry workforce need
- help create needed certification and credentialing
- help bring together needed partners and relationships
- help address gaps and needs for training skills and pathways
- help advance IDSM policy

Criteria for engagement will be greatly coordinated with efforts identified and described for refining course structure, certification and credentialing. There are numerous categories of organizations and energy efficiency supply chain participants to whom IOUs could conceivably expand outreach. Creating and managing such a list of relationship will require IOUs to strengthen coordination with collaborators. IOUs will rely on IOU rebate/incentive program requirements as a complimentary determinant for guiding and advising on workforce training curriculum in the absence of any other clear and apparent market demand standard

In line with other responses to the Needs Assessment, IOUs will use other internal department resources such as those provided by Codes and Standards, Emerging Technologies, Workforce training and Energy Upgrade California to strategically collaborate on a more refined use of IOU expertise with:

- Local government building, inspection and regulations agencies
- Community Colleges
- Trade organizations
- Contractor associations
- Certification bodies
- Workforce Development Agencies

As described in other sections, measuring success for any of these activities, dependent or independent of a Sector Strategy approach relies on availability of metrics from which benefits of adopting a Sector Strategy can be made specific, meaningful, achievable, relevant and time-based.

To benefit from the complementary nature and objectives sought through course structure changes, certification/credentialing and support for curriculum development, the action steps and **timeline** generally follow those outlined for Credential and Certifications in Section 3 above.

Q3 – Q4 2011

The IOUs will form a working group to identify institutions, associations and agencies expressing greater IOU role in curriculum development. Working group will begin communication with parties to explore ways of sustainable strategic collaboration as well as to evaluate existing relationships to identify gaps and opportunities for improving the relationship

- statewide or regional workshops with stakeholders in coordination with other recommendations addressed in this Advice Letter
- determine curriculum needs and sources for collaborative meetings on refining or initiating new curriculum

IOUs will continue to leverage internal resources and explore new external resources that might help expedite and more effectively integrate IOU expertise into outside curricula development. IOUs will certainly look to existing models (i.e. Lighting Academy) as starting points for building a sustainable process and methodology for coordinated curriculum exchange and development.

- inventory internal curriculum sources
- assess lessons learned and best practices from existing working models

Q1- Q2 2012

Through collective, informed and collaborative conversations with institutions, associations and agencies, working group will identify a methodology that stakeholders find beneficial and IOU programs can reasonably support.

- statewide or regional workshops with stakeholders in coordination with other recommendations addressed in this Advice Letter

Q3 - Q4 2012

IOUs will formalize a working model with institutions, associations and agencies from which all will work together in advancing curriculum per industry or technology sector demands. The progress will be monitored and help to refine program implementation planning for the next filing period.

- statewide or regional workshops with stakeholders in coordination with other recommendations addressed in this Advice Letter

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

6. Goals for Inclusion of Disadvantaged Workers at Energy Center Programs

Needs Assessment. Recommendations from the Needs Assessment around this topic include: (1) allocating a percentage of their training funds to support workforce

programs that meet the best practice criteria described above¹⁵ and (2) adopting as a goal for the ETC the inclusion of low-income, minority, and disadvantaged workers and job seekers. The Needs Assessment also recommends the development and implementation of specific programs in collaboration with organizations that have a record of accomplishment in this arena, emphasizing Sector Strategies that can lead to placement in good jobs with career ladders.¹⁶

Public comments at the April 6th workshop focused on collaboration with centers in the non-IOU sector to address disadvantaged workforce training issues. The suggestion was made to enhance collaboration within the existing framework of programs.

IOUs propose inclusion of disadvantaged workers within the scope of Sector Strategy development. A preliminary approach must include consideration of existing and new potential partnerships to enhance efforts toward the inclusion of disadvantaged workers. This requires coordination and evaluation work to identify appropriate organizations with proven records of accomplishment that focus on these groups. The IOU's will consider adopting a goal in the next program cycle after an evaluation of effectiveness of current program cycle efforts is complete.

The Energy Centers do currently support education of the incumbent workforce in accordance with the CLTEESP. The workforce population includes a substantial element of blue-collar workers that may represent the demographic referenced in this recommendation. Currently, the Energy Center programs do not distinguish between the various demographics represented. The Energy Centers do however work to make Energy Center workshops and trainings equally accessible to all customer demographics by implementing an off-site strategy that brings workshops and trainings to communities throughout the IOU's service territory. The Energy Centers actively collaborate with the Workforce Investment Board, community colleges, and community organizations that provide training services and outreach to low-income, disadvantaged, or underserved communities/workers.

The partnerships goals in this area correspond to the overarching objectives of WE&T to educate incumbent workers, contribute to a greener workforce, and create career pathways for disadvantaged workers entering or already in the California economy. IOU contributions to those partnerships will include provision of subject matter expertise, course curricula, visual aids, hardware, and other materials that support Adult Learning Principles for a practical learning environment. Other support may include periodic consultation with the partner, and provision of class attendance at the IOU Energy Centers, and off-site.

The plan of action is to improve awareness of Energy Center training resources among disadvantaged worker populations through targeted marketing and partnering efforts.

There is no fully vetted definition of a "disadvantaged worker" at this point. For the purposes of the IOUs work, it is suggested that disadvantaged worker may include low to no-income, blue-collar workers currently employed or unemployed, ethnic minorities, disabled persons, or those lacking a GED. IOUs acknowledge there is an opportunity

¹⁵ 281

¹⁶ 295

to define a “disadvantaged worker” more precisely to help focus program outreach efforts in the next program cycle and beyond.

2011-2012

The IOUs propose to continue the pursuit of educational collaborations with organizations that serve the various categories of disadvantaged workers. The IOUs propose that the definition of “Educational Collaboration” be consistent with the WE&T Centergies PPM – providing funding or some in-kind benefit to partner organizations engaged in providing education programs to low income or disadvantaged workers that through IOU developed curricula, or resources, expanded education opportunities might occur.

Q4 2011 - Q1 2012

IOUs propose to take inventory of current network of partnerships with organizations serving low-income and disadvantaged workers engaging with Energy Center training centers or other utility initiatives. The IOUs will assess these partnerships to identify their respective influence within each of the various sectors, potential expansion opportunities, and resource requirements.

Q1-Q4 2012

The IOUs will develop criteria and parameters to prioritize partnerships that provide the greatest impact to workforce outcomes. The intent is to foster the most effective partnerships. The established benchmark for relationship conditions shall guide partnership parameters for the next program cycle.

Based on these objectives and the results of the Sector Strategy development work, it is anticipated that the inclusion of disadvantaged workers within the sector strategies can be achieved. Furthermore, completion of these action items will serve to identify an appropriate funding allocation to meet the demand for industrial sector related training of the disadvantaged worker class, as defined.

To this end, as applicable, the IOUs will strengthen partnerships with workforce development and community based organizations as well as internal IOU departments (LIEE/CARE) that successfully serve these demographics. WE&T groups can provide education opportunities, certification courses, “train the trainer” opportunities, curriculum, etc, while the partnering agencies can outreach to their existing membership base, offer complementary programs which address additional barriers facing disadvantaged workers, and leverage existing tracking metrics and reporting protocols.

The goal for partnerships in this area corresponds to the overarching goal of WE&T to educate incumbent workers, contribute to a greener workforce, and creating career pathways for disadvantaged workers entering or already in the California economy. IOU contributions to those partnerships will include provision of subject matter expertise, course curricula, visual aids, hardware, and other materials that support Adult Learning Principles for a practical learning environment. Other support may include periodic consultation with the partner, and provision of class attendance at the IOU energy centers, and off-site.

Some examples of current and potential partner organizations include:

- LA Trade Tech – Provide students and community with high-quality technical and professional educational options that flexibly meet their life-long career

- development and academic goals; foster a climate of life-long learning; prepare students to participate effectively in our democratic society; and generate economic development with educational, governmental, community and business partners.
- Community Based Organizations that deliver LIEE and CARE programs – These organizations employ local workforce in the low-income communities they serve. Identify ways to partner with these organizations to make energy center training resources available as part of their training/workforce development programs.
 - Workforce Investment Boards/Employment Development Department – WIBs and EDD as part of their mission deliver workforce development programs that serve clients that could be associated as low-income, displaced workers, disadvantaged, among other distinctions.
 - Community Colleges – Provide education and vocational training to students across many socio-economic groups.
 - San Francisco Office of Economic and Workforce Development – Provide skills based training for weatherization workers in the Energy Savings Assistance Program
 - San Diego Workforce Partnership – Provides job training and operates a network of career centers throughout San Diego County. Career development programs are offered to disadvantaged workers and include job fairs, online learning, and other education and training opportunities.
 - Troops 2 Energy – Trains and prepares transitioning military service members for jobs in the renewable energy industry.
 - Urban Corps – Provides young adults with a high school education combined with job training and community service in the fields of conservation and recycling.

IOUs propose to track data indicating growth of partnerships in concurrence with ED PPMs, and to use 2011 partnerships as a baseline metric for tracking growth. The IOUs will coordinate statewide to add tracking data fields in our registration information to identify partnerships activities hosted at Energy Center facilities or off-site. The IOUs will seek support of partners in providing data to support tracking mechanisms. In 2012, IOUs propose to determine success criteria to include growth of attendance in specific targeted offerings both at Energy Centers and within partner programs that carry influence of IOU involvement; growth in the number of targeted offerings (% of educational collaborations).

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

7. Evaluation of Workforce Outcomes – UPDATE TO COME

Needs Assessment. Being able to track information about participants and effects of training sessions is necessary to evaluate the success of a particular session or series.

Participant data may also provide important information on worker backgrounds, job types, and industry segments that the Centers are reaching, which can guide ETC offerings and curriculum development.

Tracking of more robust participant information will allow the IOUs to better assess how the ETC are serving the broader California workforce and where they fit into the broader training resources in California. It may also help implementers design ETC programming and outreach efforts to align with goals and recommendations set by the

Program Performance Metrics, California Energy Efficiency Strategy Plan and the Needs Assessment.

Recommendations from the Needs Assessment include: (1) strengthening tracking of participants and outcomes and (2) assessing and determining what additional information is required to evaluate workforce outcomes for the ETCs. In addition, the Opinion Dynamics evaluation makes a number of suggestions for tracking participants in the Energy Centers programs. These recommendations include the creation of a common registration form among all ETCs that will collect participant type, profession or field, years in profession, and existing knowledge of course topic; use of complete and consistent data entry for course and participant tracking, such that repeated courses and participants can be easily identified; and the creation of a shared registration system across all ETCs that would allow IOUs to track participants across multiple ETCs.¹⁷

The Needs Assessment recommends that the ETCs should, at a minimum, begin to collect information from participants on occupation, prior education, and work experience.¹⁸

Public comments at the April 6th workshop did not address this particular Needs Assessment Recommendation.

IOUs propose assessing and evaluating requirements for redesigning the ETC registration system and participant information collection methods statewide among IOUs, such that the data fields and recommendations described above may be incorporated.

The plan of action is for IOUs to thoroughly review and assess the statewide IOU information systems in order to develop and implement a means of tracking and measuring program and customer participation and outcomes in a way that is feasible, effective and respectful to customer concerns for intrusion on rights and privacy.

Once such a system is in place, tracking data will initially be used to develop a baseline representing the current levels of course participation and participant career and educational background. In the future, IOUs will be able to use the baseline data to track the effectiveness of changes made to ETC courses in response to the Needs Assessment recommendations and other program modifications.

Connections

The Needs Assessment recommendations related to the Connections sub-program focus on collaboration with the education sector, career education, and evaluation of K-12 programs. We have addressed each one herein:

K-12 – while the Needs Assessment does not provide any clear recommendations with respect to sector strategies, the Needs Assessment does make recommendations for collaborating with career academies, regional occupational programs focusing on high school to develop a systematic, organized effort to institutionalize energy awareness

¹⁷ 206

¹⁸ 295

and career awareness education programs, and align them with California Content Standards.

Partnerships should include organizations and programs that have *an explicit focus on serving disadvantaged communities and lowering school dropout rates*, like the Career Academies. The following is a list of possible entities to be included in the collaboration: California Department of Education, California Partnership Academies, investor-owned utilities, publicly-owned utilities, California Energy Commission, California Public Utilities Commission, California Environmental Protection Agency, organizations providing after-school educational programming, and high-performing K-12 energy education programs (representative of all funding sources).

The IOU's are currently collaborating with 1) California Department of Education on Energy and Utility Sector curriculum standards (more details in # 8 below), 2) California Energy Commission to develop guidelines for clean energy partnership academies (more details in # 8 below), 3) Los Angeles Unified School District to develop career partnership academies, 4) collaborating with several academies in the PG&E service territory. Partnership academies combine career technical education with academic courses to prepare students for graduation and future employment or schooling. The academies serve primarily at-risk students. The criteria used for student eligibility include irregular attendance, record of underachievement, low motivation or disinterest in the regular academic program, and economic disadvantages.

Neither Career academies nor sector strategies seem to apply to K-8 students so, we are focusing on career awareness and career exploration for these grade levels. The hope is that by engaging students on career awareness and career exploration of green and clean energy careers, students will move into HS and college with a clearer focus on careers.

Colleges – While the Needs Assessment does not provide any clear recommendation with respect to sector strategies, the Needs Assessment does recommend strengthening and expanding collaborations with community college career technical education and four-year colleges to target career development results.

The IOU's are currently collaborating with the California Community College (the largest in the nation with 112 campuses) Chancellor's office on the design and implementation of community college programs that prepare students for sector specific careers as well as preparing students for transfer to four-year colleges. California Community Colleges working closely with Workforce Investment Boards (WIBs) are in the best position to understand community and industry needs and deliver sector strategy training to meet those needs. The IOU's are working directly with the WIB's and indirectly through the community colleges on our sector strategy objectives.

Community colleges have several different roles within the state's system of workforce training and education, including preparing students for entry-level jobs, providing experienced workers with opportunities to improve their skills in their existing profession or in a new profession, and preparing students to enter four-year degree programs in engineering and other technical disciplines like architecture and construction management.

8. Collaborations

Needs Assessment. The Needs Assessment states that collaboration with various levels of the education sector is an intricate part of the program strategy. Recommendations from the Needs Assessment around this topic include the need for strengthening and expanding collaborations with career Academies, Regional Occupational Programs (ROPs) and community colleges.¹⁹

Public comments at the April 6th workshop focused on what should be the objectives of the collaborative relationships being developed by the IOU education programs with K-12, community colleges, and four-year colleges and universities.

IOUs propose continuing current work with secondary and post-secondary institutions.

The plan of action is to utilize existing educational relationships and broaden that network to build new relationships and expand the program outreach. IOUs are currently collaborating with Career Academies as well as Community Colleges. ROPs have been proposed as a collaborative target and the IOUs are evaluating ways to integrate that relationship into their program. Expanding educational collaborations are an intricate part of the WE&T Connections program design and strategy.

Criteria for new partnerships:

- 1) Be involved directly or indirectly with the K-12 and/or college level education/training sector in California
- 2) Offer their services (training and education and /or support) or products regardless of income, minority status or English proficiency of participants.
- 3) Share the goal of energy efficiency education for K-12 and beyond.
- 4) Share a vision (CPUC strategic plan) of serving students in underserved communities and/or low income and minority communities. In determining low income and minority communities, ***The IOUs*** use Title # 1 school list as well as the Free Reduced Price Meal (school lunch) list
- 5) Recognize (on some level) the mutual benefits of a WE&T public/private partnership
- 6) Possible funding source for reaching WE&T goals

Outreach strategies:

The WE&T Statewide program outreach strategies are described in the WE&T Statewide Program Implementation Plan, Marketing and Outreach Plans.

IOU program support for school/teacher activities:

The WE&T Connection subprogram fully supports the activities of teachers and schools, as is evidenced by their participation in the Connections programs. Even with current successes, the IOUs plan to look into identifying and working with schools that have chosen not to participate in order to adjust curriculum and activities as deemed appropriate for future outreach efforts and offerings.

Current ongoing IOU programs support efforts to: 2010 - 2012:

- Align programs with the California Content Standards that teachers are expected to teach.
- Keep informed of new California Core Content Standards and or National Standards (pending approval) and align programs with new standards. (Please refer to work with CDE below)
- Conduct professional development workshops for teachers

Q4 2011:

- Provide a rationale for including career awareness, exploration and preparation in the K-12 schools

Q1 - Q2 2012:

- Provide materials that support events (i.e. Earth Day, Arbor Day)
- Identify higher education schools that have career fairs and provide staff and/or information

2012:

- Complete review of state testing for K-8 to determine how IOUs might support teachers by incorporating concepts into IOU program materials.
- Provide high school students access to career assessment instruments and access to green workers/professionals through a variety of online resources.

Other strategies (Q3 2011 through 2012):

- Post resources on the Web Portal
- Partner with the California Department of Education (CDE) to ensure the inclusion of EE, Green Career and Green Awareness information in schools required California Content Standards
- Partner with the California Energy Commission to develop new guidelines for clean energy partnership academies

Expanding collaborations with additional educational institutions and academies**California Department of Education: Ongoing**

IOUs are working with the California Department of Education (CDE) in an advisory capacity to affect change in near future curriculum standards. We are currently working with CDE on Energy and Utility Sector standards. Affecting the standards will ensure that our utility green awareness and green career awareness initiatives are included with California Curriculum Standards and that our programs are in line with school and teacher activities.

California Energy Commission: Ongoing

IOUs are working closely with California Energy Commission (CEC) to develop guidelines for clean energy partnership academies (Note: Partnership academies were first established by the California Department of Education in the 1980s. An academy is a multi-year program for high school students structured as a school within a school. Partnership academies combine career technical education with academic courses to prepare students for graduation and future employment or schooling. The academies serve primarily at-risk students. The criteria used for

student eligibility include irregular attendance, record of underachievement, low motivation or disinterest in the regular academic program, and economic disadvantages. Each curriculum focuses on a career theme, such as health, energy, or information technology, and is coordinated with related academic courses. The career technical focus for an academy is determined by an analysis of the local labor market and fields that have companies willing to support the program. Expanding our collaboration with academies is one goal within the Needs Assessment findings 12.7.2.)

WE&T Task Force and other stakeholders Involvement

- The IOU WE&T Task Force members are actively involved in the program planning and implementation process to ensure that we are responsive to the overall Strategic Plan goals
- The IOU WE&T Task Force members are working with California Department of Education – Energy and Utilities Industry Sector group on curriculum content standards.
- The IOU WE&T Task Force members are working with California Energy Commission on Clean Energy Partnership Academies (SB X11) in line with CLTEESP goal to include minority and low income students in programs.
- The IOU WE&T Task Force members are working with the California Community Colleges Chancellor's office on the design and implementation of community college programs.

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

9. Career Education

Needs Assessment. Incorporating career exploration into programs would be helpful to complement career awareness activities. Recommendations from the Needs Assessment include: (1) increasing the emphasis on career awareness and career exploration in ratepayer-funded education programs servicing K-8 students and supporting career preparation programs in career academies and ROPs. The Needs Assessment also recommends evaluating and working toward the integration of environmental and ratepayer-funded energy curricula. It states that there is substantial evidence that the integration of environmental and energy curricula will increase the support of teachers for these programs. Finally, the study reports that these efforts should be supported by strong collaborations with K-12 schools, particularly those programs, like the California Partnership Academies, that target disadvantaged students.²⁰

Public comments at the April 6th workshop focused on leveraging the role of the IOU WE&T programs to support education on career awareness, career exploration, and career development. A suggestion was made to collaborate with ROPs, Green Academies, and other similarly-funded programs to facilitate support for career awareness.

IOUs propose that future curriculum development needs to include input and funding from other relevant stakeholders to identify other secondary energy and environmental curricula that meet the goals of the Strategic Plan. Programs that target disadvantaged students or students from low-income households benefit from emphasis on career awareness programs. Beginning in 2010, the statewide WE&T program is tracking program participation from low-income, minority and disadvantaged communities.

The plan of action for career education during the current filing period is to incorporate career education into all *IOU programs* grades K-College.

Actions Include:

Q3 2011 – Q2 2012 (Ongoing)

- Incorporating into existing IOU K-8 curriculum materials career awareness and exploration as age appropriate
- Green Pathway pilot online community is a resource that enhances and supports the green academy and AP environmental science high school courses
- Green Pathway is building partnerships with community based organizations having green/ career programs serving young adults
- Green Campus (UC/CSU system) builds pathways to green careers through the variety of activities
- Develop collaborations with educational institutions to leverage career education resources that can be shared with K-12 schools and Community Colleges

Q4 2011

- Providing to high schools a green resource guide on green careers

Q1, Q2 2012

- Provide within IOU teacher workshops information about green careers

Incorporating Career Education into WE&T offerings

As described in the IOU's 2010-2012 WE&T Statewide Program Implementation Plan (PIP), one of the primary goals of the Connections programs is to promote career education and green careers to K-12 and college students to meet California's need for green jobs.

Career education is currently being incorporated into the existing programs through updates to existing curriculum, inclusion in new programs being developed, in stand-alone green career guide/supplements, and assemblies.

<http://www.greenschoolsnational.com/california.html>

<http://www.greenschoolsnational.com/california.html>

<http://ase.org/resources/green-campus-quarterly-report-january-march-2011>

<http://ase.org/resources/green-campus-quarterly-report-april-june-2011>

Links provided in this document are the links currently available.

The Needs Assessment acknowledges that Connections initiatives aim to foster collaborations between utilities and educational institutions with the objectives of 1)

promoting “Green Careers,” 2) encouraging energy efficiency and conservation behavior, 3) educating schools about the benefits of adopting energy efficiency policies.²¹

Outreach:

The WE&T Statewide program outreach strategies are described in the WE&T Statewide Program Implementation Plan at Section 10b, Marketing and Outreach Plans.

Strategies in 2011 Q3 - Q4 and 2012 Q1 - Q4 to facilitate best practices in next program cycle:

- Identify business partners who could provide classroom speakers to discuss their clean energy (Green Energy) work
- Identify community based organizations (CBOs) that could help promote materials and programs
- Identify agencies who already work within the schools on environmental/energy efficiency and cross market (Air Resource Board, Recycling, etc.)
- Outreach to County Office of Educations (COEs) to collaborate in promoting programs and materials to their schools (visit first those who serve schools in the Counties with the lowest median income)
- Identify partners in the high schools that have New Energy/Green Academies, and AP Environmental Science classes (e.g. Programs that are already focused on Green Careers preparation and energy efficiency)
- Partner with educational organizations that serve career tech teachers
- Partner with teachers for high school Green Pathway program, to help develop relevant program curriculum
- Continue active participation in the CDE Work Force Development group
- Develop a plan for linking of Community College and four-year University programs to energy efficiency occupations
- Post on the www.engage360.com Web Portal a listing of certificate and degree programs at the Community Colleges and UC/CSUs that are in the clean energy field
- Facilitate communication between Green Campus interns and professors with CC college students and teachers to share projects they have done and currently working on with the intent to get them interested in generating interest in green careers.

IOU program support for current school/teacher activities:

Please see section 8 above.

Further, IOUs plan to identify a core group of teachers in targeted areas to come together for a two-day workshop to solicit suggestions on how IOUs can support

²¹ P. 200

career awareness and exploration and how to integrate it into what they already teach. Identify if there are additional materials to be developed to support that.

10. Evaluation of K-12 Programs

Needs Assessment. The Needs Assessment states that collecting non-specific student data from schools is the most accessible data to IOUs for evaluating program impacts. Recommendations from the Needs Assessment include: (1) continuing to support and expand career awareness and exploration in K-12 programs. Furthermore, “as indicated in our K-12 key findings report, the IOUs have recently added career awareness and career exploration modules to the K-8 programs: Living Wise, PEAK, Green Schools, and Energenius. In this way, the K-8 programs, which, until recently, have mostly focused on how students and their families can save energy, will also contribute to the career development policy goal. These career development modules should be evaluated using appropriate performance metrics,”²² and (2) working with education agencies, schools, and funding partners to allow for the collection and reporting of demographic information on students participating in ratepayer-funded Connections education programs. The Needs Assessment states that the present lack of information hampers the evaluation of existing programs.²³

Public comments at the April 6th workshop focused on the various issues and challenges surrounding data tracking of students and teachers participating in IOU education programs. The discussion acknowledged value in monitoring and evaluating program impacts on student groups involved in IOU education programs.

IOUs propose to pursue solution to address the recommendation. Currently, the only type of demographic information collected is on the school registrants in general, not the individual student. Furthermore, there is privacy associated with schools releasing demographic information of students to outside agencies. The tracking of students into green careers could likely only be accomplished with the involvement and permission of guardians.

The plan of action is to incorporate career education into all IOU education programs K-12).

How the IOUs will evaluate programs:

Ongoing:

- Energenius, PEAK and Living Wise programs currently track teacher satisfaction.
- Review existing teacher surveys used in current IOU programs to determine if program is meeting teachers' needs.
- Continue to engage the Task Force in regular meetings to share progress and ideas. IOUs can collect general demographic information on students registered at schools in our program (with respect to the collection and reporting of student demographic information, collecting specific information on students is currently prohibitive for IOUs).

Q2, Q3 2012:

²² 206

²³ 296

- As part of the 2010-12 WE&T Process Evaluation, the IOUs are providing Opinion Dynamics Corporation with copies of the surveys used to measure teacher satisfaction, as well as the data gathered through those surveys. After IOUs receive results from the Opinion Dynamics Corp process evaluation IOUs will incorporate suggestions on how to track metrics and incorporate enhancements to the existing teacher surveys
- Determine if students are taking EE action at home or school as a result of the education

11. Strategic Planning and Implementation

This program involves management and execution of several strategic statewide planning tasks identified in the Strategic Plan: a) form an IOU/CPUC WE&T Task Force, b) conduct a needs assessment study, c) facilitate Annual WE&T Public Meetings, and d) create a WE&T-specific web portal.

This sub-program, though not specifically called out in Needs Assessment recommendations, can serve as the means by which action plans can be discussed and assessed in the spirit of the recommendations.

1. Role of WE&T Taskforce

The inaugural WE&T Taskforce meeting was held January 28, 2009 with primary purposes of sharing information on green training initiatives and to focus resources on completing a Workforce, Education & Training statewide Needs Assessment study, as well as create a WE&T web portal site. The final study was posted on March 17, 2011 to the Energy Efficiency Web-portal, www.engage360.com. A first annual WE&T public workshop occurred on April 6th 2011 when results and recommendations from the WE&T Needs Assessment study were presented for public discussion and comment.

The three key overarching themes emerging from the Needs Assessment study and workshop comments are either, goals presented in the California Long-term Energy Efficiency Strategic Plan, ways to measure program performance in Resolution E-4385 or directly or indirectly expressed in D.09-09-047. Specific comment and proposals on recommendations have provided in the respective WE&T Centergies and WE&T Connections sections of this Advice Filing.

The IOUs further propose to use the annual stakeholder Taskforce meetings to evaluate existing cross-cutting training implementations across industry trade, educational, public agency and community-based sectors. The taskforce can also be used to share with stakeholders, IOU progress with collaborative training relationships among the aforementioned sectors, as well as between IOU and inter-organizational departments. Finally, the current stakeholder Taskforce can be of great value in identifying ways to assess data tracking methodologies for measuring program effectiveness

2. Role of WE&T Web Portal

The IOUs propose to use the annual stakeholder Task Force meetings to evaluate existing EE web portal options as a means for advancing Sector Strategies, collaborative implementations and measuring program effectiveness.

The initial planning is to develop and have the WE&T Web Portal reside within the EE Web Portal (www.engage360.com). The EE web portal has communities that can be tailored to different interests; the thought is to further define and develop a Workforce Education & Training community to serve as a platform of information about careers and training opportunities in the green workforce.

Web Portal objective:

The web portal will include links to various DSM related training programs and will allow for a single point of communication. The portal will also serve as a repository for information about DSM and EE training, educational conferences, and career opportunities. The WE&T segment may be developed and possibly funded in collaboration with other appropriate entities.

The IOUs' plan of action for the web portal can be described in two phases:

Phase 1 (2012 Q2) – Focus on Functionality to Promote Green Energy Careers

- Include organized links to training programs and opportunities at adult educational facilities, labor and trade organizations, the IOUs, etc.
- Include an events and activities component that highlights upcoming green energy conferences, workshops and related gatherings.
- Feature a Career Center that will feature organized, easy-to navigate links to open job postings listed on the site and related resources/contacts to attaining these specific jobs.
- Include a level that centers around related authorities, associations and advisory bodies, including the WE&T statewide strategic taskforce, the Workforce Investment Board Green Collar Jobs Council and others
- Include blog strings and a newsletter

Phase 2 (2012 Q3 - Q4) – Community Building Specific to Green Energy Careers

- Register users and facilitate membership community features including profile page, online resumes and connection trees (i.e. friend networks, career contacts, etc). Integrate/utilize the best social web technologies/applications to build engaging and credible online interactions.
- Incorporate connectivity tools/functionality that enables the user to attach/connect personal profiles with specific interests, job listings, training program announcements, webinars, and conferences. Explore the potential for automatic registration where appropriate.
- Allow users to communicate via a private "inbox" with other users, hosted on the site.

No cost information is required for this advice filing. This advice filing will not increase any rate or charge, cause the withdrawal of service, or conflict with any other schedule or rule.

EFFECTIVE DATE

SDG&E believes that this filing is subject to Energy Division disposition and should be classified as Tier 1 (effective pending disposition) pursuant to GO 96-B. This filing is pursuant to D.09-09-047 and therefore, SDG&E respectfully requests that this filing become effective on September 9, 2011, the date filed. The additional information the IOUs have provided here does not change the scope or intent of the program approved in D.09-09-047. This supplemental advice letter clarifies certain program information per Energy Division's request.

PROTEST

The Energy Division has clarified that there will be no protest period for this supplemental advice letter. Parties to this advice letter have had an opportunity to comment and there were no comments or protests in response to the first advice letter filing submitted on June 3, 2011. Individual utility contact information is below:

San Diego Gas & Electric:

Attn: Megan Caulson
Regulatory Tariff Manager
8330 Century Park Court, Room 32C
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Pacific Gas and Electric Company;

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Southern California Edison:

Bruce Foster
Senior Vice President, Regulatory Affairs
c/o Karyn Gansecki
Southern California Edison Company
601 Van Ness Avenue, Suite 2030
San Francisco, California 94102
Facsimile: (415) 929-5540
E-mail: Karyn.Gansecki@sce.com

NOTICE

A copy of this filing has been served on the utilities and interested parties shown on the attached list, including interested parties to service lists A.08-07-021, A.08-07-022, A.08-07-023, and A.08-07-031 by either providing them a copy electronically or by mailing them a copy hereof, properly stamped and addressed.

Address changes should be directed to SDG&E Tariffs by facsimile at (858) 654-1788 or by e-mail at SDG&ETariffs@semprautilities.com.

CLAY FABER
Director – Regulatory Affairs

(cc list enclosed)

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **SAN DIEGO GAS & ELECTRIC (U 902)**

Utility type:

ELC

GAS

PLC

HEAT

WATER

Contact Person: Megan Caulson

Phone #: (858) 654-1748

E-mail: mcaulson@semprautilities.com

EXPLANATION OF UTILITY TYPE

ELC = Electric

GAS = Gas

PLC = Pipeline

HEAT = Heat

WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 2260-E-A/2041-G-A

Subject of AL: Supplemental Joint Filing: 2010-2011 Statewide Workforce Education and Training (WE&T) Program Modifications based on Findings of WE&T Needs Assessment

Keywords (choose from CPUC listing): Energy Efficiency, Demand Side Management

AL filing type: Monthly Quarterly Annual One-Time Other _____

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

D.09-09-047

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL N/A

Summarize differences between the AL and the prior withdrawn or rejected AL¹: N/A

Does AL request confidential treatment? If so, provide explanation: _____

Resolution Required? Yes No

Tier Designation: 1 2 3

Requested effective date: 9/9/2011

No. of tariff sheets: 0

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed¹: N/A

Pending advice letters that revise the same tariff sheets: N/A

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division

Attention: Tariff Unit

505 Van Ness Ave.,

San Francisco, CA 94102

mas@cpuc.ca.gov and jnj@cpuc.ca.gov

San Diego Gas & Electric

Attention: Megan Caulson

8330 Century Park Ct, Room 32C

San Diego, CA 92123

tcahill@semprautilities.com

¹ Discuss in AL if more space is needed.

General Order No. 96-B
ADVICE LETTER FILING MAILING LIST

cc: (w/enclosures)

Public Utilities Commission

DRA

D. Appling
S. Cauchois
J. Greig
R. Pocta
W. Scott

Energy Division

P. Clanon
S. Gallagher
H. Gatchalian
D. Lafrenz
M. Salinas

CA. Energy Commission

F. DeLeon
R. Tavares

Alcantar & Kahl LLP

K. Harteloo

American Energy Institute

C. King

APS Energy Services

J. Schenk

BP Energy Company

J. Zaiontz

Barkovich & Yap, Inc.

B. Barkovich

Bartle Wells Associates

R. Schmidt

Braun & Blaising, P.C.

S. Blaising

California Energy Markets

S. O'Donnell
C. Sweet

California Farm Bureau Federation

K. Mills

California Wind Energy

N. Rader

CCSE

S. Freedman
J. Porter

Children's Hospital & Health Center

T. Jacoby

City of Chula Vista

M. Meacham
E. Hull

City of Poway

R. Willcox

City of San Diego

J. Cervantes
G. Lonergan
M. Valerio

Commerce Energy Group

V. Gan

Constellation New Energy

W. Chen

CP Kelco

A. Friedl

Davis Wright Tremaine, LLP

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Dept. of General Services

H. Nanjo
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D. Douglass
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G. Klatt

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M. Gillette

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J. Paul

Ellison Schneider & Harris LLP

E. Janssen

Energy Policy Initiatives Center (USD)

S. Anders

Energy Price Solutions

A. Scott

Energy Strategies, Inc.

K. Campbell
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Goodin, MacBride, Squeri, Ritchie & Day

B. Cragg
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R. Keen

Matthew V. Brady & Associates

M. Brady

Modesto Irrigation District

C. Mayer

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P. Hanschen

MRW & Associates

D. Richardson

OnGrid Solar

Andy Black

Pacific Gas & Electric Co.

J. Clark
M. Huffman
S. Lawrie
E. Lucha

Pacific Utility Audit, Inc.

E. Kelly

R. W. Beck, Inc.

C. Elder

School Project for Utility Rate Reduction

M. Rochman
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O. Armi

Solar Turbines

F. Chiang

Sutherland Asbill & Brennan LLP

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Southern California Edison Co.

M. Alexander
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K. Gansecki

H. Romero

TransCanada

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D. White

TURN

M. Florio
M. Hawiger

UCAN

M. Shames

U.S. Dept. of the Navy

K. Davoodi

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Utility Specialists, Southwest, Inc.

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Western Manufactured Housing

Communities Association

S. Dey

White & Case LLP

L. Cottle

Interested Parties

A.08-07-021
A.08-07-022
A.08-07-023
A.08-07-031

Attachment A

Timeline of Needs Assessment Process

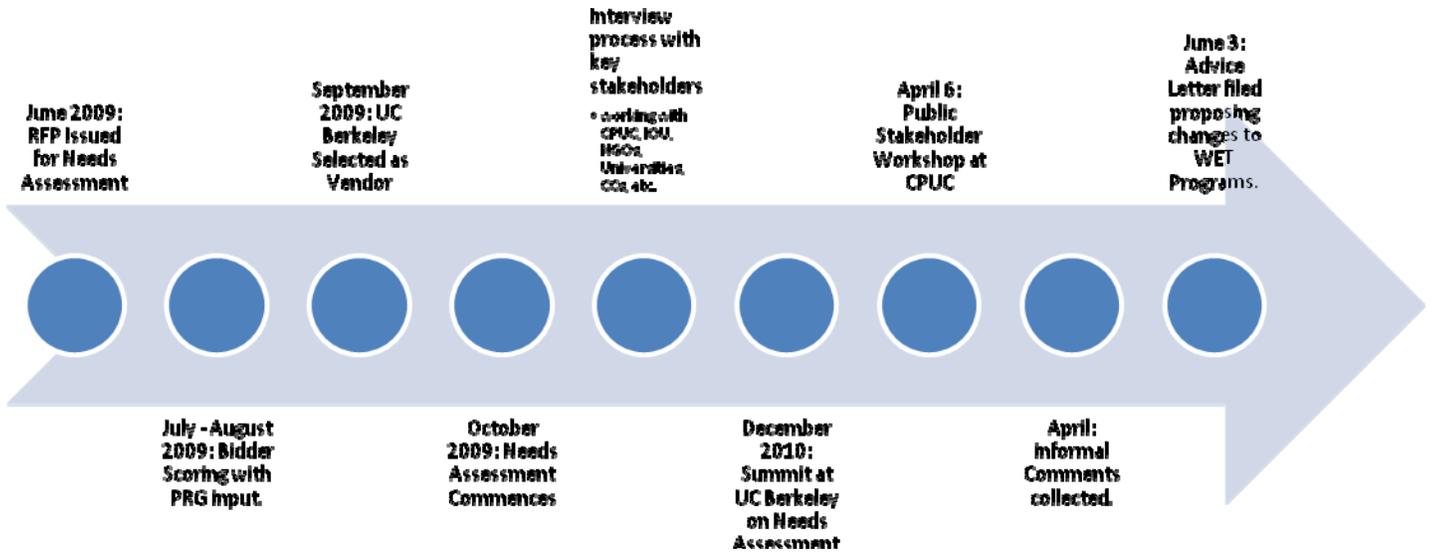
SDG&E Advice Letter 2260-E-A/2041-G-A;

SoCalGas Advice Letter 4249-A;

SCE Advice Letter 2588-E-A;

PG&E Advice Letter 3212-G-A/3852-E-A

Timeline of Needs Assessment Process



Attachment B

Redline Version of Supplemental Advice Letter

SDG&E Advice Letter 2260-E-A/2041-G-A;

SoCalGas Advice Letter 4249-A;

SCE Advice Letter 2588-E-A;

PG&E Advice Letter 3212-G-A/3852-E-A



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September 9, 2011

ADVICE 2260-E-A/2041-G-A

(San Diego Gas & Electric Company; ID U 902-M)

ADVICE 4249-A

(Southern California Gas Company; ID U 904-G)

ADVICE 2588-E-A

(Southern California Edison Company; ID U 338-E)

ADVICE 3212-G-A/3852-E-A

(Pacific Gas & Electric Company; ID U 39-M)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

SUBJECT: Supplemental Joint Filing: 2010-2012 Statewide Workforce Education and Training (WE&T) Program Modifications based on Findings of WE&T Needs Assessment

In compliance with Decision (D.) 09-09-047, Southern California Edison Company (SCE), Pacific Gas & Electric Company (PG&E), Southern California Gas Company (SoCalGas), and San Diego Gas & Electric Company (SDG&E), (collectively referred to as the Investor Owned Utilities or IOUs) hereby submit for filing their supplemental joint Advice Letter (AL) proposing modifications to the existing Statewide Workforce Education and Training (WE&T) program based on the recommendations of the WE&T Needs Assessment and a request for additional information from the Energy Division. All necessary supporting documentation is attached hereto. This joint supplemental AL is being filed at the request of Energy Division and replaces the previously filed IOU ALs (SDG&E's 2260-E/2041-G, SoCalGas' 4249, SCE's 2588-E, and PG&E's 3212-G/3852-E) in their entirety. Included as Attachment B to this supplemental advice filing is a redline version comparing this supplemental AL to the original AL filed on June 3, 2011.

PURPOSE

The purpose of this supplemental advice letter is to provide the information required by the California Public Utilities Commission (Commission or CPUC) in Ordering Paragraph (OP) 36 of D.09-09-047, and with the additional request from the Energy Division, per the supplemental notice received by the IOUs on July 6, 2011.

BACKGROUND

D.08-09-040 Adopting the California Long Term Energy Efficiency (EE) Strategic Plan (Strategic Plan) provided a framework to make energy efficiency a way of life in California by refocusing ratepayer-funded EE programs on achieving long-term savings. The Strategic Plan was developed through a collaborative process between the IOUs and industry stakeholders over the course of a year. Chapter 9 - Workforce Education and Training was adopted in the Strategic Plan and included, among other requirements, the completion of a Statewide Needs Assessment:

Goals:

1. Establish EE education and training at all levels of California's educational systems.
2. Ensure that minority, low-income and disadvantaged communities fully participate in training and education programs at all levels of the Demand Side Management (DSM) and EE industry.

Strategies:

1. WE&T Needs Assessment. An in-depth formal statewide training and education resource inventory and needs assessment is necessary for long-range strategic planning and delivery. The needs assessment and resource inventory will be structured to produce short-, near- and long-term workforce strategies to support each sector defined in the Plan.
2. WE&T Web Portal. The web portal will include links to various DSM related training programs and will allow for a single point of communication. The portal will also serve as a repository for all DSM and EE training, educational conferences, and career opportunities.
3. Energy Efficiency WE&T Task Force. The Task Force, comprised of energy efficiency program administrators, the CPUC, and educational experts, will fulfill administrative functions including: developing a needs assessment RFP; selecting the third party to conduct the needs assessment; and managing the needs assessment evaluation. The Task Force members will continue to help implement the goals and strategies set forth in this Plan.
4. Identify And Implement Specific Programs. For Each Educational Sector. WE&T needs are best organized and approached by identifying the enabling or supporting educational sectors.

Key Actions:

1-1: Define, initiate and drive long-term WE&T development and strategic planning, including identification of funding streams and market sector specific needs.

1-2: Support the community college and adult education efforts to support students to develop their education based on visible career paths in EE and related fields.

1-3: Incorporate EE and DSM into traditional contractor and technician training, such as for plumbers and electricians, and expand training resources to produce target numbers of trained workers.

1-4: Create or expand college and university programs with EE focus and foster green campus efforts to apply this knowledge in clear view of students and faculty.

- 1-5: Develop K-12 curriculum to include EE fundamentals (e.g. math, science, behavior) and identify career options in energy-related fields.
- 2-1: Collaboratively identify appropriate goals and strategies to build California's EE workforce through 2020, focusing on training that increases participation from within minority, low-income and disadvantaged communities in achieving California's economic EE potential.

Following the adoption of the Strategic Plan, D.09-09-047 Approving 2010-2012 EE Portfolios and Budgets subsequently codified the statewide WE&T program as being responsible for the development, planning, and implementation of three subprograms: Centergies, Connections, and Strategic Planning and Implementation. Those programs are described in detail below:

Centergies is organized around market sectors and cross-cutting segments to facilitate workforce education and training. Energy Centers represent the largest component of this subprogram. Included in this program are the Energy Center and Food Service Center activities. WE&T Centergies activities allow potential green workforce candidates to explore EE, integrated DSM technologies and resource management techniques.

Connections is organized around downstream and upstream IOU relationships with the educational sector as well as entry- and introductory-level community-based training efforts that support workforce development in EE, energy management and new emerging green careers.

Strategic Planning and Implementation involves management and execution of several strategic statewide planning tasks identified in the Strategic Plan: a) form an IOU/CPUC WE&T Task Force, b) conduct a needs assessment study, c) facilitate Annual WE&T Public Meetings, and d) create a WE&T-specific web portal.

D.09-09-047 also further clarified direction on the completion of a Needs Assessment to study "critical workforce needs" and to identify "opportunities to help identify and fulfill those needs through collaboration and fund sharing."¹ D.09-09-047 also called for this Needs Assessment to include a "detailed inventory of...workforce education and training programs across the state and [the identification of] collaborative opportunities to make the three-year portfolio of IOU training programs responsive to Needs Assessment findings."² Through a competitive bid process, the IOUs selected University of California - Berkeley to complete the Needs Assessment study. Collaborative efforts were made throughout the study process from initiation in 2009 to 2011, including 1) updates at the quarterly WE&T Taskforce meetings, 2) updates at the quarterly California Green Workforce Coalition meeting of Workforce Investment Boards (WIBs) and other community leaders and entities, 3) bi-weekly meetings with study manager, UC Berkeley and Commission/Energy Division staff, and 4) other community meetings where appropriate. The Assessment was completed on March 17, 2011.

As mandated by D.09-09-047, a link was posted on www.engage360.com on March 17, and an invitation and questions related to a public workshop on the Assessment was noticed to service lists in A.08-07-021 et al, R.07-01-041, R.08-03-008, and R.08-05-022. Participants were provided the opportunity to give their input on how to incorporate the findings of the Needs Assessment into the existing IOU WE&T programs, both verbally at the workshop and through an informal email comment period. Notes from the workshop were also circulated and

¹ P.220

² P.220

participants were given the opportunity to respond with revisions to ensure that the notes accurately captured the comments from the workshop. These public comments were generally supportive of recommendations from the Needs Assessment, and are summarized in Sections 1 to 10 below. As a general trend, it should be noted that three overarching themes surfaced throughout the recommendations and workshop comments: a focus on Sector Strategies, better collaboration, and enhanced data tracking.

Deleted: sector strategies

The IOUs have spent a significant amount of time during the course of the Needs Assessment and Advice Letter process considering the recommendations and public comments and herein propose changes to the WE&T Programs based on this and other program information. Included in this Advice Letter are the following:

1. Proposal of IOU changes to WE&T Programs
2. Attachment A, Timeline of Needs Assessment Process
3. Attachment B, Redline version of Advice Letter

Furthermore, the IOUs recognize and value the significance of the WE&T Needs Assessment. It provides valuable feedback and information for shaping the future of workforce education and training programs to best meet the demands of a changing workforce. In addition to the proposed changes to existing WE&T programs proposed herein, the IOUs will continue to convene during 2011 to discuss detailed statewide implementation of the Needs Assessment recommendations in helping to shape the programs in the immediate future. These IOU meetings are intended to produce objectives, goals and plans for addressing recommendations suggested in the Needs Assessment.

Finally, the IOUs note that ensuring stakeholder participation was an important and critical part of this process. In addition to the steps outlined above and in Attachment A herein, Energy Division was involved and informed throughout the Needs Assessment process and leading up to the filing of the Advice Letter and this Supplemental Advice Letter.

DISCUSSION

The WE&T Needs Assessment contains multiple sections with recommendations for a wide variety of changes to many aspects of the Workforce, Education and Training sector – many far beyond the scope mandated for this Advice Letter.³ For the purposes of this document, only recommendations relevant to the IOUs' existing statewide WE&T programs are addressed, and correspond with the ten general topics established at the April 6 Public Workshop.⁴ For each Needs Assessment recommendation, the IOUs have provided a corresponding summary of public comments followed by IOU rationale for any proposed program change. These proposed changes and corresponding Needs Assessment recommendations are summarized as follows:

Needs Assessment Topic	IOU Proposal
1. Support Sector Strategies	<u>Develop and initiate Sector Strategies</u> , test some proven concepts <u>and refine as needed</u>
2. Collaborate with Construction Trades	Engage with workforce organizations
3. Support Credentials and Certifications	Seek best comprehension and retention strategy

Deleted: Defer strategy, but

³ D.09-09-047, OP 36.

⁴ For full history of relevant recommendations, please see service list notice for questions in preparation for the April 6 WE&T Needs Assessment Workshop, as well as the related PowerPoint distribution.

Deleted: powerpoint

Needs Assessment Topic	IOU Proposal
4. Restructure Classes	Assess feasibility of longer courses and series
5. Support Curricula Development	IOUs have an advisory role; can advise on how best to make curricula accessible
6. Inclusion of Disadvantaged Workers	Facilitate relationships with Disadvantaged groups
7. Evaluation of Workforce Outcomes	Seek feasible metrics
8. Collaborate with Education	This is an existing aspect of the program's strategy
9. Career Education	Incorporate career exploration into programs
10. Evaluation of K-12 Programs	Collect non-specific student data from schools

In the July 6 Supplemental Notice, the Energy Division states:

While the AL, as proposed, does not make significant changes to the WE&T program offering, it does propose changes in the activities currently being promoted by the Statewide WE&T program that will pave the way for more significant revisions to the WE&T at a later date. As such, the current AL will need to be supplemented in order to provide an adequate level of information for each of the action plan areas the IOUs have identified in response to the Needs Assessment and the associated activities being proposed for each area.⁵

Deleted: Centergies[¶]

¶ The Needs Assessment recommendations related to the Centergies sub-program focused on sector strategies

In the supplemental notice, additional information was requested for each of the eleven main categories of needs assessment recommendations addressed in the IOUs' original advice letter. As discussed with Energy Division staff, because an emphasis is being placed on developing a foundation for more significant WE&T portfolio changes utilizing Sector Strategies in the next program cycle as opposed to the current program cycle, some of the requested clarifications may unintentionally preempt future Commission-adopted procedures for development of programs for the next program cycle. These requests may be addressed through the IOUs' next EE portfolio application or General Rate Case (GRC), and other proceedings, and through existing reporting mechanisms. Areas the IOUs believe to be so are described below:

Clarification Requested

Timeline including steps and activities for how current program cycle efforts will be used to inform development of the next program cycle and a schedule for providing status reports to ED via EEGA. (Information requested for sections 1 – 11)

Response

Where possible, IOUs have provided timelines and activities to be initiated during the current program cycle for which funding has been approved. IOUs note that current program cycle efforts are reviewed through the Measurement and Evaluation (M&E) process, and those results are used to inform the development of established CPUC proceedings for EE portfolio development and/or other proceedings which may impact this program.

With regard to providing status reports via EEGA, the WE&T statewide team meets with ED on a regular basis to discuss program progress. Further, IOUs will continue to submit to ED on an annual basis the reports as ordered by the Commission in the Annual Reporting Requirements Manual version 4 (EE Annual Report), D.09-09-047 (WE&T Progress Report) and Resolution E-4385 (Program Performance Metrics Report). To the extent that EEGA

⁵ Supplemental Notice, p.1.

Clarification Requested

Response

Staffing plan if relevant (Information requested for sections 1-11)

Staffing plans for the next program cycle will be addressed within the established CPUC proceedings for Energy Efficiency portfolio development, and the outcome of the GRC and/or other proceedings which may impact this program.

Estimated budget, if relevant, for next program cycle consideration (can be revised as necessary during planning for the next program cycle). (Information requested for sections 1 - 11)

Estimated funding for the next program cycle will be addressed within the established CPUC proceedings for EE portfolio development and the outcome of the GRC and/or other proceedings which may impact this program.

The success metrics this activity should be evaluated on and how they plan to monitor achievement of identified metrics and use results for planning the next program cycle. (Information requested for sections 1-11)

The current Program Implementation Plans (PIPs) for the WE&T program and associated subprograms list Quantitative Program targets (Section 5.d). Modifications and additions to these targets must link to the program theory and logic model. Further, Program Performance Metrics (PPMs) were adopted for the WE&T program in Resolution E-4385. Unless otherwise noted, no changes have been made to these adopted program targets or PPMs. PPM development for the next program cycle will consider success measures for the planned Sector Strategy activities.

An outreach strategy to be initiated in the next program cycle (Section 9)

IOU strategies for program implementation in the next program cycle will be developed during the existing procedures for development of programs in the next cycle.

Based on the length of the supplemental request and repetition of the items noted above that may be addressed in the next program cycle, the IOUs have responded to the supplemental request for clarification with a strong focus on Sector Strategies as an overarching theme. In this response, we will be addressing multiple recommendations within this Sector Strategies approach, as discussed with Energy Division. In addition to the requests identified above, where there was not enough information to adequately respond to questions posed in ED's supplemental request, pending future direction from the Commission, the IOUs have indicated such.

RESPONSE

The Needs Assessment recommendations focus on Sector Strategies, collaboration, credentials and certifications, Energy Center courses, support for curricula development, inclusion of disadvantaged workers, and evaluation of workforce outcomes. The recommendations related to Sector Strategies are largely applicable to the Centergies subprogram, and are addressed below (Sections 1-6). For a discussion of the Connections subprogram, please see Sections 8-10 below. For a discussion of the Strategic Planning subprogram, please see Section 11 below.

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Centergies

- 1. Supporting Sector Strategies

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Needs Assessment. Recommendations from the Needs Assessment surrounding this topic included: (1) initiating, helping fund, and partnering with other organizations to develop robust Sector Strategies in key EE sectors such as HVAC, building operators, benchmarking, and other emerging areas (as well as Low-Income Energy Efficiency or other programs undergoing review or redesign),⁶ and (2) using the CALCTP as a model, utilities should initiate, help fund, or partner with other organizations to develop robust Sector Strategies in key sectors such as HVAC, building operators, and other emerging sectors such as new energy storage, integrated DSM and commercial building⁷.

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Public comments at the April 6th workshop noted that programs such as HVAC quality installation and advanced lighting controls provide a favorable model for utility collaboration in workforce development. In addition, comments were made that the scopes of programs such as PowerPathway™ need to evolve to include four-year learning institutions. It was suggested that there be continued efforts to identify methods of collaborating with trade associations to promote sector relevant training to their memberships (i.e. mailing related classes to selected contractor lists via CSLB).

Currently, IOU Energy Center support strengthening sector-focused training for HVAC, Lighting, and Building Operations. These program areas demonstrate collaborative relationships with industry and trade organizations where the IOUs co-fund and help facilitate industry training.

By fostering relationships among trade, utility and education sectors, enhanced curricula can be implemented that will serve the needs of all parties involved. This approach may also support high-quality installations providing higher potential energy savings, and additionally, better support career growth opportunities for skilled workers. As workers advance their skills working in the field, entry-level apprenticeship programs in strategic collaboration with other sector stakeholders could be an appropriate pathway to “back-fill” those job vacancies. IOUs are conduits for local and regional workforce training models across the state. Such an effort cannot occur solely from IOU funding, so a concerted effort must be made to identify partnership opportunities among other institutions and associations.

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IOUs propose initiating steps to assess its application of strategic collaboration. IOUs believe that Sector Strategies could more efficiently create important and natural industry relationships for course structure changes that better support growth in certification and credential offerings. The Statewide IOU WE&T Program is an established framework for cross-sectional expansion of training curricula and related workforce training programs. Thus, an aptly applied Sector Strategies approach could necessitate IOU expertise, outreach, especially to disadvantaged workforce candidates, and foster a refined process for achieving successful workforce outcomes. IOUs will use the remainder of the current program cycle to evaluate the effectiveness of its current sector partnerships and employ lessons learned and Sector Strategy best practices to develop and implement a refined sector collaboration strategy.

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Sector Strategy is a national movement now and could be identified as a necessary paradigm shift. The concept could help to "connect the dots" between employers and the education and training communities. Sector Strategies address the need for targeted workforce development for a particular industry segment, and should target non-traditional labor pools and disadvantaged workforce.

Deleted: *The action plan* related to the recommendation is to strategize in 2011 and 2012; assess and perhaps test sector strategy concepts using CALTCP, Builder Operator Certification, and Energy Upgrade California/Home Performance models; and use results of discussions and initiatives to inform program filing for next funding cycle.

The goals and objectives of focusing attention on an effective Sector Strategy platform are so that workforce outcomes may be better achieved and sustained for the long-term. The IOUs recognize that the goals and objectives from employing a Sector Strategies must be clear.

Goals from a Sector Strategy approach are:

- Refined collaboration with stakeholders in support of the California energy efficiency strategic plan.
- Broader strategic collaborations to implement WE&T plans and Needs Assessment recommendations
- Strengthened connection between training and employment sectors

Objectives from a Sector Strategy approach are:

- easier industry adoption of training standards implemented in WE&T
- improved quality of workforce and work performed
- increased linkage with resource program goals/objectives
- clearer model for quickly responding to industry workforce training demands

The scope of applying a refined Sector Strategy to the existing WE&T program implementation includes determining industries with critical workforce needs that fall within the auspices of existing program policy guidelines. Likewise, the scale of applying a refined Sector Strategy to the existing WE&T program implementation is limited by available funding critical to forming strategic partnerships around emerging industry sector demands.

The plan of action is to use 2011 and 2012 to assess lessons learned and best practices of other Sector Strategy models such as those adopted by CALTCP, Builder Operator Certification, PowerPathway™, California Workforce Investment Board (CWIB), and other mostly statewide implementers. Using the results, IOUs will A) identify ways of refining its approach to existing IOU collaboration and B) establish and evolve a proven approach for implementing successful Sector Strategy relationships in the IOU WE&T statewide program for the next filing cycle.

The IOUs have begun preliminary work of splitting trade and professional level categories of training to consider Sector Strategy application. A few industries or technologies that could benefit from a Sector Strategy review and possible refinement by the IOU's WE&T programs:

Trade category

- Lighting Day-lighting
- HVAC
- Building management
- Building maintenance

- Small/Medium Business Audit
- Manufacturing/Automation
- Home Performance
- Low-income weatherization

Professional Category

- Codes & Standards enforcement agency
- Architecture/Engineering/Design
- Lighting design/consultants
- Sustainability consultants
- New Construction
- Food Service

The current program cycle will also be used to review the advantages and disadvantages of IOUs functioning in a typical intermediary role in formulating strategic collaborations through direct compliance with WE&T program implementation. Of immediate consideration in 2011 is deciding upon rationale for refining or forming new Sector Strategy relations. Criteria for such decision will be developed from review of Sector Strategy implementation models, results and effectiveness in achieving goals and objectives. Where opportunity emerges through partnership assessments to make program changes in this program cycle, such as to advance workforce outcomes, course structuring, credentialing pathways, outreach to trade and disadvantaged workers, and influence relevant curriculum, the IOUs will do so accordingly.

IOUs will continue to partner with IOU EE programs such Codes and Standards, Emerging Technologies and Energy Upgrade California. External entities that the IOUs believe could benefit from strategic collaboration within a more refined Sector Strategy are:

- Local government building, inspection and regulations agencies
- Community Colleges
- Trade organizations
- Contractor associations
- Certification bodies
- Workforce Development Agencies
- WE&T statewide Taskforce

A few criteria for considering the need and form of a Sector Strategy collaborative include whether Sector Strategy can:

- better address a specific industry workforce need
- deliver measureable and tangible outcomes
- more quickly respond to market demands
- create needed certification and credentialing
- bring together needed partners and relationships
- address gaps and needs for training skills and pathways
- advance IDSM policy

In developing partnerships, IOUs will draw on the best practices of successful models. The IOUs will need to assess the relevancy and value of Sector Strategy adoption on a case by case basis on its merits to advance statewide initiatives such as CEESP and the recommendations of the Needs Assessment while relying on the availability of metrics from which benefits of adopting a Sector Strategy can be made specific, meaningful, achievable, relevant and time-based.

Action steps to be taken in order to reach a stage of refining, adopting and implementing an effective long-term Sector Strategy approach:

Q3-Q4 2011

- IOUs establish statewide team to identify relationships that resemble Sector Strategy collaborations
- IOUs agree to a common description and application for Sector Strategy for statewide WE&T implementation
- IOUs coordinate with external adopters of Sector Strategies to assess lessons learned and best practices. This step may require the formation of working group sessions with key local Sector Strategy adopters or other technology media to work with parties who are not local

Q1-Q2 2012

- IOUs agree on Sector Strategy success factors based from lessons learned and best practices to establish IOU Sector Strategy criteria
- IOU team completes review of SW IOU implemented strategic collaborations and evaluate against Sector Strategy criteria. Refine relationship, as needed
- Identify SW IOU implemented strategic collaborations and evaluate against Sector Strategy criteria. Refine relationship, as needed
- Identify SW IOU implemented strategic collaborations and evaluate against Sector Strategy goals and objectives. Refine relationships as needed

Q3-Q4 2012

- Continue identifying SW IOU implemented strategic collaborations and refinement toward meeting IOU Sector Strategy criteria, as needed
- Continue identifying SW IOU implemented strategic collaborations and refinement toward meeting IOU Sector Strategy goals and objectives, as needed
- Have a clearly established working model for IOU formation of a Sector Strategy within the statewide IOU WE&T program implementation guidelines per established criteria, goals and objectives

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

2. Collaborations: Working with Construction Trades

Needs Assessment. Utility training centers and classes will collaborate with the contractor businesses to address EE as well as awareness of utility incentive programs. Recommendations from the Needs Assessment include: (1) expanding contractor and contractor association collaborations to building and construction trades associations that have demonstrated a commitment to investments in ongoing

workforce training, such as contributions to apprenticeship programs⁸ and (2) expanding collaborations between the Energy Training Centers (ETC) and contractor associations and building and construction trades associations. The Needs Assessment states that emphasis should be on collaborations with high-road associations demonstrating commitment to investments in ongoing workforce training, such as participating in apprenticeship programs.⁹

Public comments at the April 6th workshop focused on a desire for more focused efforts with WIBs for pre-employment training to specific green jobs opportunities and the continuation of the pursuit of connections with community colleges similar to the PowerPathway™ program. Comments also supported the enforcement (within local jurisdictions) of technology implementation to attain sustainable savings. Finally, parties proposed the development of a strategy to provide a more structured approach to technology training to unify understanding of the technology as a whole (such as HVAC).

The Energy Centers are familiar with reputable trade associations and through our IDSM Program relationships, collaborate in the development of curriculum leading to improved EE practices. These trade associations are known for their focus on best practices within their respective sectors.

IOUs propose to continue to evaluate existing training partnerships within the IOU DSM programs and external partners to look for opportunities to optimize alignment with strategic objectives and the recommendations of the Needs Assessment.

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The Energy Training Centers, through the Sector Strategy development work as proposed in this supplemental, will target development of partnerships, new and existing, around the utility training center sectors (see Sector Strategies) and the partnering opportunities that emerge from those efforts. Examples of potential partner organizations the IOUs will pursue include community colleges, trade organizations, contractor associations, certification bodies, and workforce development organizations such as the WIBs by soliciting collaborative participation that will lead to progressive improvements in IDSM program participation and workforce outcomes. Additionally, IOUs propose to advance partnerships and explore models similar to PowerPathway™, through 2012 for further evaluation and possible enhancement. The recommendation from the Needs Assessment also states that programs should emphasize “collaborations with high-road associations” and focus outreach to contractors who participate in state certified apprenticeship programs because it can help the Energy Centers reach workers in the main EE occupations. IOUs support this objective, while striving to achieve program models that are inclusive and retain equitable access to all ratepayers.

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Q3-Q4 2011

The plan of action is for the IOUs to form a working group to focus on partnership development, including, but not limited to, trade associations. The working group will be responsible for evaluation of existing partnerships and scoping opportunities for new and expanded partnerships with consideration of all the WE&T goals.

Deleted: The action plan related to the recommendation is to seek and engage with new partnerships or work with existing partners to support their certification programs with information on EE. Where there are few existing connections between trade instructors and EE, utilities can offer curriculum review assistance as well as targeted training programs for training trainers.

⁸ 205

⁹ 295

Q1-Q4 2012

Once partners are identified, IOUs will engage in dialogue with existing and prospective partners to assess the needs and opportunities, and identify the role and contribution of the utility training center programs and resources.

The IOUs propose that partnerships will be tracked via the current adopted PPMs. Through the PPM efforts in 2011, the IOUs established an understanding of how program partnerships are defined and began tracking program partners and instances of partnership activities. This effort requires modifications to tracking data fields in registration information in some sites. The IOUs also propose working with partners to gain support in leveraging their data and tracking mechanisms. IOUs need to determine appropriate measurement definitions for partnerships given the varying nature of the types of partnerships and relative outcomes.

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

3. Energy Centers' role in Credentials and Certifications

Needs Assessment. The study notes that certifications play a critical role in career development and in creating new or supporting existing partnerships with other organizations with access to a particular part of the workforce. The recommendation from the Needs Assessment is to modify the structure of classes offered by the Energy Centers, thereby increasing the number of course series that are longer in length than typical classes, focusing on a specific occupation, having a workplace-based hands-on component, and offering clear learning objectives that lead to certification. The Needs Assessment further notes that course series have a greater impact on energy savings than the typical short classes. In addition, recognized certifications for contractors and workers are expected to improve workforce outcomes as well.¹⁰

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Public comments at the April 6th workshop noted that higher levels of certification are needed for various industries. Additionally, a nationally recognized certification with the flexibility to apply regional differences such as climate and similar variances as needed would be a great asset to the workforce sector.

The Energy Centers currently offering and supporting certification programs such as BOC, IHACI, HERS, CALCTP, and USGBC. These programs offer opportunities for customers and market actors to achieve industry-recognized credentials. Such course offerings vary in length dependent on the complexity of the subject matter and the time required for the average attendee to digest the pertinent subject matter. The Energy Centers also endorse adult learning principles (ALPs) for all courses funded by IOU programs, and employ ALPs for all self-funded courses. The incorporation of ALPs in seminars addresses the recommendation for a hands-on learning environment conducive to prompt work place application.

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IOUs recognize that some certifications provide members of the California green building workforce required knowledge and skills for their jobs, credibility as trained and certified professionals, and can increase their employability when seeking promotions in an existing job or when seeking a new job. IOUs have supported and continue to

support certificate programs in various ways, including connecting utility programs to certificate programs, providing subject matter experts as instructors, serving on advisory committees to help shape certificate programs, providing curriculum to support certificate training, providing meeting and classroom space for certificate training, and providing direct financial support. IOUs also recognize that some course materials can be structured and organized to support existing certificate programs, and in some cases support the creation of new certifications. Certificate programs need to be very well coordinated and thought out, and can take several months to over one year to develop.

IOUs propose continuing and increasing efforts at their Energy Centers to offer courses which lead to certifications, or support certification programs. Where resources allow during the current funding cycle, IOUs will develop additional series type classes, as statewide programs. For example, IOUs will explore developing educational programs in partnership with other organizations that make up a series of trainings with quizzes and tests that provide feedback to students about their comprehension and retention of the material. These programs will be developed with the intent of supporting other institutions that have certification programs. Once offered, the program may be adopted by an organization to relieve the IOUs of the legal responsibility of certification.

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The plan of action is for IOUs to use the current filing period to discuss and map out their potential to partner with other organizations on certificate support and development. Where appropriate and practical, given limited resources, IOUs have begun to organize existing courses into series. An organized and cohesive series of classes with quizzes and exams can serve as a first step toward a certificate program. IOUs plan to pursue development of a certification strategy on a coordinated statewide basis, with the targeted timeline outlined below.

Deleted: The action plan related to the recommendation is for IOUs to reach out to their current students who are members of trade and professional organizations

Q1 2010 – Q2 2011

During the current filing period, IOUs have provided support to certificate and credential programs through various efforts, including hosting certificate classes at the Energy Centers, serving on advisory committees, and providing IOU subject matter experts as instructors. Some of those efforts (BOC, CALCTP, etc.) are summarized below. IOUs have also begun to map out existing course offerings and identify potential structuring of classes into series that can be offered as series in current filing period. This will serve as a way of beginning to “test” potential of creating course series that other certifying organizations might adopt as a stand-alone certificate program or that can support an existing or emerging certification program.

Q3 – Q4 2011

IOUs will expand the existing working group to focus on course series development and industry certifications. The working group will be responsible for identifying organizations and certifications that are currently offered through the Energy Centers or that can be supported by existing and future Energy Center efforts. The working group will begin work to identify and communicate with certifying organizations to identify the nature of collaboration as well as mapping existing IOU content with industry skills needed and identify gaps in certification and training that might be filled by IOUs collaborating with industry organizations. IOUs will also explore possibilities of taking an existing IOU series (i.e. Lighting Academy) and disseminate and implement in other IOU territories. Structuring course series, developing quizzes and exams, and issuing certificates of completion represents “added value” to typical Energy Center offerings. IOUs will discuss implementing a charging structure for these series-based trainings.

Q1- Q2 2012

Through a collective effort informed by conversations with certification organizations, working group will identify a statewide, standardized set of certifications that have value in the respective industries and can be offered through industry partners such as is done to date with USGBC, IHACI, BOC, NATE, etc. As resources allow, IOUs will also begin to expand existing series to new technologies and/or sectors. IOUs will also continue to develop their existing series to include next steps toward certification such as examination development and exploration of online learning to support fundamentals.

Q3 - Q4 2012

As needed, IOUs will draft plans to formally partner with certification organizations and begin to implement plans for partnering with certifying organizations. With information gathered from these collaborative efforts, working group will draft language that can be used in program implementation planning for the next filing period according to direction in upcoming CPUC Rulings or Scoping Memos. Where possible, IOUs will also begin to offer limited courses in a series with the intent of providing a clear path toward gaining a specific skill set. In some cases, the series may be adopted by a third party implementer to create a certificate program.

IOUs will take lessons learned, progress thus far, potential steps forward, and include in Program Implementation Plan for next filing period.

The WE&T Program currently supports this approach through various IOU efforts:

BOC

The Building Operator Certification program is a nationally recognized, competency-based training and certification program that offers facilities personnel the improved job skills and knowledge to transform workplaces to be more comfortable, energy-efficient and environmentally friendly.

CALCTP

The California Advanced Lighting Controls Training Program (CALCTP) is a statewide initiative aimed at increasing the use of lighting controls in commercial buildings.

Steam License series

The series offers clear pathways from entry-level to certification-level, concluding with the professional certification, DOE Steam Specialist class and qualifying exam.

Course Series Example:

- Boiler Basics
- Boiler Water Treatment
- Principles of Combustion
- Steam System Best Practices
- LA Steam License Training Series & Exam
- DOE Steam End- User
- DOE Steam Specialist Certification & Exam.

CSU East Bay IDSM Certificate

IOUs have partnered with internal groups such as the PG&E PowerPathway™ program and colleges and universities (California State University – East Bay in this case) to serve as advisors to certificate programs that would result in better trained utility employees and energy efficiency consultants.

HERS, BPI, NATE

The IOUs work with Building Performance Institute, California Home Energy Efficiency Raters and North American Technicians Excellence and other similar providers to offer training that is preparatory instruction for certification in the areas of home performance, home audits and HVAC installation, respectively.

Course Series Example:

- NATE Test Prep and Review
- Home Performance, Putting It All Together
- Green Homes That Work
- Designing High Performance Homes with HEED
- Zero Net Energy Homes
- Air Sealing and Insulation
- ACCA HVAC Performance Series

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

4. Structure of Classes

Needs Assessment. The Needs Assessment notes that not all people learn in similar ways and standard one-day classes may not allow the instructor to deliver a comprehensive set of lessons with actionable items that the student can implement as part of his/her job. Recommendations from the Needs Assessment include: (1) modifying course offerings to expand targeted cohort-based series of classes that are longer in length, focus on a specific occupation, have a workplace-based hands-on component, clear learning objectives, and lead towards a certification¹¹. The Needs Assessment further clarifies that these course series were shown to have a greater impact on energy savings than the typical short classes. In addition, the study notes, recognized certifications for contractors and workers are expected to improve workforce outcomes as well.¹²

Public comments at the April 6th workshop included the suggestion to charge an administrative fee for participants to enroll in a Centergies course.

IOUs propose modifying the course series. Some IOUs are experimenting with this idea to expand the concept in 2011 and 2012. A high quality certification program can lend credibility to an organization and to the curriculum when well designed, delivered, and administered. IOUs may consider working with organizations to develop a course series with the intent of moving that series toward a certificate program with a third party organization.

¹¹ 205

¹² 295

The *plan of action* is to convene as a group in 2011 to discuss which organizations can serve as partners to inform and eventually disseminate certification curriculum developed by or advised by the IOUs. Also, IOUs will use the current program cycle to discuss and map out the potential to partner with other organizations on certificate support and development. Where appropriate and practical, given limited resources, IOUs can begin to organize existing courses into series. An organized and cohesive series of classes can serve as a first step toward a certificate program. With some exception, these past efforts have not been coordinated and discussed at a statewide level. IOUs plan to communicate better on the topic of certification.

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To benefit from the complementary nature and objectives sought through course structure changes and certification/credentialing, the action steps and **timeline** generally follow those outlined for Credential and Certifications in Section 3 above.

The WE&T Program currently supports this approach through several efforts:

IHACI

The Institute of Heating and Air Conditioning Industries (IHACI) offers HVAC training with curriculum focused on design, service, installation, sales and maintenance practices to promote optimum energy efficiency.

Small-Medium Commercial Building Audits

This series is currently under development. Courses exist individually and PG&E is in the process of formalizing it as a series. This 5-day series is intended for students with no or some knowledge of energy audits for small to medium sized commercial buildings.

Existing Building Commissioning Workshop Series

During this 12-month class which meets once per month, participants are directly involved with the commissioning process in their buildings. Attendees get exposure to the planning, decision-making, and diagnostic aspects of commissioning by retro-commissioning a facility. Students experience the whole process and immediately apply what they have learned through structured, hands-on activities under the supervision of qualified commissioning experts.

ServSafe

A food safety training and certificate program administered by the National Restaurant Association

The program covers five key areas:

- Basic Food Safety
- Personal Hygiene
- Cross-contamination & Allergens
- Time & Temperature
- Cleaning & Sanitation

Sustainability Series

Consist of workshops that encompass various levels of student interest. Classes offered include "Core Concepts" which covers an introductory in sustainable design, construction and operations of buildings and communities. In an effort to assist customers with their "LEED Green Associate Training" certification that prepares

attendees for the LEED-GA exam is now offered and LEED Existing Building Operations and Maintenance Technical Review which provides a framework for developing efficiency and sustainability plans for existing buildings. As customers continue to put more emphasis on sustainability additional classes will be offered and the calendar expanded.

Lighting, HVAC, Day-lighting Academy

Academy classes are designed to be taken in sequential order, starting with the very basics of the particular technology (lighting, HVAC, day-lighting, etc.) and building on concepts learned in prior classes.

The classes will provide graduates the following skills:

- Determine lighting requirements
- Make knowledgeable lamp selections
- Apply economical retrofit strategies
- Calculate lighting quantities
- Select appropriate controls
- Make the best use of SCE incentives

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

5. Support for Curricula Development

Needs Assessment. The study notes that IOU training centers can leverage their expertise to support other organizations that are less experienced with EE or other ISDM content. Recommendations from the Needs Assessment include actively participating in (1) supporting curriculum review and updating, instructor professional development, and continuing education requirements associated with license renewal for the main “home institutions” that train building and construction professionals and trades people, including four-year colleges and graduate programs, apprenticeships and community colleges¹³ and (2) the content development, review, and updating of curricula, and support instructor professional development for the main “home institutions” that train building and construction professionals and trades people, such as apprenticeship programs, community colleges, and four-year institutions. ETC staff should be encouraged to share their expertise as appropriate to ensure that curricula incorporate up-to-date information on new technologies and practices.¹⁴

Public comments at the April 6th workshop did not address this particular Needs Assessment Recommendation.

IOUs propose continued efforts in the development and updating of training curricula. Energy Centers and IOU IDSM programs fund and lead the development of curriculum that addresses the educational needs of the various technology and construction sectors including codes and standards, and energy efficient building design and construction. These curriculums are available to the public through the many seminars

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offered through the Energy Centers, and in some instances, these and similar resources made available to trade and vocational organizations, IOUs can provide a supportive role in curriculum development. IOUs are already engaged with institutions to serve in advisory roles.

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The plan of action is for utilities to continue engagement with IDSM Programs, training organizations and educational institutions to provide support in curriculum development and review efforts. Making Energy Center expertise available in the form of personnel, teaching tools and other resources, as-needed or requested, represents several ways of outreach.

Deleted: The Energy Centers do not use ratepayer funds to develop curriculum for the exclusive use of any agency, but will consider expanding its partnerships with vocational and trade organizations interested in using existing or developing curriculum materials available to the public through Energy Center seminars.

The criteria for determining strategic collaborations for many of the recommendations prescribed in the Needs Assessment as been generally laid out in the Section discussing Sector Strategies. In the case of curriculum development, allocating resources will be primarily prioritized by relevance to near-term or long-term demand of the market, employers or in strengthening compliance with prevailing work standards. The Sector Strategies section outlines a few preliminary criteria for a Sector Strategy engagement of which a few seem particular applicable in curricula development, such as when IOU expertise can:

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- Help better address a specific industry workforce need
- help create needed certification and credentialing
- help bring together needed partners and relationships
- help address gaps and needs for training skills and pathways
- help advance IDSM policy

Criteria for engagement will be greatly coordinated with efforts identified and described for refining course structure, certification and credentialing. There are numerous categories of organizations and energy efficiency supply chain participants to whom IOUs could conceivably expand outreach. Creating and managing such a list of relationship will require IOUs to strengthen coordination with collaborators. IOUs will rely on IOU rebate/incentive program requirements as a complimentary determinant for guiding and advising on workforce training curriculum in the absence of any other clear and apparent market demand standard

In line with other responses to the Needs Assessment, IOUs will use other internal department resources such as those provided by Codes and Standards, Emerging Technologies, Workforce training and Energy Upgrade California to strategically collaborate on a more refined use of IOU expertise with:

- Local government building, inspection and regulations agencies
- Community Colleges
- Trade organizations
- Contractor associations
- Certification bodies
- Workforce Development Agencies

As described in other sections, measuring success for any of these activities, dependent or independent of a Sector Strategy approach relies on availability of metrics from which benefits of adopting a Sector Strategy can be made specific, meaningful, achievable, relevant and time-based.

To benefit from the complementary nature and objectives sought through course structure changes, certification/credentialing and support for curriculum development, the action steps and timeline generally follow those outlined for Credential and Certifications in Section 3 above.

Q3 – Q4 2011

The IOUs will form a working group to identify institutions, associations and agencies expressing greater IOU role in curriculum development. Working group will begin communication with parties to explore ways of sustainable strategic collaboration as well as to evaluate existing relationships to identify gaps and opportunities for improving the relationship.

- statewide or regional workshops with stakeholders in coordination with other recommendations addressed in this Advice Letter
- determine curriculum needs and sources for collaborative meetings on refining or initiating new curriculum

IOUs will continue to leverage internal resources and explore new external resources that might help expedite and more effectively integrate IOU expertise into outside curricula development. IOUs will certainly look to existing models (i.e. Lighting Academy) as starting points for building a sustainable process and methodology for coordinated curriculum exchange and development.

- inventory internal curriculum sources
- assess lessons learned and best practices from existing working models

Q1- Q2 2012

Through collective, informed and collaborative conversations with institutions, associations and agencies, working group will identify a methodology that stakeholders find beneficial and IOU programs can reasonably support.

- statewide or regional workshops with stakeholders in coordination with other recommendations addressed in this Advice Letter

Q3 - Q4 2012

IOUs will formalize a working model with institutions, associations and agencies from which all will work together in advancing curriculum per industry or technology sector demands. The progress will be monitored and help to refine program implementation planning for the next filing period.

- statewide or regional workshops with stakeholders in coordination with other recommendations addressed in this Advice Letter

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

6. Goals for Inclusion of Disadvantaged Workers at Energy Center Programs

Needs Assessment. Recommendations from the Needs Assessment around this topic include: (1) allocating a percentage of their training funds to support workforce

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programs that meet the best practice criteria described above¹⁵ and (2) adopting as a goal for the ETC the inclusion of low-income, minority, and disadvantaged workers and job seekers. The Needs Assessment also recommends the development and implementation of specific programs in collaboration with organizations that have a record of accomplishment in this arena, emphasizing Sector Strategies that can lead to placement in good jobs with career ladders.¹⁶

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Public comments at the April 6th workshop focused on collaboration with centers in the non-IOU sector to address disadvantaged workforce training issues. The suggestion was made to enhance collaboration within the existing framework of programs.

IOUs propose inclusion of disadvantaged workers within the scope of Sector Strategy development. A preliminary approach must include consideration of existing and new potential partnerships to enhance efforts toward the inclusion of disadvantaged workers. This requires coordination and evaluation work to identify appropriate organizations with proven records of accomplishment that focus on these groups. The IOU's will consider adopting a goal in the next program cycle after an evaluation of effectiveness of current program cycle efforts is complete.

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The Energy Centers do currently support education of the incumbent workforce in accordance with the CLTEESP. The workforce population includes a substantial element of blue-collar workers that may represent the demographic referenced in this recommendation. Currently, the Energy Center programs do not distinguish between the various demographics represented. The Energy Centers do however work to make Energy Center workshops and trainings equally accessible to all customer demographics by implementing an off-site strategy that brings workshops and trainings to communities throughout the IOU's service territory. The Energy Centers actively collaborate with the Workforce Investment Board, community colleges, and community organizations that provide training services and outreach to low-income, disadvantaged, or underserved communities/workers.

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Deleted: The action plan related to the recommendation is for IOUs to partner with organizations that are reaching that disadvantaged worker population to discuss opportunities for collaboration through actions that count toward filed goals. Those actions may include consultations, outreach events, train-the-trainer sessions, etc

The partnerships goals in this area correspond to the overarching objectives of WE&T to educate incumbent workers, contribute to a greener workforce, and create career pathways for disadvantaged workers entering or already in the California economy. IOU contributions to those partnerships will include provision of subject matter expertise, course curricula, visual aids, hardware, and other materials that support Adult Learning Principles for a practical learning environment. Other support may include periodic consultation with the partner, and provision of class attendance at the IOU Energy Centers, and off-site.

The plan of action is to improve awareness of Energy Center training resources among disadvantaged worker populations through targeted marketing and partnering efforts.

There is no fully vetted definition of a "disadvantaged worker" at this point. For the purposes of the IOUs work, it is suggested that disadvantaged worker may include low to no-income, blue-collar workers currently employed or unemployed, ethnic minorities, disabled persons, or those lacking a GED. IOUs acknowledge there is an opportunity

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to define a “disadvantaged worker” more precisely to help focus program outreach efforts in the next program cycle and beyond.

2011-2012

The IOUs propose to continue the pursuit of educational collaborations with organizations that serve the various categories of disadvantaged workers. The IOUs propose that the definition of “Educational Collaboration” be consistent with the WE&T Centergies PPM – providing funding or some in-kind benefit to partner organizations engaged in providing education programs to low income or disadvantaged workers that through IOU developed curricula, or resources, expanded education opportunities might occur.

Q4 2011 - Q1 2012

IOUs propose to take inventory of current network of partnerships with organizations serving low-income and disadvantaged workers engaging with Energy Center training centers or other utility initiatives. The IOUs will assess these partnerships to identify their respective influence within each of the various sectors, potential expansion opportunities, and resource requirements.

Q1-Q4 2012

The IOUs will develop criteria and parameters to prioritize partnerships that provide the greatest impact to workforce outcomes. The intent is to foster the most effective partnerships. The established benchmark for relationship conditions shall guide partnership parameters for the next program cycle.

Based on these objectives and the results of the Sector Strategy development work, it is anticipated that the inclusion of disadvantaged workers within the sector strategies can be achieved. Furthermore, completion of these action items will serve to identify an appropriate funding allocation to meet the demand for industrial sector related training of the disadvantaged worker class, as defined.

To this end, as applicable, the IOUs will strengthen partnerships with workforce development and community based organizations as well as internal IOU departments (LIEE/CARE) that successfully serve these demographics. WE&T groups can provide education opportunities, certification courses, “train the trainer” opportunities, curriculum, etc, while the partnering agencies can outreach to their existing membership base, offer complementary programs which address additional barriers facing disadvantaged workers, and leverage existing tracking metrics and reporting protocols.

The goal for partnerships in this area corresponds to the overarching goal of WE&T to educate incumbent workers, contribute to a greener workforce, and creating career pathways for disadvantaged workers entering or already in the California economy. IOU contributions to those partnerships will include provision of subject matter expertise, course curricula, visual aids, hardware, and other materials that support Adult Learning Principles for a practical learning environment. Other support may include periodic consultation with the partner, and provision of class attendance at the IOU energy centers, and off-site.

Some examples of current and potential partner organizations include:

- LA Trade Tech – Provide students and community with high-quality technical and professional educational options that flexibly meet their life-long career

- development and academic goals; foster a climate of life-long learning; prepare students to participate effectively in our democratic society; and generate economic development with educational, governmental, community and business partners.
- Community Based Organizations that deliver LIEE and CARE programs – These organizations employ local workforce in the low-income communities they serve. Identify ways to partner with these organizations to make energy center training resources available as part of their training/workforce development programs.
- Workforce Investment Boards/Employment Development Department – WIBs and EDD as part of their mission deliver workforce development programs that serve clients that could be associated as low-income, displaced workers, disadvantaged, among other distinctions.
- Community Colleges – Provide education and vocational training to students across many socio-economic groups.
- San Francisco Office of Economic and Workforce Development – Provide skills based training for weatherization workers in the Energy Savings Assistance Program
- San Diego Workforce Partnership – Provides job training and operates a network of career centers throughout San Diego County. Career development programs are offered to disadvantaged workers and include job fairs, online learning, and other education and training opportunities.
- Troops 2 Energy – Trains and prepares transitioning military service members for jobs in the renewable energy industry.
- Urban Corps – Provides young adults with a high school education combined with job training and community service in the fields of conservation and recycling.

IOUs propose to track data indicating growth of partnerships in concurrence with ED PPMs, and to use 2011 partnerships as a baseline metric for tracking growth. The IOUs will coordinate statewide to add tracking data fields in our registration information to identify partnerships activities hosted at Energy Center facilities or off-site. The IOUs will seek support of partners in providing data to support tracking mechanisms. In 2012, IOUs propose to determine success criteria to include growth of attendance in specific targeted offerings both at Energy Centers and within partner programs that carry influence of IOU involvement; growth in the number of targeted offerings (% of educational collaborations).

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

7. Evaluation of Workforce Outcomes – UPDATE TO COME

Needs Assessment. Being able to track information about participants and effects of training sessions is necessary to evaluate the success of a particular session or series.

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Participant data may also provide important information on worker backgrounds, job types, and industry segments that the Centers are reaching, which can guide ETC offerings and curriculum development.

Tracking of more robust participant information will allow the IOUs to better assess how the ETC are serving the broader California workforce and where they fit into the broader training resources in California. It may also help implementers design ETC programming and outreach efforts to align with goals and recommendations set by the

Program Performance Metrics, California Energy Efficiency Strategy Plan and the Needs Assessment.

Recommendations from the Needs Assessment include: (1) strengthening tracking of participants and outcomes, and (2) assessing and determining what additional information is required to evaluate workforce outcomes for the ETCs. In addition, the Opinion Dynamics evaluation makes a number of suggestions for tracking participants in the Energy Centers programs. These recommendations include the creation of a common registration form among all ETCs that will collect participant type, profession or field, years in profession, and existing knowledge of course topic; use of complete and consistent data entry for course and participant tracking, such that repeated courses and participants can be easily identified; and the creation of a shared registration system across all ETCs that would allow IOUs to track participants across multiple ETCs.¹⁸

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The Needs Assessment recommends that the ETCs should, at a minimum, begin to collect information from participants on occupation, prior education, and work experience.¹⁹

Public comments at the April 6th workshop did not address this particular Needs Assessment Recommendation.

IOUs propose assessing and evaluating requirements for redesigning the ETC registration system and participant information collection methods statewide among IOUs, such that the data fields and recommendations described above may be incorporated.

The plan of action is for IOUs to thoroughly review and assess the statewide IOU information systems in order to develop and implement a means of tracking and measuring program and customer participation and outcomes in a way that is feasible, effective and respectful to customer concerns for intrusion on rights and privacy.

Once such a system is in place, tracking data will initially be used to develop a baseline representing the current levels of course participation and participant career and educational background. In the future, IOUs will be able to use the baseline data to track the effectiveness of changes made to ETC courses in response to the Needs Assessment recommendations and other program modifications.

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Connections

The Needs Assessment recommendations related to the Connections sub-program focus on collaboration with the education sector, career education, and evaluation of K-12 programs. We have addressed each one herein:

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K-12 – while the Needs Assessment does not provide any clear recommendations with respect to sector strategies, the Needs Assessment does make recommendations for collaborating with career academies, regional occupational programs focusing on high

¹⁸ 206

¹⁹ 295

school to develop a systematic, organized effort to institutionalize energy awareness and career awareness education programs, and align them with California Content Standards.

Partnerships should include organizations and programs that have an explicit focus on serving disadvantaged communities and lowering school dropout rates, like the Career Academies. The following is a list of possible entities to be included in the collaboration: California Department of Education, California Partnership Academies, investor-owned utilities, publicly-owned utilities, California Energy Commission, California Public Utilities Commission, California Environmental Protection Agency, organizations providing after-school educational programming, and high-performing K-12 energy education programs (representative of all funding sources).

The IOU's are currently collaborating with 1) California Department of Education on Energy and Utility Sector curriculum standards (more details in # 8 below), 2) California Energy Commission to develop guidelines for clean energy partnership academies (more details in # 8 below), 3) Los Angeles Unified School District to develop career partnership academies, 4) collaborating with several academies in the PG&E service territory. Partnership academies combine career technical education with academic courses to prepare students for graduation and future employment or schooling. The academies serve primarily at-risk students. The criteria used for student eligibility include irregular attendance, record of underachievement, low motivation or disinterest in the regular academic program, and economic disadvantages.

Neither Career academies nor sector strategies seem to apply to K-8 students so, we are focusing on career awareness and career exploration for these grade levels. The hope is that by engaging students on career awareness and career exploration of green and clean energy careers, students will move into HS and college with a clearer focus on careers.

Colleges – While the Needs Assessment does not provide any clear recommendation with respect to sector strategies, the Needs Assessment does recommend strengthening and expanding collaborations with community college career technical education and four-year colleges to target career development results.

The IOU's are currently collaborating with the California Community College (the largest in the nation with 112 campuses) Chancellor's office on the design and implementation of community college programs that prepare students for sector specific careers as well as preparing students for transfer to four-year colleges. California Community Colleges working closely with Workforce Investment Boards (WIBs) are in the best position to understand community and industry needs and deliver sector strategy training to meet those needs. The IOU's are working directly with the WIB's and indirectly through the community colleges on our sector strategy objectives.

Community colleges have several different roles within the state's system of workforce training and education, including preparing students for entry-level jobs, providing experienced workers with opportunities to improve their skills in their existing profession or in a new profession, and preparing students to enter four-year degree programs in engineering and other technical disciplines like architecture and construction management.

8. Collaborations

Needs Assessment. The Needs Assessment states that collaboration with various levels of the education sector is an intricate part of the program strategy. Recommendations from the Needs Assessment around this topic include the need for strengthening and expanding collaborations with career Academies, Regional Occupational Programs (ROPs) and community colleges.²⁰

Public comments at the April 6th workshop focused on what should be the objectives of the collaborative relationships being developed by the IOU education programs with K-12, community colleges, and four-year colleges and universities.

IOUs propose continuing current work with secondary and post-secondary institutions.

The plan of action is to utilize existing educational relationships and broaden that network to build new relationships and expand the program outreach. IOUs are currently collaborating with Career Academies as well as Community Colleges. ROPs have been proposed as a collaborative target and the IOUs are evaluating ways to integrate that relationship into their program. Expanding educational collaborations are an intricate part of the WE&T Connections program design and strategy.

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Criteria for new partnerships:

- 1) Be involved directly or indirectly with the K-12 and/or college level education/training sector in California
- 2) Offer their services (training and education and /or support) or products regardless of income, minority status or English proficiency of participants.
- 3) Share the goal of energy efficiency education for K-12 and beyond.
- 4) Share a vision (CPUC strategic plan) of serving students in underserved communities and/or low income and minority communities. In determining low income and minority communities, *The IOUs* use Title # 1 school list as well as the Free Reduced Price Meal (school lunch) list
- 5) Recognize (on some level) the mutual benefits of a WE&T public/private partnership
- 6) Possible funding source for reaching WE&T goals

Outreach strategies:

The WE&T Statewide program outreach strategies are described in the WE&T Statewide Program Implementation Plan, Marketing and Outreach Plans.

IOU program support for school/teacher activities:

The WE&T Connection subprogram fully supports the activities of teachers and schools, as is evidenced by their participation in the Connections programs. Even with current successes, the IOUs plan to look into identifying and working with schools that have chosen not to participate in order to adjust curriculum and activities as deemed appropriate for future outreach efforts and offerings.

Current ongoing IOU programs support efforts to: 2010 - 2012:

- Align programs with the California Content Standards that teachers are expected to teach.
- Keep informed of new California Core Content Standards and or National Standards (pending approval) and align programs with new standards. (Please refer to work with CDE below)
- Conduct professional development workshops for teachers

Q4 2011:

- Provide a rationale for including career awareness, exploration and preparation in the K-12 schools

Q1 - Q2 2012:

- Provide materials that support events (i.e. Earth Day, Arbor Day)
- Identify higher education schools that have career fairs and provide staff and/or information

2012:

- Complete review of state testing for K-8 to determine how IOUs might support teachers by incorporating concepts into IOU program materials.
- Provide high school students access to career assessment instruments and access to green workers/professionals through a variety of online resources.

Other strategies (Q3 2011 through 2012):

- Post resources on the Web Portal
- Partner with the California Department of Education (CDE) to ensure the inclusion of EE, Green Career and Green Awareness information in schools required California Content Standards
- Partner with the California Energy Commission to develop new guidelines for clean energy partnership academies

Expanding collaborations with additional educational institutions and academies**California Department of Education: Ongoing**

IOUs are working with the California Department of Education (CDE) in an advisory capacity to affect change in near future curriculum standards. We are currently working with CDE on Energy and Utility Sector standards. Affecting the standards will ensure that our utility green awareness and green career awareness initiatives are included with California Curriculum Standards and that our programs are in line with school and teacher activities.

California Energy Commission: Ongoing

IOUs are working closely with California Energy Commission (CEC) to develop guidelines for clean energy partnership academies (Note: Partnership academies were first established by the California Department of Education in the 1980s. An academy is a multi-year program for high school students structured as a school within a school. Partnership academies combine career technical education with academic courses to prepare students for graduation and future employment or schooling. The academies serve primarily at-risk students. The criteria used for

student eligibility include irregular attendance, record of underachievement, low motivation or disinterest in the regular academic program, and economic disadvantages. Each curriculum focuses on a career theme, such as health, energy, or information technology, and is coordinated with related academic courses. The career technical focus for an academy is determined by an analysis of the local labor market and fields that have companies willing to support the program. Expanding our collaboration with academies is one goal within the Needs Assessment findings 12.7.2.)

WE&T Task Force and other stakeholders Involvement

- The IOU WE&T Task Force members are actively involved in the program planning and implementation process to ensure that we are responsive to the overall Strategic Plan goals
- The IOU WE&T Task Force members are working with California Department of Education – Energy and Utilities Industry Sector group on curriculum content standards.
- The IOU WE&T Task Force members are working with California Energy Commission on Clean Energy Partnership Academies (SB X11) in line with CLTEESP goal to include minority and low income students in programs.
- The IOU WE&T Task Force members are working with the California Community Colleges Chancellor's office on the design and implementation of community college programs.

IOUs will also leverage the expertise of the WE&T Task Force by providing updates on program planning and delivery, and an opportunity to provide feedback.

9. Career Education

Needs Assessment. Incorporating career exploration into programs would be helpful to complement career awareness activities. Recommendations from the Needs Assessment include: (1) increasing the emphasis on career awareness and career exploration in ratepayer-funded education programs servicing K-8 students and supporting career preparation programs in career academies and ROPs. The Needs Assessment also recommends evaluating and working toward the integration of environmental and ratepayer-funded energy curricula. It states that there is substantial evidence that the integration of environmental and energy curricula will increase the support of teachers for these programs. Finally, the study reports that these efforts should be supported by strong collaborations with K-12 schools, particularly those programs, like the California Partnership Academies, that target disadvantaged students.²¹

Public comments at the April 6th workshop focused on leveraging the role of the IOU WE&T programs to support education on career awareness, career exploration, and career development. A suggestion was made to collaborate with ROPs, Green Academies, and other similarly-funded programs to facilitate support for career awareness.

IOUs propose that future curriculum development needs to include input and funding from other relevant stakeholders to identify other secondary energy and environmental curricula that meet the goals of the Strategic Plan. Programs that target disadvantaged students or students from low-income households benefit from emphasis on career awareness programs. Beginning in 2010, the statewide WE&T program is tracking program participation from low-income, minority and disadvantaged communities.

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The plan of action for career education during the current filing period is to incorporate career education into all IOU programs grades K-College.

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Actions Include:

Q3 2011 – Q2 2012 (Ongoing)

- Incorporating into existing IOU K-8 curriculum materials career awareness and exploration as age appropriate
- Green Pathway pilot online community is a resource that enhances and supports the green academy and AP environmental science high school courses
- Green Pathway is building partnerships with community based organizations having green/ career programs serving young adults
- Green Campus (UC/CSU system) builds pathways to green careers through the variety of activities
- Develop collaborations with educational institutions to leverage career education resources that can be shared with K-12 schools and Community Colleges.

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Q4 2011

- Providing to high schools a green resource guide on green careers

Q1, Q2 2012

- Provide within IOU teacher workshops information about green careers

Incorporating Career Education into WE&T offerings

As described in the IOU's 2010-2012 WE&T Statewide Program Implementation Plan (PIP), one of the primary goals of the Connections programs is to promote career education and green careers to K-12 and college students to meet California's need for green jobs.

Career education is currently being incorporated into the existing programs through updates to existing curriculum, inclusion in new programs being developed, in stand-alone green career guide/supplements, and assemblies.

<http://www.greenschoolsnational.com/california.html>

<http://www.greenschoolsnational.com/california.html>

<http://ase.org/resources/green-campus-quarterly-report-january-march-2011>

<http://ase.org/resources/green-campus-quarterly-report-april-june-2011>

Links provided in this document are the links currently available.

The Needs Assessment acknowledges that Connections initiatives aim to foster collaborations between utilities and educational institutions with the objectives of 1)

promoting "Green Careers," 2) encouraging energy efficiency and conservation behavior, 3) educating schools about the benefits of adopting energy efficiency policies.²²

Outreach:

The WE&T Statewide program outreach strategies are described in the WE&T Statewide Program Implementation Plan at Section 10b, Marketing and Outreach Plans.

Strategies in 2011 Q3 - Q4 and 2012 Q1 - Q4 to facilitate best practices in next program cycle:

- Identify business partners who could provide classroom speakers to discuss their clean energy (Green Energy) work
- Identify community based organizations (CBOs) that could help promote materials and programs
- Identify agencies who already work within the schools on environmental/energy efficiency and cross market (Air Resource Board, Recycling, etc.)
- Outreach to County Office of Educations (COEs) to collaborate in promoting programs and materials to their schools (visit first those who serve schools in the Counties with the lowest median income)
- Identify partners in the high schools that have New Energy/Green Academies, and AP Environmental Science classes (e.g. Programs that are already focused on Green Careers preparation and energy efficiency)
- Partner with educational organizations that serve career tech teachers
- Partner with teachers for high school Green Pathway program, to help develop relevant program curriculum
- Continue active participation in the CDE Work Force Development group
- Develop a plan for linking of Community College and four-year University programs to energy efficiency occupations
- Post on the www.engage360.com Web Portal a listing of certificate and degree programs at the Community Colleges and UC/CSUs that are in the clean energy field
- Facilitate communication between Green Campus interns and professors with CC college students and teachers to share projects they have done and currently working on with the intent to get them interested in generating interest in green careers.

IOU program support for current school/teacher activities:

Please see section 8 above.

Further, IOUs plan to identify a core group of teachers in targeted areas to come together for a two-day workshop to solicit suggestions on how IOUs can support

²² P. 200

career awareness and exploration and how to integrate it into what they already teach. Identify if there are additional materials to be developed to support that.

10. Evaluation of K-12 Programs

Needs Assessment. The Needs Assessment states that collecting non-specific student data from schools is the most accessible data to IOUs for evaluating program impacts. Recommendations from the Needs Assessment include: (1) continuing to support and expand career awareness and exploration in K-12 programs. Furthermore, "as indicated in our K-12 key findings report, the IOUs have recently added career awareness and career exploration modules to the K-8 programs: Living Wise, PEAK, Green Schools, and Energenius. In this way, the K-8 programs, which, until recently, have mostly focused on how students and their families can save energy, will also contribute to the career development policy goal. These career development modules should be evaluated using appropriate performance metrics,"²³ and (2) working with education agencies, schools, and funding partners to allow for the collection and reporting of demographic information on students participating in ratepayer-funded Connections education programs. The Needs Assessment states that the present lack of information hampers the evaluation of existing programs.²⁴

Public comments at the April 6th workshop focused on the various issues and challenges surrounding data tracking of students and teachers participating in IOU education programs. The discussion acknowledged value in monitoring and evaluating program impacts on student groups involved in IOU education programs.

IOUs propose to pursue solution to address the recommendation. Currently, the only type of demographic information collected is on the school registrants in general, not the individual student. Furthermore, there is privacy associated with schools releasing demographic information of students to outside agencies. The tracking of students into green careers could likely only be accomplished with the involvement and permission of guardians.

The plan of action is to incorporate career education into all IOU education programs K-12.

How the IOUs will evaluate programs:

Ongoing:

- Energenius, PEAK and Living Wise programs currently track teacher satisfaction.
- Review existing teacher surveys used in current IOU programs to determine if program is meeting teachers' needs.
- Continue to engage the Task Force in regular meetings to share progress and ideas. IOUs can collect general demographic information on students registered at schools in our program (with respect to the collection and reporting of student demographic information, collecting specific information on students is currently prohibitive for IOUs).

Q2, Q3 2012:

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- As part of the 2010-12 WE&T Process Evaluation, the IOUs are providing Opinion Dynamics Corporation with copies of the surveys used to measure teacher satisfaction, as well as the data gathered through those surveys. After IOUs receive results from the Opinion Dynamics Corp process evaluation IOUs will incorporate suggestions on how to track metrics and incorporate enhancements to the existing teacher surveys
- Determine if students are taking EE action at home or school as a result of the education

11. Strategic Planning and Implementation

This program involves management and execution of several strategic statewide planning tasks identified in the Strategic Plan: a) form an IOU/CPUC WE&T Task Force, b) conduct a needs assessment study, c) facilitate Annual WE&T Public Meetings, and d) create a WE&T-specific web portal.

This sub-program, though not specifically called out in Needs Assessment recommendations, can serve as the means by which action plans can be discussed and assessed in the spirit of the recommendations.

1. Role of WE&T Taskforce

The inaugural WE&T Taskforce meeting was held January 28, 2009 with primary purposes of sharing information on green training initiatives and to focus resources on completing a Workforce, Education & Training statewide Needs Assessment study, as well as create a WE&T web portal site. The final study was posted on March 17, 2011 to the Energy Efficiency Web-portal, www.engage360.com. A first annual WE&T public workshop occurred on April 6th 2011 when results and recommendations from the WE&T Needs Assessment study were presented for public discussion and comment.

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The three key overarching themes emerging from the Needs Assessment study and workshop comments are either, goals presented in the California Long-term Energy Efficiency Strategic Plan, ways to measure program performance in Resolution E-4385 or directly or indirectly expressed in D.09-09-047. Specific comment and proposals on recommendations have provided in the respective WE&T Centergies and WE&T Connections sections of this Advice Filing.

The IOUs further propose to use the annual stakeholder Taskforce meetings to evaluate existing cross-cutting training implementations across industry trade, educational, public agency and community-based sectors. The taskforce can also be used to share with stakeholders, IOU progress with collaborative training relationships among the aforementioned sectors, as well as between IOU and inter-organizational departments. Finally, the current stakeholder Taskforce can be of great value in identifying ways to assess data tracking methodologies for measuring program effectiveness

2. Role of WE&T Web Portal

The IOUs propose to use the annual stakeholder Task Force meetings to evaluate existing EE web portal options as a means for advancing Sector Strategies, collaborative implementations and measuring program effectiveness.

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The initial planning is to develop and have the WE&T Web Portal reside within the EE Web Portal (www.engage360.com). The EE web portal has communities that can be tailored to different interests; the thought is to further define and develop a Workforce Education & Training community to serve as a platform of information about careers and training opportunities in the green workforce.

Web Portal objective:

The web portal will include links to various DSM related training programs and will allow for a single point of communication. The portal will also serve as a repository for information about DSM and EE training, educational conferences, and career opportunities. The WE&T segment may be developed and possibly funded in collaboration with other appropriate entities.

The IOUs' plan of action for the web portal can be described in two phases:

Phase 1 (2012 Q2) – Focus on Functionality to Promote Green Energy Careers

- Include organized links to training programs and opportunities at adult educational facilities, labor and trade organizations, the IOUs, etc.
- Include an events and activities component that highlights upcoming green energy conferences, workshops and related gatherings.
- Feature a Career Center that will feature organized, easy-to navigate links to open job postings listed on the site and related resources/contacts to attaining these specific jobs.
- Include a level that centers around related authorities, associations and advisory bodies, including the WE&T statewide strategic taskforce, the Workforce Investment Board Green Collar Jobs Council and others
- Include blog strings and a newsletter

Phase 2 (2012 Q3 - Q4) – Community Building Specific to Green Energy Careers

- Register users and facilitate membership community features including profile page, online resumes and connection trees (i.e. friend networks, career contacts, etc). Integrate/utilize the best social web technologies/applications to build engaging and credible online interactions.
- Incorporate connectivity tools/functionality that enables the user to attach/connect personal profiles with specific interests, job listings, training program announcements, webinars, and conferences. Explore the potential for automatic registration where appropriate.
- Allow users to communicate via a private "inbox" with other users, hosted on the site.

No cost information is required for this advice filing. This advice filing will not increase any rate or charge, cause the withdrawal of service, or conflict with any other schedule or rule.

EFFECTIVE DATE

SDG&E believes that this filing is subject to Energy Division disposition and should be classified as Tier 1 (effective pending disposition) pursuant to GO 96-B. This filing is pursuant to D.09-09-047 and therefore, SDG&E respectfully requests that this filing become effective on September 9, 2011, the date filed. The additional information the IOUs have provided here does not change the scope or intent of the program approved in D.09-09-047. This supplemental advice letter clarifies certain program information per Energy Division's request.

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PROTEST

The Energy Division has clarified that there will be no protest period for this supplemental advice letter. Parties to this advice letter have had an opportunity to comment and there were no comments or protests in response to the first advice letter filing submitted on June 3, 2011. Individual utility contact information is below:

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NOTICE

Deleted: Anyone may protest this advice letter to the Commission. The protest must state the grounds upon which it is based, including such items as financial and service impacts, and should be submitted expeditiously. The protest must be made in writing and received within 20 days of the date this advice letter was filed with the CPUC, or June 23, 2011. There is no restriction on who may file a protest. The address for mailing or delivering a protest to the Commission is:¶

¶
CPUC Energy Division¶
Attention: Tariff Unit¶
505 Van Ness Avenue¶
San Francisco, CA 94102¶

¶
Copies of the protest should also be sent via e-mail to the attention of both Honesto Gatchalian (inj@cpuc.ca.gov) and Maria Salinas (mas@cpuc.ca.gov) of the Energy Division. A copy of the protest should also be sent via both e-mail and facsimile to the address shown below on the same date it is mailed or delivered to the Commission.¶

¶

A copy of this filing has been served on the utilities and interested parties shown on the attached list, including interested parties to service lists A.08-07-021, A.08-07-022, A.08-07-023, and A.08-07-031 by either providing them a copy electronically or by mailing them a copy hereof, properly stamped and addressed.

Address changes should be directed to SDG&E Tariffs by facsimile at (858) 654-1788 or by e-mail at SDG&ETariffs@semprautilities.com.

CLAY FABER
Director – Regulatory Affairs

(cc list enclosed)

**PG&E Gas and Electric
Advice Filing List
General Order 96-B, Section IV**

AT&T	Dept of General Services	North Coast SolarResources
Alcantar & Kahl LLP	Douglass & Liddell	Occidental Energy Marketing, Inc.
Ameresco	Downey & Brand	OnGrid Solar
Anderson & Poole	Duke Energy	Praxair
Arizona Public Service Company	Economic Sciences Corporation	R. W. Beck & Associates
BART	Ellison Schneider & Harris LLP	RCS, Inc.
Barkovich & Yap, Inc.	Foster Farms	Recurrent Energy
Bartle Wells Associates	G. A. Krause & Assoc.	SCD Energy Solutions
Bloomberg	GLJ Publications	SCE
Bloomberg New Energy Finance	GenOn Energy, Inc.	SMUD
Boston Properties	Goodin, MacBride, Squeri, Schlotz & Ritchie	SPURR
Braun Blaising McLaughlin, P.C.	Green Power Institute	San Francisco Public Utilities Commission
Brookfield Renewable Power	Hanna & Morton	Seattle City Light
CA Bldg Industry Association	Hitachi	Sempra Utilities
CLECA Law Office	In House Energy	Sierra Pacific Power Company
CSC Energy Services	International Power Technology	Silicon Valley Power
California Cotton Ginners & Growers Assn	Intestate Gas Services, Inc.	Silo Energy LLC
California Energy Commission	Lawrence Berkeley National Lab	Southern California Edison Company
California League of Food Processors	Los Angeles Dept of Water & Power	Spark Energy, L.P.
California Public Utilities Commission	Luce, Forward, Hamilton & Scripps LLP	Sun Light & Power
Calpine	MAC Lighting Consulting	Sunshine Design
Casner, Steve	MBMC, Inc.	Sutherland, Asbill & Brennan
Chris, King	MRW & Associates	Tabors Caramanis & Associates
City of Palo Alto	Manatt Phelps Phillips	Tecogen, Inc.
City of Palo Alto Utilities	McKenzie & Associates	Tiger Natural Gas, Inc.
City of San Jose	Merced Irrigation District	TransCanada
Clean Energy Fuels	Modesto Irrigation District	Turlock Irrigation District
Coast Economic Consulting	Morgan Stanley	United Cogen
Commercial Energy	Morrison & Foerster	Utility Cost Management
Consumer Federation of California	NLine Energy, Inc.	Utility Specialists
Crossborder Energy	NRG West	Verizon
Davis Wright Tremaine LLP	NaturEner	Wellhead Electric Company
Day Carter Murphy	Navigant Consulting	Western Manufactured Housing Communities Association (WMA)
Defense Energy Support Center	Norris & Wong Associates	eMeter Corporation
Department of Water Resources	North America Power Partners	