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# MEETING NOTICE AND AGENDA

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 San Diego  
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 San Diego County  
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 Mexico

## ENERGY WORKING GROUP

The Energy Working Group may take action on any item appearing on this agenda.

May 25, 2006

11:30 a.m. – 2:00 p.m.

SANDAG, Board Room  
 401 B Street, Suite 800  
 San Diego, CA 92101-4231

Staff Contact: Rob Rundle  
 (619) 699-6949  
[rru@sandag.org](mailto:rru@sandag.org)

## AGENDA HIGHLIGHTS

- **SENATE BILL 1: CALIFORNIA SOLAR INITIATIVE**
- **ENVIRONMENTAL WORKING GROUP LTRP PROJECT UPDATE**

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# ENERGY WORKING GROUP

May 25, 2006

ITEM #		ACTION
1.	WELCOME AND INTRODUCTIONS	
+2.	MEETING SUMMARY FOR THE APRIL 27, 2006, MEETING  Please review the attached meeting summary and provide any comments.	APPROVE
3.	PUBLIC COMMENT AND COMMUNICATIONS  Anyone who would like to address the Energy Working Group on a topic not on the agenda should do so at this time.	COMMENT
4.	SANDAG EWG STAFFING UPDATE  Update on SANDAG Board of Directors decisions regarding EWG staffing for the upcoming year.	INFORMATION/ DISCUSSION
+5.	SB 1539: LEGISLATION IN SUPPORT OF THE EWG  Senator Kehoe sponsored SB 1539 that would provide resources for EWG to implement the Regional Energy Strategy 2030. EWG The most recent version of the bill (4-18-06) is attached.	DISCUSSION
+6.	SB 1: CALIFORNIA SOLAR INITIATIVE  Senator Murray sponsored SB 1, which would codify the California Solar Initiative, a program to promote solar, and to expand and accelerate development of solar resources. The most recent version of the bill (May 8, 2006) is attached. The Policy Subcommittee recommends that the EWG support the bill.	RECOMMEND
7.	EWG LTRP PROJECT UPDATE  Status report on CPUC schedule. Review of LTRP components, including correlation between RES/LTRP.	INFORMATION/ DISCUSSION

ITEM #		ACTION
8.	REPORTS FROM THE EWG SUBCOMMITTEES	INFORMATION/ DISCUSSION
	<p data-bbox="305 331 683 359">A) Public Policy Subcommittee:</p> <p data-bbox="305 384 1117 520">Paul O’Neal, North County EDC, will discuss the May 17 meeting topics, including San Diego regional legislation. The next subcommittee meeting will be June 21 from 8:30-10:30 a.m., location to be determined.</p> <p data-bbox="305 562 659 590">B) Resources Subcommittee:</p> <p data-bbox="305 615 1117 716">Staff will discuss the May 1 meeting on providing input into SDG&amp;E’s LTRP and the Sunrise Powerlink proposal. An EWG timeline will be provided. The next meeting will be June 5, 11 a.m.-1 p.m., at SDREO.</p>	
+9.	ADVANCED METERING INFRASTRUCTURE (AMI) LETTER	INFORMATION/ COMMENT
	<p data-bbox="305 831 1117 961">At the April 27 meeting, SDG&amp;E presented their plan and sought input on Advanced Metering Infrastructure. Members requested clarification on figures presented by SDG&amp;E. In response, SDG&amp;E staff has sent a letter to address these questions (attached).</p>	
10.	SUGGESTED MEETING TOPICS FOR NEXT MEETING	INFORMATION/ COMMENT
	<p data-bbox="305 1083 1117 1146">Proposed topic for the June 22 EWG meeting includes review of SDG&amp;E’s LTRP correlation with the SANDAG RES 2030.</p>	
11.	ADJOURN	INFORMATION/ COMMENT
	<p data-bbox="305 1262 1117 1354">The next EWG meeting will be held June 22, 2006. The meeting will be held at SANDAG from 11:30 a.m.–2:00 p.m. in the 7<sup>th</sup> floor conference room.</p>	

+ Next to an agenda item indicates an attachment.

**San Diego Association of Governments**  
**ENERGY WORKING GROUP**

May 25, 2006

AGENDA ITEM NO.: **2**

**Action Requested: APPROVE**

MEETING SUMMARY OF APRIL 27, 2006

**Members in Attendance:**

Henry Abarbanel, Co-Chair, Del Mar  
Scott Anders, EPIC  
Pat Zeutonian, County of San Diego  
Bob Campbell, City of Vista  
Stephen Zolezzi, Food & Beverage Association  
Irene Stillings, SDREO  
Dave Weil, UCSD  
Dave Carey, Port of San Diego  
Patti Krebs, IEA  
Alan Ball, Qualcomm  
Paul O'Neal, San Diego North EDC  
Laura Hunter, EHC  
Michael Shames, UCAN  
Steve Castaneda, City of Chula Vista

**Others in Attendance:**

Melanie McCutchan, EHC  
Stephen Gay, San Diego City Schools  
Kurt Kammerer, KJK&A  
Tom Blair, City of San Diego  
Alan Ridley, Cuyamaca College  
Al Figueroa, E-Solution Consulting  
Bob Resley, Public  
Barry Butler, Butler Sun Solutions  
Don Wood, C-3/PEPC  
Ed Lopez, SDG&E  
Julie Gelfat, IBEW 569  
Alexandra Hart, IBEW 569

Skip Fralick, Renewable Energy Team  
Nicole Capretz, City of San Diego  
Charlie Johnson, Renewable Energy Team  
Georgette Grover, EHC  
Anne Smith, SDG&E  
Ted Reguly, SDG&E  
Mike Gearhart, Public  
Heather Honea, SDSU  
Sharon Firooz, Advanced Energy Solutions  
Susan Freedman, SDREO  
Jennifer Porter, SDREO  
Bob Leiter, SANDAG

## **1. Welcome**

Co-chair Henry Abarbanel called the meeting to order.

## **2. Meeting Summary of the March 23, 2006 Meeting**

The EWG approved the March 23, 2006 meeting summary.

## **3. Public Comment**

Laura Hunter announced a workshop to be held on May 3 at the Chula Vista City Council Chambers at 6:00 p.m. to discuss a replacement plan for the South Bay Power Plant.

Tom Blair gave information on a resolution issued by CPUC energy staff that will be heard by the Commission on May 25 looking at the issue of net metering for combined technology. Tom is looking for letters of support by May 8 .

## **4. SANDAG Policy Board Meeting on Energy Planning**

On April 14 the SANDAG Policy Board met to discuss SANDAG's energy planning program. Henry Abarbanel led the presentation on the EWG and discussed meeting outcomes.

Bob Leiter commented on the discussion with regard to the Regional Energy Planning Department's proposal for permanent funding by SANDAG of an energy planning position in the department. While no final vote was taken, it appeared to be the consensus SANDAG's Board will vote on this in the next few weeks when it approves the budget. Harry Abarbanel stated he will be following up with Bob to get the proposal to be presented to the CEC finalized.

## **5. SB 1539: Legislation in Support of the EWG**

Senator Kehoe sponsored SB 1539 that would provide resources for the EWG to implement the Regional Energy Strategy 2030. EWG Co-Chairs led a discussion of updates to the bill. It was noted SB 1539 is to be heard Monday May 8 in the Senate Appropriations Committee.

Harry Abarbanel stated his understanding of the main objection to the bill is the instruction to the CEC and PUC that strongly supported spending some of their money on local government; but they did support the idea it was a very good way to spend money possibly in the future

## **6. EWG LTRP Project Update**

Status report on CPUC actions, EWG Long-Term Resource Plan progress to date, and project deliverables for discussion and approval at upcoming EWG meetings.

Harry Abarbanel stated the Board of Directors asked this group to make a recommendation to them and therefore to the region, on the position on the Sunrise PowerLink proposal and that he has requested councilmembers to wait until the recommendation made to take advantage of the regional decision.

Jennifer Porter replied another tool we are using to provide input to the Long Term Resource Plan is to use the resources tool we got from Duke Energy last year. It is useful in determining what resources we have now and will have in the future. She said next steps will be to compile issue briefs based on the information gained from the presentations by the subcommittee groups and from comments made at the meetings. We will form recommendations on renewables and in-region resources, energy efficiency and demand response, transmission and out of region resources so we can provide robust input into SDG&E's LTRP.

Jennifer added that SANDAG, after the issue briefs are formed and we have voted on the recommendations, we will present those recommendations to SDG&E. Our goal is to present the information to them well ahead of their proposal to the CPUC so that we have that input – not just witness to the process. She stated further we also have the opportunity to provide direct input to the CPUC. SDG&E will be submitting a draft plan to the PUC this summer, with final submission in the fall. We should meet with SDG&E to provide them with our input soon.

Scott Anders added it was his understanding that at the Resources Subcommittee meeting earlier this week, Rob Anderson said he expected SDG&E to file their final plan in July. (It has been clarified that SDG&E will submit their final filing in July-the LTRP schedule has been accelerated, with no draft submissions)

Scott Anders asked if we are on track to give our input for the July filing. Jennifer responded that she believes we are. We have initiated some meetings with Rob Anderson in order to provide the committee's input.

## **7. EWG Distributed Generation Workshop**

Alan Ball moderated the April 14 workshop and provided members with a summary of the event and outcomes.

- Alan Ball reported the DG conference sponsored by SANDAG was held April 14. He was pleased with the turnout and that there were a number of employees of the various municipalities in attendance along with elected officials. Presentations from John Dilliot, UCSD, Tom Blair, City of San Diego, Dr. Reed Jensen, LARS Laboratories in New Mexico, Marty Kadillak, Director, Shell Trading Gas and Power, Chris Lyons, Power Generation Sales, Solar Turbines, Tom Moore, President, California Power Partners and Bernie Lindsey, Department of Navy went well. Alan Ball moderated the event.

Paul O'Neal thought the LARS presentation was thin on details about energy budgets associated with using hydrogen in these chemical reactions. Alan Ball agreed; large and small companies have scientists with broad visions and narrow focuses are thinking about new ways to produce hydrogen and alternative non-fossil fuels.

Harry Abarbanel stated that he was at another workshop last week. He said BP is building a plant in the Ventura area to do something very similar. Alan Ball answered he thinks it is a Joint project proposal with Edison.

## **8. Reports from the Subcommittees**

### **A. Policy Subcommittee**

Alan Ball, Qualcomm, discussed current legislation, proposed 2006 legislative forum, and other upcoming EWG workshops. The next subcommittee meeting will be May 17 location TBD.

Regular monthly meeting held on April 12. Discussion included a presentation from SDG&E on the Otay Power Loop, a new transmission system that will distribute power from the San Miguel/Otay substation into downtown San Diego/Chula Vista/South Bay. Also discussed the Critical Peak Pricing decision; the alternate proposal on the table now is due for a vote on May 11. Paul spoke of legislation, specifically SB1059, which designates future transmission corridors; Alan additionally discussed an initiative to create funding from excess profits of the oil industry to apply to renewal energy efficiency throughout the state.

Michael Shames responded that he is up to speed on this issue. He described it as an initiative being circulated now to go on the November ballot proposing a tax on oil producers in the State of California. Companies who are drilling and producing oil will be subject to a "profits tax" and they would estimate over \$4B over ten years to be used to promote and provide R&D for alternative vehicles. Michael will report back in June. Pat Zeutonian asked that when EWG is given a presentation on the issue to please have both sides of the issue represented.

Alan Ball spoke about workshops stating the previous schedule has been adjusted - the legislative workshop has been moved to December 1 to accommodate legislators. The group also discussed the Sunrise PowerLink bus tour. Jennifer is trying to determine if there is enough interest to go forward.

Scott reminded the group the Energy Summit will be held October 25 at USD.

### **B. Resources Subcommittee**

The subcommittee held two meetings in April, one on renewable energy resources, and one on in-region resources (DG and repowering). The subcommittee's renewables group presented their research and recommendations followed by discussion. Based on this discussion and materials, staff will draft a renewables issue brief for review and approval at the May EWG. The issue briefs can assist EWG with LTRP and transmission decisions. Next meeting is May 8 from 11:00 -1:00 at SDREO.

Don Wood gave a summary of Monday's meeting. Don reported they were given presentations by Duke/LS Power on the South Bay Plant, Dr. Hertzberg on the Community Power Project to be built at the Sycamore substation on the eastern end of Miramar, and Steve Hoffmann on Encina.

Laura Hunter asked if Otay Mesa was mentioned. Don replied that while there was no presentation on Otay Mesa, it is his understanding SDG&E is currently negotiating to buy Otay Mesa.

Skip Fralick recognized the Renewable Energy Team for their hard work; particularly Barry Butler. They feel the driving motivation for addressing renewable energy is global warming. Barry Butler presented on concentrating solar power. Barry noted some technologies that have been successful. In Australia they are putting in a 124 megawatt plant using a power park with the entire infrastructure in it making it the best of the solar. There is a huge availability of solar energy in the San Diego area. Wind and geothermal are also considerations.

Question – In San Diego County where do we find 2560 MW of geothermal energy? Barry replied that geothermal potential is in Imperial County, not San Diego.

Laura H. asked when you say that the concentrators are 25% efficient and solar rooftop are 12%, are you deducting from the concentrator for loss of efficiency when it goes over power lines or is that efficiency at the point of generation? Barry answered that is the efficiency at the point of generation.

Barry spoke of the political implications of the energy strategies – solar and renewables. We could generate electricity in San Diego County and we could have natural gas reduction from solar water heating. There are 16,000 MW of solar hot water capacity in the US. This would mean a huge natural gas reduction.

The renewables team recommendation is to build a power park, which would need an Environmental Impact Statement, a source of water, an off-take for power, and a long-term

contract, so that the financiers can be confident in their investment. Laura H. asked for the amount of acres this would require. Barry said Nevada used approximately 10 square miles for a 2000 MW power park. The power park concept can be broken up into smaller pieces, as small as 300 MW. It was asked if this would work with wind. The answer is the power park concept is viable for wind.

Kurt Kammerer is asking the committee to advance a motion to consider the creation of a wind power park. Looking at the overlay of San Diego County with class five and six wind, SANDAG has land use authority - look at making that a wind power park and environmental restrictions. The reasons wind is not being developed and we do not have 600 MW of wind in East County is because of the cost for land. If SANDAG were to exert its land use authority, invest some money in environmental reviews, wind would come to East County. He requested a formal recommendation from the EWG to take this forward. Kurt asked how we begin studying an issue that seems viable, e.g. a wind power park in East County. Henry A stated it comes from actions of the two subcommittees. He said it could be discussed now or postponed until the resources subcommittee meets on Monday with specific recommendations and action items. He noted no one has really had the opportunity to digest the material yet.

Barry covered incentives for solar and renewables. Some of the incentives are federal tax credits, tradable/renewable credits, loans. Building transmission capability will be required if renewables are successful. The Western Governor's Association has set their recommendations for a 30% federal tax credit, which is now available to individuals and business, but not utilities. It should be extended to utilities.

Laura H. asked what the process is to move this forward. It was suggested members should take time to review the issue at the May 1 meeting, and then the group will be in a better position to make formal comments and recommendations to the SANDAG Board of Directors. Laura H. stated May 1 is a large national immigration worker day protest and she will be unable to attend the meeting. Laura would like to see governments mandate the solar water requirement, energy efficiency, clean renewable energy and wind power in their general plans and city policy. Regarding wind power farms, we would need to mitigate the bat and bird kill issue. She also mentioned power parks have no impact on some neighbors, while others have more significant impacts.

Kurt Kammerer gave some input for Monday's meeting, namely separating technical from potential figures contained in the presentation and applying economic filters equally. He encouraged the group not to put filters on incentives. Kurt believes some of the conclusions in the report should be challenged, perhaps by SDG&E.

## **9. Advanced Metering Infrastructure (AMI) Update**

SDG&E recently filed supplemental testimony with the CPUC regarding their plans to roll out AMI throughout San Diego by 2010. SDG&E presented their plan and asked for input.

Anne Smith, SDG&E, gave the EWG an AMI update and explained the benefits of the new metering service. The plan is to deploy 1.4 million electric meters and 900,000 gas meters at a cost of \$450 million spent over the deployment period – through 2011.

Michael Shames asked if that was the capital or overall cost; Anne replied it is the overall cost. Michael S. asked if this would increase customer costs. Anne replied it will in the short-term in order to pay for the upgrade. The rates will go down in ten years. Michael S. asked how the

workforce savings will be passed on to ratepayers. Anne replied that for every 10,000 meters installed, SDG&E will credit back the customers.

#### **10. State Lands Commission Coastal Power Resolution**

On April 17, the State Lands Commission voted unanimously to approve the resolution to ban once through cooling at coastal power plants by 2020. In March, the SANDAG Executive Committee sent a letter to the SLC recommending that the CEC and CPUC be included in this consideration. The CEC provided input prior to the vote. Susan Freedman reported on this issue. A copy of the resolution was provided.

#### **11. Critical Peak Pricing Update**

The CPUC recently accepted a settlement among SDG&E and interested parties regarding higher summer electric rates for large business, government and industrial customers. A summary of the results and impact for San Diego was provided.

Scott Anders briefed the EWG on the critical peak pricing settlement between SDG&E and the CPUC. The settlement retains the structure – applies to customers 200 kW and up (no direct access), eliminates the participation credit, requires SDG&E to contact its customers re: the tariff and to provide information about energy efficiency programs. Capacity reservation, which was \$1.57, is now \$7.00; and the CPP rate which was about \$0.29 is now \$0.94 on critical peak times. Customers opting for the CPP rate will have 12-month bill protection.

The City of San Diego has taken the position to support the settlement.

#### **12. Transmission Corridors Update**

Jennifer Porter reported the CPUC rejected SDG&E's bifurcated proposal for the Sunrise PowerLink, and will require both proof of need and environmental impact analysis within their application. Additionally, a multi-state Frontier Line was discussed among western governors at a Coronado Power Summit April 18-19, 2006. Jennifer provided handouts.

### **13. Suggested Meeting Topics for Next Meeting**

There were no suggested topics for the next meeting.

### **14. Adjournment**

Henry Abarbanel adjourned the meeting at 1:30 p.m. The next EWG meeting will be on May 25, 2006.

Attachment

Key Staff Contact: [Click to Insert Key Staff Contact], [Click to Insert Phone Number; E-mail]

BILL NUMBER: SB 1539 AMENDED  
BILL TEXT

AMENDED IN SENATE APRIL 18, 2006  
AMENDED IN SENATE MARCH 27, 2006

INTRODUCED BY Senator Kehoe

FEBRUARY 23, 2006

An act to add Section 379.9 to the Public Utilities Code, relating to energy resources.

LEGISLATIVE COUNSEL'S DIGEST

SB 1539, as amended, Kehoe San Diego Association of Governments Energy Working Group.

*Under existing law the San Diego Association of Governments (SANDAG), established pursuant to existing law authorizing the formation of a joint powers agency, has certain responsibilities with respect to transportation, infrastructure financing, and growth management planning for the San Diego County region.*

*This bill would state the intent of the Legislature that regional planning and implementation of energy-related policy by the SANDAG Energy Working Group, or a coalition of entities in the San Diego region, or both, should occur. The bill would state the further intent of the Legislature that the development and implementation of energy management plans to advise local governments in the effective implementation of renewable energy projects, green building options, and energy efficiency should occur.*

~~— Under existing law, the Public Utilities Commission (commission) has regulatory authority over public utilities and is authorized to establish its own procedures, subject to statutory limitations or directions and constitutional requirements. The existing Public Utilities Act provides compensation for reasonable advocate's fees, reasonable expert witness fees, and other reasonable costs to public utility customers for participation or intervention in any proceeding of the commission based, in part, upon whether the intervenor would experience significant financial hardship. —~~

~~— This bill would state the intent of the Legislature that the commission and the State Energy Resources Conservation and Development Commission (Energy Commission) consider allocating existing funds to reimburse the San Diego Association of Governments Energy Working Group, or the coalition, as defined, or both, for certain costs incurred by these entities in participating in specified proceedings of the commission, the Energy Commission, and the working group, and certain other energy related activities. The bill would make related legislative findings and declarations. The bill would require the commission and the Energy Commission to enable and facilitate the review and analysis by regional stakeholders through the San Diego Association of Governments Energy Working Group, or the coalition, or both in any proceeding of the commission or the Energy Commission. —~~

Vote: majority. Appropriation: no. Fiscal committee: ~~yes~~  
no . State-mandated local program: no.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 379.9 is added to the Public Utilities Code, to read:

379.9. (a) As used in this section:

(1) "Coalition" means the collaboration among the San Diego Association of Governments Energy Working Group (SANDAG) and other entities within the San Diego region, including, but not limited to, the San Diego Regional Energy Office and San Diego Gas and Electric Company, that has been established to implement the San Diego Regional Energy Strategy, as adopted by the San Diego Association of Governments Energy Working Group Board of Directors in 2003.

~~—(2) "Energy Commission" means the State Energy Resources Conservation and Development Commission.—~~

~~—(3) "SANDAG" means the San Diego Association of Governments Energy Working Group.—~~

~~—(4) "SDC&E" means the San Diego Gas and Electric Company.—~~

~~—(5) "SDREO" means the San Diego Regional Energy Office.—~~

~~—(6)~~

(2) "Sustainable communities program" means a program that assists local governments to analyze energy efficiency, demand response, and distributed generation measures, and to develop an implementation plan that will enable them to maximize the benefits of these measures.

~~—(b) The Legislature finds and declares all of the following:~~

~~—(1) The purpose of this section is to encourage the commission and the Energy Commission to enable and facilitate the review and analysis by regional stakeholders through SANDAG, or the coalition, or both SANDAG and the coalition in any proceeding of the commission or the Energy Commission.—~~

~~—(2) The involvement of SANDAG, or the coalition, or both SANDAG and the coalition in commission or Energy Commission processes should be promoted and encouraged where that review and analysis by regional stakeholders substantially contributes to orders and decisions of the commission or the Energy Commission, and that involvement is in the public interest.—~~

~~—(3) The Legislature encourages the review and analysis by regional stakeholders through SANDAG, or the coalition, or both SANDAG and the coalition in state policymaking processes.—~~

~~—(c)~~

(b) It is the intent of the Legislature that all of the following should occur:

~~—(1) The commission, the Energy Commission, and other state agencies should consider allocating existing funds to SANDAG, or the coalition, or both SANDAG and the coalition to be actively involved in, but not limited to, all of the following:~~

~~—(A) The Integrated Energy Policy Report of the Energy Commission pursuant to Section 25302 of the Public Resources Code.—~~

~~—(B) The state Energy Action Plan II.—~~

~~—(C) The improvement of energy security and resource enhancement through in-region distributed generation.—~~

~~—(D) The SDC&E Long Term Resources Plan proceeding of the commission.—~~

~~—(2) The commission and the Energy Commission should consider allocating existing funds to support regional~~

~~(1) *Regional* planning and the implementation of energy-related policy by SANDAG, or the coalition, or both SANDAG and the coalition to achieve regional energy goals and optimize the beneficial social, economic, and environmental impacts of essential energy infrastructure not required of investor-owned utilities, including, but not limited to, all of the following:~~

~~(A) Transportation fuels in SANDAG's role as transportation planning agency, identifying strategies to reduce the fuel consumption rate through transportation and use choices, and transportation mode choices.~~

~~(B) Transportation corridors that identify strategies to utilize long-range transportation planning processes to plan for relocation of utility infrastructure.~~

~~(C) International border issues related to energy policy.~~

~~(D) Implementation of the energy goals of the state.~~

~~(E) Creation of a model sustainable communities program for the San Diego region.~~

~~—(3) The commission and Energy Commission should consider allocating existing funds to SANDAG, or the coalition, or both SANDAG and the coalition for the use of subject matter experts, including, but not limited to, SDREO or other experts deemed necessary to provide assistance and education to SANDAG in development and implementation of energy~~

~~(2) *Development and implementation of energy* management plans to advise local governments in the effective implementation of renewable energy projects, green building options, and energy efficiency. The plans should also include funding initiatives to facilitate the implementation of the loading order that is included in the Energy Action Plan II.~~

~~—(d) The commission and the Energy Commission shall enable and facilitate the review and analysis by regional stakeholders through SANDAG, or the coalition, or both SANDAG and the coalition in any proceeding of the commission or the Energy Commission.—~~

BILL NUMBER: SB 1            AMENDED  
 BILL TEXT

AMENDED IN ASSEMBLY    MAY 8, 2006  
 AMENDED IN ASSEMBLY    APRIL 4, 2006  
 AMENDED IN ASSEMBLY    SEPTEMBER 2, 2005  
 AMENDED IN ASSEMBLY    AUGUST 31, 2005  
 AMENDED IN ASSEMBLY    AUGUST 18, 2005  
 AMENDED IN ASSEMBLY    JULY 12, 2005  
 AMENDED IN ASSEMBLY    JULY 5, 2005  
 AMENDED IN ASSEMBLY    JUNE 23, 2005  
 AMENDED IN SENATE        MAY 31, 2005  
 AMENDED IN SENATE        MAY 16, 2005  
 AMENDED IN SENATE        APRIL 25, 2005  
 AMENDED IN SENATE        FEBRUARY 28, 2005

INTRODUCED BY    Senator Murray  
 (Principal coauthor: Assembly Member Levine)  
 (Coauthors: Senators Alquist, Chesbro, Ducheny, and Kehoe)  
 (Coauthors: Assembly Members Bermudez, Blakeslee, Chan,  
 Cohn, Koretz, Laird, Leno, Lieber, Nation, Pavley, Saldana, Wolk,  
 and Yee)

DECEMBER 6, 2004

An act to add Sections 25405.5 and 25405.6 to, and to add Chapter 8.8 (commencing with Section 25780) to Division 15 of, the Public Resources Code, and to amend Section 2827 of, and to add Sections 387.5 and 2851 to, the Public Utilities Code, relating to solar electricity.

LEGISLATIVE COUNSEL'S DIGEST

SB 1, as amended, Murray    Electricity: renewable energy resources: California Solar Initiative.

(1) Existing law requires the State Energy Resources Conservation and Development Commission (Energy Commission) to expand and accelerate development of alternative sources of energy, including solar resources. Existing law requires the Energy Commission to develop and adopt regulations governing solar devices, as defined, designed to encourage the development and use of solar energy and to provide maximum information to the public concerning solar devices.

This bill would require beginning January 1, 2011, a seller of production homes, as defined, to offer the option of a solar energy system, as defined, to all customers negotiating to purchase a new production home constructed on land meeting certain criteria and to disclose certain information. The bill would require the Energy Commission to develop an offset program that allows a developer or seller of production homes to forgo the offer requirement on a project by installing solar energy systems generating specified amounts of electricity on other projects. The bill would require, not later than July 1, 2007, the Energy Commission to initiate a public proceeding *to study* and make findings whether, and under what conditions, solar energy systems ~~are to~~ *should* be required on new residential and nonresidential

buildings and to periodically update the study thereafter  
. ~~The bill would prohibit the Energy Commission from requiring that a solar energy system be installed on a residential building unless the Energy Commission determines, based upon consideration of all costs associated with the system, including the availability of certain financial incentives, that the system is cost effective when amortized over the economic life of the structure.~~

(2) Under existing law, the Public Utilities Commission (PUC) has regulatory authority over public utilities, including electrical corporations. Existing law required the PUC, on or before March 7, 2001, and in consultation with the Independent System Operator, to take certain actions, including, in consultation with the Energy Commission, adopting energy conservation demand-side management and other initiatives in order to reduce demand for electricity and reduce load during peak demand periods, including differential incentives for renewable or super clean distributed generation resources. Pursuant to this requirement, the PUC has developed a self-generation incentive program to encourage customers of electrical corporations to install distributed generation that operates on renewable fuel or contributes to system reliability. Existing law requires the PUC, in consultation with the Energy Commission, to administer, until January 1, 2008, a self-generation incentive program for distributed generation resources in the same form that existed on January 1, 2004, subject to certain air emissions and efficiency standards. In a PUC decision, the PUC adopted the California Solar Initiative, which modified the self-generation incentive program for distributed generation resources and provides incentives to customer-side photovoltaics and solar thermal electric projects under ~~1~~ one megawatt.

This bill would require the PUC, in implementing the California Solar Initiative, to authorize the award of monetary incentives for up to the 1st megawatt of alternating current generated by an eligible solar energy ~~systems~~ system, that meets the eligibility criteria established by the Energy Commission. The bill would authorize the commission, prior to the establishment of eligibility criteria by the Energy Commission, to determine the eligibility of a solar energy system, as defined, to receive monetary incentives. The bill would require that awards of monetary incentives decline at a rate of an average of at least 7% for each year following implementation, and be zero by December 31, 2016. The bill would require the PUC, by ~~January 1~~ June 30, 2010, to adopt a performance-based incentive program, as specified. The bill would require that the PUC, by January 1, 2008, and in consultation with the Energy Commission, require reasonable and cost-effective energy efficiency improvements in existing buildings as a condition of providing incentives for eligible solar energy systems. The bill would require the commission to require time-variant pricing for all ratepayers with a solar energy system. The bill would prohibit costs of the program from being recovered from certain customers and would require the commission to ensure that the total cost over the duration of the program does not exceed \$3,200,000,000, consisting of 3 specified program components. The bill would prohibit the PUC from allocating additional moneys for certain research, development, and demonstration. The bill would require that by

January 1, 2009, and every year thereafter, the PUC submit to the Legislature an assessment of the success of the California Solar Initiative program, that includes specified information.

This bill would require the Energy Commission, by January 1, 2008, and in consultation with the PUC, local publicly owned electric utilities, and interested members of the public, to establish and thereafter revise eligibility criteria for solar energy systems and to establish conditions for ratepayer funded incentives that are applicable to the California Solar Initiative. The bill would require the Energy Commission to adopt guidelines for solar energy systems receiving ratepayer funded incentives at a publicly noticed meeting.

*The bill would, upon establishment of eligibility criteria by the Energy Commission, prohibit ratepayer funded incentives from being made for a solar energy system that does not meet the eligibility criteria.* The bill would require the Energy Commission to make certain information available to the public, to provide assistance to builders and contractors, and to conduct random audits of solar energy systems to evaluate their operational performance.

This bill would require all local publicly owned electric utilities, as defined, that sell electricity at retail, on or before January 1, 2008, to adopt, implement, and finance a solar initiative program, as prescribed, for the purpose of investing in, and encouraging the increased installation of, residential and commercial solar energy systems. The bill would require a local publicly owned electric utility to make certain program information available to its customers and to the Energy Commission on an annual basis beginning June 1, 2008. By imposing additional duties upon local publicly owned electric utilities, the bill would thereby impose a state-mandated local program.

(3) Existing law requires all electric service providers, as defined, to develop a standard contract or tariff providing for net energy metering, and to make this contract available to eligible customer generators, upon request. Existing law requires all electric service providers, upon request, to make available to eligible customer generators contracts for net energy metering on a first-come-first-served basis until the time that the total rated generating capacity used by eligible customer generators exceeds 0.5% of the electric service provider's aggregate customer peak demand.

This bill would require the PUC to order electric service providers to expand the availability of net energy metering so that it is offered on a first-come-first-served basis until the time that the total rated generating capacity used by all eligible customer-generators exceeds 2.5% of the electric service provider's aggregate customer peak demand. *The bill would require the commission, by January 1, 2010, in consultation with the Energy Commission, to submit a report to the Governor and Legislature on the costs and benefits of net energy metering, wind energy co-metering, and co-energy metering to participating customers and non participating customers and with options to replace the economic costs of different forms of net metering with a mechanism that more equitably balances the interests of participating and nonparticipating customers.*

~~—(4) Under existing law, a violation of the Public Utilities Act or an order or direction of the PUC is a crime.—~~

~~—Various provisions of this bill are within the act and require action by the PUC to implement the bill's requirements. Because a~~

~~violation of those provisions or of PUC actions to implement those provisions would be a crime, this bill would impose a state mandated local program by creating new crimes.~~

~~(5)~~

(4) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for specified reasons.

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: yes.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 25405.5 is added to the Public Resources Code, to read:

25405.5. (a) As used in this section, the following terms have the following meanings:

(1) "kW" means kilowatts or 1,000 watts, as measured from the alternating current side of the solar energy system inverter consistent with Section 223 of Title 15 of the United States Code.

(2) "Production home" means a single-family residence constructed as part of a development of at least 50 homes per project that is intended or offered for sale.

(3) "Solar energy system" means a ~~photovoltaic solar collector or other photovoltaic solar energy device that has a primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, and that produces at least one kW, but not more than five megawatts, alternating current rated peak electricity. The commission may designate a solar energy device that is not a photovoltaic solar collector or other photovoltaic solar energy device to be a "solar energy system" if the solar energy device has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, it produces at least one kW, but not more than five megawatts, alternating current rated peak electricity, and it meets or exceeds the eligibility criteria established pursuant to Section 25782.~~ solar energy device that has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, that produces at least one kW, and not more than five megawatts, alternating current rated peak electricity, and that meets or exceeds the eligibility criteria established pursuant to Section 25782.

(b) A seller of production homes shall offer a solar energy system option to all customers that enter into negotiations to purchase a new production home constructed on land for which an application for a tentative subdivision map has been deemed complete on or after January 1, 2011, and disclose the following:

(1) The total installed cost of the solar energy system option.

(2) The estimated cost savings associated with the solar energy system option, as determined by the commission pursuant to Chapter 8.8 (commencing with Section 25780) of Division 15.

(c) The State Energy Resources Conservation and Development Commission shall develop an offset program that allows a developer or

seller of production homes to forgo the offer requirement of this section on a project, by installing solar energy systems generating specified amounts of electricity on other projects, including, but not limited to, low-income housing, multifamily, commercial, industrial, and institutional developments. The amount of electricity required to be generated from solar energy systems used as an offset pursuant to this subdivision shall be equal to the amount of electricity generated by solar energy systems installed on a similarly sized project within that climate zone, assuming 20 percent of the prospective buyers would have installed solar energy systems.

(d) The requirements of this section shall not operate as a substitute for the implementation of existing energy efficiency measures, and the requirements of this section shall not result in lower energy savings or lower energy efficiency levels than would otherwise be achieved by the full implementation of energy savings and energy efficiency standards established pursuant to Section 25402.

SEC. 2. Section 25405.6 is added to the Public Resources Code, to read:

25405.6. Not later than July 1, 2007, the commission shall initiate a public proceeding *to study* and make findings whether, and under what conditions, solar energy systems ~~shall~~ *should* be required on new residential and new nonresidential buildings, including the establishment of numerical targets. ~~As part of the study,~~ *the commission may determine that a solar energy system shall not be required for a residential building unless the commission determines, based upon consideration of all costs associated with the system, that the system is cost effective when amortized over the economic life of the structure. When determining the cost-effectiveness of the solar energy system, the commission shall consider the availability of governmental rebates, tax deductions, net-metering, and other quantifiable factors, if the commission can determine the availability of these financial incentives if a solar energy system is made mandatory and not elective. The commission shall periodically update the standards and adopt *study and incorporate* any revision that the commission determines is necessary, including revisions that reflect changes in the financial incentives originally considered by the commission when determining cost-effectiveness of the solar energy system. For purposes of this section, "solar energy system" means a photovoltaic solar collector or other photovoltaic solar energy device that has a primary purpose of providing for the collection and distribution of solar energy for the generation of electricity. *This section is intended to be for study purposes only and does not authorize the commission to develop and adopt any requirement for solar energy systems on either residential or nonresidential buildings.**

SEC. 3. Chapter 8.8 (commencing with Section 25780) is added to Division 15 of the Public Resources Code, to read:

CHAPTER 8.8. California Solar Initiative

25780. The Legislature finds and declares all of the following:

(a) California has a pressing need to procure a steady supply of affordable and reliable peak electricity.

(b) Solar generated electricity is uniquely suited to California's needs because it produces electricity when California needs it most, during the peak demand hours in summer afternoons when the sun is brightest and air conditioners are running at capacity.

(c) Procuring solar electric generation capacity to meet peak electricity demand increases system reliability and decreases California's dependence on unstable fossil fuel supplies.

(d) Solar generated electricity diversifies California's energy portfolio. California currently relies on natural gas for the bulk of its electricity generation needs. Increasing energy demands place increasing pressure on limited natural gas supplies and threaten to raise costs.

(e) More than 150,000 homes will be built annually in California in the coming years, challenging energy reliability and affordability.

(f) Investing in residential and commercial solar electricity generation installations today will lower the cost of solar generated electricity for all Californians in the future. In 10 years, solar peak electric generation can be procured without the need for rebates.

(g) Increasing California's solar electricity generation market will also bring additional manufacturing, installation, and sales jobs to the state at a higher rate than most conventional energy production sources.

(h) The California Solar Initiative is intended to be a cost-effective investment by ratepayers in peak electricity generation capacity. Pursuant to the initiative, it is further intended that ratepayers recoup the cost of their investment through lower rates as a result of avoiding purchases of electricity at peak rates, with additional system reliability and pollution reduction benefits.

(i) Solar energy systems provide substantial energy reliability and pollution reduction benefits. Solar energy systems also diversify our energy supply and thereby reduce our dependence on imported fossil fuels.

(j) It is the goal of the state to install solar energy systems with a generation capacity equivalent of 3,000 megawatts, to establish a self-sufficient solar industry in which solar energy systems are a viable mainstream option for both homes and businesses in 10 years, and to place solar energy systems on 50 percent of new homes in 13 years.

25781. As used in this chapter, the following terms have the following meanings:

(a) "California Solar Initiative" means the program providing ratepayer funded incentives for eligible solar energy systems adopted by the Public Utilities Commission in Decision 06-01-024.

(b) "kW" means kilowatts or 1,000 watts, as measured from the alternating current side of the solar energy system inverter consistent with Section 223 of Title 15 of the United States Code.

(c) "kWh" means kilowatthours, as measured by the number of kilowatts generated in an hour.

(d) "MW" means megawatts or 1,000,000 watts.

(e) "Solar energy system" means a ~~photovoltaic solar collector or other photovoltaic solar energy device that has a primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, and that produces at least one kW and not more than five MW alternating current rated peak~~

~~electricity. The commission may designate a solar energy device that is not a photovoltaic solar collector or other photovoltaic solar energy device to be a "solar energy system" if the solar energy device has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, it produces at least one kW, but not more than five MW, alternating current rated peak electricity, and it meets or exceeds the eligibility criteria established pursuant to solar energy device that has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, that produces at least one kW, and not more than five MW, alternating current rated peak electricity, and that meets or exceeds the eligibility criteria established pursuant to~~  
Section 25782.

25782. (a) The commission shall, by January 1, 2008, in consultation with the Public Utilities Commission, local publicly owned electric utilities, and interested members of the public, establish eligibility criteria for solar energy systems receiving ratepayer funded incentives that include all of the following:

(1) Design, installation, and electrical output standards or incentives.

(2) The solar energy system is intended primarily to offset part or all of the consumer's own electricity demand.

(3) All components in the solar energy system are new and unused, and have not previously been placed in service in any other location or for any other application.

(4) The solar energy system has a warranty of not less than 10 years to protect against defects and undue degradation of electrical generation output.

(5) The solar energy system is located on the same premises of the end-use consumer where the consumer's own electricity demand is located.

(6) The solar energy system is connected to the electrical corporation's electrical distribution system within the state.

(7) The solar energy system has meters or other devices in place to monitor and measure the system's performance and the quantity of electricity generated by the system.

(8) The solar energy system is installed in conformance with the manufacturer's specifications and in compliance with all applicable electrical and building code standards.

(b) The commission shall establish conditions on ratepayer funded incentives that require all of the following:

(1) Appropriate siting and high quality installation of the solar energy system by developing installation guidelines that maximize the performance of the system and prevent qualified systems from being inefficiently or inappropriately installed. The conditions established by the commission shall not impact housing designs or densities presently authorized by a city, county, or city and county. The goal of this paragraph is to achieve efficient installation of solar energy systems to promote the greatest energy production per ratepayer dollar.

(2) Optimal solar energy system performance during periods of peak electricity demand.

(3) Appropriate energy efficiency improvements in the new or existing home or commercial structure where the solar energy system is installed.

(c) The commission shall set rating standards for equipment,

components, and systems to assure reasonable performance and shall develop standards that provide for compliance with the minimum ratings.

*(d) Upon establishment of eligibility criteria pursuant to subdivision (a), no ratepayer funded incentives shall be made for a solar energy system that does not meet the eligibility criteria.*

25783. The commission shall do all the following:

(a) Publish educational materials designed to demonstrate how builders may incorporate solar energy systems during construction as well as energy efficiency measures that best complement solar energy systems.

(b) Develop and publish the estimated annual electrical generation and savings for solar energy systems. The estimates shall vary by climate zone, type of system, size, lifecycle costs, electricity prices, and other factors the commission determines to be relevant to a consumer when making a purchasing decision.

(c) Provide assistance to builders and contractors. The assistance may include technical workshops, training, educational materials, and related research.

(d) The commission shall annually conduct random audits of solar energy systems to evaluate their operational performance.

(e) The commission, in consultation with the Public Utilities Commission, shall evaluate the costs and benefits of having an increased number of operational solar energy systems as a part of the electrical system with respect to their impact upon the distribution, transmission, and supply of electricity, using the best available load profiling and distribution operations data from the Public Utilities Commission, local publicly owned electric utilities, and electrical corporations, and performance audits of installed solar energy systems.

25784. The commission shall adopt guidelines for solar energy systems receiving ratepayer funded incentives at a publicly noticed meeting offering all interested parties an opportunity to comment. Not less than 30 days' public notice shall be given of the meeting required by this section, before the commission initially adopts guidelines. Substantive changes to the guidelines shall not be adopted without at least 10 days' written notice to the public. Notwithstanding any other provision of law, any guidelines adopted pursuant to this chapter shall be exempt from the requirements of Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code.

SEC. 4. Section 387.5 is added to the Public Utilities Code, to read:

387.5. (a) The governing body of a local publicly owned electric utility, as defined in subdivision (d) of Section 9604, that sells electricity at retail, shall adopt, implement, and finance a solar ~~roofs~~ initiative program, funded in accordance with subdivision (b), for the purpose of investing in, and encouraging the increased installation of, residential and commercial solar energy systems. This program shall be consistent with the ~~California Solar Initiative adopted by the commission in Decision 06-01-024, and with the intent and~~ goals of the ~~Legislature~~ state to encourage the installation of 3,000 megawatts of photovoltaic solar energy in California in accordance with Chapter 8.8 (commencing with Section 25780) of Division 15 of the Public Resources Code.

(b) On or before January 1, 2008, a local publicly owned electric utility shall offer monetary incentives for the installation of solar energy systems of at least two dollars and eighty cents (\$2.80) per installed watt, or for the electricity produced by the solar energy system, measured in kilowatthours, as determined by the governing board of a local publicly owned electric utility, for photovoltaic solar energy systems. The incentive level shall decline each year thereafter at a rate of no less than *an average of 7* percent per year.

(c) A local publicly owned electric utility shall initiate a public proceeding to fund a solar energy program to adequately support the goal of ~~the Legislature to encourage the installation of~~ *installing* 3,000 megawatts of photovoltaic solar energy in California in accordance with Chapter 8.8 (commencing with Section 25780) of Division 15 of the Public Resources Code ~~and consistent with the California Solar Initiative adopted by the commission in Decision 06-01-024~~

. The proceeding shall determine what additional funding, if any, is necessary to provide the incentives pursuant to subdivision (b). The public proceeding shall be completed and the comprehensive solar energy program established by January 1, 2008.

(d) A local publicly owned electric utility shall, on an annual basis beginning June 1, 2008, make available to its customers and to the State Energy Resources Conservation and Development Commission, information relating to the utility's solar ~~roofs~~ initiative program established pursuant to this section, including, but not limited to, the number of photovoltaic solar watts installed, the total number of photovoltaic systems installed, the total number of applicants, the amount of incentives awarded, and the contribution toward the program goals.

(e) ~~It is the intent of the Legislature that, in~~  
*In* establishing the program required by this section, no moneys shall be diverted from any existing programs for low-income ratepayers, or from cost-effective energy efficiency or demand response programs. ~~-(f)~~  
~~It is the intent of the Legislature that the statewide expenditure cap for local publicly owned electric utilities shall not exceed seven hundred million dollars (\$700,000,000). The expenditure cap for each local publicly owned electric utility~~

(f) *The statewide expenditures for solar programs adopted, implemented, and financed by local publicly owned electric utilities shall be seven hundred eighty-four million dollars (\$784,000,000). The expenditure level for each local publicly owned electric utility shall be based on that utility's percentage of the total statewide load served by all local publicly owned electric utilities. Expenditures by a local publicly owned electric utility may be less than the utility's cap amount, provided that funding is adequate to provide the incentives required by subdivision (b).*

SEC. 5. Section 2827 of the Public Utilities Code is amended to read:

2827. (a) The Legislature finds and declares that a program to provide net energy metering for eligible customer-generators is one way to encourage substantial private investment in renewable energy resources, stimulate in-state economic growth, reduce demand for electricity during peak consumption periods, help stabilize

California's energy supply infrastructure, enhance the continued diversification of California's energy resource mix, and reduce interconnection and administrative costs for electricity suppliers.

(b) As used in this section, the following definitions apply:

(1) "Electric service provider" means an electrical corporation, as defined in Section 218, a local publicly owned electric utility, as defined in Section 9604, or an electrical cooperative, as defined in Section 2776, or any other entity that offers electrical service. This section shall not apply to a local publicly owned electric utility, as defined in Section 9604 of the Public Utilities Code, that serves more than 750,000 customers and that also conveys water to its customers.

(2) "Eligible customer-generator" means a residential, small commercial customer as defined in subdivision (h) of Section 331, commercial, industrial, or agricultural customer of an electric service provider, who uses a solar or a wind turbine electrical generating facility, or a hybrid system of both, with a capacity of not more than one megawatt that is located on the customer's owned, leased, or rented premises, is interconnected and operates in parallel with the electric grid, and is intended primarily to offset part or all of the customer's own electrical requirements.

(3) "Net energy metering" means measuring the difference between the electricity supplied through the electric grid and the electricity generated by an eligible customer-generator and fed back to the electric grid over a 12-month period as described in subdivision (h). Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in two directions. An additional meter or meters to monitor the flow of electricity in each direction may be installed with the consent of the customer-generator, at the expense of the electric service provider, and the additional metering shall be used only to provide the information necessary to accurately bill or credit the customer-generator pursuant to subdivision (h), or to collect solar or wind electric generating system performance information for research purposes. If the existing electrical meter of an eligible customer-generator is not capable of measuring the flow of electricity in two directions, the customer-generator shall be responsible for all expenses involved in purchasing and installing a meter that is able to measure electricity flow in two directions. If an additional meter or meters are installed, the net energy metering calculation shall yield a result identical to that of a single meter. An eligible customer-generator who already owns an existing solar or wind turbine electrical generating facility, or a hybrid system of both, is eligible to receive net energy metering service in accordance with this section.

(4) "Wind energy co-metering" means any wind energy project greater than 50 kilowatts, but not exceeding one megawatt, where the difference between the electricity supplied through the electric grid and the electricity generated by an eligible customer-generator and fed back to the electric grid over a 12-month period is as described in subdivision (h). Wind energy co-metering shall be accomplished pursuant to Section 2827.8.

(5) "Co-energy metering" means a program that is the same in all other respects as a net energy metering program, except that the local publicly owned electric utility, as defined in Section 9604, has elected to apply a generation-to-generation energy and time-of-use credit formula as provided in subdivision (i).

(6) "Ratemaking authority" means, for an electrical corporation as defined in Section 218, or an electrical cooperative as defined in Section 2776, the commission, and for a local publicly owned electric utility as defined in Section 9604, the local elected body responsible for regulating the rates of the local publicly owned utility.

(c) (1) Every electric service provider shall develop a standard contract or tariff providing for net energy metering, and shall make this contract available to eligible customer-generators, upon request, on a first-come-first-served basis until the time that the total rated generating capacity used by eligible customer-generators exceeds 2.5 percent of the electric service provider's aggregate customer peak demand.

(2) On an annual basis, beginning in 2003, every electric service provider shall make available to the ratemaking authority information on the total rated generating capacity used by eligible customer-generators that are customers of that provider in the provider's service area. For those electric service providers who are operating pursuant to Section 394, they shall make available to the ratemaking authority the information required by this paragraph for each eligible customer-generator that is their customer for each service area of an electric corporation, local publicly owned electric utility, or electrical cooperative, in which the customer has net energy metering. The ratemaking authority shall develop a process for making the information required by this paragraph available to energy service providers, and for using that information to determine when, pursuant to paragraph (3), a service provider is not obligated to provide net energy metering to additional customer-generators in its service area.

(3) Notwithstanding paragraph (1), an electric service provider is not obligated to provide net energy metering to additional customer-generators in its service area when the combined total peak demand of all customer-generators served by all the electric service providers in that service area furnishing net energy metering to eligible customer-generators exceeds 2.5 percent of the aggregate customer peak demand of those electric service providers.

(4) *By January 1, 2010, the commission, in consultation with the State Energy Resources Conservation and Development Commission, shall submit a report to the Governor and the Legislature on the costs and benefits of net energy metering, wind energy co-metering, and co-energy metering to participating customers and nonparticipating customers and with options to replace the economic costs and benefits of net energy metering, wind energy co-metering, and co-energy metering with a mechanism that more equitably balances the interests of participating and nonparticipating customers, and that incorporates the findings of the report on economic and environmental costs and benefits of net metering required by subdivision (n).*

(d) Electric service providers shall make all necessary forms and contracts for net metering service available for download from the Internet.

(e) (1) Every electric service provider shall ensure that requests for establishment of net energy metering are processed in a time period not exceeding that for similarly situated customers requesting new electric service, but not to exceed 30 working days from the date the electric service provider receives a completed application form for net metering service, including a signed interconnection

agreement from an eligible customer-generator and the electric inspection clearance from the

governmental authority having jurisdiction. If an electric service provider is unable to process the request within the allowable timeframe, the electric service provider shall notify both the customer-generator and the ratemaking authority of the reason for its inability to process the request and the expected completion date.

(2) Electric service providers shall ensure that requests for an interconnection agreement from an eligible customer-generator are processed in a time period not to exceed 30 working days from the date the electric service provider receives a completed application form from the eligible customer-generator for an interconnection agreement. If an electric service provider is unable to process the request within the allowable timeframe, the electric service provider shall notify the customer-generator and the ratemaking authority of the reason for its inability to process the request and the expected completion date.

(f) (1) If a customer participates in direct transactions pursuant to paragraph (1) of subdivision (b) of Section 365 with an electric supplier that does not provide distribution service for the direct transactions, the service provider that provides distribution service for an eligible customer-generator is not obligated to provide net energy metering to the customer.

(2) If a customer participates in direct transactions pursuant to paragraph (1) of subdivision (b) of Section 365 with an electric supplier, and the customer is an eligible customer-generator, the service provider that provides distribution service for the direct transactions may recover from the customer's electric service provider the incremental costs of metering and billing service related to net energy metering in an amount set by the ratemaking authority.

(g) Each net energy metering contract or tariff shall be identical, with respect to rate structure, all retail rate components, and any monthly charges, to the contract or tariff to which the same customer would be assigned if the customer did not use an eligible solar or wind electrical generating facility, except that eligible customer-generators shall not be assessed standby charges on the electrical generating capacity or the kilowatthour production of an eligible solar or wind electrical generating facility. The charges for all retail rate components for eligible customer-generators shall be based exclusively on the customer-generator's net kilowatthour consumption over a 12-month period, without regard to the customer-generator's choice of electric service provider. Any new or additional demand charge, standby charge, customer charge, minimum monthly charge, interconnection charge, or any other charge that would increase an eligible customer-generator's costs beyond those of other customers who are not customer-generators in the rate class to which the eligible customer-generator would otherwise be assigned if the customer did not own, lease, rent, or otherwise operate an eligible solar or wind electrical generating facility are contrary to the intent of this section, and shall not form a part of net energy metering contracts or tariffs.

(h) For eligible residential and small commercial customer-generators, the net energy metering calculation shall be made by measuring the difference between the electricity supplied to

the eligible customer-generator and the electricity generated by the eligible customer-generator and fed back to the electric grid over a 12-month period. The following rules shall apply to the annualized net metering calculation:

(1) The eligible residential or small commercial customer-generator shall, at the end of each 12-month period following the date of final interconnection of the eligible customer-generator's system with an electric service provider, and at each anniversary date thereafter, be billed for electricity used during that period. The electric service provider shall determine if the eligible residential or small commercial customer-generator was a net consumer or a net producer of electricity during that period.

(2) At the end of each 12-month period, where the electricity supplied during the period by the electric service provider exceeds the electricity generated by the eligible residential or small commercial customer-generator during that same period, the eligible residential or small commercial customer-generator is a net electricity consumer and the electric service provider shall be owed compensation for the eligible customer-generator's net kilowatthour consumption over that same period. The compensation owed for the eligible residential or small commercial customer-generator's consumption shall be calculated as follows:

(A) For all eligible customer-generators taking service under tariffs employing "baseline" and "over baseline" rates, any net monthly consumption of electricity shall be calculated according to the terms of the contract or tariff to which the same customer would be assigned to or be eligible for if the customer was not an eligible customer-generator. If those same customer-generators are net generators over a billing period, the net kilowatthours generated shall be valued at the same price per kilowatthour as the electric service provider would charge for the baseline quantity of electricity during that billing period, and if the number of kilowatthours generated exceeds the baseline quantity, the excess shall be valued at the same price per kilowatthour as the electric service provider would charge for electricity over the baseline quantity during that billing period.

(B) For all eligible customer-generators taking service under tariffs employing "time of use" rates, any net monthly consumption of electricity shall be calculated according to the terms of the contract or tariff to which the same customer would be assigned to or be eligible for if the customer was not an eligible customer-generator. When those same customer-generators are net generators during any discrete time of use period, the net kilowatthours produced shall be valued at the same price per kilowatthour as the electric service provider would charge for retail kilowatthour sales during that same time of use period. If the eligible customer-generator's time of use electrical meter is unable to measure the flow of electricity in two directions, paragraph (3) of subdivision (b) shall apply.

(C) For all residential and small commercial customer-generators and for each billing period, the net balance of moneys owed to the electric service provider for net consumption of electricity or credits owed to the customer-generator for net generation of electricity shall be carried forward as a monetary value until the end of each 12-month period. For all commercial, industrial, and agricultural customer-generators the net balance of moneys owed shall be paid in accordance with the electric service provider's normal

billing cycle, except that if the commercial, industrial, or agricultural customer-generator is a net electricity producer over a normal billing cycle, any excess kilowatthours generated during the billing cycle shall be carried over to the following billing period as a monetary value, calculated according to the procedures set forth in this section, and appear as a credit on the customer-generator's account, until the end of the annual period when paragraph (3) shall apply.

(3) At the end of each 12-month period, where the electricity generated by the eligible customer-generator during the 12-month period exceeds the electricity supplied by the electric service provider during that same period, the eligible customer-generator is a net electricity producer and the electric service provider shall retain any excess kilowatthours generated during the prior 12-month period. The eligible customer-generator shall not be owed any compensation for those excess kilowatthours unless the electric service provider enters into a purchase agreement with the eligible customer-generator for those excess kilowatthours.

(4) The electric service provider shall provide every eligible residential or small commercial customer-generator with net electricity consumption information with each regular bill. That information shall include the current monetary balance owed the electric service provider for net electricity consumed since the last 12-month period ended. Notwithstanding this subdivision, an electric service provider shall permit that customer to pay monthly for net energy consumed.

(5) If an eligible residential or small commercial customer-generator terminates the customer relationship with the electric service provider, the electric service provider shall reconcile the eligible customer-generator's consumption and production of electricity during any part of a 12-month period following the last reconciliation, according to the requirements set forth in this subdivision, except that those requirements shall apply only to the months since the most recent 12-month bill.

(6) If an electric service provider providing net metering to a residential or small commercial customer-generator ceases providing that electrical service to that customer during any 12-month period, and the customer-generator enters into a new net metering contract or tariff with a new electric service provider, the 12-month period, with respect to that new electric service provider, shall commence on the date on which the new electric service provider first supplies electric service to the customer-generator.

(i) Notwithstanding any other provisions of this section, the following provisions shall apply to an eligible customer-generator with a capacity of more than 10 kilowatts, but not exceeding one megawatt, that receives electrical service from a local publicly owned electric utility, as defined in Section 9604, that has elected to utilize a co-energy metering program unless the electric service provider chooses to provide service for eligible customer-generators with a capacity of more than 10 kilowatts in accordance with subdivisions (g) and (h):

(1) The eligible customer-generator shall be required to utilize a meter, or multiple meters, capable of separately measuring electricity flow in both directions. All meters shall provide "time-of-use" measurements of electricity flow, and the customer shall take service on a time-of-use rate schedule. If the existing meter of the eligible customer-generator is not a time-of-use meter

or is not capable of measuring total flow of energy in both directions, the eligible customer-generator shall be responsible for all expenses involved in purchasing and installing a meter that is both time-of-use and able to measure total electricity flow in both directions. This subdivision shall not restrict the ability of an eligible customer-generator to utilize any economic incentives provided by a government agency or the electric service provider to reduce its costs for purchasing and installing a time-of-use meter.

(2) The consumption of electricity from the electric service provider shall result in a cost to the eligible customer-generator to be priced in accordance with the standard rate charged to the eligible customer-generator in accordance with the rate structure to which the customer would be assigned if the customer did not use an eligible solar or wind electrical generating facility. The generation of electricity provided to the electric service provider shall result in a credit to the eligible customer-generator and shall be priced in accordance with the generation component, established under the applicable structure to which the customer would be assigned if the customer did not use an eligible solar or wind electrical generating facility.

(3) All costs and credits shall be shown on the eligible customer-generator's bill for each billing period. In any months in which the eligible customer-generator has been a net consumer of electricity calculated on the basis of value determined pursuant to paragraph (2), the customer-generator shall owe to the electric service provider the balance of electricity costs and credits during that billing period. In any billing period in which the eligible customer-generator has been a net producer of electricity calculated on the basis of value determined pursuant to paragraph (2), the electric service provider shall owe to the eligible customer-generator the balance of electricity costs and credits during that billing period. Any net credit to the eligible customer-generator of electricity costs may be carried forward to subsequent billing periods, provided that an electric service provider may choose to carry the credit over as a kilowatthour credit consistent with the provisions of any applicable tariff, including any differences attributable to the time of generation of the electricity. At the end of each 12-month period, the electric service provider may reduce any net credit due to the eligible customer-generator to zero.

(j) A solar or wind turbine electrical generating system, or a hybrid system of both, used by an eligible customer-generator shall meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and accredited testing laboratories such as Underwriters Laboratories and, where applicable, rules of the Public Utilities Commission regarding safety and reliability. A customer-generator whose solar or wind turbine electrical generating system, or a hybrid system of both, meets those standards and rules shall not be required to install additional controls, perform or pay for additional tests, or purchase additional liability insurance.

(k) If the commission determines that there are cost or revenue obligations for an electric corporation, as defined in Section 218, that may not be recovered from customer-generators acting pursuant to this section, those obligations shall remain within the customer class from which any shortfall occurred and may not be shifted to any other customer class. Net-metering and co-metering customers shall

not be exempt from the public benefits charge. In its report to the Legislature, the commission shall examine different methods to ensure that the public benefits charge remains a nonbypassable charge.

(l) A net metering customer shall reimburse the Department of Water Resources for all charges that would otherwise be imposed on the customer by the commission to recover bond-related costs pursuant to an agreement between the commission and the Department of Water Resources pursuant to Section 80110 of the Water Code, as well as the costs of the department equal to the share of the department's estimated net unavoidable power purchase contract costs attributable to the customer. The commission shall incorporate the determination into an existing proceeding before the commission, and shall ensure that the charges are nonbypassable. Until the commission has made a determination regarding the nonbypassable charges, net metering shall continue under the same rules, procedures, terms, and conditions as were applicable on December 31, 2002.

(m) In implementing the requirements of subdivisions (k) and (l), a customer-generator shall not be required to replace its existing meter except as set forth in paragraph (3) of subdivision (b), nor shall the electric service provider require additional measurement of usage beyond that which is necessary for customers in the same rate class as the eligible customer-generator.

(n) On or before January 1, 2005, the commission shall submit a report to the Governor and the Legislature that assesses the economic and environmental costs and benefits of net metering to customer-generators, ratepayers, and utilities, including any beneficial and adverse effects on public benefit programs and special purpose surcharges. The report shall be prepared by an independent party under contract with the commission.

(o) It is the intent of the Legislature that the Treasurer incorporate net energy metering and co-energy metering projects undertaken pursuant to this section as sustainable building methods or distributive energy technologies for purposes of evaluating low-income housing projects.

SEC. 6. Section 2851 is added to Chapter 9 of Part 2 of Division 1 of the Public Utilities Code, to read:

2851. (a) In implementing the California Solar Initiative, adopted by the commission in Decision 06-01-024, the commission shall do all of the following:

(1) The commission shall authorize the award of monetary incentives for ~~eligible solar energy systems~~ *up to the first megawatt of alternating current generated by solar energy systems that meet the eligibility criteria established by the State Energy Resources Conservation and Development Commission pursuant to Chapter 8.8 (commencing with Section 25780) of Division 15 of the Public Resources Code. The commission shall determine the eligibility of a solar energy system, as defined in Section 25781 of the Public Resources Code, to receive monetary incentives until the time the State Energy Resources Conservation and Development Commission establishes eligibility criteria pursuant to Section 25782. Monetary incentives shall not be awarded for solar energy systems that do not meet the eligibility criteria . The incentive level authorized by the commission shall decline each year following implementation of the California Solar Initiative, at a rate of no less than an average of 7 percent per year, and shall be zero as of December 31, 2016. The commission shall adopt and publish a schedule of declining incentive levels no less than -60*

30 days in advance of the first decline in incentive levels. The commission may develop incentives based upon the output of electricity from the system, provided those incentives are consistent with the declining incentive levels of this paragraph *and the incentives apply to only the first megawatt of electricity generated by the system* .

(2) By January 1, 2010, the commission shall adopt a performance-based incentive program in which at least 50 percent of the moneys thereafter expended pursuant to the California Solar Initiative are expended to provide incentives that are based on the actual electrical output of the solar energy system and that promote the installation of solar energy systems that maximize electrical output to coincide with peak loads. The commission shall ensure that the performance-based incentive declines each year thereafter at a rate of no less than an average of 7 percent per year. In developing the performance-based incentive program, the commission may:

(A) Apply performance-based incentives only to customer classes designated by the commission.

(B) Design the performance-based incentives so that customers may receive a higher level of incentives than under incentives based on installed electrical capacity.

(C) Develop financing options that help offset the installation costs of the solar energy system, provided that this financing is ultimately repaid in full by the consumer or through the application of the performance-based rebates.

(3) By January 1, 2008, the commission, in consultation with the State Energy Resources Conservation and Development Commission, shall require reasonable and cost-effective energy efficiency improvements in existing buildings as a condition of providing incentives for eligible solar energy systems, with appropriate exemptions or limitations to accommodate the limited financial resources of low-income residential housing.

(4) *The commission shall require time-variant pricing for all ratepayers with a solar energy system. The commission shall develop a time-variant tariff that creates the maximum incentive for ratepayers to install solar energy systems so that the system's peak electricity production coincides with California's peak electricity demands and that assures that ratepayers receive due value for their contribution to the purchase of solar energy systems and customers with solar energy systems continue to have an incentive to use electricity efficiently. In developing the time-variant tariff, the commission may exclude customers participating in the tariff from the rate cap for residential customers for existing baseline quantities or usage by those customers of up to 130 percent of existing baseline quantities, as required by Section 80110 of the Water Code.*

(b) (1) In implementing the California Solar Initiative, the commission shall not allocate any additional moneys to research, development, and demonstration that explores solar technologies and other distributed generation technologies that employ or could employ solar energy for generation or storage of electricity or to offset natural gas usage. This subdivision does not prohibit the commission from continuing to allocate moneys to research, development, and demonstration pursuant to the self-generation incentive program for distributed generation resources originally established pursuant to Chapter 329 of the Statutes of 2000, as modified pursuant to Section 379.6.

(2) The Legislature finds and declares that a program that

provides a stable source of monetary incentives for eligible solar energy systems will encourage private investment sufficient to make solar technologies cost effective.

(3) On or before ~~January 1~~ June 30 , 2009, and every year thereafter, the commission shall submit to the Legislature an assessment of the success of the California Solar Initiative program. That assessment shall include the number of residential and commercial sites that have installed solar energy systems, the electrical generating capacity of the installed solar energy systems, the cost of the program, total electrical system benefits, including the effect on electrical service rates, environmental benefits, how the program affects the operation and reliability of the electrical grid, how the program has affected peak demand for electricity, the progress made toward reaching the goals of the program, whether the program is on schedule to meet the program goals, and recommendations for improving the program to meet its goals.

*(c) (1) The commission shall not impose any charge upon the consumption of natural gas, or upon natural gas ratepayers, to fund the California Solar Initiative.*

*(2) Notwithstanding any other provision of law, any charge imposed to fund the program adopted and implemented pursuant to this section shall be imposed upon all customers not participating in the California Alternate Rates for Energy (CARE) or family electric rate assistance (FERA) programs as provided in paragraph (2), including those residential customers subject to the rate cap required by Section 80110 of the Water Code for existing baseline quantities or usage up to 130 percent of existing baseline quantities of electricity.*

*(3) The costs of the program adopted and implemented pursuant to this section may not be recovered from customers participating in the California Alternate Rates for Energy or CARE program established pursuant to Section 739.1, except to the extent that program costs are recovered out of the nonbypassable system benefits charge authorized pursuant to Section 399.8.*

*(d) In implementing the California Solar Initiative, the commission shall ensure that the total cost over the duration of the program does not exceed three billion two hundred million dollars (\$3,200,000,000). The financial components of the California Solar Initiative shall consist of the following:*

*(1) Programs under the supervision of the commission funded by charges collected from customers of San Diego Gas and Electric Company, Southern California Edison Company, and Pacific Gas and Electric Company. The total cost over the duration of these programs shall not exceed two billion sixteen million (\$2,016,000,000) and includes moneys collected directly into a tracking account for support of the California Solar Initiative and moneys collected into other accounts that are used to further the goals of the California Solar Initiative.*

*(2) Programs adopted, implemented, and financed in the amount of seven hundred eighty-four million dollars (\$784,000,000), by charges collected by local publicly owned electric utilities pursuant to Section 387.5. Nothing in this subdivision shall give the commission power and jurisdiction with respect to a local publicly owned electric utility or its customers.*

*(3) Programs for the installation of solar energy systems on new construction, administered by the State Energy Resources Conservation*

and Development Commission pursuant to Chapter 8.6 (commencing with Section 25740) of Division 15 of the Public Resources Code, and funded by nonbypassable charges in the amount of four hundred million dollars (\$400,000,000), collected from customers of San Diego Gas and Electric Company, Southern California Edison Company, and Pacific Gas and Electric Company pursuant to Article 15 (commencing with Section 399).

~~SEC. 7. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.~~

~~SEC. 8.~~ SEC. 7. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution ~~for certain other costs that may be incurred by a local agency or school district~~ because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.



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May 8, 2006

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Thank you for allowing time at your last meeting to discuss SDG&E's Advanced Metering Infrastructure (AMI) proposal. Questions came up during the discussion regarding the cost of the project and the impact on rates to customers. Several days ago, Michael Shames copied you on a letter that asked me to verify and clarify, to the EWG, the answers I provided at the meeting. I believe the explanation to follow should do just that.

At the EWG meeting, I stated that SDG&E plans to develop and install the entire infrastructure from 2007 through 2011. The cost to deploy over that time totals approximately \$450 million. The actual number filed in our March 28<sup>th</sup> testimony to the CPUC is \$436 million, which I rounded-up for ease of communication. This number includes the cost for hardware such as electric meters, gas modules, and communications network equipment, the cost to install this hardware, and the cost to develop application software for managing the meter data and integrating the new systems with the legacy utility systems. Over the same 5-year period, we will realize capital savings of approximately \$30 million, as the purchase of certain equipment and systems become unnecessary (e.g. the electromechanical meters).

Michael asked about a cost figure of \$650 million in our filed testimony. The CPUC requires us to address the long-term cost effectiveness of the project in our filing. The methodology used for this economic assessment is a standard net present value analysis, which looks at the annual cash flow over the life of the investment, discounted back to present day. The analysis captures not only the initial installation cost described above, but also the ongoing costs and savings that would occur throughout the longer project life. We performed the analysis for 2007-2038, which resulted in a total (present value) cost of \$635 million and a corresponding total (present value) benefit of \$762 million, over the 32-year horizon. Therefore, the AMI project has a net positive benefit for customers.

Although I did not discuss AMI Operating & Maintenance (O&M) expenses during my presentation, I do want to provide you with a quick highlight. These expenses include certain labor and non-labor costs that we typically do not capitalize. Examples of labor costs are resources to re-route meter reading during transition, coordinate large customer system installations, perform rate analysis, and answer customers' questions. Non-labor costs include customer education materials and software license fees. These expenses total approximately \$80 million for the deployment period 2007-2011. However, we expect to achieve over \$92 million in total lower operating costs through AMI over the same time horizon, offsetting the incremental O&M expenses and providing a

net savings to customers. In addition to the operating cost reductions, we anticipate saving customers approximately \$51 million in avoided capacity and energy during the deployment period alone. This stems from the demand reduction that could result from the illustrative incentive programs and time-based rates included as part of our plan.

Deploying AMI requires significant upfront cost to build the network, integrate software and change every customer's meter. These costs will be funded through rates, with expected savings to follow in subsequent years. We expect a typical residential customer bill to increase by around \$3/month during the initial deployment period 2007-2011. This increase will gradually taper off until 2021, roughly ten years after the infrastructure is installed, when AMI-related savings will begin to outweigh AMI-related costs.

I hope this explanation is helpful. We wish to be open and direct in sharing information with you. We are excited about AMI because it will achieve tangible benefits for our customers and lay the foundation for other technology initiatives that will further enhance services and reduce cost to our customers. Thank you again for having me at your meeting and for your time.

Sincerely,

A handwritten signature in black ink, appearing to read "Gene A. Smith". The signature is fluid and cursive, with a long horizontal stroke extending to the right.