

DRAFT

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

I.D.# 6222

ENERGY DIVISION

RESOLUTION G-3394

December 14, 2006

R E S O L U T I O N

Resolution G-3394. The California Energy Commission (CEC) requests approval of its 2007 program plan and funding request for the Natural Gas Public Interest Research Program. The CEC's request is approved.

Pursuant to California Public Utilities Commission Decision (D.) 04-08-010.

SUMMARY

This Resolution approves the California Energy Commission (CEC) report, *Proposed Program Plan and Funding Request for 2007, Natural Gas Public Interest Research Program*. That program was established pursuant to D. 04-08-010. The CEC filed this plan and the funding request on August 31, 2006.

This resolution also modifies the timetable for the public interest gas R&D program approval process. This modification to the current timetable is made at the request of the CEC, in response to provisions of SB 1250 (Chapter 512, Statutes of 2006) that affect the California Energy Commission's (Energy Commission) administration of the Natural Gas Research Program.

In short, this resolution approves the CEC plan with a change in its timetable. Funding will begin for the 2007 fiscal year July 1, 2007, and follow a fiscal year through June 30, 2008. Previously, funding ran January to January. Existing project funding will not be affected in the January 2007-June 2007 time frame, but no new projects will be funded during that period.

The timetable we approve here will also be in effect for future years.

BACKGROUND

D. 04-08-010 (the "Decision") implemented Assembly Bill (AB) 1002, establishing a natural gas surcharge to fund gas public purpose programs, including public interest research and development (R&D).

The CPUC instituted Rulemaking 02-10-001 to implement AB 1002. In this proceeding the Commission addressed various issues related to the design and implementation of a surcharge to fund gas public purpose programs.

D. 04-08-010 established certain criteria for gas R&D projects to be approved under this program.

The Decision defines public interest gas R&D activities as those which "are directed towards developing science or technology, 1) the benefits of which [sic] accrue to California citizens and 2) are not adequately addressed by competitive or regulated entities." (p.25)*.

The CPUC established the following criteria for public interest gas R&D projects:

- 1) Focus on energy efficiency, renewable technologies, conservation and environmental issues
- 2) Support State Energy policy
- 3) Offer a reasonable probability of providing benefits to the general public, and
- 4) Consider opportunities for collaboration and co-funding opportunities with other entities.

D. 04-08-010 designated the CEC as administrator of the R&D program, because the CEC already administers the Public Interest Energy Research (PIER) program and it is publicly accountable, being subject to the Bagley-Keene Open Meeting Act and the Public Records Act.

* See http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/39314.PDF

Projects will be selected by the CEC, and reviewed and approved by the CPUC.

D. 04-08-010 reserved ultimate oversight for the CPUC. The CPUC is responsible for adopting the R&D program, and for setting the surcharge to fund the R&D program. The Decision therefore made it clear that the CPUC has final responsibility to “approve and resolve administration, funding, project approval, or other matters, and make a final decision” (p.32). The Decision further designated the CPUC’s Energy Division to serve as this Commission’s advisor (*ibid.*).

The CEC’s R&D program plans and budgets have been approved by the CPUC for calendar years 2005 and 2006. D. 04-08-010 established a zero-based budget of up to \$18 million for the Gas R&D program for 2007 (p. 36 and 47).

The CEC timely submitted its Program Plan and Funding Request for 2007 on August 31, 2006. In addition to providing its research plan and budget for 2007, the CEC also provides information on 2006 program activities and expenditures.

DISCUSSION

Consistent with D. 04-08-010, the CEC’s Public Interest Natural Gas Research Program comprises a research and development effort directed towards maximizing efficiency and mitigating environmental effects of gas consumption. The CEC proposes to allocate its \$18 million budget to administration (\$1.8 million), small grants (\$1 million), and a set of five ranked Key Research Areas, broken down into their sub-areas for further explication:

1. Affordable, comfortable, and energy-smart choices for daily life and a strong California economy
 - a. Increase efficiency of existing building systems and industrial processes (for example, develop replacement/retrofit products, improve operational strategies, identify intervention tactics).
 - b. Reduce the first costs and operating costs of energy efficient technologies and systems for buildings and industries.

Natural Gas Public Interest Research Program 2007/DRE

- c. Reduce and optimize the hot water use in residential, commercial, and industrial operations by developing technologies that conserve water or provide cost-effective alternate thermal energy sources.
2. Clean and diverse natural gas supply that optimizes California's resources
 - a. Assess the quality and interchangeability of LNG to determine its environmental and performance impact.
 - b. Improve and reduce the cost of clean combustion technologies.
 - c. Reduce the cost and improve the performance of solar thermal, biogas, and geothermal technologies for natural gas replacement (for example, space heating and industrial applications) as well as hybrid systems (for example, solar/gas hybrids).
3. Clean and diverse transportation system
 - a. Develop and demonstrate advanced fuel efficient transportation technologies and fuel switching strategies that result in a cost-effective reduction of on-road and off-road petroleum fuel use in the short and long term.
 - b. Develop and demonstrate technologies for the in-state production of renewable and non-petroleum transportation fuels that can augment transportation fuel supplies, provide state economic and ratepayer benefits, reduce air pollutant and greenhouse emissions, and increase on- and off-road transportation fuel diversity.
4. Integrated natural gas system that is reliable and secure
 - a. Analyze the impact storage would have on the market and the conditions required for investment in storage infrastructure.
 - b. Develop a natural gas system (cyber and physical) that is resilient to natural and man-made events, self-diagnosing, and self-healing.
 - c. Improve means of measuring and predicting economic impacts of natural gas use.
5. Environmentally sound natural gas system
 - a. Create tools for assessing the impacts of global climate change on key sectors (for example, ecosystems, energy, and infrastructure) and develop robust mitigation and adaptation strategies.
 - b. Develop strategies to reduce direct and indirect GHG emissions (for example CO₂, NO, CH₄) associated with natural gas in California.
 - c. Improve understanding of and develop solutions to reduce impact of air quality, biological, land-use, public health, and water from

Natural Gas Public Interest Research Program 2007/DRE

natural gas production, distribution, storage, and use, and contribute to a sustainable energy future.

- d. Develop methodologies (e.g. emissions testing protocols) to improve regulatory processes (e.g. pipeline siting) and inform future state environmental/energy policy.

These areas and the CEC's proposed budget allocation are delineated in the appended table, *Exhibit III-1 Program Budget Summary*, taken from the CEC report (p.17).

The Energy Innovations Small Grants Program is intended to complement ongoing core research for natural gas. This program is modeled on a well established one in electricity research known as the energy Innovations Small Grant Program (EISG). It is primarily intended to fund feasibility studies, which will assess proofs of concepts, and as a new mechanism for identifying emerging and promising natural gas technologies. Maximum funding is to be set at \$95,000 per hardware project and \$50,000 per modeling project. The program will be administered by the San Diego State University Research Foundation.

Provisions of SB1250 would hold up budget allocations for this program until FY 2007 beginning July, 1 2007. SB 1250 changes the manner for allocating funds to the Energy Commission for natural gas research. It changes the budget cycle from a calendar year to a fiscal year basis, so the \$18 million proposed in the Energy Commission's budget plan will be available at the earliest on July 1, 2007. For this reason, the proposed Program Plan and Funding Request needs to be modified to reflect the changes to the annual program cycle originally established in D.04-08-010.

In a letter dated October 30, 2006, the CEC requested of the Executive Director of CPUC that certain timetable changes be made pursuant to SB 1250. Specifically, this letter requested that the CEC's annual Program Plan and Funding Request be rescheduled from August 31 to April 30. It also requested that outside party project proposals be due to the CEC on March 30, rather than the current deadline of July 31. This schedule does not leave this Commission with adequate time to review CEC's annual Program Plan and Funding Request before the July 1 start of the fiscal year.

A March 31 due date for the Program Plan and Funding Request is appropriate and necessary. As part of implementing the new schedule pursuant to SB 1250, CEC has proposed a deadline of April 30th to submit its Program Plan and Funding Request to the CPUC. The CPUC finds that the April 30th deadline will not leave sufficient time for the CPUC to process the funding request and that the deadline should be moved to March 31st. Adoption of this date will also require the moving back of project proposals to CEC from March 30 to Feb 28.

The CEC's proposed program budget and funding request should be approved, with these modifications to its timetable. In accordance with D. 04-08-010, the annual proposed R&D program for 2007 was provided by the CEC to the Energy Division by August 31. The CEC has furthermore solicited R&D project proposal abstracts and incorporated them into the development of its plan. The Energy Division has reviewed the CEC report and found it to be submitted properly in compliance with D. 04-08-010. The basic program areas meet the criteria for public interest gas R&D projects laid out in the Decision, the CEC reasonably selected gas R&D program areas, and the CEC reasonably allocated the program's budget to the different program areas.

The timetable changes for the gas R&D program approval process that we approve above will apply to future budget years as well as the 2007-2008 fiscal year.

COMMENTS

Public Utilities Code Section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Our Rules of Practice and Procedure (Rule 14.6(c)(2)) provide that the Commission may waive or reduce the period for public review and comment on draft resolutions in an uncontested matter where the decision grants the relief requested. The Rules of Practice and Procedure (Rule 14.6(c)(9)) also allow the Commission to waive or reduce the review and comment period when required by "public necessity". "Public necessity" refers to circumstances in which the public interest in the Commission's adopting a decision before expiration of the 30-day review and comment period clearly

Natural Gas Public Interest Research Program 2007/DRE

outweighs the public interest in having the full 30-day period for review and comment. In this instance, no protests have been filed since the proposal was made outside of the usual advice letter process, and we are approving the CEC's proposed gas R&D budget and program.

Because we are approving the CEC's proposed plan and budget and because there is a public necessity in notifying the CEC of this approval and the changes to the approval timetable as soon as possible, we will allow comments on this draft resolution but will reduce the comment period. Accordingly, the draft resolution was mailed to parties for comments.

FINDINGS

1. The CEC filed its 2007 public interest gas R&D report on August 31, 2006, as per D. 04-08-010, and has met its obligation.
2. The CEC's proposed R&D project areas meet the criteria set forth in D. 04-08-010.
3. The CEC reasonably selected gas R&D project areas, and reasonably allocated the 2007 R&D budget to the different project areas.
4. The CEC's report, *Program Plan and Funding Request for 2007, Natural Gas Public Interest Research Program*, should be adopted.
5. We should adopt a change to the program approval timetable to require that the CEC submit its budget and program proposal for future program years by March 31st.

THEREFORE IT IS ORDERED THAT:

1. The 2007 public interest gas R&D plan submitted by the CEC in its report, *Program Plan and Funding Request for 2007, Natural Gas Public Interest Research Program*, is approved.
2. The CEC shall submit its annual public interest gas R&D program and budget proposal by March 31st, beginning in 2008.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on December 14, 2006; the following Commissioners voting favorably thereon:

STEVE LARSON
Executive Director

Natural Gas Public Interest Research Program 2007/DRE

Appendix -- Exhibit III-1 Program Budget Summary

Key Research Areas/Research Solutions	Proposed Research Solution Funds	Total for Research Area
Research Area 1. Affordable, comfortable, and energy-smart choices for daily life and a strong California economy		\$3,000,000
Research Solution 1a: Increase efficiency of existing building systems and industrial processes (for example, develop replacement/retrofit products, improve operational strategies, identify intervention tactics).	\$500,000	
Research Solution 1b: Reduce the first costs and operating costs of energy efficient. technologies and systems for buildings and industries.	\$1,000,000	
Research Solution 1c: Reduce and optimize the hot water use in residential, commercial. and industrial operations by developing technologies that conserve water or provide cost –effective alternate thermal energy sources.	\$1,500,000	
Research Area 2. CLEAN AND DIVERSE NATURAL GAS SUPPLY THAT OPTIMIZES CALIFORNIA'S RESOURCES		\$2,350,000
Research Solution 2a: Assess the quality and interchangeability of LNG to determine its environmental and performance impact.	\$800,000	
Research Solution 2b: Improve and reduce the cost of clean combustion technologies.	\$550,000	
Research Solution 2c: Reduce the cost and improve the performance of solar thermal, biogas, and geothermal technologies for natural gas replacement (for example, space heating and industrial applications) as well as hybrid systems (for example, solar/gas hybrids).	\$1,000,000	
Research Area 3. CLEAN AND DIVERSE TRANSPORTATION SYSTEM		\$6,000,000
Research Solution 3a: Develop and demonstrate advanced fuel efficient transportation technologies and fuel switching strategies that result in a cost-effective reduction of on-road and off-road petroleum fuel use in the short and long term.	\$1,000,000	
Research Solution 3b: Develop and demonstrate technologies for the in-state production of renewable and non-petroleum transportation fuels that can augment transportation fuel supplies, provide state economic and ratepayer benefits, reduce air pollutant and greenhouse emissions, and increase on- and off-road transportation fuel diversity.	\$5,000,000	
Research Area 4. INTEGRATED NATURAL GAS SYSTEM THAT IS RELIABLE AND SECURE		\$1,950,000
Research Solution 4 a: Analyze the impact storage would have on the market and the conditions required for investment in storage infrastructure.	\$350,000	
Research Solution 4b: Develop a natural gas system (cyber and physical) that is resilient to natural and man-made events, self-diagnosing, and self-healing.	\$800,000	
Research Solution 4c: Improve means of measuring and predicting economic impacts of natural gas use.	\$800,000	
Research Area 5. 1. ENVIRONMENTALLY SOUND NATURAL GAS SYSTEM		\$1,900,000
Research Solution 5a: Create tools for assessing the impacts of global climate change on key sectors (for example, ecosystems, energy, and infrastructure) and develop robust mitigation and adaptation strategies.	\$750,000	
Research Solution 5b: Develop strategies to reduce direct and indirect GHG emissions (for example CO2, NO, CH4) associated with natural gas in California.	\$500,000	
Research Solution 5c: Improve understanding of and develop solutions to reduce impact of air quality, biological, land-use, public health, and water from natural gas production, distribution, storage, and use, and contribute to a sustainable energy future.	\$250,000	
Research Solution 5d: Develop methodologies (e.g. emissions testing protocols) to improve regulatory processes (e.g. pipeline siting) and inform future state environmental/energy policy.	\$400,000	
PROGRAM ADMINISTRATION		\$1,800,000
SMALL GRANTS		\$1,000,000
GRAND TOTAL		\$18,000,000

I. D. # 6222

November 28, 2006

RESOLUTION G-3394

December 14, 2006 Commission Meeting

TO: Parties to Rulemaking 02-10-001.

Enclosed is draft Resolution G-3394 of the Energy Division. It will be on the agenda at the Commission's December 14, 2006 meeting. The Commission may then vote on this Resolution or it may postpone a vote until later.

When the Commission votes on a draft Resolution, it may adopt all or part of it as written, amend, modify or set it aside and prepare a different Resolution. Only when the Commission acts does the Resolution become binding on the parties.

Parties may submit comments on the draft Resolution. An original and two copies of the comments, with a certificate of service, should be submitted to:

Honesto Gatchalian
Energy Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Fax: 415-703-2200

A copy of the comments should be submitted **in electronic format** to:

David R. Effross
Energy Division
California Public Utilities Commission
505 Van Ness Avenue

San Francisco, CA 94102
email: dre@cpuc.ca.gov

Natural Gas Public Interest Research Program 2007/DRE

Any comments on the draft Resolution must be received by the Energy Division by December 8, 2006. Those submitting comments must serve copies of their comments on 1) the entire service list attached to the draft Resolution, 2) all Commissioners, and 3) the Director of the Energy Division, on the same date that the comments are submitted to the Energy Division.

Draft Resolution G3394
28, 2006

November

Page

2

Comments shall be limited to five pages in length plus a subject index listing the recommended changes to the draft Resolution, a table of authorities and an appendix setting forth the proposed findings and ordering paragraphs.

Comments shall focus on factual, legal or technical errors in the draft Resolution. Comments that merely reargue positions taken in the advice letter or protests will be accorded no weight and are not to be submitted.

Late submitted comments will not be considered. Reply comments will not be accepted.

Richard A. Myers

Supervisor

Energy Division

CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

I certify that I have by mail this day served a true copy of Draft Resolution G-3394 on all parties in R.02-10-001.

Dated November 28, 2006 at San Francisco, California.

Honesto Gatchalian

NOTICE

Parties should notify the Energy Division, Public Utilities Commission, 505 Van Ness Avenue, Room 4002 San Francisco, CA 94102, of any change of address to insure that they continue to receive documents. You must indicate the Resolution number on the service list on which your name appears.