

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

RESOLUTION G-3448

June 24, 2010

R E S O L U T I O N

Resolution G-3448. The California Energy Commission (“CEC”) requests approval of its Fiscal Year (“FY”) 2010-2011 Proposed Program Plan and Funding Request for the Natural Gas Public Interest Research Program.

PROPOSED OUTCOME: The CEC’s request is approved, pursuant to California Public Utilities Commission (“CPUC”) Decision (D.) 04-08-010.

ESTIMATED COST: \$24 million for Fiscal year 2010-2011

SUMMARY

This Resolution approves the CEC report, *Proposed Program Plan and Funding Request for Fiscal Year 2010-2011, Natural Gas Public Interest Research Program*, established pursuant to D. 04-08-010. The CPUC approves the CEC’s proposed \$24 million budget proposal.

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, resulting in D.04-08-010.

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 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.

The CEC administers the Public Interest Energy Research (PIER) program and is publicly accountable, being subject to the Bagley-Keene Open Meeting Act and the Public Records Act (p.31). Projects are 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 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.

The CEC's R&D program plans and budgets have been approved by the CPUC from 2005 to FY 2009-2010.

D. 04-08-010 established a zero-based budget for the Gas R&D program, starting at \$12 million for 2005, with maximum annual increases of up to \$3 million per year, subject to CPUC approval (p.38). Historically, each year the CEC has requested a budget up to the maximum limit for the year, and each year has increased the budget over the past year by the maximum allowable limit of \$3 million. Thus the budget for FY2009-2010 was \$24 million.

The CEC has submitted its Program Plan and Funding Request for Fiscal Year 2010-2011.

In addition to providing its research plan and budget for FY2010-2011, the CEC also provided information on prior program activities and expenditures.

DISCUSSION

D. 04-08-010 provides that the Commission "will assess the reasonableness of the funding level, and the overall R&D program" after four years.

D.04-08-010 provided for CPUC review of the "reasonableness of the funding level, and the overall R&D program" after four years, i.e., sometime after FY2009-2010. The CPUC has not scheduled such a review yet and will schedule this review at some future date.

Pending an assessment of the reasonableness of the overall R&D program, it is reasonable to keep the maximum limit for program funding at \$24 million.

In the interim, we elect to maintain the same administrator (i.e., the CEC) and maximum funding level at \$24 million per year. We approve the CEC's proposed budget of \$24 million for FY2010-2011. This funding level has no precedential value regarding the overall program review or funding levels

beyond FY2010-2011 as the CEC is required to propose a zero based budget for each fiscal year.

Consistent with D. 04-08-010, the CEC's Public Interest Energy Research Program for Natural Gas focuses on research and development directed towards maximizing energy efficiency and mitigating environmental effects of gas consumption.

Consistent with the state's Energy Action Plan loading order, the CEC proposes to allocate the bulk of its \$24 million budget to three research areas: Industrial, Commercial, Residential, and Transportation Energy Efficiency (\$10.84 million), Acceleration of the Adoption of Clean Alternatives to Conventional Natural Gas Resources and Technologies (\$6.25 million), and Reduction of the Environmental Footprint of California's Natural Gas System (\$3 million). The CEC also allocates \$2.16 million to administration and \$1.75 million to small grants. The CEC's proposed budget allocations are delineated in the appended tables of this resolution.

The following is a breakdown of specific areas within the three major categories:

1. Industrial, Commercial, Residential, and Transportation Energy Efficiency (\$10.84 million) includes:
 - a. Improved efficiency of industrial natural gas usage
 - b. Improved efficiency of food service operations
 - c. Improved efficiency of hot water generation and distribution
 - d. Improved efficiency of heating systems and building envelopes
 - e. Improved transportation fuel efficiency

2. Acceleration of the Adoption of Clean Alternatives to Conventional Natural Gas Resources and Technologies (\$6.25 million) includes:
 - a. Developing low-cost and thermally-efficient renewable industrial heating and cooling
 - b. Developing energy-efficient and low-emission technologies for distributed energy resources and combined heat and power and cogeneration applications

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- c. Researching and developing alternative fuels that reduce petroleum and transportation-related GHG emissions while assisting California state economic development
3. Reduction of the Environmental Footprint of California's Natural Gas System (\$3 million) includes:
 - a. Air quality (including sensors for detecting ultra-low NOx emissions and sustainable urban energy planning)
 - b. Environmental effects from geological carbon sequestration
 - c. Climate science (including reduction of fugitive methane emissions)

The Energy Innovations Small Grants Program is intended to complement ongoing core research for natural gas.

This program is modeled on a well-established electricity research program 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. The program will be administered by the San Diego State University Research Foundation. The CEC requests \$1.75 million for the Small Grants program.

The CEC has reduced its administrative cost to 9% of the total budget request.

The CEC's request for administrative expenses is lower for FY2010-2011 than its FY2009-2010 request. The CEC requests \$2.16 million for administrative expenses (9% of total budget), down from \$2.65 million requested in last year's report (11% of total budget). The Commission is pleased that the CEC has made these efficiency gains.

A mechanism for the return of unspent PIER Natural Gas R&D funds is needed.

Currently, the CEC requests funding from the legislature prior to sending the CEC's proposed budget to the CPUC in late March for authorization. This out-of-order sequence causes problems if the CPUC does not authorize the entire requested budget or if the CEC does not use the entire requested budget.

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Henceforth, until further direction by the CPUC, each time that the CEC requests funding from the legislature for a proposed PIER Natural Gas R&D program budget, the CEC shall also request authority to return any portion of the requested funding to the Gas Consumption Surcharge Fund, up to and including the entire proposed budget in case the CPUC were to authorize a lower than requested budget or some funds were left unspent.

In any future PIER Natural Gas R&D program budget proposals, the CEC shall discuss how it avoids duplicative research.

In defining “public interest,” D. 04-08-010 requires that the administrator of the PIER Natural Gas R&D program avoid duplicating the efforts of competitive and regulated entities. (p.25). It is also implied that the administrator collaborate with local, state, and federal agencies to avoid duplicative efforts and to identify potential collaboration opportunities. The CEC shall describe its efforts in this regard in more detail in future proposed budgets and annual reports.

In any future PIER Natural Gas R&D program budget proposals, the CEC shall discuss how the benefits of commercializing PIER Natural Gas R&D-funded research are likely to accrue to ratepayers.

In the Decision, we stated that we expected that the benefits of commercializing research funded by the PIER Natural Gas R&D program shall accrue to the ratepayers funding such research, and that the administrator shall inform Energy Division “if and when any commercial benefits result from the gas R&D projects.” (p.42) Despite the CEC stating that some PIER Natural Gas R&D projects have or are approaching commercialization, it is unclear how ratepayers are accruing related benefits and whether or not the CEC is adequately securing an inventory of intellectual property rights arising from such research on the ratepayers’ behalf. The CEC shall address this in more detail in future proposed budgets and annual reports.

The CEC’s proposed program budget and funding request for FY2010-2011 is approved.

In accordance with D. 04-08-010, the annual proposed R&D program for FY2010-2011 was provided by the CEC to the Energy Division. The CEC has solicited

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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. We authorize the CEC's proposed \$24 million budget as described in its *Proposed Program Plan and Funding Request for Fiscal Year 2010-2011, Natural Gas Public Interest Research Program*.

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. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments on May 25, 2010, with comments due by June 14, 2010. No comments were received.

FINDINGS

1. The CEC filed its Fiscal Year 2010-2011 public interest gas R&D report, per D. 04-08-010.
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 Fiscal Year 2010-2011 R&D budget to the different project areas.
4. The CEC's report, *Program Plan and Funding Request for Fiscal Year 2010-2011, Natural Gas Public Interest Research Program*, should be adopted.
5. There is a need for a mechanism by which the CEC may return unspent or unauthorized funds for the PIER Natural Gas R&D program.

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6. The Commission has not yet scheduled an assessment of the reasonableness of the funding level and the over-all R&D program as envisioned in D. 04-08-010. Such a review will be scheduled at a future date.

THEREFORE IT IS ORDERED THAT:

1. Until the Commission has made an assessment of the reasonableness of the funding level and the over-all R&D program as envisioned in D. 04-08-010, the CEC remains the program administrator for the PIER Natural Gas R&D program.
2. The maximum PIER Natural Gas R&D program funding level for FY2010-2011 is \$24 million.
3. Until further direction by the CPUC, each time that the CEC requests funding from the legislature for a proposed PIER Natural Gas R&D program budget, the CEC shall also request authority to return any portion of the requested funding to the Gas Consumption Surcharge Fund, up to and including the entire proposed budget.
4. The FY2010-2011 public interest gas R&D plan submitted by the CEC in its report, *Program Plan and Funding Request for Fiscal Year 2010-2011, Natural Gas Public Interest Research Program*, is approved.

This Resolution is effective today.

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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 June 24, 2010; the following Commissioners voting favorably thereon:

/s/ Paul Clanon

Paul Clanon
Executive Director

MICHAEL R. PEEVEY
PRESIDENT
DIAN M. GRUENEICH
JOHN A. BOHN
TIMOTHY ALAN SIMON
NANCY E. RYAN
Commissioners

**Appendix (Numbering by CEC Proposed Program Plan and Funding Request
for Fiscal Year 2010-2011)**

Table 1: Natural Gas Budget Plan Summary FY 2009-10 & FY 2010-11

Budget Item	FY 2009-10 Budget	FY 2010-11 Budget (proposed)
Improve Industrial, Commercial, Residential, and Transportation Energy Efficiency	\$9.95 million	\$10.84 million
Accelerate the Adoption of Clean Alternatives to Conventional Natural Gas Resources and Technologies	\$4.95 million	\$6.25 million
Improve Natural Gas System Infrastructure Performance and Reliability	\$1.7 million	\$0 ¹
Reduce the Environmental Footprint of California's Natural Gas System	\$3 million	\$3 million
Energy Innovation Small Grants	\$1.75 million	\$1.75 million
Program Administration	\$2.65 million	\$2.16 million
TOTAL	\$24 million	\$24 million

Source: California Energy Commission

¹ Given that significant research efforts are already in progress in this research objective, the proposed natural gas budget plan reflects no new investments in this area for the coming year.

Table 4: Budget Breakdown for Improving Industrial, Commercial, Residential, and Transportation Energy Efficiency

Research Solution	Budget
Natural Gas Efficiency Research for Industrial Use	\$2.42 million
Energy Efficient Food Service Operations	\$1.8 million
Energy Efficient Hot Water Generation and Distribution	\$1.6 million
Advanced Energy-Efficient Heating Systems and Building Envelopes	\$2.02 million
Fuel-Efficient Transportation Technologies	\$3 million
TOTAL	\$ 10.84 million

Source: California Energy Commission

Table 5: Budget Breakdown for Accelerate the Adoption of Clean Alternatives to Conventional Natural Gas Resources and Technologies

Research Solution	Budget
Develop Low-Cost and Thermally Efficient Renewable Industrial Heating and Cooling.	\$1 million
Develop Energy-Efficient and Low-Emission Technologies for Distributed Energy Resources (DER) and Combined Heat and Power (CHP)/Combined Cooling, Heating and Power (CCHP)/Industrial Cogeneration Applications	\$2 million
Research, Develop, and Deploy Alternative Fuels that Reduce Petroleum Consumption and Transportation related GHG Emissions, While Assisting Economic Development Within the State of California.	\$3.25 million
TOTAL	\$6.25 million

Source: California Energy Commission

Table 6: Budget Breakdown for Reducing the Environmental Footprint of California's Natural Gas System

Research Solution	Budget
Air Quality	\$0.8 million
Environmental Effects from Geological Sequestration	\$1.2 million
Climate Science	\$1 million
TOTAL	\$3 million

Source: California Energy Commission