

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Item 50

Agenda ID #12154

ENERGY DIVISION

RESOLUTION G-3484

June 27, 2013

R E S O L U T I O N

Resolution G-3484. The California Energy Commission (“CEC” or “the CEC”) requests approval of its Fiscal Year (“FY”) 2013-2014 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.

SAFETY CONSIDERATIONS: This resolution approves, among other things, CEC’s proposed budget of \$2.5 million for natural gas pipeline safety research and development. Demonstration and market facilitation of precommercial pipeline integrity management and inspection technologies will provide field operational data and increase operator confidence. Further efforts to increase pipeline safety will include research and demonstration of technologies for right-of-way monitoring and prevention of excavation damage. CEC calculates that this research will result in increased safety and integrity of about 70 percent of the existing natural gas transmission pipeline.

ESTIMATED COST: \$24 million for Fiscal Year 2013-2014.

SUMMARY

This Resolution approves the CEC report, *Proposed Program Plan and Funding Request for Fiscal Year 2013-2014, 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 2012-2013.

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, up to \$24 million per year (p.38). Historically, each year the CEC has requested, and the CPUC has approved, the maximum budget increase over the past year. Thus the budget ceiling reached \$24 million in FY2009-2010. CPUC approved a \$24 million budget for FY2010-2011, FY2011-2012, and FY2012-2013 as well.

The CEC has submitted its Proposed Program Plan and Funding Request for Fiscal Year 2013-2014.

In addition to providing its research plan and budget for FY2013-2014, 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 yet scheduled a firm timeline for such a review but is in the process of gathering information leading up to such a review.

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 FY2013-2014. This funding level has no precedential value regarding the overall program review or funding levels

beyond FY2013-2014, 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 renewable technologies, mitigating environmental effects of gas consumption, improving natural gas vehicle performance, and enhancing natural gas pipeline safety.

Consistent with the state's Energy Action Plan loading order, the CEC's proposed budget for FY2013-2014 allocates the bulk of a \$24 million budget to the following research areas: Energy Efficiency (\$8.541 million), Energy Infrastructure (\$9.5 million), and Renewable Energy (\$3.5 million). The CEC also allocates \$2.459 million to administration. The CEC's proposed budget allocations are delineated in the appended tables of this resolution (see Appendix).

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

1. Energy Efficiency (\$8.541 million) includes:
 - a. Buildings End-Use Energy Efficiency
 - b. Industrial, Agriculture, and Water Efficiency

2. Energy Infrastructure (\$9.5 million) includes:
 - a. Natural Gas Pipeline Integrity
 - b. Energy-Related Environmental Research
 - c. Natural Gas-Related Transportation

3. Renewable Energy (\$3.5 million) includes:
 - a. Renewable Energy and Advanced Generation

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. 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 is not asking for additional funding of this program for FY2013-2014 because the program is fully funded through 2015 and the CEC is reassessing the program.

We applaud and encourage CEC's more efficient use of program R&D and administrative funds.

The CEC's request for administrative expenses (\$2.459 million, or 10.25% of the total proposed budget) is slightly lower than the amount requested in the FY2012-2013 budget (\$2.50 million, or 10.42% of the total budget). This is a step in the right direction and in line with historical program administration costs. We encourage the CEC to keep such expenses at 10% or less.

In the interest of transparency, we require the CEC to explain its process for funding the PIER Natural Gas R&D program in cases where the CPUC authorizes less than what the CEC proposes in its budgets.

It is the understanding of the CPUC that the CEC draws authorized funding for the PIER Natural Gas R&D program from the Gas Consumption Surcharge Fund on a pro-rated, quarterly basis, starting in October for each fiscal year budget cycle. The CPUC requests more transparency regarding this process. The CEC shall provide a detailed explanation, in its 2013 PIER Natural Gas R&D annual report (due in October 2013) and in its proposed budget for Fiscal Year 2014-2015 (due in March 2014), of how the CEC would transfer funds from the Gas Consumption Surcharge Fund in cases where the CPUC authorizes less than the amount requested by the CEC.

In the interim, the CEC shall also request authority from the legislature to return any portion of the requested funding to the Gas Consumption Surcharge Fund, up to and including the entire proposed budget.

In the interest of transparency, the CEC shall give an accounting of unspent PIER Natural Gas R&D funds in each future year proposed budget, beginning with the proposed budget for Fiscal Year 2014-2015.

The CPUC understands that the CEC has two years to encumber PIER Natural Gas R&D funds with projects and an additional four years before such funds expire. Beginning with the Fiscal Year 2014-2015 proposed budget, the CEC shall include in its proposed budget an account, by research area, of then-current unspent funds in the PIER Natural Gas R&D program, including encumbrances

and expiration dates. The intent of this requirement is to show that the CEC has spent its cumulative authorized budgets in the areas in which the money was authorized and to provide an accounting of the status of cumulative unspent funds. This requirement shall remain in place for each fiscal year's proposed budget, until otherwise directed by the CPUC.

The CEC's proposed program budget and funding request for FY2013-2014 is approved.

In accordance with D. 04-08-010, the annual proposed R&D program for FY2013-2014 was provided by the CEC to the Energy Division. The CEC has 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. We authorize the CEC's proposed \$24 million budget as described in its *Proposed Program Plan and Funding Request for Fiscal Year 2013-2014, 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. No comments were received.

FINDINGS

1. The CEC filed its Fiscal Year 2013-2014 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 2013-2014 R&D budget to the different project areas.
4. The CEC's report, *Proposed Program Plan and Funding Request for Fiscal Year 2013-2014, Natural Gas Public Interest Research Program*, should be adopted.
5. There is a need for clarification of how the CEC addresses situations in which the CPUC authorizes less than the CEC's proposed budget for the PIER Natural Gas R&D program.
6. There is a need for clarification of how the CEC accounts for unspent funds and how much authorized funding has been spent in authorized research areas.
7. The Commission has not yet determined the reasonableness of the overall PIER Natural Gas R&D Program or of the funding level beyond FY2013-2014.

THEREFORE IT IS ORDERED THAT:

1. The CEC remains the program administrator for the PIER Natural Gas R&D program for FY2013-2014.
2. The maximum PIER Natural Gas R&D program funding level for FY2013-2014 is \$24 million.
3. The CEC shall provide a detailed explanation, in its 2013 PIER Natural Gas R&D annual report (due in October 2013) and in its proposed budget for Fiscal Year 2014-2015 (due in March 2014), of how the CEC would transfer funds from the Gas Consumption Surcharge Fund in cases where the CPUC authorizes less than the amount requested by the CEC.
4. The CEC shall request authority from the legislature to return any portion of the requested funding to the Gas Consumption Surcharge Fund, up to and including the entire proposed budget.
5. Beginning with the Fiscal Year 2014-2015 proposed budget, the CEC shall include in its proposed budget an account, by research area, of then-current unspent funds in the PIER Natural Gas R&D program, including encumbrances and expiration dates.
6. The FY2013-2014 public interest gas R&D plan submitted by the CEC in its report, *Program Plan and Funding Request for Fiscal Year 2013-2014, Natural Gas Public Interest Research Program*, is approved.

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 June 27, 2013; the following Commissioners voting favorably thereon:

Paul Clanon
Executive Director

**Appendix (Table Numbering per CEC Proposed Program Plan and Funding
Request for Fiscal Year 2013-2014)**

Table 3: FY 2013-14 Natural Gas Research Budget Plan Summary

Program Areas	Proposed Budget
Energy Efficiency	\$8,541,000
Buildings End-Use Energy Efficiency	\$4,200,000
Industrial, Agriculture, and Water Efficiency	\$4,341,000
Renewable Energy	\$3,500,000
Energy Infrastructure	\$9,500,000
Natural Gas Pipeline Integrity	\$2,500,000
Energy-Related Environmental Research	\$3,000,000
Natural Gas-Related Transportation	\$4,000,000
Program Administration	\$2,459,000
TOTAL	\$24,000,000

Source: California Energy Commission

Table 4: FY 2013-14 Natural Gas Research Budget Plan Summary – Energy Efficiency

Program Area – Energy Efficiency Research	Proposed Budget
<p>Buildings End Use Energy Efficiency Research</p> <ul style="list-style-type: none"> ▪ Water heating and distribution ⁽¹⁾ ▪ Food service ▪ Advanced Heating Ventilation and Air Conditioning and envelopes ⁽¹⁾ ▪ Cross-cutting (Zero Net Energy and low energy buildings) ▪ Indoor environmental quality⁽²⁾ <p>(1) Parts of the project related to low NOx water heaters and HVAC systems will be coordinated and co-funded with the Environmental Research Area. Please refer to the Energy-Related Environmental Research – Project 4: Low-Emissions Combustion and Control Technology Development Program.</p> <p>(2) This project will be coordinated and co-funded with the Environmental Research Area.</p>	\$4,200,000
<p>Industrial, Agriculture and Water Efficiency</p> <ul style="list-style-type: none"> ▪ Natural Gas Efficiency Research and Demonstration ▪ Heat Recovery ▪ Roadmap Update 	\$4,341,000
Total Energy Efficiency Research	\$8,541,000

Source: California Energy Commission

Table 5: FY 2013-14 Natural Gas Research Budget Plan Summary – Renewable Energy and Advanced Generation

Program Area – Renewable Energy Research	Proposed Budget
Renewable Energy <ul style="list-style-type: none"> ▪ Biogas and Renewable Natural Gas advancement for on-site and remote DG/CHP Applications ▪ Natural Gas and Renewable Energy Dynamics and Integration at Local and Regional Scale ▪ Bottoming Cycle Solutions for Natural Gas Conservation 	\$3,500,000
Total Renewable Energy Research	\$3,500,000

Source: California Energy Commission

Table 6: FY 2013-14 Natural Gas Research Budget Plan Summary – Energy Infrastructure

Program Area – Energy Infrastructure Research	Proposed Budget
<p>Natural Gas Pipeline Integrity</p> <ul style="list-style-type: none"> ▪ Pipeline Network Safety 	<p>\$2,500,000</p>
<p>Energy Related Environmental Research</p> <ul style="list-style-type: none"> ▪ Assessment of Residential Fugitive CH₄ Emissions: Phase 1 ▪ Improvement of Airborne Natural Gas Leak-Detection System Natural Gas Energy Infrastructure ▪ Climate Readiness Options for the Natural Gas Sector ▪ Low-Emissions Combustion and Control Technology Development Program: Residential Sector⁽¹⁾ ▪ Indoor Environmental Quality Research for Commercial Buildings - Ventilation Control Phase 1⁽²⁾ ▪ Indoor Environmental Quality Research for the Residential Sector⁽²⁾ <p>(1) This project will be coordinated and co-funded with the Building Energy Efficiency Research area. Please refer to Buildings End-Use Energy Efficiency – Water Heating and Distribution Systems and Space Heating section.</p> <p>(2) These projects will be coordinated and co-funded with the Building Energy Efficiency Research area. Please refer to Buildings End-Use Energy Efficiency – Indoor Environmental Quality Research commercial and residential.</p>	<p>\$3,000,000</p>
<p>Natural Gas Related Transportation Research</p> <ul style="list-style-type: none"> ▪ Research, develop, and demonstrate near-zero emission heavy-duty vehicles ▪ Advanced natural gas engine ignition systems research ▪ Fueling infrastructure improvements 	<p>\$4,000,000</p>
<p>Total Energy Infrastructure Research</p>	<p>\$9,500,000</p>

Source: California Energy Commission