Decision **PROPOSED DECISION OF ALJ SULLIVAN** (Mailed 11/3/2009)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Southern California Edison Company (U338E) For Authorization to Recover Costs Necessary to Co-Fund a Feasibility Study of a California IGCC with Carbon Capture and Storage.	Application 09-04-008 (Filed April 3, 2009)

DECISION APPROVING APPLICATION

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DECISION APPROVING APPLICATION

1. Summary

This decision approves the application of Southern California Edison Company (SCE) to recover up to $30 million in costs necessary to co-fund feasibility studies of a California integrated gasification combined cycle plant with carbon capture and storage.[1] The decision finds that it is reasonable for SCE to commit up to $17 million to the Phase I feasibility studies associated with the facility known as the Hydrogen Energy California project. In addition, the decision finds it is reasonable for SCE to fund up to $13 million in Phase II studies that will further examine the permitting, engineering, and economics associated with this project, if the Phase I feasibility studies demonstrate that further studies are warranted.

This decision finds that the costs associated with the studies of this project are consistent with other projects of this type and amount to only 20 percent of the total forecast costs of the studies.

The project will provide SCE and its ratepayers with important, although unquantifiable, benefits. The project will provide SCE with a better understanding of this promising technology, which has the potential to reduce greenhouse gases and provide clean electricity. These benefits are especially

[1] The HECA Study consists of multiple studies, which collectively determine the feasibility of this project. The words "study" and "studies" are used interchangeably throughout this decision.

beneficial to SCE ratepayers because California policy seeks to reduce greenhouse gases.[2]

For these reasons, it is reasonable to authorize SCE to recover up to $30 million in rates for participating in the studies associated with Phase I and Phase II of this project.

The decision approves SCE's plan to disclose the results of the studies to the public. The decision finds that SCE has met all the conditions set out in Resolution E-4227A pertaining to this application.

This proceeding is closed.

2. Factual and Procedural Background

On April 3, 2009, Southern California Edison Company (SCE) filed *Application for Authorization to Recover Costs Necessary to Co-Fund a Feasibility Study of a California IGCC with Carbon Capture and Storage* (Application).

The Application "seeks authorization to recover costs necessary for SCE to co-fund a feasibility study that will determine the technical feasibility and commercial reasonableness of an integrated gasification combined cycle (IGCC) facility with carbon capture for use in Enhanced Oil Recovery (EOR) with sequestration in Kern County, California."[3]

The Application states that:

> The facility is referred to as Hydrogen Energy California (HECA). If shown to be technically feasible and commercially reasonable, and, if appropriate regulatory and commercial support can be

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[2] See Pub. Util. Code § 743.1, § 748(a), § 2842, § 2843, § 8341, and Executive Orders S-7-04 and S-3-05. All references are to the Public Utilities Code unless otherwise stated.

[3] Application at 3.

> established, the HECA facility will provide low-carbon, baseload electricity within California by gasifying non-conventional fuel resources (primarily petroleum coke from California's oil refineries or, as needed, blends of petroleum coke and other solid fuels) to produce hydrogen for electricity generation through an IGCC plant and capture the CO_2 for EOR with storage.[4]

Thus, the facility, if feasible, would produce power while reducing greenhouse gases.

The Application has its roots in Resolution E-4227A, which was adopted on February 20, 2009, and directs SCE:

> … to fund Phase I of a feasibility study to evaluate an Integrated Gasification Combined Cycle plant, approves a memorandum account to record the costs of this study and any costs spent on Phase II, and further determines that SCE must file an application in order to request recovery of these costs.[5]

Further language directing SCE to fund Phase I of the studies is in Ordering Paragraph 2, which states "SCE is directed to fund up to $17 million for Phase I of the HECA Study and to record those expenditures in HECAMA [Hydrogen Energy California Memorandum Account]."

The Resolution granted SCE a memorandum account, called HECAMA, to fund up to $17 million for Phase I of the studies, and up to an additional $13 million for Phase II of the studies. The Resolution stated that:

> The Commission denies SCE's request to authorize recovery of certain costs recorded in the HECAMA via this resolution. SCE may seek recovery of the costs stemming from SCE's participation in Phase I and Phase II of the HECA study by filing

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[4] Application at 1.

[5] Resolution E-4227A at 1.

> an application with the Commission requesting authority for recovery of the costs. The application may also seek authorization to spend, record in the HECAMA and recover costs spent on Phase II of the HECA study. This order to SCE to fund Phase I of the HECA feasibility study does not prejudge the Commission's review of any subsequent SCE application. A timely application will receive priority review.[6]

On April 2, 2009, SCE entered into an agreement with HEI and made a first payment of $10 million later in the month, within 30 days of April 2 as provided for in the agreement.[7]

This Application, which was filed the day after the signing of the agreement, states that SCE is requesting that the Commission, pursuant to Resolution E-4227A:

> Determine that it is reasonable for SCE to comply with Resolution E-4227A and provide up to $17 million in funding for Phase I of the HECA feasibility study, and establish ratemaking authorizing SCE to recover up to $17 million for Phase I costs recorded in the HECAMA upon Commission disposition of the Application; and
>
> Establish ratemaking authorizing SCE to recover up to $13 million in costs for Phase II of the HECA feasibility study recorded in the HECAMA, subject to a reasonableness review in a future Energy Resource Recovery Account (ERRA) Reasonableness proceeding.
>
> Approve SCE's Public Disclosure Plan to publicize the study results.[8]

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[6] *Id*. at 1-2.

[7] SCE-1 Attachment 4; TR at 28:6-10.

[8] Application at 5.

The $30 million of funding by SCE would constitute approximately 20 percent of the $152 million budgeted for Phase I studies assessing initial feasibility and the Phase II Front End Engineering Design (FEED) study.[9]

Attached to the Application (served, but not filed) was SCE's testimony in support of the application.

Simultaneously with the filing of its application, SCE filed a Motion of Southern California Edison Company for an Expedited Procedural Schedule (SCE Motion).

On April 16, 2009, Resolution ALJ 176-3232 reached a preliminary determination that this proceeding was ratesetting and that hearings would prove necessary.

On April 20, 2009, Pacific Gas and Electric Company (PG&E) filed a motion seeking party status in this proceeding.[10] On April 27, 2009, The Utility Reform Network (TURN)[11] and the Commission's Division of Ratepayer Advocates (DRA)[12] filed protests. TURN protested that recovery of costs should require a full review of the reasonableness of costs, not just a review to determine whether the application meets the requirements set forth in Resolution E-4227A. DRA, which filed an appeal of Resolution E-4227A,

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[9] Application at 4.

[10] Motion of Pacific Gas and Electric (U 39 E) to Become a Party, April 20, 2009.

[11] Protest of The Utility Reform Network (TURN Protest), April 27, 2009.

[12] *Protest of the Division of Ratepayer Advocates to the Application of Southern California Edison Company for Authorization to Recover Costs Necessary to Co-Fund a Feasibility Study of a California IGCC with Carbon Capture and Storage* (DRA Protest), April 27, 2009.

protested that the Commission should hold this proceeding in abeyance pending resolution of the appeal.

On April 28, 2009, SCE filed Southern California Edison's (U-338-E) Proof of Compliance with Rule 3.2 of the Commission's Rules of Practice and Procedure along with three exhibits documenting SCE's provision of notice of its proposed rate increase.

On April 28, 2009, an *Administrative Law Judge's Ruling Accelerating Schedule for Protests or Comments, Setting a Prehearing Conference (PHC) for May 8, 2009, and Granting Pacific Gas and Electric's Request (PG&E) for Party Status* (ALJ Ruling) mailed. In addition to setting the PHC and granting PG&E party status, the ALJ Ruling set deadlines for protests or comments on the application and for the filing of PHC Statements.

On May 1, 2009, PG&E filed comments. In addition, the Commission received comments from San Diego Gas & Electric Company and Southern California Gas Company (filing jointly) and from the Independent Energy Producers Association (IEP). On May 6, 2009, SCE filed its response to protests and comments.

On May 7, 2009, TURN, DRA, and Hydrogen Energy International (HEI) and SCE filed PHC Statements for consideration at the PHC, which took place in San Francisco on May 8, 2009. On May 26, 2009, the assigned Commissioner issued a *Scoping Memo and Ruling of Assigned Commissioner,* setting the scope of issues in the proceeding and a timetable for case management.

On July 1, 2009, HEI was selected by the National Energy Technology Laboratory of the U.S. Department of Energy (DOE) for negotiations leading to a

$308 million award under DOE's Funding Opportunity Announcement entitled "Clean Coal Power Initiative – Round 3" (CCPI-3).[13]

Evidentiary Hearings took place on September 1-3, 2009 in San Francisco. SCE, HEI, DRA, and TURN filed and served opening briefs on September 23, 2009.

On September 24, 2009, the Commission adopted Decision (D.) 09-09-049, which modified Resolution E-4227A and denied rehearing of the resolution, as modified. Specifically, D.09-09-049 modified Ordering Paragraph 2 of Resolution E-4227A, cited above, to delete the words directing SCE to fund the feasibility studies. Ordering Paragraph 1 of D.09-09-049 states:

> Ordering Paragraph No. 2 of Resolution E-4227A is modified to read as follows: "SCE shall record no more than $17 million for Phase I of the HECA Study in the HECAMA."

SCE, HEI, DRA, and TURN filed and served reply briefs on September 30, 2009.

On September 30, 2009, an ALJ Ruling scheduled public participation hearings (PPH) for October 28, 2009 in Bakersfield, CA, which is a major city close to the site of the proposed project.

On October 16, 2009, an ALJ Ruling ordered SCE to provide notice of the PPHs through newspaper notices and public service announcements in Spanish language media. The ruling ordered these steps to remediate for SCE's failure to provide notice of the evidentiary hearings pursuant to Rule 13.1(b) of the

[13] Ex. SCE-2 at 17.

Commission's Rules of Practice and Procedure, and in place of the notice otherwise required by that Rule.[14]

On October 27, 2009, SCE submitted proof of compliance with the October 16, 2009 ALJ Ruling.

The PPHs took place at 1:30 and 6:30 p.m. on October 28, 2009, in Bakersfield at the Bakersfield City Hall Council Chambers. Following the PPHs, the case was submitted.

3. Legal Background

Under § 454(a) of the Public Utilities Code,

> Except as provided in Section 455, no public utility shall change any rate or so alter any classification, contract, practice, or rule as to result in any new rate, except upon a showing before the commission and a finding by the commission that the new rate is justified.

Thus, the Commission must review utilities' projects that lead to changes in rates to ensure that they are just and reasonable. In addition, the burden of making a showing that the proposed rates are just and reasonable rests with the utility requesting the change in rates.

In this case, the responsibility for showing that the SCE's contribution of $30 million to the feasibility studies associated with the HECA project falls to SCE. Specifically, although Resolution E-4227A directed SCE to fund Phase I of

[14] The evidentiary hearings were noticed properly by the Commission through publication in the Commission's Daily Calendar.

the feasibility studies,[15] the responsibility for showing the reasonableness of funding the feasibility studies remains with SCE.

Resolution E-4227A denied SCE's advice letter request for authorization of costs recorded in the HECAMA, but instead permitted SCE to seek recovery of these costs "by filing an application with the Commission requesting authority for recovery of the costs."[16] In addition, Resolution E-4227A imposed specific requirements on any application to recover project costs:

> 10. In any future application for approval of costs related to the HECA study, SCE should include an explanation of how its proposal fits its overall procurement strategy, as directed by D.08-04-038. Further, SCE should include, in such an application, a plan to publicize detailed study results to the greatest extent possible.
>
> 11. In any future application for approval of costs related to the HECA study, SCE should provide notice to all parties to D.06-05-016 and D.07-12-052 any other relevant decisions or proceedings.
>
> 12. In any future application for approval of costs related to the HECA study, SCE should include a detailed budget for the HECA study.[17]

Furthermore, Resolution E-4227A states that:

> Consistent with the findings in D.08-04-038, all information developed in Phase I and the detailed results of the study should be made publicly available to the greatest extent possible (with the limited exception of the intellectual property of the persons or entities hired to perform the studies). Such public disclosure is

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[15] As noted earlier, the ordering paragraph directing SCE to contribute to the feasibility study was removed upon rehearing.

[16] Resolution E-4227A at 1.

[17] Resolution E-4227A, Findings at 17.

> both desirable and necessary in order to advance development of this technology.[18]

Thus, an information disclosure plan remains key to the reasonableness of SCE's participation in the HECA project.

4. Issues before the Commission

The issues before the Commission in this proceeding are largely determined by statute and Commission precedent. These include:

1. Are SCE's Phase I costs reasonable and recoverable in rates?[19] (Addressed in Section 5.2.)
2. Are SCE's Phase II costs reasonable and recoverable in rates? (Addressed in Section 5.3.)
3. Is the HECA project so duplicative of other projects that the information that feasibility studies would yield fails to produce benefits that make it reasonable to authorize recovery of costs in rates?[20] (Addressed in Section 5.1.)
4. Does SCE's public disclosure plan comply with the requirements of Resolution E-4227A and D.08-04-038? (Addressed in Section 6.)
5. Does SCE's HECA project fit into SCE's overall procurement strategy, as required by E-4227A? (Addressed in Section 7.)
6. Has SCE provided notice to all parties to D.06-05-016 and D.07-12-052, as required by Resolution E-4227A? (Addressed in Section 8.)
7. Has SCE provided a detailed budget for the HECA project in its application, as required by Resolution E-4227A? (Addressed in Section 9.)

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[18] Resolution E-4227A at 14.

[19] As discussed above, § 454(a) requires that the Commission, based upon a showing of the utility, reach a finding that it is reasonable for a utility to recover any costs in rates.

[20] This issue is squarely raised in DRA's Opening Brief.

8. Is the Department of Energy's decision to fund a large portion of the HECA project costs a factor relevant to this decision? Is SCE's participation in the project critical to DOE's funding decision?[21] (Addressed in Section 10.)
9. Would a decision to authorize SCE to recover Phase I costs constitute retroactive ratemaking?[22] (Addressed in Section 5.2.)

5. Is it Reasonable to Permit SCE to Recover HECA Costs in Rates?

A critical issue before the Commission in any utility's request for the authorization to recover costs in rates is whether the costs are reasonable. This section will first discuss DRA's contention that the HECA project is so duplicative of other projects that the feasibility studies do not produce benefits that justify the costs. Subsequently, this section will address the costs and benefits associated with Phase I of the HECA project and then Phase II of the project.

5.1. Is the HECA Project So Duplicative of Other Projects That Feasibility Studies Fail to Produce Benefits that Justify Costs?

If the HECA project duplicates other projects, then the information benefits of feasibility studies and the FEED study are less valuable than information about a new or unique project or technology. A central issue in this proceeding, addressed by all active parties, is the uniqueness of the proposed HECA project.

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[21] This issue is squarely raised in TURN's Opening Brief.

[22] This issue is raised in DRA's Opening Brief.

5.1.1. Positions of Parties

DRA argues that:

> The HECA study is exactly the same study that BP, Rio Tinto, and Edison Mission Group started in Southern California as the Carson Project. It is also duplicative of the study the Commission authorized SCE to conduct in A.07-05-020. Therefore, SCE's application should be denied in its entirety because SCE has not shown that the study it seeks to conduct with HEI is different from the study the Commission has already committed $46.7 million to support in D.08-04-038.[23]

Specifically, DRA contends that the HECA project is identical to a "project that began in Carson California…."[24] As a consequence, DRA concludes that "[a]t the very least, Phase I for which SCE seeks recovery of $17 million, would have been completed under any timeline before February 20, 2009, because the Carson project began in 2006."[25] DRA states that because the Carson and HECA projects are identical, this "points to the likelihood that the funds SCE contributes to the HECA feasibility study might be used to reimburse Edison Mission Group for its contributions to the Carson Project."[26]

TURN supports DRA's analysis, concluding that "the substantial weight of the evidence supports a finding that the HECA project is a continuation of the Carson project, albeit relocated."[27]

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[23] DRA Opening Brief at 25.

[24] *Id*. at 26.

[25] *Id*. at 26-27.

[26] *Id*. at 27.

[27] TURN Opening Brief at 27.

In addition, DRA contends that SCE did not present any evidence to address the possibility that the reports the ratepayers would fund in Phase I of the HECA study are not duplicative of the reports SCE was producing in its Clean Hydrogen Power Generation (CHPG) feasibility study. Finally, DRA argues that IGCC technology is not a new technology. DRA therefore concludes "In light of the fact that California ratepayers are already funding [a] $46.88 million IGCC feasibility study and the fact that IGCC technology is not new, the Commission should deny SCE's application for recovery of additional funds for the HECA Study …"[28]

On this issue, SCE argues that:

> … the existence of other contemplated projects similar in concept to HECA is irrelevant. No party can dispute that HECA will be a first-of-a-kind facility in California, that the HECA feasibility study is site specific, and that as a result, it is necessary to complete the study to determine the technical feasibility and commercial reasonableness of a HECA facility in California. No other IGCC or other large, complex, new technology, power generation facility has been advanced to the point where technical and economic feasibility is proven without performing a site-specific FEED [front end engineering design] or other detailed engineering and design study.[29]

In making this point, SCE cites the testimony of its witness, Dr. Cortez, that "there is no project that compares to the HECA project, which is a unique, first-of-a-kind project that is designed with technology elements that is unlike any

[28] DRA Opening Brief at 29.

[29] SCE Opening Brief at 30.

other project under development by HEI or anyone else."[30] HEI similarly cites this testimony in support of the uniqueness of this project.[31]

Concerning the Carson Project, SCE cites the testimony of the SCE and HEI witness, Jonathan Briggs, who "explained that differences in the location, scope, and participants make the Carson project 'a very different project as compared to [the] project we're considering in the HECA feasibility study,' and those differences 'drive different components of the study.' "[32]

HEI supports SCE's analysis, and points out that the Carson Project was cancelled in 2007.[33]

Concerning the second project, the CHPG project, SCE argues that the HECA project does not duplicate it. SCE states that:

> As noted in Exhibit SCE-2, HECA (located in Kern County, California) and CHPG (located in Utah) have very different siting, permitting and transmission requirements, and plant parameters. Accordingly, the site-specific feasibility work cannot simply be applied from one study to the other.[34]

HEI also agrees with SCE that CHPG and HECA are very different. HEI notes that CHPG is a coal fed project, while HECA uses petroleum coke. HEI also points out the Utah and California sites are very different, as are the permitting, transmission, and commercial issues. CHPG does not involve

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[30] Transcript (TR) at 70 (Dr. Cortez, SCE), cited in SCE Opening Brief at 29-30.

[31] HEI Opening Brief at 20.

[32] SCE Opening Brief at 27-28, citing TR 181.

[33] HEI Opening Brief at 24.

[34] SCE Reply Brief at 28, citing SCE-2 at 9, TR at 278 and TR at 281.

enhanced oil recovery, and, among other things, the Utah site is at high altitude.[35]

Finally, SCE states that no funding will be used to reimburse the Edison Mission Group and that "there is no connection (nor any evidence of a connection) between SCE's cofunding and Edison Mission Group. SCE's ratepayer co-funding will cover only HECA feasibility study activities."[36]

5.1.2. Discussion

The weight of the evidence supports the contention that the HECA project is a unique project, and different from either the Carson Project or the CHPG project.

The testimony in support of the uniqueness of the project was very credible. SCE's witness is a national expert that is familiar with IGCC plants. His "survey of the entire IGCC scene in the US today" found that "there is no project that compares to the HECA project, which is a unique, first-of-a-kind project that is designed with technology elements that is unlike any project under development by HEI or any one else."[37]

Moreover, throughout the evidentiary hearings, it became clear that the IGCC and carbon sequestration technologies are at a stage where the design of a project, even one without cutting edge elements, presents unique technical and design challenges depending on the nature of the fuel and the geology of the site, which affect both the recovery and use of fuel and the sequestration of carbon.

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[35] HEI Opening Brief at 24.

[36] SCE Reply Brief at 30.

[37] TR 70.

Because of the novelty of this technology, neither the feasibility studies nor the FEED study constitutes project development as discussed in D.06-05-016. These studies are both necessary to determine whether there is a project at all.

The CHPG project is also very different from the HECA project. HECA will be a 250 megawatt (MW) facility designed for EOR at a specific site in Kern County, California, and will determine the viability of oil and gas geological formations for carbon sequestration. CHPG is a 500 MW coal-fed project, without EOR, in Utah, and the carbon sequestration will involve an as yet uncharacterized saline formation – not a depleted oil and gas reservoir.

The Carson Project and the HECA project are very different. First, the Carson Project is cancelled. The cancellation alone makes it very different. The Carson Project is also located in an urban area – Los Angeles County. Second, although the knowledge gained from a project like the Carson Project is clearly valuable for the development of IGCC projects such as HECA, the testimony of HEI that the "location, scope and participants" leads to a "very different project"[38] and has consequences for the overall project was compelling. Specifically, locating such a project in Carson California, the heart of the Los Angeles basin, a congested urban setting with bad air quality, raises design and permitting issues that are far different from those raised by the HECA project, which is located in a rural area of California.

These differences led to testimony by the HEI witness, who was involved in both projects, that the Carson and the HECA project are very different. For example, consider the following exchange:

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[38] HEI Opening Brief at 25.

> [Mr. Obiora, for DRA] Q Right. But you stated in your answer that the components of this project are different from the components of the Carson Project. I know the components of this project based on the information in this application. I'm trying to get, so I can make that determination for myself, what in your opinion were the components of the Carson Project?
>
> [Mr. Briggs, for HEI] A Well, it's worth recognizing that the Carson Project was a very different project just by its location, its design, its scope, its participants. All of those will [sic] have made it a very different project as compared to a project that we're considering with the HECA Feasibility Study that has a very different design, location, participants, scale. And on the basis of each one of those components, the specific work would be very different. It would drive different components of the study. But as we've said in our testimony, the basic knowledge gained from attempting to progress and assess the feasibility of an IGC study with carbon capture and storage was useful in the development of future projects like HECA.[39]

Thus, for HEI, there are major differences between the Carson Project and HECA. For SCE, these differences are even greater. SCE was not involved in the Carson Project, which was a project of Mission Energy, and SCE had no knowledge of the project beyond press reports.[40]

Finally, there is no evidence that provides support for DRA's allegation that SCE's co-funding of the project will be used to reimburse Edison Mission Group. We see no connection between SCE's co-funding of the HECA project and Edison Mission Group. In the absence of any contravening evidence, SCE's pledge that "ratepayer co-funding will cover only HECA feasibility study

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[39] TR 180:22 to TR 181: 17.

[40] See, e.g., RT 264:20-24 (Nelson/SCE): "I am aware of the BP Carson Project only through public and general company information."

activities" is credible.[41] Moreover, if DRA finds evidence of a transfer of funds to Edison Mission Group, DRA can bring this information before the Commission in the future – for example, at the time of the ERRA proceeding, which reviews the movement of costs into rates.

5.2. Are SCE's Phase I Costs Reasonable?

A central question in this proceeding is whether it is appropriate for SCE to recover the $17 million Phase I costs to participate in the HECA feasibility studies. We discuss the position of parties and then decide this matter.

5.2.1. Position of Parties

SCE holds that it is reasonable for it to recover the Phase I costs. SCE argues that the vetting of the Phase I costs "has occurred and the SCE submission supporting Resolution E-4227A has been substantiated through this proceeding" and therefore "it is appropriate for the Commission to authorize SCE to recover the $17 million in costs that the Commission directed SCE to contribute to Phase I…"[42]

SCE supports its position by contending that the project will provide ratepayer benefits. SCE argues:

> First, the feasibility study is consistent with Commission and State policy on GHG [Green House Gas] reduction, including AB 32, AB 1925, SB 1368, and Executive Orders S-7-04 and S-3-05. If the feasibility study demonstrates that HECA is technically feasible and commercially reasonable, the HECA facility will

[41] SCE Reply Brief at 30.

[42] SCE Opening Brief at 10.

> provide a unique, first-of-a-kind opportunity to advance these environmental and energy security policies and initiatives.[43]

SCE further notes that "the $30 million in ratepayer funding represents only 20% of the overall HECA feasibility study budget" thereby leveraging the ratepayer investment.[44] SCE argues that "if it [the project] is shown to be technically feasible and commercially reasonable, HECA as an in-state facility will provide significant benefits for California, including a cleaner environment, numerous clean-energy jobs, …" and other benefits.[45] SCE also argues that by participating in these studies, SCE will benefit ratepayers by enhancing its "overall knowledge regarding IGCC and CCS [carbon capture and sequestration] technologies" and by providing for "future baseload needs" with "clean generation characteristics."[46]

HEI also argues that the project provides many benefits to California and to California ratepayers. HEI points out that the feasibility studies "will employ over 100 California-based professionals, stimulate continued private investment in California, and position California for future job growth as a leader in developing CCS [Carbon Capture and Sequestration] technology."[47] HEI argues further that "[r]egardless of the ultimate results concerning technical feasibility and commercial reasonableness, the information disclosed will help advance the technology with the clean energy sector and SCE's ratepayers will receive the

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[43] *Id*.

[44] *Id*. at 11.

[45] *Id*.

[46] *Id*.

[47] HEI Opening Brief at 7-8.

benefit of an informed utility that will be better positioned to participate in HECA or other IGCC with CCS offerings."[48]

HEI further argues that the HECA project itself, if built, offers significant benefits:

> HECA could reduce GHGs: reduce California's reliance on foreign crude imports by increasing in-state crude production through EOR utilizing CO_2 [carbon dioxide]; generate additional tax revenue…; add hundreds of permanent new jobs; … and avoid emissions….[49]

Finally, HEI argues that "all qualitative analyses support the application and quantitative analyses are not possible for studies."[50] Because these are feasibility studies, it is not possible to know the costs and benefits at this stage of the project.

DRA argues that "SCE has not shown that it actually incurred any costs in the HECAMA account that were prospective from the date that Resolution E-4227A was issued."[51] As a consequence, DRA concludes that authorizing recovery of costs "would constitute impermissible retroactive ratemaking."[52] DRA argues that "all these reports have essentially been prepared and are simply awaiting delivery to SCE upon the certain conditions."[53]

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[48] *Id*. at 8.

[49] *Id*. at 9.

[50] *Id* at 10.

[51] DRA Opening Brief at 10.

[52] *Id*.

[53] *Id*. at 13.

DRA further argues that "even if the Commission finds that recovery of HECA is not retroactive ratemaking," that "SCE presented no evidence upon which the costs recorded to Phase I of the HECAMA could be deemed reasonable."[54] More specifically, DRA argues that "the Commission would have to examine the deliveries that SCE received in Phase I to determine if they were in fact what SCE was authorized to fund in Resolution E-4227A or some other Study."[55] Furthermore, DRA argues that "[t]he Commission cannot also authorize recovery of any funds that SCE has not yet paid,"[56] arguing that recovery of these funds "presents a far different situation than those instances where the Commission has essentially evaluated the reasonableness of a contract and thus authorized the recovery of the funds required for the performance of the contract."[57]

TURN argues that "the record in this proceeding raises substantial doubts about the reasonableness of SCE's request."[58] Concerning costs, TURN argues that "the absence of such information in the record here means, quite simply, that the Commission does not have a sufficient basis for finding the costs (or any portion thereof) to be reasonable, and, therefore, eligible for rate recovery."[59] Concerning the testimony of Cortez, whom SCE hired to conduct an evaluation of the HECA project, TURN argues "his credentials do not permit relying on his

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[54] *Id*. at 17.

[55] *Id*. at 18.

[56] *Id*. at 19.

[57] *Id*. at 20.

[58] TURN Opening Brief at 8.

[59] *Id*. at 9.

review or his opinion as a basis for finding the study costs eligible for rate recovery."[60]

Finally, TURN argues that "SCE has failed to demonstrate that the costs are reasonable, or that the ratepayer benefits from the feasibility study are likely to exceed those costs."[61] Specifically, TURN argues that the budget has insufficient detail, and "because SCE failed to present sufficiently detailed budget information, the Commission should decide that utility has failed to present sufficient evidence to support a finding of reasonableness."[62] Concerning the benefits, TURN argues that "SCE has failed to demonstrate sufficient benefits incremental to the performance of the HECA Feasibility Study itself to support a finding that the benefits warrant ratepayer incurrence of the SCE share of the study costs."[63]

5.2.2. Discussion

First, permitting SCE to recover the Phase I costs of participating in the HECA project does not constitute retroactive ratemaking.

As the uncontested timeline above makes clear, SCE did not sign the agreement with HEI nor did it provide any money to HEI until after the Commission adopted Resolution E-4227A. Moreover, SCE did not acquire access to HEI's feasibility studies until SCE provided financial support for that information and for participation in the HECA project. The fact that HEI had already begun work on the feasibility studies prior to the adoption of Resolution

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[60] *Id*. at 12.

[61] *Id*.

[62] *Id*. at 17.

E-4227A is no more relevant to the issue of retroactive ratemaking than is the fact that a gas supplier has pumped gas from the ground before its sale to SCE for the generation of power. In both cases, what matters is whether SCE's action *follows* a grant of Commission authority to establish a memorandum account for the tracking of costs.

The "service" provided by HEI to SCE was access to the information and participation in the HECA project. That access and participation followed Commission approval to enter into the contract, to establish a memorandum account, and to book the costs to that account. Consequently, a decision to permit the recovery of those costs that were incurred following the signing of the contract between HEI and SCE and after the establishment of a memorandum account for tracking cost does not constitute retroactive ratemaking.

Concerning the reasonableness of the HECA costs, SCE's case rises and falls on the testimony of Cortez. Cortez was retained by SCE as its representative to review the HECA project on SCE's behalf. The testimony of Cortez concluded that "SCE's investment in the HECA Study (Phase I and Phase II) represents fair and good value and represent a minority share of the total Phase I and Phase II budget."[64] In addition, Cortez testified that SCE's funding of the HECA project allowed it to participate in an IGCC that was state of the art, and that of all the IGCC studies going forward throughout the nation, every one "of the feasibility studies were funded essentially 100-percent ratepayer

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[63] *Id*. at 18.

[64] Ex SCE-1 Attachment 3 at 12.

funding."[65] According to Cortez, within this context, SCE's payment of only 20 percent of the total is "a good deal for California consumer, in my judgment."[66] In addition, Cortez testified that the budget for the studies contained "very detailed documents that described the scope of work, the tasks, the organization to exercise this study, to implement it, as well as detailed budgets that were presented over roughly a three-year period on a monthly basis"[67] and that is consistent with industry practice, "typical" for "studies like this.…"[68]

Although TURN argued that the Commission should not rely on the opinion of Cortez, we disagree. Cortez's training, experience, and credible testimony as a witness warrant reliance on his testimony. As a witness, Cortez responded to questions with detailed information explaining exactly how he reviewed costs, budgets, and his basis for judging them to be reasonable. From his testimony and background, it is clear that in the area of IGCC technology, Cortez is among the top two or three individuals in the nation and that he has followed this technology throughout his professional career.[69] In addition to his credible testimony, we note that SCE relied on his conclusions to guide its investment. It is reasonable for this Commission to rely on his testimony as well.

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[65] TR 116:28-117:2.

[66] TR 117:15-16.

[67] TR 61:17-21.

[68] TR 61: 23-24.

[69] Douglas Cortez holds a doctorate and master's in chemical engineering from the Massachusetts Institute of Technology and a bachelor's of science in chemical engineering from the University of California, Berkeley. He is a registered chemical engineer in the state of California. He has 35 years of experience in electrical power, petroleum refining, chemical production and synthetic fuels industry. He has worked at Fluor and Tosco.

Concerning the benefits produced by the feasibility studies, they are indeed not quantified, but are nevertheless substantial. As SCE and HECA point out, the use of IGCC technology with carbon capture and sequestration is a technology that holds promise of reducing GHGs. California statutes, including Assembly Bill (AB) 32 (Stats. 2006, Ch. 488), AB1925 (Stats. 2006, Ch. 47-1), Senate Bill (SB) 1368 (Stats. 2006, Ch. 598) and Executive Orders S-7-04 and S-3-05, call for GHG reduction. With such clear legislative and executive direction, it becomes the responsibility of the Commission and California utilities to devise strategies that can reach these legislative goals, even without the quantification of benefits. In this context, the HECA project, which is a first-of-a-kind opportunity to advance environmental and energy policies, produces benefits that warrant its pursuit.

Moreover, when legislation adopts goals that require new technologies to achieve them, it is not reasonable to demand that a feasibility analysis of the new technology provide the Commission with the same level of detail on costs and benefits that the Commission would expect from the use of a more traditional technology.

In summary, authorizing the recovery of the Phase I costs does not constitute retroactive ratemaking. In addition, based on substantial evidence in the record, the Phase I costs for the basic feasibility studies are reasonable. Finally, the prospect of determining whether the technology of IGCC with carbon sequestration and EOR in the Kern County setting can provide power while making progress on the legislatively mandated goal of reducing GHG justifies SCE's phase I expenditures.

5.3. Are SCE's Phase II Costs Reasonable?

Depending on the outcome of the feasibility studies, the HECA project may proceed to the next phase (Phase II) in which HEI would prepare a FEED engineering study. Under the terms of the agreement, SCE will be responsible for an additional $13 million. The second major issue in this proceeding is whether these Phase II costs are reasonable.

5.3.1. Positions of Parties

SCE argues that its "costs for Phase II are also reasonable."[70] SCE first argues that funding Phase II is implicitly authorized in Resolution E-4227A because Phase I costs total $17 million and "because the Commission authorized SCE to record $30 million in the HECAMA, the Commission authorized SCE to participate in Phase II."[71]

SCE further argues that the proposed payment schedule is reasonable, citing the testimony of Cortez:

> First, the schedule is tied to specific milestones, so that Edison is not making payments until they have received the product, the reports, or the events that are key milestones in the feasibility study;
>
> Number two, the schedule of payments at all times leaves Edison in a minority – a very small minority position in terms of their investment relative to the private at-risk capital that's being invested.[72]

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[70] SCE Opening Brief at 23.

[71] *Id*. at 24.

[72] *Id*. at 24-25, citing TR 84:10-14, 84:17-20.

SCE concludes that it "will have sufficient information to determine whether to proceed to Phase II when the milestones for Phase I are met."[73]

Finally, SCE argues that "Phase II is necessary to determine the technical feasibility and commercial reasonableness" of the project.[74] In particular, SCE argues that the FEED engineering study includes "new detailed engineering activities to address all aspects of the project, including all technical, operational, environmental, and commercial issues."[75] SCE concludes that "the Phase II study is necessary to determine the capital cost and commercial reasonableness of HECA."[76]

HEI argues that FEED costs are not project development costs, but are instead feasibility costs. This distinction is important because D.06-05-016 states that "project development costs for proposed new projects should not be specifically included in rates."[77] HEI then notes that FEED and Ability-to-Permit Assessment were deemed not project development costs in D.08-04-038. HEI further argues that Resolution E-4227A found that "Phase I of the HECA Study does not include project development costs as discussed in D.06-05-016."[78]

HEI also argues that the costs associated with the Application for Certification (AFC), which was made to the California Energy Commission (CEC), are also not project development costs. HEI states that the "AFC was

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[73] *Id*. at 25.

[74] *Id*. at 26.

[75] *Id*. at 27 citing Ex. SCE-2 at 11.

[76] *Id*. at 27.

[77] D.06-05-016 at 53.

[78] HEI Opening Brief at 15 citing Resolution E-4227A at Finding 3.

filed with the CEC to test permitting feasibility and is an integral part of the HECA feasibility study."[79] HEI also notes that the Scoping Ruling in this proceeding stated "there is no project now before [the Commission] – only a study."[80]

Finally, HEI argues that the Phase II costs are necessary, in part because the CHPG work "is not a reasonable substitute for Phase II of the HECA feasibility study."[81] HEI states that "the CHPG and the HECA projects have very different site characteristics, permitting requirements, transmission requirements, technological configuration and commercial issues and thus each requires its own FEED study to address its specific issues and challenges."[82]

DRA, in contrast, argues against authorizing "recovery of the funds for Phase II of HECA feasibility study as inconsistent with law."[83] Specifically, DRA argues that authorizing SCE to proceed with Phase II is inconsistent with Resolution E-4227A, which DRA cites:

> SCE and HEI are not obligated to commence with Phase II and may choose not to do so, based on the results of Phase I and the availability of adequate funding assurance. Phase II will consist of Front End Engineering Design reports.[84]

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[79] HEI Opening Brief at 15 citing Exhibit SCE-2 at 11:5-6.

[80] Scoping Memo at 8.

[81] HEI Opening Brief at 17.

[82] *Id*. at 17.

[83] DRA Opening Brief at 21.

[84] *Id*. at 21-22, citing Resolution E-4227A.

DRA argues "[w]hy should the Commission authorize recovery in rates for funds that may not be expended should SCE and HEI ultimately decide not to commence Phase II?"[85]

DRA argues further that "SCE's request for recovery of Phase II Costs seeks to place the reasonableness of those costs in a completely different proceeding because those costs have not yet been incurred."[86] DRA concludes that these costs should not be considered in this proceeding.

Finally, DRA argues that "SCE conceded that it has not presented any evidence in this proceeding with which the Commission may make a determination that costs 'to be incurred' in Phase II of the feasibility study are reasonable."[87]

TURN also argues against authorizing recovery of Phase II costs. First, TURN argues that "SCE's showing in support of the Phase 2 costs of the HECA feasibility study shares the same infirmities as those described" pertaining to Phase I.

Furthermore, TURN argues against "the request for a finding of reasonableness for Phase II costs because the request is premature and inadequately formed at this juncture."[88] TURN points out that "SCE cannot at this juncture describe with certainty what costs will be incurred…"[89] and

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[85] *Id*. at 22.

[86] *Id*. at 23.

[87] *Id*. at 25.

[88] TURN Opening Brief at 21.

[89] *Id*. at 22.

therefore question "how the Commission can approve such costs for rate recovery."[90]

TURN also joins DRA in questioning whether the Phase II costs constitute "specific project development."[91]

As a result of these considerations, TURN argues that "the Commission should deny rate recovery of the Phase 2 costs, even if it permits rate recovery of any portion of the Phase 1 costs."[92]

5.3.2. Discussion

As many parties have noted, an analysis of the reasonableness of the Phase II costs is very similar to the analysis of the Phase I costs. In our discussion of the Phase I costs, we find that SCE's participation in the HECA project provides SCE with direct experience in an advanced IGCC project with carbon sequestration. This experience, and the resulting studies, will give SCE experience with a technology that offers the prospects of meeting California's energy needs while simultaneously reducing GHG emissions.

Moreover, as we noted in the discussion of Phase I costs, SCE has provided expert testimony that the terms of its agreement with HEI provide "good value"[93] for the ratepayer funds that it commits to the project.

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[90] *Id*.

[91] *Id*. at 23.

[92] *Id*.

[93] Ex SCE-1 Attachment 3 at 12.

Resolution E-4227A authorized SCE to book up to $30 million into the HECAMA to cover Phase I and Phase II costs and to seek recovery of these costs in an application. Specifically, Resolution E-4227A states that the Commission:

> approves a memorandum account to record the costs of this study and any costs spent on Phase II, and further determines that SCE must file an application in order to request recovery of these costs.[94]

This application is considering the reasonableness of these proposed Phase II costs. DRA's argument that authorizing SCE to proceed with Phase II is inconsistent with Resolution E-4227A runs directly counter to the plain language of the resolution.

The testimony in this proceeding makes clear that the schedule of payments is reasonable. The project uses the results of earlier feasibility tests to determine whether to undertake subsequent studies. Thus, rather than offer a project that proceeds in lockstep through a series of studies, the project spreads the tasks and costs out over time and only incurs new costs for further studies when the project reveals itself to be promising.

Pursuing the project makes sense only if it is technically and commercially feasible. The fact that Phase II will proceed only if the Phase I shows that the project is promising in part indicates the reasonableness of the study plan. The detailed FEED engineering study will be conducted only if the initial analysis shows the likelihood that the project will prove technically and commercially feasible. DRA's objection that the Commission should not authorize recovery for funds that may not be expended is inapposite – if the funds are not spent, their

[94] Resolution E-4227A at 1.

recovery will not be made because the initial analysis will not justify it. Moreover, delaying action on whether to spend more funds until more information from the initial analysis is available helps ensure that reasonableness of the use of the Phase II funds.

In arguments similar to those proposed by DRA, TURN objects to determining that the expenses of Phase II are reasonable at this time or constitute specific project development.

FEED costs, however, are not project development costs, as determined by a prior Commission decision.[95] Specifically, D.08-04-038 found that

> … all activities associated with the feasibility study are to support new generation and not associated with a proposed project. As such, the costs associated with Property and Commodity Options, FEED Study and Ability-to-Permit Assessment are not "project development" costs.[96]

Thus, DRA and TURN attempt to reargue a matter already decided by this Commission.

Finally, although TURN renews its objection that SCE has not provided adequate information to support the determination of the reasonableness of its costs – whether for Phase I or Phase II – we once again find the expert testimony of SCE's witnesses to be persuasive and adequate to support a determination that it is reasonable to authorize SCE to recover up to $13 million in costs for Phase II costs of the HECA feasibility studies recorded or to be recorded in the

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[95] D.08-04-038.

[96] D.08-04-038 at 18.

HECAMA, subject to a reasonableness review in a future ERRA reasonableness proceeding.

6. Does SCE's Public Disclosure Plan comply with the Requirements of Resolution E-4227A?

As noted above, Resolution E-4227A requires that:

> Further, SCE should include, in such an application, a plan to publicize detailed study results to the greatest extent possible.[97]

For this reason, we review SCE's proposed disclosure plan to determine whether it complies with this disclosure requirement.

6.1. Position of Parties

SCE argues that its Public Disclosure Plan "meets this requirement."[98] SCE notes that the "proposed plan has two components: (1) public workshops and (2) a process to provide access to one or more of the 28 reports that SCE will receive, with appropriate copyright/use restrictions as provided by law."[99] SCE explains that:

> The workshops will provide the results of the study, and provide interested third parties the opportunity to review the report and answers to any questions concerning the reports. The reports will cover the subjects listed in the HECA Study Agreement: technology appraisal; feedstock and water; process and system configuration; EOR and carbon sequestration; environmental safety and health; operations, maintainability and constructability; water treatment; acid gas removal; CAISO

[97] Resolution E-4227A at Finding 10.

[98] SCE Opening Brief at 27.

[99] SCE Opening Brief at 28, citing Ex. SCE-1 at 8.

> interconnection; value engineering; and process design package.[100]

SCE concludes by arguing that no party opposed the disclosure plan.

HEI argues that the "goals of the Plan include wide dissemination of information to those who can help push the technology forward…"[101] HEI points out that "the reports would include descriptions of available options, technology, and the justification of selection for components of the proposed HECA facility and feasibility study."[102]

HEI links the disclosure to the reimbursement of SCE costs by ratepayers and notes that "[t]here is no evidence that any private power project developer has ever publicly released feasibility study reports where the public (ratepayers) had no investment in the private power project."[103]

TURN does not oppose the public disclosure plan, but argues that "SCE should be required to publicly disclose the HECA feasibility study reports immediately, whether or not ratepayers bear any cost of the study."[104] TURN argues that "[n]othing in the decision [D.08-04-038] links the public disclosure to ratepayer funding of the studies, or suggest that the outcome would have been different had SCE shareholders funded the studies."[105]

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[100] SCE Opening Brief at 28, footnotes omitted.

[101] HEI Opening Brief at 18.

[102] *Id*.

[103] *Id*., footnotes omitted.

[104] TURN Opening Brief at 23.

[105] *Id*. at 26.

6.2. Discussion

SCE's disclosure plan meets the requirements of Resolution E-4227A. No party has objected to any aspect of the disclosure plan.

Since the decision authorizes the ratepayer funding of the cost of the HECA studies as proposed by SCE, we need not consider TURN's argument that the Commission should require the disclosure of information even if ratepayers do not provide funding at this time.

7. Does SCE's HECA Project Fit Into SCE's Overall Procurement Strategy, as Required by Resolution E-4227A?

Resolution E-4227A states that:

> 10. In any future application for approval of costs related to the HECA study, SCE should include an explanation of how its proposal fits into its overall procurement strategy, as directed by D.08-04-038.[106]

Therefore, our review of this application requires us to review this generation proposal in light of SCE's overall procurement strategy.

7.1. Positions of Parties

In testimony, SCE states that:

> … SCE's participation in the HECA feasibility study advances SCE's efforts to develop a generation and procurement strategy that provides low-carbon baseload generation. In particular, the potential for obtaining power from a HECA facility is attractive to SCE ratepayers because of: 1) its timing to fill SCE's baseload need, 2) its clean generation characteristic, which is consistent with state policy objectives, 3) its in-state location with identified CO_2 off-take for EOR where both the off-taker and HEI have significant experience in such technology, and 4) its fuel

[106] E-4227A Finding 10.

characteristic, which helps mitigate regulatory uncertainty as well as provide fuel diversity.[107]

In addition, SCE also presented testimony that it will need "at least 250 MW of baseload resources by 2015."[108] SCE also notes the project both helps reduce GHG emissions[109] and increases fuel diversity.[110]

No party presented contrary evidence, and no party discussed this issue in its briefs.

In D.08-09-041 (as corrected by D.09-01-004), this Commission notes that SCE's unmet residual procurement authorization is 145-645 MW.[111] Thus, the 250 MW that the HECA project will produce is consistent with the baseload range as it appears in D.08-09-041 and with SCE's testimony of its power needs.

7.2. Discussion

The HECA project is consistent with SCE's overall procurement strategy because its timing will help fill SCE's baseload need, it produces low GHG emissions, it is located in California and provides additional fuel diversity. There is no evidence nor argument to the contrary.

8. Has SCE Provided Notice to All Parties to D.06-05-016 and D.07-12-052, as Required by Resolution E-4227A?

Resolution E-4227A requires that:

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[107] Ex. SCE-1 at 4.

[108] *Id*; amended at TR 253:3-13.

[109] *Id*. at 7.

[110] *Id*. at 8.

[111] D.09-01-004 at 1.

> 11. In any future application for approval of costs related to the HECA study, SCE should provide notice to all parties to D.06-05-016 and D.07-12-052 any other relevant decisions or proceedings.[112]

In its Application, SCE states:

> In compliance with Resolution E-4427A, SCE is serving this Application and its exhibits on all parties on the Commission's service list for proceedings Decision (D.) 06-05-016, D.07-12-052 and D.08-04-038.[113]

No party raises any issue concerning the service of the application.

Based on the information provided, we find that SCE has met this requirement of Resolution E-4227A.

9. Has SCE Provided a Detailed Budget for the HECA Project in its Application, as Required by Resolution E-4227A?

Resolution E-4227A requires that:

> 12. In any future application for approval of costs related to the HECA study, SCE should include a detailed budget for the HECA study.[114]

9.1. Positions of Parties

The parties to this proceeding vigorously dispute whether SCE has provided a budget for the HECA studies in sufficient detail to meet this requirement.

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[112] Resolution E-4227A at Finding 11.

[113] Application at 30.

[114] Resolution E-4227 A at Finding 12.

SCE states that concerning the budget, "the narrative detail provided identified precisely the scope of HECA feasibility activities that SCE's minority contribution covers, and the scope of value that SCE will be obtaining."[115]

SCE further contends:

> In response to DRA's and TURN's objections regarding the sufficiency of budget details provided, SCE and HEI provided a narrative description of the cost categories in Exhibit SCE-2 in order to provide further detail and explanation on the scope of the feasibility work included in the budget. As explained in Exhibit SCE-2, this is the greatest level of detail that HEI is able to provide publicly, consistent with its existing third party confidentiality obligations and retaining commercial flexibility and optionality in third party negotiation related to property, commodity and other commercial options.[116]

To support SCE's argument that the budget and the level of budget detail is adequate, SCE's witness testified that "the HECA budget was consistent with what he would expect within the industry for this type of study."[117] SCE also points out the DOE has selected the HECA project to receive $308 million in co-funding from DOE and concludes its argument that "[t]he additional budget detail provided, plus Dr. Cortez's and the DOE's independent confirmation that HEI has the organization in place to implement the study plan, are sufficient to determine the reasonableness of SCE's total costs."[118]

HEI argues that:

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[115] SCE Opening Brief at 20.

[116] *Id*. at 18-19, footnotes omitted.

[117] *Id*. at 19.

[118] *Id*. at 20.

> The HECA Feasibility Study budget provided by SCE and HEI contains a breakdown of costs between Phases I and II. Detailed descriptions of the activities represented have also been provided.[119]

In contrast, DRA argues that:

> SCE's argument for not including the detailed budget that Resolution E-4227A ordered SCE to include in this application is untenable.[120]

DRA argues that the narrative description of the cost categories that SCE provided in AL 2274-E is not convincing.[121] In addition, DRA argues that the Commission should be able to "verify that the HECA budget is in fact what SCE claims it is going to be …"[122]

9.2. Discussion

We find that the budget submitted for this project to the Commission contains sufficient details for the Commission to determine that the costs associated with this project are reasonable.

Specifically, from the qualitative and quantitative information submitted by SCE, we know that SCE will be required to pay up to $17 million to participate in Phase I, and up to $13 million to participate in Phase II, and that SCE's contribution will represent less than 20% of the projected Phase II costs. SCE provides a budget that details the costs of the Phase I and Phase II studies

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[119] HEI Reply Brief at 26.

[120] DRA Reply Brief at 7.

[121] *Id*. at 8.

[122] *Id*. at 9.

by cost categories, including Administrative and General, Equipment and Plan, Third Party Vendors, and Permitting Feasibility costs.[123]

Although TURN's testimony showed the SCE provided a greater level of budgetary detail concerning the CHPG application (A.07-05-020), [124] that project is very different than the project before us today. Most importantly, SCE had full responsibility for the CHPG project, while on the HECA project, SCE will be responsible for only 20% of the costs of determining project feasibility.[125] In addition, SCE notes that the details in the CHPG budget included SCE's own labor hours and costs, while in the HECA project, many of the budget cost categories cover service provided by third-party vendors that is subject to confidentiality agreements.[126] Since the costs associated with the HECA project do not consist of SCE's own labor and materials costs and SCE's responsibility for these costs involve only 20% of the overall costs, we find that the budgetary information provided by SCE is of sufficient detail to meet the requirements of Resolution E-4227A and, as noted above, is sufficient to permit the Commission to determine that funding the HECA studies is a reasonable use of ratepayer funds.

Within the overall context of California energy policy as enshrined in legislation, the HECA project is consistent with California policies to produce energy in ways that do not increase the production of GHGs. Moreover, since this project is at this time only a study, further details concerning Phase II costs

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[123] Ex. SCE-1 at 10.

[124] Ex. TURN-3 Attachment 1.

[125] Ex. SCE-2 at 14.

[126] Ex. SCE-2 at 14.

require the completion of Phase I. We note that, if Phase I fails to provide data supporting continued investigation, then Phase II will not take place.

10. Other Issues

10.1. Does the Federal decision to fund a portion of the costs of the HECA studies rely on ratepayer's participation in funding?

10.1.1. Positions of Parties

SCE argues that

> … the DOE has a history of favoring clean coal projects with strong public support. In fact, since 1996, the DOE has awarded clean coal grants or tax credits to IGCC projects of over $100 million each to six projects, and each of the six projects involves regulated utility rate-based funding support.[127]

HEI notes that DOE's National Energy Technology Laboratory selected HEI for a $308 million award. HEI states that it is its position

> … that project applications for federal incentives, whether they are tax credits or grant funding, are selected based on their technical merit as well as whether the projects enjoy broad public support, local regulatory support and permitting support, and satisfy cost-sharing requirements. It is inarguable that participation by a State, as represented by the approval of the participation of its ratepayers in co-funding a project study, is a strong indication of support that improves the likelihood of federal incentives being awarded to the HECA Project.[128]

TURN takes a very different approach to this matter. TURN argues that "there is no specific provision in the federal economic stimulus legislation from

[127] SCE Opening Brief at 32.

[128] HEI Opening Brief at 25-26.

either late 2008 or early 2009 that would distinguish between utility shareholders or ratepayers as the source of funding."[129] TURN notes further that

> There is no clear evidence that the DOE cared one way or the other about whether the cofunding in support of an application for CCPI-3 funds came from utility ratepayers rather than utility shareholders (or any other non-federal source).[130]

10.1.2. Discussion

Under § 454(a), the Commission's obligation is to determine "upon a showing before the commission and a finding by the commission that the new rate is justified."[131] The evidence in the record of the proceeding is sufficient to support a finding that the new rate is justified because the benefits accruing to SCE ratepayers are sufficient to warrant the commitment of $30 million of ratepayer funding to this project.

For this reason, there is no need to address the question of whether state support for the HECA project was a critical factor in the DOE's decision to award it a $308 million grant.

10.2. Warm-line and confidentiality issue?

10.2.1. Positions of Parties

TURN, citing D.09-03-025, argues that SCE has failed to meet its burden of proving by a preponderance of the evidence that granting its request is reasonable. TURN also argues:

> In addition to these general rules of burden and standard of proof, there are two additional more specific principles that

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[129] TURN Opening Brief at 30.

[130] *Id*.

[131] § 454(a).

> apply to SCE's showing in this proceeding. First, consistent with the Commission's treatment of a similar issue in the recent *Warm Line* complaint case, a party that makes a specific claim needs to prove the related facts, particularly where the information necessary to prove the related facts is largely within control of that party.

And on this point, TURN concludes:

> SCE and HEI made general assertions that using ratepayer funds, rather than shareholder funds, as a contribution to the co-funding would demonstrate a greater level of support for the HECA project and, by extension, make it more likely the project would receive an award of DOE funds through the CCPI-3 solicitation. But when pushed for a specific citation to any provision of the Emergency Economic Stabilization Act of 2008 or the American Recovery and Reinvestment Act of 2009 that supports such an assertion, SCE and HEI conceded "there are no specific provisions in the economic stimulus bills regarding the source of funding."

TURN also raises another, but related, legal issue:

> The unusual circumstances of this proceeding implicate a second rule regarding burden and standard of proof that arises where, as here, a party chooses not to provide information due to claims of confidentiality. Even if it assumes such claims are valid, the Commission has previously recognized that the onus of such claims falls on the party making them. That is, the party claiming confidentiality must meet its burden of proof with other material or risk denial of its requested relief. … As TURN will describe in greater detail below, the broad claims of confidentiality left such a scant evidentiary record on the reasonableness of rate recovery issue that the Commission cannot grant the application.

In response, SCE argues that "*Warm Line* is inapposite."[132] SCE states that it has "never contended that there are specific statutory provisions that require ratepayer funding as a precondition for federal funding."[133] SCE states that instead, it has argued that "it is reasonable to conclude that ratepayer funding (as opposed to shareholder funding) enhances the opportunity for the HECA feasibility study to receive federal funding."[134]

Concerning TURN's objection to HEI's confidentiality claims, SCE responds:

> SCE has provided sufficient HECA feasibility cost data, and intervenors do not need to review confidential details. Indeed, resolution E-4227A required SCE to provide a detailed budget "*so that when SCE files its application for cost recovery SCE can demonstrate that its portion of the co-funding was less than 50% of the total study costs.*" SCE has fulfilled this requirement.[135]

10.2.2. Discussion

As our discussion in above made clear, our assessment of the reasonableness of the funding of 20 percent of the cost of feasibility studies by ratepayers does not require us to determine that ratepayer funding was critical to DOE's decision to award $308 million to this project. Since this is the case, the *Warm Line* argument, which pertains to whether SCE has demonstrated that the DOE action depended upon ratepayer funding, is not relevant.

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[132] SCE Reply Brief at 30.

[133] *Id*.

[134] *Id*. at 31.

[135] *Id*. at 35.

Similarly, since the SCE budget provided in the record of this proceeding and the testimony of Cortez demonstrated that the costs were reasonable and far less than 50% of the total costs of the studies, we do not need access to the additional data under DOE's confidentiality protections to make a determination that the costs are reasonable.

We found above that SCE has met its burden of demonstrating by a preponderance of the evidence that the costs it incurs in participating in the funding of the HECA project are reasonable. Based on the more than adequate data provided in its budgetary showing, SCE has shown that the costs are reasonable and less than 50% of total costs for the HECA studies.

11. Conclusion

In summary, we find SCE's costs associated with its participation in Phase I and Phase II of the HECA Study to be reasonable and authorize their recovery. Thus, SCE is authorized to recover up to $17 million for Phase I costs recorded or to be recorded in the HECAMA. SCE is also authorized to recover up to $13 million in costs for Phase II of the HECA Study recorded or to be recorded in the HECAMA, subject to the usual reasonableness review in a future ERRA reasonableness proceeding.

In addition, we approve SCE's Public Disclosure Plan as described in the record of this proceeding. We further find that SCE has fulfilled all the requirements placed upon this application by Resolution E-4227A.

There are no outstanding issues in this proceeding, and it should be closed.

12. Comments on Proposed Decision

The proposed decision (PD) of the Administrative Law Judge (ALJ) in this matter was mailed to the parties in accordance with Section 311 of the Public

Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on November 23, 2009, by SCE, HEI, DRA and TURN. Reply comments were filed on November 30, 2009, by SCE, HEI, DRA and TURN.

12.1. Major Issues Raised in Comments on Proposed Decision

SCE's comments express broad support for the PD, stating that it "addresses the evidentiary record in detail, and reaches a well-reasoned decision on each of the issues and arguments raised by the parties in the proceeding."[136] In addition to correcting minor factual errors, SCE, citing its Reply Brief, renewed its request that the Commission authorize "the State's investor-owned utilities (IOUs) to enter into joint discussions with HEI to negotiate the terms and conditions (including price, quantity and scheduling arrangements) for one or more power purchase agreements (PPA) for the power output from HECA; and, if appropriate , enter an agreement …, subject to prior Commission review and approval."[137] SCE argues that "Resolution E-4227 encouraged the two IOUs, PG&E and SCE, to become partners in the HECA feasibility study with SCE and HEI…"[138] SCE argues that "the Commission may authorize collaboration between and among the IOUs and HEI, and thereby immunize such activities from any potential liability under the antitrust laws….'[139]

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[136] SCE, Comments on PD at 1.

[137] *Id.* at 3.

[138] *Id.* at 4.

[139] *Id.* at 5.

HEI's comments also support the PD, stating that "[t]he Commission should approve the PD as it is well reasoned and supported by the evidence, policy and precedent."[140]

In addition, HEI joins SCE in asking that the Commission urge "all utilities subject to its jurisdiction to enter into negotiations for HECA Project output subject to a determination of project feasibility."[141] In Reply Comments, TURN and DRA oppose the requests of SCE and HEI for this authorization. TURN argues that "the Commission must reject it [the request] as being inadequately supported by the record and likely unnecessary in light of Resolution E-4227A."[142]

In general, DRA's comments strongly object to the PD, arguing that it commits both legal and factual error, and DRA "recommends that the Commission reject the PD."[143] DRA argues that the PD commits legal error when it observes that SCE's testimony rises and falls on the testimony of its witness, Dr. Cortez. DRA charges that in stating this, "the PD delegates the Commission's authority to make a discretionary determination, entrusted to it by statute, to a third party."[144] In addition, DRA notes that "The PD does not explain why the same records that it claims Dr. Cortez reviewed was [sic] not

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[140] HEI, Comments on PD at 2.

[141] *Id.* at 6.

[142] TURN, Reply Comments on PD at 5.

[143] DRA, Comments on PD at 1.

[144] *Id.* at 3.

made available to the Commission and the parties in the proceeding for review and examination."[145]

DRA also argues that the basic judgment reached in the PD – that the unquantifiable benefits outweigh the costs of the project – is wrong and that "[t]he notion that the benefits listed in the PD accrue to ratepayers from the $30 million that SCE would invest in the feasibility study is disingenuous at best."[146] DRA argues that "[t]he PD found the costs for Phase II of the feasibility study reasonable, even though SCE admitted at hearing that it has not presented any evidence on which the Commission could determine that those costs were reasonable. Surprisingly, the PD never addresses this admission." [147] DRA therefore objects to the PD and argues for its rejection.

DRA also argues that "there was no evidence to support the $10 million SCE paid in Phase I for the enhanced oil recovery study part of the report."[148]

DRA further argues that the PD misconstrues DRA's position on retroactive ratemaking.

Finally, DRA proposes implementation safeguards in the event that the decision is adopted. DRA argues that SCE must demonstrate it receives the reports described in the HECA feasibility study. This demonstration may be made by requiring SCE to file a Tier II Advice Letter within 45 calendar days after the workshops described in the public disclosure plan are completed. DRA makes a similar recommendation for the filing of a Tier II advice letter within

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[145] *Id.* at 4.

[146] *Id.* at 6.

[147] Id. at 8.

[148] *Id.* at 11.

45 calendar days after all Phase II reports are received. In Reply Comments, HEI argues that "DRA never raised this suggestion in its testimony, at evidentiary hearings, or in any briefs, and there is thus no reference to this request in the PD."[149] SCE argues that the safeguards proposed by DRA are not necessary because "SCE will be publicizing the study results pursuant to the Public Disclosure Plan approved in the PD, and SCE anticipates that DRA, TURN and Energy Division will be participating in the workshops."[150]

TURN argues that the PD fails "to address the undisputed factual evidence that runs counter to its findings."[151] Specifically, TURN argues that the PD fails to address a statement identified in DRA's testimony in which a HECA manager uses the words "the project" to refer both to a project in Carson and a project in Elk Hills.[152] Similarly, TURN argues that the PD is wrong in relying on SCE's rebuttal testimony which states that the CHPG project and the HECA project are different. TURN claims that "undisputed record evidence demonstrates that the two projects were largely identical in this way: As SCE's witness acknowledged, the vast majority of the labor costs set forth in the CHPG estimates covered non-SCE labor."[153] Therefore, TURN desires that the budgetary information provided for HECA contain the same level of details as that for CHPG.

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[149] HEI Reply Comments on PD at 5.

[150] SCE Reply Comments on PD at 5.

[151] TURN Comments on PD at 1.

[152] *Id.* at 3.

[153] *Id.*

TURN also argues that the PD "commits legal error when it abandons cost-effectiveness as a necessary condition for ratepayer funding." [154]

In addition, TURN joins DRA in charging that the PD has delegated decisionmaking to Dr. Cortez, and notes that Dr. Cortez "had a continuing employment relationship with one of the parties to the transaction and had been hired by the other party to the same transaction."[155]

Finally, TURN argues that "the fact that SCE's share of the HECA feasibility study cost is a small proportion does not make the share reasonable."[156] TURN then cites the Commission's rejection of PG&E's participation in the California Solar Testing Center as a precedent that "limiting the utility share to 20 percent has no bearing on whether to permit rate recovery of the utility's share of the cost."[157]

12.2. Discussion of Comments

Concerning the comments of SCE, we have corrected the errors of fact that they have identified and documented.

Concerning the request of SCE and HEI that the Commission authorize negotiations between California IOUs and HEI concerning a potential PPA regarding the electric output of HECA, as TURN has pointed out, this matter was already extensively addressed in Resolution E-4227A and further action is unnecessary. Specifically, Resolution E-4227A states:

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[154] Id. at 4.

[155] *Id.* at 8.

[156] *Id.* at 8.

[157] *Id.* at 9.

> While this advice letter was filed by SCE, we encourage the two other investor-owned utilities (IOU), Pacific Gas and Electric Company and San Diego Gas & Electric Company, as well as the publicly-owned utilities to become partners in the HECA Study project and for all utilities to work together on commercializing carbon capture and storage (CCS) technology. We suggest that SCE seek out this involvement from the other IOUs. We do acknowledge general support for emerging technologies on the part of all three IOUs, but do encourage them to work together on this particular HECA project. If the California utilities work together, the costs and risks of this and other CCS projects can be shared broadly so that the benefits can be realized by all Californians. If shown to be technically feasible and commercially reasonable, the HECA facility, and potentially other generation utilizing CCS technology, will be low-carbon, baseload generation resources that will advance California's move towards reduced greenhouse gas emissions while producing reliable power within the state and with locally derived fuel sources.[158]

Since Resolution E-4227A has already asked SCE to seek cooperation on commercialization of HECA power, and because commercialization requires the sale and purchase of electricity, there is no need to address further the request for the authorization of cooperation by the utilities in this decision.

Concerning the comments of DRA, we note that the PD's observation that SCE's case rises or falls on the testimony of Cortez is just that – an observation. The Commission in no way has delegated its decisionmaking to Cortez. Instead, we are simply noting that Cortez is the principal witness providing testimony on the reasonableness of the project for SCE and its ratepayers, and therefore SCE's case rises and falls on the credibility of this witness.

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[158] Resolution E-4227A.

Concerning DRA's charge that "PD does not explain … why the records … was [sic] not made available … to the parties, "[159] we point out that no discovery dispute was brought to the Commission for resolution during this proceeding by either DRA or TURN in which they requested access to this information. In this decision, the evidence presented by SCE was weighed and was deemed adequate to support ratepayer participation in this project at the level of $30 million. The Commission does not need access to more information at this time.

Concerning DRA's argument that the PD commits error in finding that this project's benefits outweigh costs, this is just a restatement of the argument contained in DRA's brief, which the PD considered and rejected. Concerning the issue of whether the Phase II costs are reasonable, DRA's misrepresents the PD. The PD does not find the Phase II costs reasonable. The PD finds that it is reasonable for the Commission to authorize SCE to incur the Phase II costs for later recovery, following a reasonableness review in a future ERRAM. This is what SCE requested, and it is what the PD authorized. Ordering Paragraph 2 of the PD, which is unchanged below, makes this very clear.

Concerning DRA's argument to exclude $10 million from Phase I costs because DRA believes that these costs support EOR and are not supported by an evidentiary showing, we note that the PD reached its result by evaluating the costs and benefits for participation in a single project, and that EOR is part of that project. The record in this proceeding justifies ratepayer participation in the entire project.

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[159] DRA Comments on PD at 4.

Concerning DRA's argument that the PD misconstrues DRA's position on retroactive ratemaking, we note that we have quoted DRA's brief to represent its position in the presentation above.

Concerning DRA's request that we order an Advice Letter review process for the interim steps in the HECA project, we find persuasive SCE's argument that such a process is not necessary because it will publicize its progress consistent with the Commission approved Public Disclosure Plan. Instead, to enable the Commission to track the progress of the HECA project, we will require SCE to provide the Commission with progress reports every six months during this phase of the HECA project and with the HECA feasibility reports. As part of these progress reports, SCE should attach the feasibility reports that it has received as appendices to its report.

TURN's argument that the CHPG project and HECA are the same project and that the PD ignores evidence that they are the same is in error. A project of the scale and complexity of HECA must differ in response to the local challenges and opportunities that arise from the access to refining byproducts, the state of depletion in oil fields, access to the electricity transmission grid, and with the local permitting environment. An IPGG project is not like a consumer product that can be moved from place to place – it is a specially designed project tied to local conditions. The testimony of the HEI witnesses and the Commission's own experience overwhelmingly support this conclusion.[160]

Moreover, the statement cited by TURN as evidence that the Carson project and the HECA project are the same is also readily explained in the

[160] See the exchange at TR 180:22 to TR 181: 17 cited above in section 5.1.2.

testimony cited previously – things would have been learned at Carson that are generally applicable to an IGCC facility, but at this stage in the technological development of IGCC facilities, characteristics that vary with the location make the projects very different.[161] Based on the evidence presented, we find the reference in a press release calling the Carson Project and the HECA project the same is outweighed by the direct testimony under oath in this proceeding by the same person.[162]

Concerning TURN's argument that the Commission must use a quantifiable cost-benefit calculus, we disagree. First, there are clear precedents for deciding this way. For example, in granting SCE the authority to determine the feasibility of the CHPG project, D.08-04-038 approved the funding of the study without a quantification of benefits and costs. Second, TURN's position that the Commission requires a precise quantification of costs and benefits would preclude funding promising but uncertain technologies. This would harm ratepayers and is not in the public interest.

Furthermore, although we do indeed note that SCE's share of the costs of the study is small, that is only one factor in our assessment and does not drive our conclusion. We do find that benefits to SCE ratepayers are likely to exceed costs. Moreover, gaining full access to the study results for this modest commitment of funds supports our conclusion on the cost-effectiveness on reasonableness of this project, for it compares favorably with projects in other

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[161] We note that at one level, TURN is raising a philosophical issue about when things are the same and when they are different. Both projects are called IGCC facilities, but this common name belies many differences that distinguish the projects.

[162] This exchanged is in included in section 5.1.2 above.

states, cited in the record, where ratepayers have commonly provided the full funding.

Finally, we note that to the extent that we have not discussed specific objections of parties that we have summarized above, it is because these objections have repeated arguments that we have previously addressed. In addition, we have reviewed all the comments and replies filed in this proceeding and have revised the decision as deemed reasonable.

13. Assignment of Proceeding

Michael R. Peevey is the assigned Commissioner and Timothy J. Sullivan is the assigned ALJ in this proceeding.

Findings of Fact

1. SCE filed this application on April 3, 2009 to request authorization to recover up to $30 million in costs stemming from SCE's co-funding of the HECA feasibility study.

2. Resolution E-4227A granted SCE a memorandum account, called the HECAMA, to track costs up to $17 million for Phase I of the HECA Study and up to an additional $13 million to fund Phase II of the HECA Study.

3. The Carson Project is cancelled, but was to be located in an urban area close to centers for electricity demand.

4. The HECA project remains viable. It is located in a rural part of Kern County, far from electricity demand centers in Southern California.

5. The HECA project is different from the Carson Project.

6. The CHPG is a 500 MW coal-fed project, without EOR, in Utah, and the carbon sequestration will involve an as yet uncharacterized saline formation – not a depleted oil and gas reservoir.

7. If built, HECA will be a 250 MW facility designed for EOR at a specific site in Kern County, California and will determine the viability of these oil and gas geological formations for carbon sequestration.

8. The HECA project is different from the CHPG project.

9. The HECA project is different from the Carson project.

10. The HECA project is a unique, first-of-a-kind project that is designed with technology elements that are unlike any project under development.

11. Since legislation makes green house gas reduction a requirement of California energy policy, the HECA project helps California comply with this requirement because it produces electricity with only modest increases of green house gas.

12. IGCC and carbon capture and sequestration technologies are at a stage where a project presents unique technical and design challenges depending on the nature of the fuel and the geology of the site, which affect both the recovery and use of fuel and the sequestration of carbon.

13. Pursuant to D.08-04-038 and D.06-05-016, neither the feasibility studies conducted in Phase I nor the FEED study conducted in Phase II constitutes project development. Furthermore, none of the activities proposed for analysis in either Phase I or Phase II constitutes project development as discussed in D.06-05-016 or D.08-04-038.

14. There is no evidence in the record that SCE's co-funding of the HECA studies will result in a transfer of funds to Edison Mission Group.

15. SCE did not enter into an agreement with HEI until after the Commission authorized this action in Resolution E-4227A.

16. SCE did not acquire access to the HECA feasibility studies until it provided financial support to HEI for that information.

17. Dr. Cortez is a recognized expert on IGCC projects throughout the nation and was retained by SCE to determine whether SCE should invest in the HECA Study.

18. Of the other IGCC feasibility studies going forward throughout the nation, every one of the feasibility studies has been funded by ratepayers.

19. SCE's funding of the HECA project will constitute only 20 percent of the costs of the feasibility study.

20. SCE's funding of the HECA feasibility studies represents fair and good value for its investment.

21. Because the use of IGCC technology with carbon capture and sequestration holds the promise of reducing GHGs from the generation of electricity, a feasibility analysis offers benefits to ratepayers and to SCE.

22. The United States Department of Energy has awarded $308 million to support the HECA project.

23. It is reasonable to defer incurring Phase II costs for the HECA project until after an assessment of the feasibility studies conducted in Phase I is complete.

24. The proposed payment plan for Phase II costs is tied to the achievement of particular milestones in the HECA project.

25. Phase II of the HECA project includes the development of an FEED study to determine the technical, operational, environmental and commercial issues associated with the project.

26. The HECA FEED costs are not project development costs as set forth in D.06-05-016.

27. SCE has proposed a sufficiently detailed and comprehensive disclosure plan for the information that it will acquire from participating in the HECA project.

28. No party has objected to any aspect of SCE's proposed disclosure plan.

29. SCE's participation in the HECA feasibility analysis advances SCE's efforts to develop a generation and procurement strategy that provides low-carbon baseload generation.

30. The clean characteristics of the electricity that the HECA project will produce, if built, is consistent with state policy objectives.

31. SCE projects that it will need at least 250 MW of baseload resources by 2015.

32. SCE has explained in its application how the HECA proposal fits into its overall procurement strategy as directed by D.08-04-038 and Resolution E-4227A.

33. SCE has provided notice and service of this application to all parties to D.06-05-016 and D.07-12-052, as required by Resolution E-4227A.

34. The budget submitted for the HECA project by SCE contains sufficient detail for the Commission to determine that the costs associated with this project are reasonable.

35. The level of detail provided in its budget for the CHPG application is not analogous to that of the HECA budget because in the CHPG project, SCE had full responsibility for all costs, whereas for the HECA project, SCE has a 20% share of the costs. In addition, the CHPG budget contained data on SCE's own labor costs, while in the HECA project HEI and third-party vendors provide many of the services.

36. The detail provided in SCE's HECA budget, as supplemented by the testimony during the hearing, is sufficient.

37. SCE's contribution to the costs of the feasibility studies of the HECA project is far less than 50% of the total costs of the studies and SCE's HECA budget has demonstrated such.

38. The record demonstrates by the preponderance of the evidence that the costs that SCE will incur from participating in the funding of the HECA project are reasonable and total less than 50% of total costs of the studies.

39. Participation in the HECA feasibility study by SCE will provide SCE with a better understanding of this promising technology.

40. It is reasonable to require SCE to submit progress reports to the Energy Division every six months over the course of the HECA project and attach the available feasibility studies as appendices.

Conclusions of Law

1. Authorizing SCE to recover Phase I costs booked into the HECAMA, established pursuant to Resolution E-4227A, does not constitute retroactive ratemaking.

2. GHG reduction is a policy goal of California utilities law.

3. The costs of Phase I of the HECA Study – up to $17 million – that SCE has incurred or will incur are reasonable.

4. Resolution E-4227A authorized SCE to book up to $30 million into the HECAMA to cover Phase I and Phase II costs and to seek recovery of these costs in an application.

5. It is inconsistent with Resolution E-4227A to defer consideration of Phase II costs to a subsequent proceeding.

6. D.08-04-038 determined that FEED study costs are not project development costs as set forth in D.06-05-016.

7. California statutes, including Assembly Bill (AB) 32 (Stats. 2006, Ch. 488), AB1925 (Stats. 2006, Ch. 47-1), Senate Bill (SB) 1368 (Stats. 2006, Ch. 598) and Executive Orders S-7-04 and S-3-05, call for greenhouse gas reduction.

8. It is reasonable to authorize SCE to recover up to $13 million – to be incurred by SCE in Phase II of the HECA Study, subject to a reasonableness review in a future ERRA reasonableness proceeding, if such expenditure is justified by the results of the Phase I analysis.

9. SCE's disclosure plan meets the requirements of Resolution E-4227A.

10. The HECA project meets the requirements of Resolution E-4227A and D.08-04-038 because the project, if built, will be consistent with SCE's overall procurement strategy.

11. SCE has fulfilled the notice requirements set forth in Resolution E-4227A.

12. The detail provided in SCE's HECA budget, as supplemented by the testimony during the hearing, meets the requirement set forth in Resolution E-4227A.

13. To determine the reasonableness of SCE's HECA project costs, it is not necessary to determine whether ratepayer funding was critical to DOE's decision to award $308 million to the HECA project.

14. It is reasonable to authorize SCE to recover the costs of the HECA project up to a total of $30 million.

O R D E R

IT IS ORDERED that:

1. Southern California Edison Company is authorized to recover up to $17 million for Phase I costs of the Hydrogen Energy California feasibility study recorded or to be recorded in the Hydrogen Energy California Memorandum Account.

2. Southern California Edison Company is authorized to recover up to $13 million in costs for Phase II costs of the Hydrogen Energy California

feasibility studies recorded or to be recorded in the Hydrogen Energy California Memorandum Account, subject to a reasonableness review in a future Energy Resource Recovery Account reasonableness proceeding.

3. Southern California Edison Company's Public Disclosure Plan, as described in its application, is approved.

4. Southern California Edison Company shall submit progress reports to the Energy Division every six months over the course of the Hydrogen Energy California project and attach the available feasibility studies as appendices to its progress reports. The submission of a progress report to the Energy Division does not reopen this proceeding.

5. Application 09-04-008 is closed.

This order is effective today.

Dated _____, at San Francisco, California.