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Decision 95-11-035 November 21, 1995

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ORIGINAL

Order Instituting Investigation on the Commission's own motion to develop a policy governing utility involvement in the market for low-emission vehicles.	Investigation 91-10-029 (Filed October 23, 1991)
Order Instituting Rulemaking on the Commission's own motion to establish rules and procedures governing utility involvement in the market for low-emission vehicles.	Rulemaking 91-10-028 (Filed October 23, 1991)

(See Appendix A for appearances.)

I N D E X

CORRECTION !!

THE PREVIOUS DOCUMENT(S) MAY HAVE BEEN FILMED INCORRECTLY .....

RESHOOT FOLLOWS

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OPINION: PHASE II

I. Summary

On July 21, 1993, the Commission issued Decision (D.) 93-07-054, the Phase I decision in this docket, which prescribed broad policy guidelines to govern utility activities to help develop and facilitate the use of Low Emission Vehicles (LEVs) and further the legislative goal of substantial market penetration. A utility would be allowed to pass on to ratepayers the reasonable cost of its LEV programs if the utility could demonstrate that a given program would fulfill one or more of the utility's traditional responsibilities.

The Commission directed Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas), and San Diego Gas & Electric Company (SDG&E) to refine their plans for activities related to LEVs in light of these guidelines and to file, in Phase II, special applications requesting funding for any ongoing LEV program. The Commission expressed its intention to consolidate these applications to ensure uniform consideration and congruity among utility LEV programs statewide. In this decision, we approve the utilities' requests for continued and (in many instances) expanded LEV programs.

II. Background

The Commission asked the utilities to address, in their applications, all funding requirements related to LEVs for a six-year cycle. The six-year cycle would begin when the Commission acts on the applications. These applications were to address all

LEV funds including those for Research, Development and Demonstration (RD&D), Demand-Side Management (DSM), and Experimental Pilot Programs. The following table summarizes LEV funding currently in effect.

INTERIM FUNDING FOR ELECTRIC VEHICLE (EV) PROGRAMS:

SCE:	PG&E:	SDG&E:
$3.456 mil. (D.91-12-076) (Limited EV activities, expired 12/94)	$1.800 mil. annually (D.92-12-057 & D.93-10-073) (EV bridge funding)	$0.530 mil. (D.94-02-012) (EV bridge funding)
$2.86 mil. (D.95-01-018) (EV bridge funding)	$0.885 mil. (D.92-12-057) (RD&D for EV & NGV programs)	

INTERIM FUNDING FOR NATURAL GAS VEHICLE (NGV) PROGRAMS:

SoCalGas:	PG&E:	SDG&E:
$10.818 mil. (D.92-01-021) (2-Year Pilot program; expired 12/93)	$12.485 mil. (D.91-07-018) (2-Year Pilot program; expired 7/93)	$6.761 mil. (D.91-07-017) (2-Year Pilot program; expired 7/93)
$5.409 mil. annually (D.93-12-043) (continuance of pilot funding until a decision is reached on Phase II.)	$6.242 mil. annually (D.92-12-057 & D.93-10-073) (continuance of pilot funding until a decision is reached on Phase II.)	$3.380 mil. annually (D.92-01-019 & D.93-10-021) (continuance of pilot funding until a decision is reached on Phase II.)
$3.388 mil. annually (D.93-12-043) (NGV RD&D funding until a decision is reached on Phase II.)		
$9.1 mil. (D.94-10-035) (Shift of capital funds to NGV capital budget)		

Unless otherwise indicated, all references are to 1992 dollars.

The utilities filed their Phase II applications on November 1, 1993. Initially, the funding requests exceeded $600,000,000. On several occasions, one or more utilities modified their applications, funding requests and program descriptions. The utility requests were vigorously contested. The Commission held 39 days of evidentiary hearing running from August 8 to November 29, 1994 and heard oral argument on February 8, 1995. The case was submitted with the filing of Reply Briefs on February 24, 1995.

A proposed decision was mailed on July 5, 1995. Comments were filed by all active parties. Changes based on the Comments have been incorporated, where appropriate.

In the course of hearings, four different settlement agreements were offered, each covering different aspects of the funding requests and each supported by a different combination of parties. No settlement agreement was supported by all of the active parties. The settlement agreements are summarized in the following table:

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[1] Unless otherwise indicated, all references are to 1992 dollars.

LOW EMISSION VEHICLE SETTLEMENTS

	Parties	Opposed	Programs Removed	Programs Reduced	Programs Unchanged or Changed Slightly	Other Issues
SCE Electric Vehicle Settlement ($103.8 mil.)	SCE, DRA, CEC, SCAQMD, SCAG	WSPA	None	System impact assessment, customer service, RD&D	Fleets, overhead, infrastructure	Establishes one-way balancing acct., fund-shifting guidelines, TOU rates
SDG&E Electric Vehicle Settlement ($10.7 mil.)	SDG&E, DRA, CEC	WSPA	None	None significantly	Infrastructure, system impact assessment, overhead, fleets, customer service	Establishes one-way balancing acct., fund-shifting guidelines, TOU rates
Battery Incentive Settlement (No budget)	PG&E, SDG&E, SCE, CEC, SCAG, SCAQMD	DRA, WSPA	Battery incentive programs	Not applicable.	The Battery Incentives will be studied further by a panel with the purpose of establishing efficient power quality baselines, and appropriate incentives for those baselines.	Study panel reports back in 1996; if issue is unresolved, utilities may file for PUC approval of Battery Incentive programs.
SDG&E's Natural Gas Vehicle Settlement* ($28.1 mil.)	SDG&E, SoCalGas, SCAG, SCAQMD, Coalition for Clean Air, TURN, UCAN	WSPA, DRA, CEC, Liquid Carbonics	None removed.	None significantly.	Fleets, overhead, vehicle incentives, infrastructure, customer service	Equal cents per therm method for cost allocation, fund shifting w/out PUC overview, UCAN and TURN take no position on program funding levels
SoCalGas' Natural Gas Vehicle Settlement* ($155.4 mil.)	SDG&E, SoCalGas, SCAG, SCAQMD, Coalition for Clean Air, TURN, UCAN	WSPA, DRA, CEC, Liquid Carbonics	None removed.	None significantly.	Fleets, overhead, vehicle incentives, customer service, RD&D, infrastructure	EPMC method for cost allocation (TURN is opposed to this method), fund shifting w/out PUC overview; UCAN and TURN take no position on program funding levels.

III. Discussion

A. The Actions We Will Take in This Decision

The following table lists the utilities' program and funding requests as of the close of this proceeding and indicates the extent to which we will approve the requested programs and ratepayer contributions. In the discussion that follows we will provide the basis for our decision. In addition, we discuss the reporting oversight requirements that will apply to these programs and the future use of DSM guidelines.

PACIFIC GAS & ELECTRIC

EV Program: (In Thousands of Dollars)

COMPONENT	REQUESTED*	SETTLED**	APPROVED
Battery Incentives			
Residential Infras.	$ 712	NA	$ 712
Pilot Infras.	$ 169	NA	$ 169
Fleet Vehicles	$ 217	NA	$ 217
System Impact Eval.	$ 570	NA	$ 570
Tech.Intro./Cust.Ed.	$ 1,313	NA	$ 1,313
Overhead	$ 963	NA	$ 963
Research & Devel.	$ 1,875	NA	$ 1,875
EXPENSE TOTAL:	$ 5,819	$ 0	$ 5,819
EV Capital:			
Infrastructure	$ 615	NA	$ 615
EV Fleet	$ 1,682	NA	$ 1,682
Distrib. Upgrade	$ 379	NA	$ 379
Fleet Infras.	$ 1,033	NA	$ 1,033
	$ 3,709	$ 292	$ 3,709
CAPITAL TOTAL:			

NGV Program: (In Thousands of Dollars)

COMPONENT	REQUESTED*	SETTLED**	APPROVED
Fleet Infras./O&M	$8,313***	NA	$8,313***
Tech./Cust. Ed.	$6,993	NA	$4,426
System Impact Eval.	$ 859	NA	$ 859
Research & Devel.	$6,838	NA	$6,838
Vehicle Rebates	$2,585	NA	$2,585
Overhead	$3,512	NA	$2,548
	$ 29,100		$ 22,984
EXPENSE TOTAL:			
NGV Capital:	$1,666	NA	$1,666
Infrastructure	$6,156	NA	$6,156
NGV Fleet	$7,822		$7,822
Public Infras.			
CAPITAL TOTAL:			

*The figures reflected in the column are from PG&E's most recent application (8/94). The amounts shown here are 1992 financial dollars and were taken from PG&E's workpapers.

** PG&E was not involved in a settlement for its EV program with the exception of the Battery Incentive component. There was no settlement involving its NGV program.

*** The figures represent costs of the program w/out fuel savings factored in. Savings are $488,000 (EVs) and $5,807,000 (NGVs).

SAN DIEGO GAS & ELECTRIC

EV Program: (In thousands of dollars)

COMPONENT	REQUESTED**	SETTLED*	APPROVED^
Battery Incentives	$5,192	$ 0	$ 0
Residential Infras.	$ 782	$ 782	$ 782
Com./Public Infras.	$2,400	$2,400	$1,267
Fleet Vehicles	$ 410	$ 893	$ 893
System Impact Eval.	$1,800	$ 1,800	$1,800
Customer Service	$ 925	$ 925	$ 800
Overhead	$3,045	$2,512	$ 963
Research & Devel.	$ 0	$ 0	$ 0
EXPENSE TOTAL:	**$14,554**	**$ 9,312**	**$ 6,505**
Ratepayer-Funded Exp.:			**$ 4,456**
EV Capital:			
Infrastructure	NA	$ 615	$ 615
EV Fleet	NA	$ 1,632	
Distrib. Upgrades	$ 521	$ 521	$ 521
Fleet Infras.	$ 600	$ 600	$ 600
Distrib. Upgrades	$ 292	$ 292	$ 292
CAPITAL TOTAL:	**$1,413**	**$ 1,413**	**$1,413**
Ratepayer-Funded Cap.:			**$ 892**

NGV Program: (In thousands of dollars)

COMPONENT	REQUESTED		SETTLED*	APPROVED^
Fleet Vehicles	$ 2,385	NA	-	$1,692
Fleet Infras.	$ 0	NA	-	$ 0
Infras. Incentives	$ 1,550	NA	-	$1,000
Tech./Cust. Ed.	$ 9,128	NA	-	$ 0
System Impact Eval.	$ 0	NA	-	$ 0
Research & Devel.	$ 0	NA	-	$ 0
Vehicle Rebates	$ 1,050		-	$ 0
Overhead/Prog. Ad.	$ 5,320		-	$ 991
EXPENSE TOTAL:	**$19,433**		-	**$3,683**
NGV Capital:		NA	-	
Infrastructure		NA	-	
NGV Fleet	$1,000		-	$1,000
Public Infras.	$8,995		-	$ 0
CAPITAL TOTAL:	**$9,995**		-	**$1,000**

*The figures reflected in the column are from PG&E's most recent application (8/94). The amounts marked by this footnote were identified as utility-side expenditures which are acceptable for ratepayer funding.

^ Amounts approved for shareholder-funding only. None of the expenditures described by SDG&E for the programs

** PG&E

^^ SDG&E's program contained public or convenience charging costs that are denied. However SDG&E did not provide the material which distinguished these programs from commercial wiring costs. Therefore SDG&E's requested budget was reduced by 34%. The percentage is based on the ratio of public/ convenience charging costs to the total commercial/industrial/public infrastructure costs in Edison's program.

* Budget amounts not entered since the Settlement allows complete fund fungibility, and not all the settling parties agreed on specific funding levels for each NGV program.

SOUTHERN CALIFORNIA EDISON (In thousands of dollars)

COMPONENT	REQUESTED	SETTLED	APPROVED
Battery Incentives	$68,624		
Residential Infras.	$ 4,409	$ 4,440	$ 4,440
Com./Public Infras.	$ 6,613	$20,582	$11,155^^^
Fleet Vehicles	$ 6,036	$ 6,036	$ 6,036
System Impact Eval.	$13,520	$ 8,805	$ 8,805
Tech.Intro./Cust.	$10,323	$ 7,203	$ 2,826
Overhead	$10,530	$10,530	$ 5,151
Research & Dev.	$12,690	$ 3,000	$ 3,000
EXPENSE TOTAL:	**$132,745**	**$60,596**	**$41,413**
Ratepayer-Funded Exp.:	-		**$26,223**
EV Capital:			
Dept. Overhead	$ 342	$ 342	$ 342
System Impact Eval.	$ 700	$ 445	$ 445
Infras.: Residential	$22,045 -	$22,045	$22,045^^^
: Commercial	$29,972 -	$15,972	$12,972^^^
EV Fleet	$ 3,964 -	$ 3,964	$ 3,964
Tech. Intro./Cust.	$ 500	$ 500	$ 500
CAPITAL TOTAL:	**$57,523**	**$43,268**	**$39,768**
Ratepayer-Funded Cap.:			**$18,515**

^ $405,000 of the requested $4.440 million is a utility-side of the meter expense. Distribution System Installation Activities (found on pg. 67 of Edison's Exhibit 57). Utility-side expenses are approved for ratepayer funding. The remaining $4.035 million of the $4.440 million are customer-side expenditures and are approved for shareholder funding.

^^ All funds for commercial/industrial infrastructure were identified as customer-side expenditures. Ratepayer funds for public charging stations and employee/visitor program ($9.427 million) are denied. (See Table 10, Lines 19 and 24, pg. 62, of Edison's Exhibit 57.)

^^^ Of the $22.045 million, $8.835 million (38%) are utility-side of the meter costs which are approved for ratepayer-funding. (See Table 12, Line 8 on pg. 70 of Edison Exhibit 57.)

^^^^ The amount approved for ratepayer-funding is 38% of the commercial/industrial infrastrucutre request: $12.972 million (See Table 10, line 10 on pg. 62 of Edison's Exhibit 57). The 38% is based on the calculation discussed in the footnote above since Edison does not distinguish between customer and utility-side expenditures for its commercial/industrial infrastructure. Capital for Employee/visitor parking program ($3 million) is denied (See Table 10, line 25 pg. 62 of Edison's Exhibit 57).

SOUTHERN CALIFORNIA GAS (In thousands of dollars)

COMPONENT	REQUESTED	SETTLED**	APPROVED
Fleet Vehicles	$ 8,977		
Fleet Infras.	$ 6,099		
Public Infras.	$ 21,434		
Tech./Cust. Ed.	$ 750		
System Impact Eval.	$ 0		
Research & Devel.	$ 25,900		
Vehicle Rebates	$ 10,922		
LNG Program	$ 0		
Overhead	$ 23,614	-	
Indirect O & M	$ 7,844	-	$ 6,638
EXPENSE TOTAL:	**$105,535***		**$35,305**
NGV Capital:			
Infrastructure	$ 36,287		
Overhead	$ 2,717		
LNG Program	$ 0		
CAPITAL TOTAL:	**$ 39,004**		

* This figure does not include a $3 million transfer from SoCalGas' Demand Side Management program for upfit and conversion centers (Ecotrans). This decision rejects SoCalGas' request for the transfer.

** Budget amounts not entered since the Settlement allows complete fund fungibility, and not all the settling parties agreed on specific funding levels for each NGV program.

*** The Commission previously authorized SoCalGas to shift $9.1 million from its capital budget to its NGV capital budget in D.94-10-035. These funds will be used for fleet infrastructure development.

B. Statutes and Guidelines

The Legislature has expressly granted the Commission the discretion to approve utility LEV programs under certain circumstances. We addressed the applicable statutes in the Phase I decision and will not repeat that discussion here. We should note, however, that many of the statutory provisions remain in effect only until January 1, 1997. On that date, the Commission loses its express discretion to establish special incentive tariffs for the use of natural gas and electricity as vehicle fuels (Public Utilities Code § 745). At the same time, the Commission loses its specific authority to allow natural gas utilities to construct and maintain natural gas refueling stations, to support vehicle conversion centers, to offer incentives for vehicle conversions and for the purchase of factory-equipped compressed natural gas vehicles, and to pass the reasonable costs of such programs on to utility customers, where a ratepayer interest can be established (§ 745.5). We will not approve ratepayer-funded activities in these areas that would extend past December 31, 1996. We reach this conclusion without addressing the broader question of what our authority would have been in the absence of these rather specific statutes. Rather, we do so in deference to the clear legislative intent that any approved programs of this type be limited in duration.

After January 1, 1997, the Commission retains its responsibility to work with the California Energy Commission, the California Air Resources Board (ARB), the air districts, the utilities and the motor vehicle industry to evaluate and implement other policies to promote natural gas and electric vehicle equipment and infrastructure development (§ 740.3). This includes the sale-for-resale and rate base treatment of LEVs and related equipment and the development of statewide refueling standards.

In the Phase I decision, the Commission established the following guidelines that apply to the approval of each LEV program:

"(1) Ratepayers will pay the reasonable cost of programs that help develop and facilitate the use of LEVs and further the goal of substantial market penetration if the utility can demonstrate that the program will meet one or more of the utility's traditional responsibilities to provide:

"(a) Reliable Service and Efficient Utility Service:

An LEV expenditure is consistent with the utility's traditional responsibilities if it determines, creates, maintains or balances the infrastructure needed to meet customer loads resulting from NGVs or EVs at the lowest reasonable cost, or ensures that LEV demand does not unnecessarily interfere with the provision of other services.

"(b) Safe Service:

An LEV expenditure is consistent with traditional utility responsibilities if it undertakes research or implements programs or changes necessary to assure safe recharging or refueling at the lowest reasonable cost or safe operation of utility owned LEV fleet vehicles.

"(c) Environmentally and Socially Responsible Utility Service:

An LEV expenditure is consistent with traditional utility responsibility if it stems from programs designed to reduce negative environmental or social impacts resulting from the provision of utility services.

(d) Reasonable Rates:

An LEV expenditure is consistent with traditional utility responsibility if it provides appropriate incentive tariffs for LEVs or is designed to generate economic benefits to ratepayers as a result of savings in cost related to the provision of utility service.

"(2) To the extent they are applicable, programs must comply with statutory and Commission guidelines related to Research, Development, and Demonstration and Demand Side Management.

"(3) For approval of each program, the utility will be required to demonstrate that it has reviewed the programs of the motor vehicle industry, state, regional and local agencies, other utilities, and state and national electric and natural gas LEV research groups and, where appropriate, consulted with these entities to assure that each program element does not unnecessarily duplicate, and is complementary with, programs being undertaken or planned by these entities to encourage substantial market penetration of NGVs and EVs.

"(4) The utility will be required to demonstrate that its programs are generally consistent with goals, policies, and objectives of California and federal legislation and agencies, and air district and local agencies within the service territory.

"(5) The utility will be required to demonstrate that each element of its LEV program is not unfairly competitive with nonutility enterprises, and to discontinue the offending program element if, and when, it interferes with the development of a competitive market."

In order to satisfy the first guideline, the utility must demonstrate that the program is in the ratepayer's interest because it will ensure that utility service is reliable, safe,

environmentally and socially responsible, or reasonably priced. After the issuance of these guidelines, the Legislature enacted § 740.8 which states, in full:

> "As used in sections 740.3 and 745.5, interests of ratepayers, short- or long-term, mean direct benefits that are specific to ratepayers in the form of safer, more reliable, or less costly gas or electric service."

This statute appears to endorse three of the four means chosen by the Commission to measure the ratepayer's interest in funding a given program. The language omits a reference to a fourth criterion: an effort to ensure that utility service is environmentally and socially responsible. As we stated in the Phase I decision, we intended that utility vehicle fleet purchases be considered under this criterion, since LEV fleet purchases should help reduce the negative environmental impacts of utility vehicle operations.

We assume that by omitting this category from § 740.8 the Legislature did not intend to override the applicability of other provisions of law, such as state and federal fleet purchasing requirements that will apply to energy utilities as fleet operators. Thus, § 740.8 appears to be consistent with our guidelines as we intended to apply them.

Principles Underlying This Decision

In addition to the LEV guidelines, there are several philosophical principles that underlie this decision, and guide the decisions reached on funding levels for the proposed programs. These principles are explained below.

- Captive consumer funding for utility involvement in LEV programs should be limited to those activities which have *direct* benefits for captive consumers, like safety and reliability of utility facilities.

There are some programs in which utilities will legitimately engage, which will provide direct benefits to captive consumers. As the entity entrusted with preserving the interests of captive consumers, it is only those programs which we should authorize.

- **Captive consumers should fund activities in which utilities must participate to comply with state or federal law, like fleet vehicle programs.**

Our regulatory authority does not extend to the promulgation and enforcement of environmental protection laws and standards; these activities are left to other local, state, and federal agencies. The utilities over which we have regulatory authority also must answer to those agencies. Our goal has always been to ensure that utilities comply with environmental laws and regulations. It is appropriate for captive consumers to fund activities for the utility's environmental compliance related to its regulated utility activities.

This again comports with the guideline that requires LEV expenditures that provide environmentally and socially responsible utility service, as well as the utilities' requirement to comply with the goals, policies, and objectives of other agencies.

- **Where direct benefits to captive ratepayers are insufficient to support ratepayer funding of utility ventures, utilities are strongly encouraged to undertake new market activities of a broader scope, but should do so at shareholder expense, preferably in separate utility affiliates. This not only protects captive consumers from subsidizing new business ventures, it also allows utilities to reap the rewards of successes and swallow the penalties of economic losses.**

One of the central features of low emission vehicles is that they can and are being provided by a number of manufacturers. LEVs do not constitute a monopoly market. Utility participation in the market for these vehicles (as opposed to utility infrastructure to support low emission vehicles) should therefore be as competitive entities, not protected monopolists. As we move to a restructured electric services industry, it is appropriate for utilities to enter the LEV market with shareholder funding, except for those activities that provide direct benefits to captive consumers, as discussed above. This principle is a natural expansion of the LEV guideline that requires utilities to not compete unfairly with nonutility enterprises and to discontinue program elements that interfere with the development of a competitive market.

- **Wherever possible, the Commission's policies should support the development of a competitive energy services industry, particularly in light of California being the most aggressive of all states in restructuring the industry.**

We strongly encourage regulated utilities to exercise their discretionary authority to enter the newly emerging competitive electric services industry. Many of the activities that we reject in this decision as inappropriate to be funded by captive consumers are perfectly legitimate enterprises for shareholders, who invest knowing the potentials benefits and downfalls of a business venture. It is most appropriate for the utilities to identify and exploit opportunities in the LEV markets through unregulated subsidiaries, and we encourage them to do so, again in accordance with the LEV guidelines.

While we are directed by law to encourage the utilities to promote the market penetration of low emission vehicles, we also are required by law to limit ratepayer funding to only those

low emission programs that serve the ratepayers' long-term interest. This requirement reflects the high value our society places on both clean air (which the Legislature has found can be promoted through the use of low emission vehicles) and the protection of utility ratepayers in their relationship with regulated monopoly providers. It is our legal responsibility to avoid approving low emission vehicle programs that promote one of these goals at the expense of the other. In establishing low emission vehicle program guidelines, the Commission clearly understood this limitation. See D.93-07-054 at page 17:

> "Had the Legislature been of the view that the attainment of environmental and security benefits were sufficient to warrant the expenditure of utility ratepayer funds, the repeated directive that we find and determine the existence of ratepayer interests would have been utterly superfluous. Something more is needed, and it is our task to identify it and to assure that it is achieved."

The Commission went on to identify the ratepayer interests that must be served (ibid., pp.17-18):

> "The quest for the legislatively mandated linkage between the financial burdens and long-term ratepayer benefits need not take us beyond an application of the Commission's traditional responsibilities. In the absence of this legislation, we have an enduring responsibility to ensure safe, reliable, nondiscriminatory and reasonably-priced utility service. It is the attainment or preservation of these qualities that has traditionally defined the interests of ratepayers. Over the years, we have recognized a ratepayer interest, some would say a ratepayer responsibility, to pay the reasonable cost of programs necessary to assure that utility services are provided in a manner consistent with larger societal

goals. [Such] policies or programs focus on the quality of actions taken by California utilities to provide safe, reliable, nondiscriminatory and reasonably-priced utility service. To the extent that LEV infrastructure expenditures pursue these same goals, they will reflect ratepayer interests in both the immediate and long-term."

We must not allow our zeal in promoting clean air to cause us to lose sight of our concurrent statutory responsibility.

C. Electric Vehicle Programs

1. Overview

Electric vehicles have yet to make a strong showing at the marketplace. No major automotive manufacturer sells original equipment that runs on electricity. Several smaller firms are offering fossil-fueled vehicles that have been converted to run on electricity. Thus far, of the major manufacturers, only General Motors has indicated that it has invested heavily in the

development of a prototype electric vehicle (the Impact). However, General Motors has not announced an intention to sell those vehicles.

The impetus for the automobile manufacturers to develop and sell electric vehicles is the ARB's requirement that, by 1998, 2% of all vehicles produced for sale in the state must yield no tailpipe emissions when in operation. By 2003, 10% of the vehicles produced for sale in the state must meet this criterion. Thus far, battery powered electric cars, vans and buses are the only motorized vehicles that can operate without creating localized air emissions.

Most observers anticipate that, by 1998, the biggest automakers will respond to the ARB mandate by producing either new or reconfigured equipment that will be powered by electric batteries. The electric utilities (PG&E, SCE, and SDG&E) would like to see electric vehicles become the vehicles of choice, both because they are convinced that the widespread substitution of electric vehicles for those using fossil fuels will improve air quality and thus improve the business climate in their service territories and because the use of electric vehicles will increase the demand for electricity. Some portion of that demand will help the utilities make better use of their generating resources during what are normally off-peak hours. Thus, these utilities would like to do what they can to encourage people to buy electric vehicles.

At the same time, the utilities express concern that unbridled demand for electric current to recharge depleted vehicle batteries could strain the existing system, undermining reliability and hastening the need for new generating resources as well as upgraded substations, distribution lines, and transformers. In addition, the potentially rapid adoption of new

electric technologies raises significant safety concerns. For these reasons, the utilities and their ratepayers share a strong interest in affecting the behavior of electric vehicle owners and operators who will make daily decisions about how and when to recharge the on-vehicle storage batteries.

The utilities have proposed a variety of programs designed to serve the interests they share with their ratepayers while providing reassurance and encouragement to potential purchasers of electric vehicles. Where these objectives overlap, the electric vehicle programs satisfy major statutory and guideline requirements and are candidates for approval.

The parties offered three settlements addressing the electric vehicle programs. This is the first decision in which we interpret the guidelines set forth by this Commission in D.93-07-054. In reviewing the settlements, we will determine whether or not the provisions of the settlements are consistent with the guidelines. We have found that although the settlements contain many constructive proposals, there are provisions in each which are inconsistent with Commission policy as set forth in the guidelines. We will not adopt the settlements, although we will strive to honor the intent of the settling parties wherever doing so is consistent with the guidelines, our settlement rules, and applicable statutes.

In presenting their requests, the utilities agreed to identify their proposed programs as fitting into one of several broad categories. We will discuss each of these categories separately and consider ways in which the utilities' proposed programs may differ.

2. Acquiring Electric Vehicles for the Utilities' Fleets

The electric utilities propose to buy electric vehicles for their utility fleets because they will provide utility personnel first-hand experience with electric vehicle driving characteristics, operation, maintenance, and infrastructure installation. This will help the utility to support safe recharging practices and may help the utilities better understand how to maintain system reliability.

In addition, utility electric vehicle use will help the utilities to meet the fleet requirements under the National Energy Policy Act of 1992 (EPAct), Publ.L.102-486, 106 Stat.2776. EPAct has provisions designed to promote a market for alternative fuel vehicles. Under § 501 of EPAct, all alternative fuel providers (including both gas and electric utilities) who maintain sizable vehicle fleets must begin purchasing alternative fuel light-duty vehicles by 1996.

EPAct Compliance Schedule for Utility Fleet Purchases of Alternative Fuel Vehicles

Portion of Light-Duty Vehicle Acquisitions in a Given Year That Must Be Alternative Fuel Vehicles	
Model Year 1996	30%
Model Year 1997	50%
Model Year 1998	70%
Model Year 1999	90%
(and beyond)	

(Source: EPAct § 501(a)(1))

Although the energy utilities must purchase alternative fuel vehicles, they are under no obligation to buy either natural gas or electric vehicles.

Alternative fuels include:

- methanol
- denatured ethanol and other alcohols
- gasoline mixtures that contain a high percentage of methanol, ethanol, or other alcohols
- natural gas
- propane
- hydrogen
- coal-derived liquid fuels
- fuels other than alcohol derived from biological products
- electricity

(Source: EPAct § 402)

However, if an electric utility chooses to use electric vehicles to meet its alternative fuel vehicle fleet requirement, the Secretary of Energy can allow that utility to defer any such purchases until 1998 and later. Pursuant to rules proposed by the United States Department of Energy, the utilities would have to make that election no later than December 31, 1995 (Federal Register Volume 60, Number 39 (February 28, 1995), page 10993, § 490.307(b)).

The fleet funds sought in this proceeding are not for the purpose of acquiring a greater number of fleet vehicles than had previously been expected, but to reflect the added cost of acquiring electric, rather than fossil-fueled, vehicles. SDG&E plans to acquire approximately 1,200 new fleet vehicles in the next six years and asks for the added funds needed to include 60 electric vehicles in that number. The anticipated added cost is $893,000. As we will discuss below, SDG&E also seeks to acquire, as part of the same fleet additions, 835 natural gas vehicles. In total, approximately 74% of the fleet vehicles acquired in the

next six years would use alternative fuels. SDG&E also requests $600,000 in capital costs for fleet recharging equipment.

The parties to SDG&E's settlement agreement support this request. Originally, 20 of the 60 vehicles would have been acquired as demonstration vehicles, for use by SDG&E customers in an effort to persuade them to obtain their own electric vehicles. Some of the settling parties objected to the use of ratepayer funds for what is primarily a promotional activity. In the revised settlement, parties agreed that electric vehicles should only be acquired for utility fleet purposes and that some of the fleet vehicles can be used for demonstration purposes when they are not needed for utility work.

SCE seeks $6.036 million in expenses and $3.964 million in capital to enable it to acquire 750 electric vehicles as part of its fleet. Parties to the SCE settlement support this proposal. The expenses would cover the incremental cost of the electric vehicles, as well as the labor costs associated with their use, maintenance and evaluation. The capital funds reflect the cost for the construction of 120 fleet recharging stations throughout SCE's service territory. SCE acquires about 500 vehicles for its fleet every year. If it were to use only electric vehicles to meet its EPAct requirements, it would have to acquire 750 such vehicles between 1998 and 2000.

The Western States Petroleum Association (WSPA) is alone in objecting to these proposals. First, WSPA expresses concern that some of the electric vehicles might be acquired before the ARB mandate takes effect in 1998, when the technologies may be somewhat less advanced and electric vehicles might be more expensive and less reliable. Second, since EPAct does not expressly require the fleet use of electric vehicles, WSPA argues

that the utilities should place a greater reliance on natural gas vehicles, which might be less expensive and more reliable.

We find that it is sensible and appropriate for the electric utilities to use electric vehicles. Doing so is consistent with the utilities' obligations under federal law and a good way for the utilities to understand any safety and reliability implications from their use. WSPA argues that because electric vehicles are not the least cost fleet choice, the utilities should not buy very many of them. WSPA suggests that SDG&E and PG&E be limited to acquiring electric vehicles needed to comprise no more than 2% of its new fleet purchases. For SDG&E, this would be approximately 24 vehicles over the six-year period, instead of the requested 60. We see no meaningful difference between these numbers and see no reason to constrain the utility in this way. We also defer to SDG&E in judging when, during the six-year period, it is best to make those acquisitions. WSPA proposes that SCE wait until 1998 to start buying electric vehicles, in the hopes that costs per vehicle will have gone down by then. In addition, by waiting, WSPA points out, SCE would avoid the purchase of one round of batteries, which may have to be replaced every two or three years.

SCE must exercise its discretion to determine what vehicles to buy and when to buy them. There is no reliable way that this Commission can know today whether it would be more prudent to wait until 1998 or later, or to acquire some vehicles sooner. While some earlier vehicles might be less efficient and more expensive, they may provide important information for SCE to use in advising customers in later years. An additional factor is that under EPAct, SCE may be able to receive credit for alternative fuel vehicles acquired in earlier years to offset

purchase requirements in later years. In any event, each utility remains accountable for the reasonableness of its expenditures. We will approve SCE's budget request, as endorsed in the settlement.

PG&E seeks to spend $1.682 million over the next six years to cover the incremental cost of buying electric, as opposed to gasoline fired, vehicles. It also anticipates spending $1,033 million for the necessary recharging equipment and $217,000 in expenses to manage the fleet. As discussed below, PG&E proposes buying about 2,300 natural gas vehicles during the same period. Without exceeding the proposed budget for these two programs, PG&E asks for the flexibility to spend the funds on whatever ratio of natural gas and electric vehicles appears reasonable at the time. As of now, PG&E proposes the following schedule for acquiring electric vehicles during the next six years:

1995:	0 purchases,	2 conversions
1996:	0 purchases,	2 conversions
1997:	1 purchase,	1 conversion
1998:	85 purchases,	0 conversions
1999:	109 purchases,	0 conversions
2000:	109 purchases,	0 conversions
Total:	304 purchases,	5 conversions

Of the 4,400 light-duty fleet vehicles PG&E plans to purchase between 1995 and 2000, 2,640 would be alternative fuel vehicles. The proposed 304 electric vehicles would be 11% of that total. WSPA recommends disallowing $1.47 million of PG&E's proposed electric vehicle fleet budget, arguing that this would still allow the company sufficient fleet vehicles to evaluate electric vehicles for future fleet applications.

In the absence of unexpectedly low prices for electric vehicles, the budget proposed by PG&E only allows the company to

acquire a very modest number of electric vehicles. If the prices turn out to be surprisingly low, it may be perfectly reasonable for the company to acquire a greater number of electric vehicles. We see no need to artificially constrain the company's fleet vehicle purchasing strategy.

3. System Impact Evaluation

When considering the potential impact of an electric vehicle on the utility system, it has become almost axiomatic to describe an electric vehicle as a house on wheels. It is said to take about as much energy to fully recharge an array of vehicle batteries as it takes to fuel a modern home. However, this particular source of demand can be moved from one place to another and may not be consistently used. All parties agree that the electric utilities must take steps to understand and learn how to appropriately manage the transmission, distribution, and generation impacts of this new appliance.

The Energy Commission has succinctly described the types of system impact evaluation activities that are consistent with the reliability, safety, and reasonable rate thresholds in our guidelines:

> "Demand analysis requires the development of reliable vehicle forecast models, customer data collection, and actual vehicle and infrastructure trial information. Impact assessments seek to determine the effects of EV use on the distribution, transmission and generation system, as well as the efficacy of various load management tools such as time-of-use rates. Infrastructure testing evaluates the safety, reliability and efficiency of various recharging infrastructure configurations, and their impacts on customer usage patterns and utility systems. Vehicle/battery testing seeks to evaluate the energy consumption and

recharging harmonic distortions of various types of electric vehicles."

With one exception, all parties agree that these activities are appropriate and consistent with the guidelines. The exception is that WSPA argues that SCE's proposed vehicle and energy storage system testing program is the type of activity that vehicle and component manufacturers should undertake as opposed to utility ratepayers. WSPA has not objected to any aspect of SDG&E's system impact analysis program, although SDG&E's program also contains funds for vehicle testing.

Initially, SCE had sought to participate in research to support battery and vehicle development. As part of the partial settlement agreement, SCE agrees that it would not participate in product development research. Instead, SCE would evaluate batteries, advanced vehicles, charging equipment and load management devices to understand the potential impacts of their use on the utility system. The goal is to enable SCE to better manage the electric vehicle charging load.

All of the system impact evaluation activities proposed by SCE and SDG&E in their settlement agreements as well as those proposed by PG&E are consistent with the guidelines and the related categories suggested by the Energy Commission and should be approved. This includes SCE's vehicle and energy storage evaluation as described in the settlement agreement. We agree with WSPA and others that the utilities should not be undertaking ratepayer-funded research to develop new products. However, it is important for the electric utilities to understand the technology that is currently being applied and to anticipate new products in order to adequately plan to manage the electric vehicle recharging load. It appears that the utilities understand the distinction between product development and

evaluation and are committed to focussing exclusively on the latter. So long as the utilities carefully adhere to evaluation-related activities and conduct those activities in a reasonable way, the programs should be approved.

Initially, PG&E sought $5.545 million in expenses and $5.452 million in capital for its assessment program. In its last amended application, PG&E had reduced this request to $570,000 in expenses and $379,000 in capital. The capital portion would be for distribution upgrades, as needed. The Energy Commission expresses concern that this reduction in funding "will directly harm the carefully coordinated assessment efforts involving PG&E, SCE and the [Energy Commission] itself," and asks that the Commission act on its own to restore the cuts in PG&E's proposed budget.

PG&E states that, even with reduced funding, it will continue to collect data from various sources:

(1) RD&D evaluations of its electric vehicle fleet operations;

(2) RD&D assessments of vehicles and charging technologies;

(3) time-of-use metering of customer accounts;

(4) feedback from potential and existing electric vehicle users; and

(5) studies conducted by other utilities, research organizations and other interested parties.

PG&E characterizes its approach to preparing to serve electric vehicle load as conservative. The company points out that it will not begin to see how the allocation of electric vehicles in California will play out until at least 1998 and that

without a more significant market penetration of electric vehicles, there is no reason to seek additional funds at this time. This debate raises the question of how it can make sense to approve SCE's and SDG&E's more ambitious budgets while agreeing with PG&E's argument that it is not necessary for it to spend anywhere nearly as much on assessment. Division of Ratepayer Advocates (DRA) has recommended that SCE's and SDG&E's assessment budgets be approved, but supports PG&E's reduced request because the southern California utilities are likely to be the first to encounter difficulties with electric vehicles' batteries and chargers during the early phases of development. This is presumably because southern California, with its somewhat more severe air quality problems, may be the primary focus of early electric vehicle marketing efforts. DRA argues that PG&E may benefit less from early investigations, but will in any case be able to rely on the results of other utilities' early experiences.

We applaud PG&E's efforts to minimize its electric vehicle program budget and see no reason to force it to spend more. By insisting that PG&E increase its assessment budget, we might be encouraging inefficiency in the absence of evidence that the company's more modest program will be insufficient. PG&E plans to closely watch the development of the electric vehicle market, track data that is otherwise available, and ask for permission to do more if accelerated market development warrants it. This approach makes good sense, especially in light of the potential for an early market focus outside of its service territory. We will approve PG&E's proposed assessment plans.

4. Residential Infrastructure

There are at least three types of special equipment that might be installed to enable someone to recharge the

batteries of an electric vehicle at home (special wiring, time-of-use meters, and load management devices.

Electric vehicles require special charging equipment. Some chargers are carried on the vehicle and need merely be plugged into a power source. Others stay in one place, connected to a power source and then also connected to the vehicle when it is time to recharge the batteries. In either event, the recharging process relies on wiring that carries higher voltage than is used for most residential purposes. It is likely that those who acquire electric vehicles for personal use and who live in homes with garages or carports will need additional wiring and outlets in those places and may need assistance in installing charging equipment.

Utilities plan to encourage or require electric vehicle users to recharge their vehicle's batteries at a time of day when the demand for electricity is relatively low (off-peak). In this way, the utilities might be able to meet much of the demand created by electric vehicles without building or otherwise relying on additional power plants and distribution equipment. Toward this end, the utilities will offer time-of-use rates that significantly reward customers for off-peak usage. We will more closely examine those rates below. In order to bill customers under a time-of-use tariff, the utilities will have to install special time-of-use meters that not only measure consumption but also keep track of when the power was consumed.

Finally, the utilities are concerned that time-of-use rates alone may not be enough to ensure that homeowners will recharge their electric vehicles only when they are not using a significant amount of electricity for other purposes. This could be a problem because local transformers and distribution lines may not be big enough to handle more than one large source of

demand from a single residence at the same time. A utility may be able to avoid enlarging its distribution system if it can place a load management device on the customer's side of the meter. Such a device would cut off power to a customer whose demand exceeds the available capacity of the distribution system. For instance, the device might force a residential customer to choose between recharging a car or running a central air conditioner at a given time.

For its residential customers choosing to use electric vehicles, SDG&E would pay for the installation of time-of-use meters and wiring for charging equipment in exchange for the customer's agreement to use time-of-use rates for battery recharging and (in some instances) allow the utility to install a load management device. On average, SDG&E expects to spend $600 to install wiring and $400 (to be included in rate base) for time-of-use meters and load management devices. These improvements are all on the customer side of the meter. SDG&E anticipates offering these free installations to 1,300 customers.

SCE proposes to provide similar installations at 21,728 locations for its residential and small commercial customers. It appears that SCE would more consistently require the participating customers to accept load management devices than would SDG&E. Under SCE's proposal, the general body of ratepayers would absorb the cost of the load management device and any needed distribution upgrades, while the electric vehicle customer would pay for the time-of-use meter and would also reimburse ratepayers for any customer-side-of-the-meter wiring costs over several years through rates for battery recharging. For this program, SCE proposes to place $22 million in rate base and recover $4.4 million in expenses.

Parties to the SDG&E and SCE programmatic settlements endorse these proposed programs. In the SCE settlement, the

budget is unchanged from SCE's initial proposal, but for the fact that they have shifted $14 million from the capital programs to direct expenses. The SDG&E budget is $521,200 in capital and $781,800 in expenses.

SDG&E argues that its proposal should be approved because it would help electric vehicle purchasers to overcome the installation cost barrier. While this is a result which may be beneficial to the vehicle purchasers, this argument does not establish a ratepayer benefit, as required by §740.8 and the first guideline.

SDG&E has provided analysis designed to demonstrate that its proposed electric vehicle programs, when considered together, are beneficial to ratepayers because they will encourage increased sales of electricity. The increased sales would provide additional revenues to help offset the fixed cost of SDG&E's electric service and thereby help lower rates to all customers. There are several problems with this argument. First, the statutes and guidelines would be rendered virtually meaningless if all of a particular utility's electric or natural gas vehicles programs could be lumped together for the purpose of determining if they are in the ratepayers' interest. Suppose that a utility proposes to undertake Program A, which is clearly in the ratepayers' interest, and Program B, which is clearly contrary to the ratepayers' interest. Using the argument set forth by SDG&E and other utilities, the utility would be permitted to undertake Program B, which is contrary to the interest of its customers, so long as when viewed together, Programs A and B appear beneficial to ratepayers. We do not find in the statutes or our guidelines a suggestion that we should endorse these proposed programs. In the SCE settlement, the parties to the SDG&E and SCE programmatic settlements

could approve, for cost recovery, programs that fail to benefit ratepayers. Even if such wholesale analysis was valid, it is not logical for the utility to take credit for benefits resulting from every electric vehicle that it expects to serve. Many electric vehicles may be purchased as a result of available tax credits, vehicle manufacturer marketing activities, EPAct fleet requirements, other special use requirements, or consumer taste. Yet, the utility would argue that none of these purchases would occur in the absence of the utility programs. This claim is not persuasive.

The Energy Commission offers a different rationale for these infrastructure programs. The Energy Commission suggests that electric vehicles are potentially an enormous new source of demand. If they become a common mode of travel, there could be thousands, if not millions, of separately constructed, individual refueling sites throughout the state. Concerns about safety and system impacts dictate to the Energy Commission that the electric utilities be involved from the outset, to work closely with initial users and to understand how to fully mine the potential for load management and the appropriate use of pricing signals. The residential infrastructure programs proposed by SDG&E and SCE certainly afford them the opportunity to be closely involved with the early residential electric vehicle users. In addition, they offer an opportunity to manage the new load through the use of time-of-use tariffs and load management devices.

WSPA objects to the proposed expenditures by SDG&E and SCE on several grounds. First, WSPA argues that faced with the current uncertainty about the development of an electric vehicle market, it would be more prudent for the utilities to start out with lower cost programs that might achieve the same results

such as simply making it mandatory that electric vehicle users adhere to time-of-use rates and allow for the installation of load management devices. Consistent with this argument, WSPA supports PG&E's streamlined program, which is discussed below. WSPA also argues that just as the utility does not provide other wiring on the customer's side of the meter, it should not provide residential infrastructure for electric vehicle purchasers. SCE responds by emphasizing that under its proposal, the customers receiving "free" wiring would reimburse the utility through rates for electric vehicle recharging, exposing its ratepayers only to "unidentified (and unquantified) management time, contract risks and indirect costs." In addition, SCE argues, coordination of these activities will lead to safer, less expensive installations, which is important since currently there are no specific code standards or electricians experienced in installing wiring for electric vehicles. There would, of course, be added risk to ratepayers because SCE would install the customer-side improvements first and receive reimbursement over the course of time. There is risk that the benefiting electric vehicle customer might move, or resell the electric vehicle or simply choose not to use it before having fully reimbursed the utility. SCE states that it has yet to plan for this contingency, since it is not certain how big of a problem this will turn out to be. In the meantime, the company proposes leaving the ratepayers at risk. SDG&E proposes to pay for the wiring without planning to receive direct-to-customer reimbursement from the affected customer. WSPA objects to this, as well. First, WSPA argues that facing vehicle users to use time of use rates and accept load management devices, such requirements might discourage people from using

electric vehicles. Also, even if this new load could be successfully managed through mandatory measures, the utilities would lose the opportunity to be closely involved in the initial recharging installations. Instead of paying for and installing customer-side wiring, PG&E proposes requiring time-of-use rates. PG&E feels that this can be an effective way to shape the electric vehicle load and that it will not tend to chill the market for electric vehicles.

There is a plethora of opinions about the proposed residential infrastructure programs. WSPA believes that SCE's and SDG&E's programs are too large and that PG&E's is fine. The Energy Commission and SCE argue that SCE and SDG&E are fine, but that PG&E's program is too small. The Energy Commission asks us to require PG&E to spend more than it has proposed. DRA finds that all three programs are acceptable.

Because of the lack of perfect information about this future market, we do not know with certainty if any of the proposed approaches are either excessive or insufficient. However, there all will promote safety and off-peak charging. As such, they are each consistent with the guidelines and should be allowed, subject to the provisions described below.

We certainly do not know if any of the proposed approaches are excessive or insufficient. However, they all will promote safety and off-peak charging. As such, they are each consistent with the guidelines and should be approved. With time, we will know whether it was necessary to provide customer-side wiring or if PG&E's approach is enough.

There is no apparent reason, however, that the direct beneficiaries of customer-side wiring programs should not reimburse the utility for those installations over a reasonable period of time. SDG&E has not proposed to create such a

requirement that SCE has. However, the evidence it has presented concerning its proposed time-of-use rates does not clearly demonstrate that this will occur. In fact, the testimony of Akbar Jazayeri, SCE's rate design witness, suggests otherwise. He

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testifies that average rates to be achieved under the proposed tariffs are in the range of 6.7 to 7.1 cents per kilowatt hour (kWh). He then subtracts the marginal cost of 5.7 cents per kWh for the same load profile and concludes that the rates result in a contribution to fixed costs in the range of 1.0 to 1.3 cents per kWh (Exhibit 50, p. 29). There is no room in that calculation for a contribution to the cost of customer-side wiring. It is with the infrastructure on the customer side of the meter that the potentially competitive aspects of the electric vehicle market begin to assert themselves. While the utility will want to make sure that the additional load does not impose a burden on its system, there is no reason that the utility must be the sole provider of the metering and recharging equipment. It is quite possible that vehicle manufacturers would provide and install that equipment as an inducement to potential electric vehicle purchasers, or independent entrepreneurs might offer this equipment in a competitive market. We therefore will require the shareholders to bear the risk for infrastructure activities on the customer side of the meter.

If the utility wishes to undertake these activities, and we can see where the utility might have such an interest, it should do so based on the merits of the market, not because captive customers will be there to account for any shortfalls. When the utilities file their time-of-use tariffs for electric vehicle recharging, they may include and identify in those tariffs a surcharge designed to recoup the customer-side wiring cost within a reasonable period of time. We will allow the utilites to track any expenditures they make for customer-side infrastructure, both expense and capital, so the shareholders can be reimbursed from the collected surcharge funds.

Ideally, this program and others of a similar nature would be performed by a separate utility affiliate. We

recognize, however, that the initial development of the electric vehicle market may not coincide with the utilities' ability to reorganize in order to take advantage of these opportunities, and therefore authorize shareholder involvement as an interim step.

5. Commercial and Industrial Infrastructure

By the year 2000, SCE estimates that over 32,000 electric vehicles will be purchased for use in commercial and industrial fleets within its service territory. Originally, SCE wanted to spend approximately $6.6 million in labor and nonlabor costs and $13 million in capital costs to provide the wiring and install the charging equipment to recharge each of these electric vehicles. In the settlement, parties proposed shifting funds from capital dollars to expense (see Table on p. 10). SCE would also spend $3 million in capital funds for equipment to recharge employee's and visitor's vehicles. In addition to installing the equipment, SCE would offer a consumer safety program, support the development of construction standards and applicable codes and ordinances, and work directly with manufacturers and customers. The settling parties support these proposals. Further, SCE plans to install various public charging facilities, to demonstrate their usefulness and test their impacts on the system. WSPA argues that the budget should be significantly reduced

SDG&E seeks $2,400,000 in expenses and $291,500 in capital investment for a similar program in its service territory. The settling parties support this request and WSPA seeks to reduce the funding level.

For the reasons set forth above in our discussion about residential infrastructure programs, it makes sense that the utilities should be involved with their fleet customers in their early efforts to use and recharge electric vehicles. However, there are several differences between the residential and the commercial/industrial markets that deserve our consideration. First, while residential customers are not likely to use more than one electric vehicle at a time, fleet purchasers are. In order to ensure that charging equipment is properly installed and safely used, is it necessary to pay for the installation of their equipment to charge each and every vehicle? Fleet owners are also more likely to use knowledgeable fleet operators who can oversee the installation and use of the equipment.

Second, the need to influence usage patterns is not as acute on the commercial/industrial side as it is on the residential side. Most of the commercial/industrial customers already employ time-of-use rates. While they may need to install new time-of-use meters in order to take advantage of the steeply-tiered electric recharging rates, they will be motivated to do so, if the recharging tariff will save them money. In addition, according to SCE, the larger commercial and industrial users have access to greater excess distribution capacity, reducing the urgency of installing load management devices. While the utilities should still pursue load management, this reduced urgency suggests that it may not be reasonable to pay for all recharging installations in order to encourage acceptance of load management.

Third, the utilities seek to subsidize the installation of charging equipment for use by governmental fleets. These costs should be absorbed through the tax or user fee sources that support other governmental activities.

Fourth, SCE and SDG&E would like to install demonstration public charging stations at airports, public parking facilities, shopping centers, office buildings (including their own), and mass transit stops. Some of these demonstration facilities would offer quick charging, as that option becomes available. Although by their very existence these public stations would have obvious promotional value and would encourage daytime (some on-peak) usage, the utilities state that they want to open them not to encourage people to use them, but to study their impacts on the utility system.

It is inconsistent with the utilities' stated program goals to encourage on-peak charging. The utilities argue that they will try to avoid this result by charging steeper rates for use of the stations during peak periods. However, by opening these stations, the utilities would be making a clear statement: one reason to use an electric vehicle is that daytime recharging is fast and convenient. This is the opposite of the rationale offered for approval of all other electric vehicle programs: that electric vehicle recharging load is good for everybody, but only if it is off-peak. The utilities argue that they need to study the system impacts of these installations in case they become more prevalent in the future. The utilities should study these impacts, but it is not clear that they need to sponsor such facilities in order to study them. The utilities should receive the funds necessary to monitor some such facilities if and when they are created by

others, but should not receive funds to sponsor, promote, or construct such facilities.

Finally, while SCE plans to receive reimbursement from electric vehicle customers for residential installations, it has not apparently offered a similar plan for commercial/industrial customers. There is no clear reason for this distinction, especially in light of the increased motivation commercial/industrial customers will have to purchase low emission vehicles under EPAct fleet requirements. We will require that electric vehicle recharging rates for those customers receiving free installations include a surcharge to allow for repayment of the customer-side installation costs within a reasonable period of time.

Consistent with this discussion, we have reduced SCE's and SDG&E's commercial/industrial infrastructure budgets by eliminating funds for public charging stations other than those intended primarily for use by the utility fleet and by eliminating funds for customer-side wiring installation. PG&E's more limited program will be approved as proposed. It should be noted that SDG&E failed to provide enough detail in its exhibits and workpapers to enable us to identify any utility-side costs. Thus, the budget as approved contains no ratepayer funds for SDG&E's Commercial and Industrial Infrastructure Program.

6. Research, Development and Demonstration (RD&D) Programs

SCE originally sought $12.69 million for its electric vehicle RD&D. As part of its settlement agreement, SCE has reduced that amount to $3 million by eliminating its proposed participation in the development of vehicles, batteries and other energy storage devices and shifting its Vehicle and Energy Storage Testing activities to its System Impact Program (as

discussed earlier). What remains is the company's Recharging Infrastructure Development and Testing program. No party objects to the funding of this program, under which SCE says it would test recharging hardware to help effectively manage load impacts such as power and power quality, and to evaluate other safety parameters such as safety, reliability, efficiency, electromagnetic fields, ergonomics, and cost.

SCE is likely to experience the earliest and largest penetration of electric vehicles in the country. As such, it cannot afford to rely on the experiences of utilities in other parts of the country. This proposal is reasonable and should be approved.

PG&E seeks $1.878 million in expenses for RD&D projects during the six-year period. There are three areas that PG&E wishes to pursue:

(1) evaluation of charger technologies with the goal of influencing manufacturers to rely on designs that will enhance safety and reliability, as well as comply with efficiency and power quality recommendations;

(2) vehicle technologies assessment that will include working with other utilities to evaluate vehicle performance; and

(3) participation in the national dialogue concerning technical trends and emerging technologies.

No party objects to this request, although the Energy Commission states that it would have preferred a more ambitious program. The proposed program is consistent with the guidelines, in that

it would help the utility ensure safe, reliable, and efficient electric service and should be approved.

SDG&E has not proposed to undertake any electric vehicle RD&D activities.

7. Battery Incentives and Study Panel

Originally, all three electric utilities sought to undertake ambitious programs to encourage consumers to buy electric vehicles by providing them with rebate checks at the time of purchase. In most cases, the consumer would have received $1,500. Along the way, the utilities considered redefining these rebate offerings so that the payments would be used to encourage the purchase of the more energy efficient electric vehicles. Ultimately, PG&E and SCE withdrew their proposals entirely. While SDG&E has not withdrawn its request, it has asked that its rebate proposals not be funded if the settlement agreement, discussed below, is approved.

All three electric utilities joined with the Energy Commission and other parties in agreeing that the Commission should postpone consideration of electric vehicle rebates until 1996. In the meantime, a study panel, composed of representatives of the three utilities, DRA, the Commission's Advisory and Compliance Division (CACD), and the Energy Commission would collect information needed to determine whether or not a rebate program is needed. The panel would try to reach consensus no later than April 15, 1996. DRA opposes this proposal and CACD was not consulted. The fact that the utilities have entered into this agreement indicates that they are not convinced that an appropriate electric vehicle rebate program can be designed and offered at this time. The settling parties have expressed particular interest in structuring a program that would encourage

consumers to acquire vehicles that are preferable from a power quality and energy efficiency perspective.

DRA raises questions as to why this agreement need be considered by the Commission at all, since SCE and PG&E no longer have rebate proposals before us and SDG&E appears to be wavering. As a primary proponent of the agreement, SCE states that it is seeking the Commission's approval for four reasons.

First, SCE is seeking the Commission's agreement that there are significant potential power quality problems for electric utilities from poor electric vehicle chargers and that the potential exists for significant benefits from improving electric vehicle system efficiencies. We cannot agree with these assertions. While we acknowledge an interest in avoiding power quality problems and improving the energy efficiency of electric vehicles, we cannot find that there is a potential for significant improvements in response to a utility rebate offering or any other specific program. It would appear that our current inability to answer that question is precisely the reason the settling parties wish to further study the matter.

Second, the settling parties ask us to order DRA and CACD to participate in the study. In addition, the agreement calls for CACD to prepare a report on the study's findings. While the study appears to be a worthwhile undertaking and we encourage their involvement, we will not order DRA or CACD to participate. They are free to do so, if they wish. In addition, we will not ask CACD to prepare a report. In the event that one or more than one utility ultimately seeks Commission approval of a rebate proposal, it may be necessary for opposing parties to cross-examine the author of the report. As advisor to the Commission, CACD is often hesitant to take on that role. We do encourage those participating in the study to find an author elsewhere.

Third, SCE seeks the Commission's approval of the process provided for reporting on the study's findings. Although we will not ask CACD to prepare a report, the utilities may offer us a report as a compliance filing within the deadline set forth in the agreement (March 1, 1996).

Fourth, SCE wants the Commission to agree that the utilities can file a later request, in this or some other docket, for approval of a rebate program. We will allow for a later request for this purpose, in the form of a supplemental application within this docket. We are concerned, however, that the utilities not misconstrue our approval of this request as an agreement that a program would be approved or that a decision would be issued within the time frame envisioned in the settlement agreement. The agreement discusses filing an application on or after April 15, 1996 and refers to having the offerings in place for the vehicle model year of 1997. As a practical consideration, if model year 1997 starts in September 1996, the parties should seek to file an application considerably earlier than April 15, 1996.

With these clarifications, we are prepared to approve this settlement. It is reasonable, because it recognizes current uncertainties and provides an opportunity to act at a later date without harming the rights of any party. In approving this agreement, we are reaching no conclusion whatsoever about the merits of utilities offering rebates for the purchase of electric vehicles. We are only agreeing that the utilities and any other interested parties may study this issue and that the utilities may make a future request for such funding, if it appears appropriate. To the extent that the settlement agreement suggests a policy preference for or against a rebate offering, we remind the parties that settlements before this agency are non-

precedential and that we have adopted no such policy. As of now, we do not envision approving utility expenses in this area beyond the year 2000. This may be an appropriate point at which to acknowledge the creative contribution of the Energy Commission in this proceeding. In this agreement and elsewhere, the Energy Commission has constructively worked to ensure that the utilities' programs will be consistent with our low emission vehicle guidelines and relevant statutes. The agreement asks for authority for the utilities to recover costs involved in implementing it, but SCE asserts that there are none (Opening Brief, p. 109). While supporting the agreement, PG&E says it still plans not to offer rebates and has not indicated that it will be incurring significant expenses related to this study. SDG&E has not specifically addressed this issue. We are left confused as to whether expenses related to the study are a concern. In approving the agreement, we expect that the utilities will absorb all study-related costs within the budgets approved in this order and will allow recovery of those expenses to the extent they are found reasonable.

8. Technology Introduction and Customer Education

Under this category, the utilities each proposed spending ratepayer funds to familiarize potential electric vehicle customers with vehicles and recharging technologies and to provide information about time-of-use rates and load management devices. The Energy Commission succinctly stated the principles that should guide these expenditures:

> "First, under the [low emission vehicle] statutes and guidelines, it is appropriate for utilities to assist their customers in obtaining accurate information related to the safe, efficient, reliable and cost-effective

recharging and operations of [electric vehicles]. Second, it is not appropriate for utilities to use ratepayer funds to simply promote the market growth for [electric vehicles]."

With these distinctions in mind, the Energy Commission and DRA joined with others to agree upon reductions to SCE's proposed Introduction and Education budgets. SCE's budget was reduced from $10.323 million to $7.20 million to reflect the elimination of a vehicle loan and demonstration program. SDG&E's program was maintained at $925,000. As discussed above, $483,000 of these funds would be used to increase SDG&E's electric vehicle fleet purchases. No party objects to PG&E's $1.313 million request, although the Energy Commission would have this increased to $2.172 million.

WSPA agrees with the initial premise that it is appropriate to spend ratepayer dollars on utility related educational activities but is not appropriate to spend those funds to engage in promotional or marketing activities designed to encourage electric vehicle sales. WSPA differs from other parties as to where the line should be drawn. Of the $7.2 million currently sought by SCE, WSPA asks us to disallow $4.4 million. This amount reflects the proposed funding for an Advanced Transportation Technology Application Center (SCE calls it the "ATTAC Center") and for contributions to CALSTART (which will be described below).

According to SCE, the ATTAC Center would be a public facility that would provide a centralized forum for public and employee access to written, oral, demonstrated and video information on: (1) [electric vehicles]; (2) battery technology; (3) infrastructure (residential, commercial, industrial and public recharging

stations); (4) electric mass transit, such as battery-powered buses, electric trolley buses, passenger and freight rail electrification; and (5) legislative and regulatory issues pertaining to electric transportation, such as public grants, loans and incentives or rebates (available or proposed) for [electric vehicle] purchases.

WSPA asserts that the ATTAC Center would be "merely an [electric vehicle] showroom, funded solely by ratepayers, to provide information to the public on [electric vehicles], battery technology, infrastructure, mass transit and legislative and regulatory issues pertaining to electric transportation." WSPA argues that with the exception of information on electric recharging infrastructure, SCE should not bear the responsibility of disseminating this information and that an ATTAC Center is not needed merely to tell people about recharging infrastructure.

WSPA raises valid objections to the inclusion of ratepayer funds for the ATTAC Center. SCE's legitimate interest in informing electric vehicle customers about recharging infrastructure, time-of-use rates and the benefits of load management devices ostensibly underlies its ambitious residential, commercial and industrial infrastructure programs. By offering assistance with installations and upfront funding for customer-side improvements, SCE should have the ear of electric vehicle purchasers. For at least the next six years, SCE will not have to persuade customers of the benefits of time-of-use rates and load management devices because customers will have agreed to employ them in exchange for the utility's installation assistance. Vehicle and battery manufacturers should bear the burden of displaying and advertising their products. There is no demonstrated ratepayer benefit in having SCE promote electric mass transit options. Finally, SCE has not demonstrated that the

legislative and regulatory education function to be performed by the center comprises something other than the type of lobbyist expenses for which recovery from ratepayers is normally disallowed.

For all of these reasons, SCE has not demonstrated that the proposed $3.6 million funding for the ATTAC Center is reasonable or that it is otherwise consistent with the next guidelines. We will deny funding for this activity.

The settling parties have agreed to allow for CALSTART funding as proposed in SCE's testimony. According to SCE, CALSTART is a public/private consortium that seeks primarily to support the development and manufacturing within the state of components for advanced transportation products and to generate and demonstrate 'prototype' and advanced applications of electric technologies, to help its members achieve commercialization, and infrastructure development goals." These laudatory purposes do not, in and of themselves, suggest a ratepayer interest. SCE seems to recognize this and has stated its intention to limit its contributions to CALSTART programs that are consistent with ratepayer interests. This statement provides little assurance that the proposed expenditures will be consistent with the guidelines. It is SCE's burden not to promise compliance with the guidelines, but to demonstrate compliance. SCE having failed to meet its burden, the CALSTART funding request of $1,260,000 shall not be approved.

SDG&E seeks $800,000 for communications and $125,000 for displays in its Energy Technology Center. The settling parties agree to these amounts. SDG&E has offered virtually no evidence to support the $800,000 request. However, we will approve it because it represents an average annual expenditure of $112,000 which would appear barely enough to staff and equip

an office. However, SDG&E does not have an energy technology center. Since there is no evidence that the company now plans to build one, the $125,000 for displays will be denied.

The Energy Commission is of the opinion that PG&E's proposed funding level for education is insufficient. Because the amount of interest and activity related to electric vehicles in the next six years is so speculative, we see no reason to require PG&E to increase its budget for education.

Program Administration/Department Overhead Programs

Regardless of which specific electric vehicle programs are approved, the three electric utilities each would like to maintain a staff that would know about electric vehicles and related services, and would be able to offer information and advice to electric vehicle customers. The utilities have vastly different notions of the amount of money needed to do this effectively. For the six years at issue, SCE seeks $10,530,000 in labor and nonlabor expenses and $342,000 capital dollars for administration and overhead. SDG&E requests $2,512,000 in expenses. The settling parties support these amounts. In addition, PG&E originally asked for $2,278,000 but has now reduced its request to $963,000.

SCE would maintain a staff of 16 to work on administrative activities related to electric vehicles, including a division vice president, two budget analysts, five people to "deal" with legislation and regulations, a planning and policy manager, two media representatives, an employee to serve as liaison to the existing electric vehicle fleet, and two people to oversee project implementation. SDG&E and PG&E do not explain what type of administrative staff they would maintain. SCE has not provided sufficient justification for requiring ratepayer funds for some of these purposes. We are not

persuaded, for instance, that a program with annual funding of approximately $16,000,000 needs the services of two budget analysts. At this rate, a company with annual operating revenues of approximately $7 billion would need 875 budget analysts. Similarly, SCE has not shown why its electric vehicle program needs more than one media representative.

In addition, SCE has not demonstrated that those personnel "dealing" with legislation and regulation will avoid the types of ratepayer-funded lobbying activities proscribed under long-standing Commission policy. The Commission has repeatedly disallowed proposed expenditures where the utility has failed to meet this test. In a 1975 PG&E General Rate Case decision (78 CPUC 638), the Commission disallowed expenses for activities that were described as follows:

> "These functions include liaison with executive departments and federal regulatory agencies and contact with business and defense officials on matters concerning industrial mobilization and federal power policies. In addition, there are functions pertaining to liaison with Congress which do not involve legislative advocacy. Such activities include acquainting members of the California delegation and their staffs with information pertaining to PG&E activities, including the distribution of PG&E material and responding to requests from particular Congressional representatives for information. The executive representatives also obtain bills, public laws, and committee reports for evaluation, attend committee hearings which have no connection with pending legislation, such as the status of the energy crisis (sic). Other nonlegislative advocacy functions include daily examination of the Congressional record, the Federal Register, the Washington news media, and other sources of information to follow current developments which may bear

PG&E activities. There is also liaison with trade organizations." (Ibid. pp. 686-687.)

The Commission found that all of these activities are lobbying functions which are legitimate, necessary and honorable, but which reflect costs that should be borne by shareholders, not ratepayers.

In D.93-12-043, involving SoCalGas' last general rate case, SoCalGas sought $60,000 in ratepayer funding to support its efforts related to the Nonoccupational Indoor Air Quality Program which was then pending before the California Legislature. The Commission denied this request because "ratepayers should not pay for the costs of influencing legislation" (Ibid., p. 63). In D.89-12-057 (34 CPUC 2d 199), involving a PG&E general rate case, the Commission disallowed the portions of the company's dues for the Edison Electric Institute that were directed to Legislative Policy Research, Regulatory Advocacy and Regulatory Policy Research. The reason for disallowing these expenses is that PG&E failed to demonstrate that the funds would be used for purposes other than to influence legislation or rulemaking (Ibid., pp. 267-268).

The activities which SCE seeks to undertake with its five-member Electric Vehicle Regulatory Affairs office are similar to those enumerated in the 1975 PG&E decision. As such, and consistent with prior decisions, those expenses should be borne by shareholders, not ratepayers. SCE argues that ratepayers should fund its legislative advocacy because some of the bills concerning electric vehicles could have an adverse effect on ratepayers. However, SCE has not demonstrated how pervasive this concern is, or how much of its operation would be devoted to this type of bill. SCE also states that this unit

would also prepare testimony and undertake advocacy before this Commission. However, it is our intention to dispose of virtually all funding issues for the next six years in this decision. Although a smaller effort may be undertaken by SCE to request the approval of a rebate program, the likelihood of such a request is unknown and SCE has failed to show what portion of its Regulatory Affairs budget would be devoted to this activity.

For all of the stated reasons, we will disallow the portions of SCE's Program Administration/Department Overhead budget request providing funds for the following positions:

(1) one budget analyst ($242,424),

(2) one media representative (writer) ($226,548), and

(3) a Regulatory Affairs Manager and a four-person staff ($1,235,556).

In addition to the 16 positions addressed above, SCE requests funding for three additional positions. SCE has not provided adequate justification for those positions and the related funding will be denied. In all other respects, the requested budget for overhead will be approved, totalling $7,955,000 in expenses and $342,000 in capital.

In authorizing these funds, we expect the management of each company to exercise its best judgment on how precisely to staff it program administration in order to ensure compliance with this decision, applicable federal and state laws, and the Commission's low emission vehicle guidelines.

PG&E has not specifically attempted to justify its administrative costs, simply stating that those costs are imbedded in the other program descriptions. Nonetheless, we will approve its request of $963,000 for administration and other overhead expenses. It represents an average annual expenditure

of $160,500, which appears to be a modest amount to spend in overseeing and supporting electric vehicle activities, commission. Similarly, SDG&E has failed to support its $2,512,000 budget request with specifics. To support its request the company cites pages 9 and 10 of its settlement (Exhibit 175) at which unknown and SCE has failed to show what portion of its Regulatory Affairs budget would be devoted to this activity.

For all of the stated reasons, we will disallow the portions of SCE's Program Administration/Department Overhead budget request providing funds for the following positions:

(1) one budget analyst ($242,424),

(2) one media representative (writer) ($226,548), and

(3) a Regulatory Affairs Manager and a four-person staff ($1,235,556).

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PG&E has not specifically attempted to justify its administrative costs, simply stating that those costs are imbedded in the other program descriptions. Nonetheless, we will approve its request of $963,000 for administration and other overhead expenses. It represents an average annual expenditure

Those pages list two categories that seem to apply to Administration/Program Overhead. The first is Department Overhead ($802,000) for which no citation to the record is offered. It is described as covering travel expenses, computer expenses, dues to various organizations, educational materials, seminars, and something identified (with some circularity) as administrative expenses. SDG&E apparently did not break down these costs by category or describe in any more detail what would be done with the funds. The second is Customer Service Support, described in the settlement as consisting "of the staff salaries for [electric vehicle] program personnel." The citation offered to support this category is page 7 of the workpapers of Charles R. Eshelman (Exhibit 135). That page contains a table with various entries, only three of which appear to identify program personnel. These are an Electric Vehicle Coordinator, 25% of a Manager's salary and a part-time Secretary, for a six-year total of $750,000. In the table, SDG&E also identifies a need for $120,000 for Office Supplies and Other Direct Expenses. Thus, SDG&E has provided meager detail to support $870,000 of its original $2,512,000 request. Nonetheless, because SDG&E proposes to spend roughly the same amount of money as PG&E for its electric vehicle effort, we will allow SDG&E to receive the same amount of ratepayer support for its Administration/Program Overhead costs ($963,000).

10. **Balancing Accounts and Fund Shifting**

SCE seeks to establish a new one-way balancing account and a memorandum account to track its electric vehicle expenditures. It also wishes to use an existing RD&D balancing account to record its electric vehicle RD&D expenditures. The new one-way account would be used to record expense costs. The memorandum account would be used to record capital costs

Any unspent funds would be returned to ratepayers at the end of the six-year period. SCE agrees that it will not seek additional rate recovery if its recorded expenses exceed the authorized levels. SCE would be allowed to shift its overhead and fleet vehicle funds into other specific programs. Any other changes would require an advice letter or application, depending on the magnitude of the change.

It is appropriate that the utilities should be required to use the funds approved in this decision only for the special purposes for which they are initially intended. In addition, because of the uncertainty about how quickly electric vehicles will become available and whether or not consumers will respond favorably, it is important to provide assurances that unused funds will not be charged to ratepayers. With one exception, SCE's one-way balancing account and fund-shifting proposals, as described in its settlement, are reasonable and will be adopted. Because it is uncertain how quickly the market for electric vehicles will develop and because so many of the utilities' electric vehicle costs are dependent on the pace of market development, we will not grant permission for the utilities to collect revenues for these programs on a prospective basis. The utilities may track their approved expenditures and seek recovery of any such reasonable costs through rates in the following year.

Through its settlement, SDG&E has requested similar balancing account treatment. One difference is that, rather than asking for a rate increase now to pay for later projected electric vehicle expenditures, SDG&E proposes to amortize the balance in its account on an annual basis. Thus, ratepayers would only pay for actual expenditures as offset by electric vehicle revenues. With the proviso that SDG&E's recovery would be limited to those actual expenditures that are proven to be reasonable, this approach is acceptable. At the same time, SDG&E's proposed fund-shifting rules would give it greater flexibility than that granted to SCE. SDG&E would be able to shift up to 20% of the six-year funding level for a particular program without seeking Commission approval, unless DRA or the Energy Commission objects. Any greater amount of fund shifting must be preceded by an advice letter filing.

SDG&E's fund-shifting proposal would allow it to take all of the funding approved for a particular program in a given year and spend it on other electric vehicle programs. Only if SDG&E wished to repeat this exercise for a second year would it need to seek the most abbreviated form of Commission review. We are concerned that this proposal jeopardizes our ability to ensure that SDG&E's program activities will remain consistent with our guidelines and the law. We will approve this proposal because it is offered as part of a comprehensive settlement (this portion of the settlement is unopposed) and because SDG&E's ultimate recovery of its expenditures is subject to reasonableness review. PG&E also proposes to establish a one-way balancing account but seeks limited discretion to reallocate its overall electric vehicle program budget in a manner consistent with its proposal for natural gas vehicle funds. In addition, as mentioned earlier, PG&E asks to be able to spend its low-emission vehicle fleet funds on either electric or natural gas cars without restriction. For reasons discussed in Section III (D)(12), we will approve PG&E's proposed shifting approach. In addition, PG&E may reallocate its fleet vehicle funds between electric and natural gas vehicles in any reasonable manner.

11. Rate Design and Cost Allocation

A key assumption underlying all of the proposed electric vehicle programs is that almost all electric battery recharging can and will occur during off-peak hours. Toward this end, all three utilities are offering time-of-use rates designed both to encourage the greater use of electric vehicles and to persuade users to recharge their batteries at off-peak times. SCE and SDG&E are offering time-of-use tariffs for voluntary use following two tables.

by their customers. They plan to spend millions of dollars during the early years to gain commitments from their electric customers to use these tariffs. PG&E, on the other hand, proposes making mandatory the application of time-of-use rates to vehicle battery recharging.

Both PG&E and SDG&E propose that their commercial electric vehicle customers use existing time-of-use schedules, because current time-of-use periods provide adequate coverage of system and local area peak loads. SDG&E's commercial customers would be eligible to receive incentive payments under its existing schedules. SCE proposes a separate electric vehicle rate schedule for its commercial customers. Designed in a manner similar to its residential electric vehicle schedules (discussed below), it is supposed to be revenue neutral when compared to SCE's GS-1 schedule, which is applicable to small general service customers. Revenue neutrality means that if customers demand on-peak and off-peak service in the ratio predicted by those designing the rates, the customers using the tariff will pay as much for their service as they would under a normal GS-1 schedule.

All three utilities offer separate time-of-use tariffs for those who would recharge electric vehicles at home. However, the utilities all define their peak periods differently. For instance, SCE defines on-peak as between noon and 9:00 p.m. All other hours are off-peak. PG&E has the most complex arrangement, using three types of peak periods, with variances depending on the day of the week and the season. All three utilities differentiate between winter peaks and summer peaks. SDG&E's summer rate period is two months shorter than those of PG&E and SCE. The resulting rules and rates are summarized on the following two tables.

Rate Proposals for EV Programs

	Rate Schedules based on Time of Use (TOU)	Peak Periods	Seasonal Time Frames	Separate Meter for EV Use?
Pacific Gas & Electric - Rate A	3 Periods in Summer: peak, part-peak, and off-peak. 2 Periods in Winter: part-peak and off-peak.	Peak: 2 pm to 9 pm (M-F) (Sum) Part-peak (Sum): 7 am to 2 pm & 9 pm to midnight & 5 pm to 9 pm on weekends (Winter): 7 am to midnight & 5 pm to 9 pm on weekends Off-peak: Midnight to 7 am (M-F), 9 pm to 5 pm on weekends (Summer and winter)	Summer: May 1 - Oct. 31 Winter: Nov. 1 - April 30.	No. Rate applies to all usage at customer's premises.
Pacific Gas & Electric - Rate B	Same as Rate A, except EV usage is separately metered.	Same as Rate A	Same as PG&E Rate A	Yes. EV battery is separately metered.
Pacific Gas & Electric - Rate C	Part-peak and off-peak in both seasons, no peak period.	Part-peak: 7 am to midnight, 5 pm to 9 pm (weekends) Off-peak: midnight to 7 am, 9 pm to 5 pm (weekends)	Same as PG&E Rate A	No. Rate applies to all usage.
Pacific Gas & Electric - Rate D	Same as Rate C, except EV usage is separately metered.	Same as Rate C	Same as PG&E Rate A	Yes.
Southern Cal. Edison - TOU-EV1	On-peak and off-peak in both seasons.	On-peak: between noon and 9 pm. Off-peak: all remaining hrs.	Summer: May 1 - Oct. 31 Winter: Nov. 1 - April 30	Yes.
Southern Cal. Edison - TOU EV2	On-peak and off-peak in both seasons.	Same as TOU-EV1.	Same as TOU-EV1	Yes.
San Diego Gas & Electric - EV-TOU	On-peak, super off-peak and off-peak daily and for both seasons.	On-peak: noon to 8 pm daily. Super Off-peak: 12 am to 5 am daily Off-peak: all other hours.	Summer: June 1 - Sept. 30. Winter: Oct. 1 - May 31.	Yes.
San Diego Gas & Electric - EV-TOU2	Same as EV-TOU, except holidays are exempted for on-peak periods.	Same as EV-TOU, except On-peak is from noon to 6 pm, instead of 8 pm.	Same as SDG&E's EV-TOU.	No.

Rate Proposals for EV Programs

	Lock-Out Provisions	Meter Charge (Per Meter)	Customer (C) or Minimum (M) Charge	Energy Charges (per kWh) Summer	Energy Charges (per kWh) Winter	Baseline Credits (Deductions per kWh of baseline use)
Pacific Gas & Electric - Rate A	None.	$7.40 per mo.	$5.00 per mo. (M)	Peak: $0.31567 Part-Peak: $0.10748 Off-Peak: $0.04294	Peak: None Part-Peak: $0.11622 Off-Peak: $0.05428	$0.01822 for summer and winter
Pacific Gas & Electric - Rate B	None.	$7.40 per mo.	$5.00 per mo. (M)	Peak: $0.308 Part-Peak: $0.09997 Off-Peak: $0.05479	Peak: None Part-Peak: $0.10940 Off-Peak: $0.06539	None
Pacific Gas & Electric - Rate C	Clock prevents EV charging for 917 hrs., not to exceed 7 hrs. per day.	$3.90 per mo.	$5.00 per mo. (M)	Peak: None Part-Peak: $0.18633 Off-Peak: $0.04294	Peak: None Part-Peak: $0.11622 Off-Peak: $0.05428	$0.01822 for summer and winter
Pacific Gas & Electric - Rate D	Same as Rate C.	$3.90 per mo.	$5.00 per mo. (M)	Peak: None Part-Peak: $0.09997 Off-Peak: $0.05479	Peak: None Part-Peak: $0.10940 Off-Peak: $0.06539	None
Southern Cal. Edison - TOU-EV1	None.	$5.00 per mo.	None	On-Peak: $0.35808 Off-Peak: $0.0450	On-Peak: $0.09584 Off-Peak: $0.0488	None
Southern Cal. Edison - TOU EV2	None.	$5.00 per mo.	$0.31 per day (C)	On-Peak: $0.10481 Off-Peak: $0.0400	On-Peak: $0.08158 Off-Peak: $0.0434	None
San Diego Gas & Electric - EV-TOU	None.	$3.28 per mo.	$0.164 per day (M)	On-Peak: $0.25950 Off-Peak: $0.05869 Super Off-Peak: $0.03432	On-Peak: $0.09050 Off-Peak: $0.05869 Super Off-Peak: $0.03432	None
San Diego Gas & Electric - EV-TOU2	None.	$3.28 per mo.	$0.164 per day (M)	On-Peak: $0.25654 Off-Peak: $0.06050 Super Off-Peak: $0.03407	On-Peak: $0.08874 Off-Peak: $0.06050 Super Off-Peak: $0.03407	None

It appears that only SDG&E has clearly deviated from the theme of revenue-neutrality by offering a residential tariff designed to produce a 15% discount for electric vehicle users when compared to otherwise available rates. This comprises an incentive rate which the utilities can offer only through December 31, 1996 consistent with statutory sunset provisions. Effective the next day all electric vehicle tariffs must be revenue-neutral. As discussed below, we will require that the company make an advice letter filing no later than September 1, 1996 offering a revenue-neutral tariff.

While not opposing any of the proposed time-of-use tariffs, DRA points to the danger that these rate schedules may result in higher-than-anticipated subsidies from other ratepayers. DRA focussed its concerns on SCE's tariffs, but the comments would appear applicable to others as well:

> ". . . to make off-peak electric rates for [electric vehicles] attractive, SCE has had to take fairly drastic actions. First, it has had to drop its off-peak tariff rate below its marginal cost. Then, to make up the revenue shortfall to keep its rate design neutral, SCE proposes an extremely high on-peak tariff rate of 28-35.8 cents/kWh. SCE assumes that 4.5% of [electric vehicle] recharging will occur during on-peak hours and the customer will pay the high on-peak [electric vehicle] tariff rate. It is these customers who provide much of the revenue associated with the tariff.
>
> "If the recharging pattern SCE assumes materializes, everything will be okay. If, on the one hand, EV users recharge less at the high on-peak tariff, SCE will have to raise its off-peak rate to levels it has suggested will deter new [electric vehicle] users. If

> on the other hand, [electric vehicle] users seek to recharge during the day, but find means to do so at non-[electric vehicle] time-of-use metered outlets, SCE will incur a significant revenue shortfall and may incur additional costs associated with impacts to its distribution system. DRA is very leery of any rates such as SCE's proposed on-peak [electric vehicle] tariff rates of 28-35.8 cents/kWh which are so high above the utility's marginal cost. This is just an invitation for enterprising minds to figure out ways of bypassing this rate.
>
> "DRA is not opposing Edison's planned approach at this time. However, we suggest that the Commission may want to pay close attention to how [electric vehicle] users respond to the very high on-peak [electric vehicle] recharging rates proposed by SCE."

SCE says that DRA is wrong in asserting that its off-peak rates are below marginal cost. Regardless, the concern underlying DRA's comment remains. With such a large differential between off-peak and on-peak rates, electric vehicle customers may be encouraged not only to avoid on-peak usage, but also to avoid using a dedicated electric vehicle meter entirely when on-peak charging is desired or required. Customers faced with a 35 cent/kWh rate might be encouraged to connect their charging units to a normal household meter in order to pay only 15 cents/kWh. If many customers did this, the time-of-use tariff would be less than revenue-neutral, other customers would be subsidizing electric vehicle users, and the tariff would comprise an incentive rate. No later than September 1, 1996, we will require each electric utility to submit an advice letter filing demonstrating whether or not the tariffs have proven to be

revenue-neutral and proposing any changes necessary to ensure revenue-neutrality as of January 1, 1997.

As discussed earlier, WSPA approves of PG&E's plan to require that electric vehicle customers use its special time-of-use rates. WSPA further recommends that SCE and SDG&E be required to do the same. It argues that time-of-use rates represent the least cost way of encouraging off-peak charging and managing load. In response, SCE asserts that such a requirement would require offensive and expensive policing efforts, and would invite some [electric vehicle] customers to avoid mandatory [time-of-use] rates by remaining on flat or rates--causing increased disruption of distribution systems and greater on-peak charging. Finally, mandatory [time-of-use] rates in a deregulated environment open to competition from many sellers of electricity are likely to be unworkable."

There is no evidence to support SCE's argument that any policing effort would be needed, nor that such an effort would be offensive or expensive. In addition, it is unclear that customers would be more motivated to avoid a mandatory time-of-use rate than they would a voluntary one. Further, if utilities are entering a more competitive environment, one in which mandatory time-of-use rates are unworkable, then voluntary rates will be unworkable as well. Customers who found a time-of-use rate sufficiently unattractive would reject a voluntary tariff and respond to a mandatory tariff by buying their power elsewhere.

SCE's argument underscores the fact that the electric vehicle programs cannot be justified on the basis of benefits flowing to ratepayers from increased sales. The reason that mandatory time-of-use tariffs need not be required for SCE and

SDG&E, at this time, is that these utilities are planning to offer short-term programs that will attract customers to those tariffs in a manner consistent with other ratepayer interests.

PG&E and SCE seek to place electric vehicle program costs in rates in subsequent proceedings, most likely in the next Energy Cost Adjustment Clause (ECAC) proceeding. They would defer the discussion of the appropriate revenue allocation approach until those proceedings. SDG&E has proposed that, when its balancing accounts are amortized, the costs should be spread among all classes using an Equal Percentage of Marginal Cost (now methodology. No party objects to this proposal, which is consistent with current practice.

Our pending consideration of various options for restructuring the electric industry creates uncertainty about the long-term treatment of electric vehicle program costs. PG&E would prefer that the revenue allocation issue be resolved in the electric restructuring proceeding. While the restructuring process may result in either the Commission or the Legislature changing the way that electric vehicle efforts are funded, we will continue to look at ways to cover program costs in the interim. SCE and PG&E should resolve revenue allocation cost recovery issues in the second phases of their pending general rate cases. In the alternative, the ALJs assigned to those matters may choose to defer this question to each company's next ECAC proceeding.

D. Natural Gas Vehicle Programs

1. Overview

Natural gas vehicles can qualify as low emission vehicles, but they are not zero emission vehicles, as the Air

Resources Board defines that term. Because only electric vehicles currently qualify as zero emission vehicles, it is likely that major vehicle manufacturers will be required to offer electric vehicles for sale. They will not be expressly required to offer natural gas vehicles. Thus, those who would promote the acquisition and use of natural gas vehicles do not have the luxury of a mandate that would force manufacturers to produce and sell them. However, there are various qualities of natural gas vehicles that make them promising.

First, a few words about the technology. Electric vehicles use electric motors. Often, a separate small motor drives each wheel. The biggest hurdles to commercialization of electric cars are the high initial cost of new technologies and the relatively primitive state of electric energy storage technology. Currently, drivers of most electric vehicles must plan to recharge their batteries after driving 80 to 100 miles.

Natural gas vehicles, on the other hand, rely on internal combustion engines. The major difference between a natural gas fueled vehicle and one using gasoline is that the normal gasoline tank is either replaced or supplemented with cylinders that can hold compressed natural gas. In addition, the natural gas vehicle cannot be refueled at regular distribution line pressure. The gas must be compressed before it enters the vehicle.

Natural gas vehicles face a promising market for several reasons. They can be used by fleet operators to meet EPAct requirements. They can be built by relying on available technology. The vehicle and equipment costs for natural gas vehicles are modestly higher than those for conventional vehicles, but the fuel costs are lower. Natural gas vehicles may

be competitive for commercial and industrial uses that are beyond the near-term capability of electric vehicles. Because they look, sound, and feel like conventional vehicles, natural gas vehicles may receive quicker consumer acceptance. In addition, most natural gas vehicles can travel significantly farther between refueling stops than can a comparably sized electric vehicle.

Perhaps the single greatest hurdle to customer acceptance of natural gas vehicles is the sense that gasoline refueling stations are ubiquitous, but natural gas refueling stations are hard to find.

The natural gas utilities (PG&E, SDG&E, and SoCalGas) do not hide their eagerness to promote the use of natural gas as a vehicle fuel. They would like to see natural gas become the fuel of choice, both because they are convinced that the widespread substitution of natural gas vehicles for those using other fossil fuels will improve air quality and thus improve the business climate in their service territories and because the use of natural gas vehicles will increase the demand for natural gas.

The utilities would like to build or encourage the construction of a sufficient number of natural gas refueling stations to convince commercial and industrial fleet customers that it is safe to invest in and use natural gas vehicles. They want to acquire a large number of such vehicles for their own fleets. The utilities want to offer natural gas for vehicle use at rates that increase its attractiveness when compared to gasoline or other alternative fuels. They would like to offer rebates to customers to encourage them to convert their vehicles to accept natural gas. They would also like ratepayers to bear

both the cost of all of these promotional activities and the risk that any expenditures might fail to produce the desired result. Most parties support the electric utilities' efforts to prepare for the development of a safe electric vehicle market with minimal impact on the existing generation, transmission, and distribution system. In contrast, the opposition to the natural gas vehicle program proposals is vigorous and multi-directional. Parties voice concerns that focus not only on ratepayer interests, but on the effect of utility programs on competition in markets for natural gas and other alternative fuels.

Before discussing the individual programs proposed by the utilities, we will address certain preliminary issues.

2. Proposed Settlement Affecting SoCalGas and SDG&E

SoCalGas and SDG&E entered into an agreement with TURN, UCAN, the Coalition for Clean Air, the South Coast Air Quality Management District (SCAQMD), and the Southern California Association of Governments (SCAG) to propose the adoption of a settlement. The proposed settlement is opposed by DRA, the Energy Commission and WSPA. To a limited extent, the proposed settlement is also opposed by TURN.

The proposed settlement offers unusual suggestions for limiting potential adverse impacts of the natural gas vehicle programs on ratepayers and competitors. We applaud the settling parties for their efforts. However, for reasons that we explain below, we find that this settlement is not in the public interest and should not be approved.

The settlement agreement is a complicated document. Here are some of the highlights:

a. Most Programs Approved

The utilities would be allowed to proceed with almost all of their proposed natural gas vehicle programs. The only exception is that SDG&E agreed to reduce its refueling station budget by $1.3 million.

b. No Specific Budgets Adopted

The parties did not settle on specific permissible budgets for either utility, but agreed that the utilities should not spend more money than they have requested.

c. Total Fungibility

The utilities would be allowed to shift funds from program-to-program without limitation.

d. Avoidance of Reasonableness Reviews

The utilities would be allowed to pass through costs related to refueling stations without Commission oversight or review so long as at least 50% of the costs are borne by a third party.

e. Competitive Procurement

The utilities would use competitive bids to buy refueling station equipment.

f. Independent Qualification

As SoCalGas proposed in its testimony, the utilities would look to independent organizations to develop criteria for qualifying private natural gas vehicle station and product providers.

g. Station Selection Criteria

The utilities would use the criteria set forth in SoCalGas' testimony for selecting the sites for new utility-funded refueling stations.

h. Capital Spending Limiter

The utilities would adhere to a formula proposed by SoCalGas in its testimony for determining when the utilities should reduce their spending on new refueling stations.

Market Exit Criteria

The utilities would stop building refueling stations if one of three conditions was met:

(1) third parties have provided the majority of the investment in public access refueling stations in the service territory over the period of a calendar year, or

(2) the market value of the utility's ownership interest in stations exceeds the depreciated book value of the assets, or

(3) utility subsidies for refueling have been eliminated.

The utility would leave the "vehicle" market if both of the following occur:

(1) two original equipment manufacturers have established a natural gas vehicle mass production run at an assembly plant for at least one passenger vehicle line and

(2) two manufacturers have established a mass production run at an assembly plant for at least one medium duty natural gas truck line

The utility would stop participating in a nonviable element of the refueling or vehicles market if either of the following conditions occurs:

(a) revenues from the sale of compressed natural gas for all stations in the aggregate are not expected to cover the costs of the energy used for compression, or

(b) the consumption of the utility employees' time is deemed by the utility to be excessive in comparison to the benefits expected to be derived from continuing operations.

Pursuant to Rule 51.1(e), "the Commission will not approve stipulations or settlements, whether contested or uncontested, unless the stipulation or settlement is reasonable in light of the whole record, consistent with law, and in the public interest." In measuring the public interest, we want to know whether the parties to the settlement are fairly reflective

of the affected interests. In this instance, there appears to be a mismatch between the parties to the agreement and the interests affected.

The nonutility signing parties fit into two categories: groups that had previously announced their support for the SoCalGas and SDG&E programs because of their concern for air quality (SCAQMD, SCAG, and the Coalition for Clean Air), and ratepayer groups that were comparatively inactive in the hearings, but had been critical of the utility programs (TURN and UCAN).

It is not particularly surprising or informative that SCAQMD, SCAG, and the Coalition for Clean Air have signed an agreement supporting the utility programs, since these groups had previously expressed their support. In addition, since we cannot approve the utility programs solely because they may help improve air quality, the involvement of these parties in the settlement does not help us determine if the proposed programs are consistent with our adopted guidelines.

TURN and UCAN are groups that often speak on behalf of the interests of ratepayers. However, they were comparatively inactive during this lengthy proceeding. Although they did offer limited prepared testimony, they did not participate in cross-examination of most witnesses. In contrast, the active non-utility participants (including DRA, which also represents ratepayer interests) did not support this agreement. In addition, despite their interest in protecting ratepayers, TURN and UCAN did not express an opinion as to what level of funding, if any, the utilities should receive for these programs, other than agreeing that the utilities should not be given more than they asked for.

In the limited area in which the settlement did directly address ratemaking concerns (revenue allocation), the parties agreed to disagree. The proposed settlement would shift more of SoCalGas' program costs to its core customers, but the settling parties agreed that TURN could actively contest this provision.

TURN and UCAN's ability to represent ratepayer interests was also undermined in this instance because of the fact that the two groups, in an apparent effort to conserve resources, consolidated their representation in the negotiations. This arrangement raises a problem because the proposed settlement affects two utilities, while TURN represents the interests of ratepayers for one of the utilities while UCAN represents the interests of ratepayers of the other, and the interests of the ratepayers are sometimes at odds with each other. For instance, SDG&E's ratepayers would have an interest in making sure that none of SoCalGas' program costs would be passed on to them. SoCalGas' ratepayers would want an opposite result. According to UCAN, SDG&E's ratepayers would be willing to allow SoCalGas to change its cost allocation mechanism. According to TURN, SoCalGas' ratepayers would not. These inconsistencies enhance our sense that the interest of ratepayers may not have been adequately represented in the settlement process.

Finally, the settling parties assert that the proposed settlement protects competitors. However, no competitors or potential competitors have signed the agreement. In these circumstances, we cannot assume that the proposed settlement reflects the underlying interests of either ratepayers or competitors.

DRA has expressed a number of additional concerns with the proposed settlement. DRA argues that the agreement is "fatally vague" because

(1) no specific funding levels are recommended,

(2) one criterion for market exit is the end of "discounted gas prices," but that term is never defined,

(3) the mandatory exit from the "vehicle market" is vague because that term is never defined, and

(4) "utility station" is never defined.

SoCalGas responds to the first concern by stating that the "[s]ettling parties agree that a cap on funding levels derived from the forecasts provided by SoCalGas is reasonable and that the settlement's market-based building, spending, pricing, and set tests will prove to be a superior allocator of [natural gas vehicle] funding than any forecast, however good, adopted by the Commission."

SoCalGas' argument that the proposed settlement's formula will effectively bring the discipline of market forces to bear on its program expenditures is worthy of an independent examination. However, SoCalGas fails to deal with a more fundamental issue. No matter what forces might serve to temper SoCalGas' actual expenditures, the Commission must still determine which programs and what funds should be available to the company. SoCalGas would prefer to have permission to spend each dollar in its requested budget. In the aggregate, the other settling parties were not willing to take a position on this

issue. The indecision on this point undermines the settlement and leaves the Commission with a lingering need to carefully examine each proposed program and expenditure.

In response to the proposed settlement's failure to define terms, SoCalGas refers only to the definition of "discounted gas prices", saying that "... any fair reading of the settlement will show that the intention is to eliminate all subsidies for commercial [natural gas vehicle] service and any discounted gas price however defined is included in those subsidies targeted for elimination." This argument fails to take into account the debate, during the hearings, as to what constitutes a discounted gas price. Further, the ambiguity of this point creates the possibility that, pursuant to the proposed settlement, discounted rates might continue beyond the statutory deadline of December 31, 1996. SoCalGas has not specifically responded to the failure of the proposed settlement to define other terms.

We agree with DRA that the vagueness of various terms and conditions in the proposed settlement militate against its approval. Without greater clarity, it is difficult to know what we would be approving and at least as difficult to know how we would enforce its provisions.

DRA, the Energy Commission and WSPA cite many other arguments for rejecting this settlement. We choose not to address them here simply because the reasons already addressed form a sufficient basis for its rejection. We do not take this action lightly. The Commission does encourage parties to settle their differences and has been ready to approve innovative agreements, where appropriate. However, we continue to emphasize the importance of bringing to the table those who are in a

position to represent the interest of affected groups in an unfettered manner, to produce an agreement that is internally consistent and self-sustaining, and to provide the Commission with enough information and sufficient clarity to enforce its provisions.

3. Increased Throughput and Ratepayer Interest

The natural gas utilities have relied on two arguments to satisfy the statutory and guideline-derived requirement that low emission vehicle program costs be passed through to ratepayers only where the underlying programs can be found to serve a ratepayer interest. First, they argue that all of a particular utility's natural gas vehicle programs are interdependent and that they all must be judged together when reflecting on whether or not they serve a ratepayer interest. Second, they argue that ratepayers benefit from the increased sale of natural gas (increased throughput) and that all program expenditures should be approved so long as they will result in a net savings to ratepayers.

As discussed above, in the section addressing electric vehicle programs, it would be inconsistent with the guidelines and applicable statutes to approve all of a particular utility's programs in the aggregate. The utilities want to do many distinct things with their proposed natural gas vehicle budgets. They want to buy vehicles for their own fleets, build service stations to refuel their own vehicles, build and run service stations for use by others, finance a factory to install natural gas equipment in existing vehicles, offer rebates to natural gas vehicle users, help develop a used car market for natural gas vehicles, advertise and otherwise promote the use of natural gas vehicles, and many other things. Using the utilities' argument

some of these activities could be adverse to the interest of ratepayers, but would be approved anyway if, in the aggregate, the programs appear beneficial. We cannot agree that the law permits us to approve ratepayer support for programs that are not in the ratepayers' interest. Thus, we will examine each major program individually.

3. Increased Throughput and Ratepayer Benefits

As for the second argument, even ignoring the utilities' inappropriate insistence on aggregating their programs, we are not prepared to approve the proposed programs on the basis of their potential for increasing throughput. We need not address, in this order, whether as a matter of public policy we would encourage the utilities to undertake this type of massive load building program at ratepayer expense. The utilities have failed to demonstrate that the various proposed programs would be reasonably likely to increase throughput in a manner that would make the programs beneficial to ratepayers.

The gist of the utilities' throughput argument is that the increased natural gas sales resulting from the proposed programs would be great enough to more than repay ratepayers for the program costs through increased contributions to the fixed cost of the system. These contributions would be comprised of payments above marginal cost received from natural gas vehicle customers.

There are six fundamental factors that undermine this argument:

(1) The utilities have failed to demonstrate (and only take credit for) the incremental effects of their programs. To the contrary, the utilities assume that no natural gas will be sold for use by vehicles in their service territories unless the proposed future expenditures are approved. Every future vehicle

related therm of gas is credited to these future expenditures. This argument is illogical. There already are natural gas vehicles in use and refueling stations in place. The utilities already use natural gas vehicles. There are private fleet users who have purchased their own vehicles and installed their own refueling equipment. There are EPAct fleet requirements that may favor the use of natural gas vehicles in many instances. The utilities have already spent tens of millions of dollars on natural gas vehicle programs. We do not agree with the proposition that all future natural gas sales for vehicle fuel should be attributed to the utilities' future programs.

(2) For those vehicles that would be in service anyway, discounted rates represent a loss of revenues not a gain. Rates for all customers are expected to cover the fully allocated cost for that service. SoCalGas' proposed rates, for instance, would not reflect fully allocated cost in the life of its program. Those customers who would be using natural gas for their vehicles even without additional help from SoCalGas would not be contributing their full share to revenues. The result is a revenue loss, which is not reflected in the utilities' calculations.

(3) The utilities have not demonstrated a linkage between any particular proposed program and an increase in gas throughput. It lacks credibility to argue that each dollar spent on each activity is so critical to the viability of a natural gas vehicle market that the whole market would collapse if it was not spent. Yet this is the argument relied upon by the utilities.

(4) The pilot programs already undertaken by the utilities stand for the proposition that throughput projections may be overly optimistic. The utilities have already been

allowed to spend over $60 million on natural gas vehicle pilot programs. A study by DRA demonstrates that while the number of natural gas vehicles in use meets the utilities' estimates, they are purchasing less natural gas than expected.

(5) Most of the benefits are speculative, leaving ratepayers with the risk that the program costs will not be reimbursed. However, these risks are not reflected in the utilities' forecasts. One risk is that an existing tax inequity may be reversed. Gasoline is currently taxed at 45¢ per gallon, while natural gas is taxed at 1.5¢ per gasoline-equivalent gallon. Since vehicles using natural gas still contribute to congestion and the need to maintain roads, as their use increases, at least some local governments will want to tax them more steeply. If a higher tax increased overall fuel costs, it would discourage consumption. If a utility responded by lowering its rates to remain competitive, vehicle users would contribute less to fixed costs. In either event, any benefit to ratepayers would be reduced.

Another risk is that prices for reformulated gasoline will not be as high as the utilities expect. SoCalGas wants to keep its rates for vehicle fuel below those for reformulated gasoline, which the oil companies are now required to provide. SoCalGas is counting on the price for reformulated gasoline continuing to climb, so that it can raise its vehicular natural gas rates enough to provide a net benefit to other ratepayers. If reformulated gasoline remains less expensive and if SoCalGas continues to peg its rates to the price of reformulated gasoline, the expected ratepayer benefits shrink.

These and other risks reduce the value of any forecast ratepayer benefits.

(6) It is unrealistic to assume that all of the benefits of increased throughput will flow to ratepayers. The utilities argue that they will capture added revenues for the benefit of ratepayers by maintaining tariffs for the purchase of compressed and uncompressed natural gas for vehicle use. However, there is nothing to prevent fleet customers from buying natural gas on their own. The utilities encourage private customers to build their own refueling stations. Some of them already have. Noncore customers with private refueling equipment could use noncore gas to fuel their vehicles and circumvent the utilities' natural gas vehicle tariffs. The utilities do not know how much, if any, of the current vehicle usage is furnished through noncore sources. They have not offered a means for preventing future noncore purchases for this purpose. Nonetheless, the utilities assume that they will furnish all vehicle fuel through their tariffs.

This assumption undermines the analysis of all three utilities. It is especially troublesome, however, for SoCalGas. In a recent decision involving a major settlement affecting SoCalGas, the Commission stated:

> "We make one final observation. The settlement would allow SoCalGas to increase earnings substantially from increased demand. It is silent, however, with regard to the ratemaking treatment of investments and expenses designed to increase demand and thereby increase SoCalGas's earnings. This omission could impose additional costs on captive ratepayers and at the same time provide an incentive for SoCalGas to make investments that are not cost-effective. For example, SoCalGas could invest $10 million in natural gas vehicle fueling stations in anticipation of increasing earnings of $5

> intent to construct fueling stations as a way of increasing load. . . . In the spirit of the settlement, all capital costs and expense related to increasing noncore load, and therefore earnings under the terms of the settlement, must be accounted for below-the-line. Consistent with D.93-12-043, captive ratepayers will not subsidize investments in noncore load-building and from which SoCalGas would profit under the terms of the settlement." D.94-04-088 (see mimeo. pp. 31 and 32).

SoCalGas' ability to justify its program based on increased throughput assumptions is further undermined because any increase in noncore throughput resulting from vehicle use would benefit SoCalGas' shareholders and not its ratepayers and because SoCalGas does not know how much of the projected vehicle-related demand will be met with noncore gas.

For all of these reasons, we find that the potential for increased throughput resulting from vehicle fuel sales does not establish a sufficient ratepayer interest to satisfy applicable statutes and our guidelines. We will examine each utility program to determine whether it is consistent with the Commission's guidelines and applicable statutes.

4. The Acquisition of Natural Gas Vehicles for Utility Fleets

As discussed earlier, energy utilities are required under EPAct to purchase a certain number of vehicles using alternative fuels, and natural gas vehicles can be used to meet those requirements. The following table summarizes the natural gas utilities' proposals for acquiring natural gas vehicles

during the next six years and compares those plans with an approximation of each utility's EPAct requirements.

Natural Gas Fleet Vehicle Acquisition Proposals

Company	Budget	# Vehicles	EPAct Requires
SDG&E	$2,385,000	835	660
SoCalGas	$8,977,000	2,888	1,391
PG&E	$4,668,000	2,340	2,650

It is consistent with our guidelines for utilities to purchase vehicles that operate on alternative fuels in order to comply with EPAct. All active parties agree. However, several parties object to the SDG&E and SoCalGas proposal to acquire more natural gas vehicles than required under EPAct.

SDG&E wants to exceed EPAct requirements because it argues additional natural gas vehicles can be a cost-effective way to cut fuel costs and demonstrate the company's commitment to natural gas as a vehicle fuel. SoCalGas argues that "(p)urchasing more (natural gas vehicles) than federal or state regulations may require demonstrates clearly to third parties that SoCalGas 'walks its talk' relying on (natural gas vehicles) in such an uncompromising way. Moreover, ultimately 90% of the SoCalGas fleet will be required to be (natural gas vehicles); SoCalGas is simply accelerating its purchasing schedule." SoCalGas also argues that, at a certain point, natural gas vehicles will be a cost-effective alternative to conventionally fueled vehicles.

"Walking the talk" does not satisfy the Commission's guidelines or the applicable statutes because it does not demonstrate a direct ratepayer interest. As for the cost-effectiveness argument, we agree with DRA, which points out that the utilities already have fleet budgets which they are required to expend in a reasonable way. If it will be less expensive to acquire and use natural gas vehicles than it would to rely on conventional vehicles, then the utilities should use their existing fleet budgets accordingly. The utilities should not require additional funds to acquire and use vehicles that are less expensive than those reflected in their current budgets.

For these reasons, we will limit the additional funding for SoCalGas and SDG&E to reflect the EPAct mandated acquisition levels shown in the above table.

In addition, it is not true that 90% of SoCalGas' fleet eventually must be natural gas vehicles. At some point, 90% of the vehicles must run on some type of alternative fuel. SoCalGas has not demonstrated that it would be prudent to accelerate its acquisition of natural gas vehicles to meet that requirement when the viability and cost of vehicles using various alternative fuels could change in the intervening years.

At a minimum, the utilities expect to save on fuel costs by using natural gas vehicles instead of the gasoline vehicles for which they had originally planned. DRA also points out the three utilities have offered differing ways to account for and return to ratepayers the resulting benefits. PG&B has reduced its natural gas vehicle revenue requirement by $5.8 million to reflect these savings. Similarly, SDG&E has reduced its revenue requirement by $3.8 million. SoCalGas proposes to

pass the savings along as they occur, through its natural gas vehicles balancing account. Because there is no apparent reason for various utilities to treat these costs in an inconsistent manner, and because of the importance of keeping overall rates low, we will require SoCalGas to reduce its natural gas vehicle revenue requirement to reflect its projected fleet savings. In addition, because we have reduced the number of specially funded fleet vehicles for SoCalGas and SDG&E, we will adjust their fleet savings estimates proportionally.

We are left with inconsistencies in the fleet savings estimates of the utilities. While the revenue requirements we approve here will reflect the utilities' estimated savings, we will adopt DRA's suggestion that CACD convene a workshop to develop a consistent manner of accounting for fleet savings. The results of this process should be reported to the Commission by CACD for incorporation in proceedings in which the utilities seek to adjust their natural gas vehicle balancing account levels. Any additional fleet savings resulting from the use of a common methodology will be accounted for at that time.

5. Utility Fleet Infrastructure

In order to rely on the use of natural gas vehicles, the utilities need to make sure that adequate refueling facilities exist. All three utilities have already constructed refueling stations to serve their own fleets. Both SDG&E and SoCalGas would like to build additional stations. PG&E states that it can function adequately with its current stations, but wants to acquire eight tube trucks that could provide mobile storage of compressed gas for refueling. The following table indicates the number of utility fleet stations already in

existence and the number of additional such stations each utility seeks permission to create. For comparative purposes, the table also includes the number of fleet vehicles required under EPAct during the planning period.

Refueling Stations on Utility Property and EPAct Vehicle Requirements

Utility	Current	Proposed	Total	Vehicles
SoCalGas	10	30	40	1,391
SDG&E	5	3	8	660
PG&E	22	0	22	2,650
(tube trailers)	(12)	(8)	(20)	

SoCalGas wants to devote $11,085,000 in capital dollars and $6,094,000 in expense dollars to construct and maintain 30 additional stations primarily to serve its fleet vehicles. The company has not met its burden of proving the need for a specific number of stations. Further, since the number of fleet vehicles to be funded by this program has been reduced, it is not clear that SoCalGas needs as many stations for its own fleet as it previously estimated. SoCalGas states that it needs one station for approximately 80 cars and that it needs more stations to maintain an adequate geographical distribution. With its 42 stations and tube trailers, PG&E will have one refueling facility for every 63 vehicles. Using a similar ratio, SoCalGas would only need 22 stations. We will err in favor of any potential geographical concerns by allowing SoCalGas to add 20 stations to the 10 it already has. We will allow SoCalGas to use portions of its already-available capital funds for this purpose. These funds were made available in D.94-10-035. Because SoCalGas has

not demonstrated that those funds were acquired for purposes outside of the proposals made in this proceeding. SoCalGas has not shown that the funds cannot be used for building its additional fleet stations.

SDG&E seeks $1 million in capital to build three new stations to serve its own fleet. As a result, SDG&E would have 8 stations to serve what will ultimately be 660 vehicles. This appears to be a reasonable investment to support the company's EPAct requirements.

PG&E does not plan to build any additional stations, but it intends to continue maintaining and operating its existing 22 stations. PG&E also wants to purchase 8 additional tube trailers, which can store compressed natural gas and can be moved for use where needed. The company proposes to purchase these trailers early in its program and lend them to private users until such a time as PG&E may need them to serve its own fleet.

DRA asserts that PG&E should not place these new trailers into rate base until the company needs them. PG&E responds by stating that the ratepayers have an interest in having these trailers used by others because ratepayers will benefit from any increased throughput resulting from their use.

As discussed above, the utilities have not demonstrated that increased throughput resulting from the proposed programs will create a net ratepayer benefit. Thus, we will instruct PG&E not to place these new tube trailers into rates until they are used and useful for utility purposes.

SoCalGas seeks $750,000 in combined labor and nonlabor costs for its Customer Services program. These funds support full-time positions to handle various activities. However, one of the positions (Service Technician) will support the Vehicle Refueling Appliance program. Since that program is rejected by this decision (see Overhead section), the Service Technician position is no longer necessary. SoCalGas' Customer Introductory and Customer Education program is therefore reduced to $486,000.

6. Technology Introduction and Customer Education

SDG&E seeks $8,809,000 for Technology Introduction and Customer Education, including $6,914,000 for Program Administration/Marketing Staff. The proposed budget also includes $885,000 for vehicle demonstrations and loans and $125,000 for Energy Technology Center exhibits. This is the largest element of the company's proposed operation and maintenance (O&M) budget. The entire justification offered by SDG&E is that "[t]his educational and technology introduction effort is critical to fostering a wider knowledge base about the benefits of [natural gas vehicles]." SDG&E has failed to demonstrate that the proposed expenditures comply with the Commission's guidelines.

WSPA would disallow $6,700,000 from this request. The Energy Commission would cut the budget to $5,127,000 by reducing customer service expenses from $6,914,000 to $4,560,000, eliminating the vehicle demonstration and loan program, and cutting the communications budget in half to $442,000. DRA would transfer the $885,000 demonstration vehicle expense to the utility fleet program to allow the company to obtain more vehicles for fleet purposes and would disallow the rest.

There is no ratepayer interest in funding the proposed vehicle demonstration program. Having already reduced the utility fleet level to that required under EPAct, there is no reason to shift the vehicle demonstration funds to the fleet program. The Energy Technology Center funds should also be disallowed because SDG&E has no such center. However, DRA's suggestion that all other funds be disallowed ignores the fact that SDG&E has a legitimate role to play in ensuring that its customers select and utilize natural gas vehicles and related equipment in a manner that is safe, reliable, and efficient. Just as we have allocated $2,000,000 to SoCalGas for this purpose, we will approve $1,000,000 for SDG&E to provide constructive, non-promotional information to its customers.

PG&E seeks $6,993,000 in this category to fund customer contact and technical support personnel, a vehicle quality assurance program, communications material and participation in state and federal industry organizations. WSPA recommends the disallowance of funds for two corporate fleet representatives, six regional customer contact representatives and customer seminars, arguing that these activities are primarily intended to promote the sale of vehicles. PG&E acknowledges this, but asserts that the representatives will also be able to collect information about purchasers and fuel usage. While this may be true, PG&E has not shown that its proposal represents a cost-effective way to collect this information. This is especially striking when it is compared to PG&E's proposal on the electric side, where the company plans to acquire information about purchasers by paying a modest sum to vehicle dealers. We will disallow these positions.

DRA opposes PG&E's proposed natural gas vehicle rebate program. Accordingly, DRA proposes disallowing the portion of PG&E's quality assurance program that is linked to those rebates. We agree that if the rebate program is not carried forward, any related costs should be disallowed. We discuss the rebates below. Rather, PG&E seeks the fractional salary of a Legislative/Regulatory Representative. We are removing this position for reasons consistent with those discussed earlier regarding the other companies. In all other respects, the funds requested by PG&E should be approved.

7. Utility System Impact

SoCalGas and SDG&E seek no funding for this purpose, stating that they are not worried about exceeding their excess transmission and distribution capacity in the near future. PG&E proposes spending $520,000 to persuade four refueling station owners to use new refueling technologies and to evaluate their impacts on system loads. In effect, PG&E would provide incentive payments of up to $100,000 to four station owners to gain their cooperation. In addition, PG&E asks to spend $339,000 on natural gas vehicle projections and system impact analysis.

The Energy Commission endorses this proposal and also asks that the SoCalGas and SDG&E be required to undertake system impact analyses. WSPA opposes any funding for this purpose, arguing that no one has demonstrated that there is reason for concern about system impacts. DRA opposes the use of incentive payments, arguing that PG&E ought to be able to test the technologies in its own stations or gain the cooperation of other station owners without making the payments.

We will approve the funds requested by PG&E because the sums are modest and because all parties concerned could benefit

from a more precise understanding of how the refueling of natural gas vehicles affects utility systems. We expect that PG&E will make the results of its study widely available. At this time, we will not impose studies on the utilities who have not asked for permission to undertake them.

8. Ratepayer-Funded Refueling Stations

Earlier, we discussed the utilities' proposals for building more refueling stations on their own property, primarily to serve their own fleets. The utilities also each currently own (in whole or in part) and operate refueling stations on customer property. SoCalGas and SDG&E would like permission to build and operate many more such stations in the next six years, and to place ratepayers at risk for the commercial viability of those stations. They also seek the funds needed to continue operating existing stations for the next six years. The Energy Commission, DRA and WSPA oppose any funding for additional stations and support funding for continuing operation of existing stations.

As we indicated above, consistent with legislative intent, we will not approve funds for any stations to be constructed after December 31, 1996. What remains for our consideration is whether to approve ratepayer funding for any new stations prior to that date. For reasons explained below, we will allow the utilities to develop plans for shareholder-funded station construction under some circumstances. However, we will not allow the utilities to recover costs for any new stations on customer property for which contracts had not been signed as of the date of issuance of the ALJ's proposed decision in this matter.

The Energy Commission has done an excellent job of describing the issues here:

"SoCalGas and SDG&E are seeking a combined total of approximately $34.0 million in capital (i.e., $25.064 million for SoCalGas and $8.995 million for SDG&E) and over $15.0 million in expenses to build and operate no less than 98 additional [natural gas vehicles] refueling stations on customer property (i.e., at least 67 such stations for SoCalGas and at least 31 stations for SDG&E) in their service territories. PG&E has no comparable infrastructure plan, though it does propose to provide about $520,000 in expenses for impact assessments on up to four stations.

"The CEC has serious concerns about SoCalGas' and SDG&E's proposed NGV infrastructure program, as we discussed at some length in our original written testimony. (Exh. 87, pp. 46 - 49.) In essence, we believe that while the 'chicken and egg' phenomena does exist with regard to [natural gas vehicles] and related infrastructure (i.e., without adequate refueling stations substantial vehicle penetrations are unlikely, and without substantial vehicle penetrations construction of refueling stations is problematic), the use of ratepayer funds to break this conundrum, as proposed by SoCalGas and SDG&E, violates the 'ratepayer interest' provisions of the LEV statutes and guidelines, and may also violate the 'anti-competitive' provisions as well. (Exh. 87, pp. 46 - 47.)

"To understand our concerns, one must first recognize the key rationale which the utilities offer to justify their use of ratepayer funds for these [natural gas vehicle] stations, to wit, ratepayer funds will be used to build [natural gas vehicle] refueling stations that would otherwise not exist. The existence of these stations will provide the refueling availability assurances that customers need as a precondition to

purchasing [natural gas vehicles]. As a result, a growing number of people will purchase [natural gas vehicles]. These [natural gas vehicle] owners will then purchase natural gas from the refueling stations which the utilities have helped to construct, thereby providing repayment to the ratepayers for their original investment, and eventually contributing to the fixed costs of utility gas pipelines, thus reducing these fixed costs to general ratepayers in the long term. (Exh. 87, p. 47.)

"The main problem with the utilities' Field of Dreams scenario (i.e., build it and they will come) is that it is speculative and risky for ratepayers, at best. Embedded in the utilities' rationale is the assumption that if ratepayer funds are expended for these stations, sufficient [natural gas vehicles] will then be purchased and operated to ensure full repayment to ratepayers through subsequent fuel purchases. However, SoCalGas has identified no less than seven factors which place ratepayers at 'substantial risk' . . . of never recovering their investment, let alone reducing their rates through the long-term spreading of fixed costs.' Specifically, SoCalGas has identified the following seven 'substantial risks' which could dampen [natural gas vehicle] penetrations or fuel consumption and leave ratepayers holding the bag: (1) continued high incremental prices for [natural gas vehicles]; (2) relaxed emissions regulations; (3) lower reformulated gasoline prices; (4) higher natural gas prices; (5) higher natural gas taxes; (6) economic stagnation; and (7) technological limitations. (Exh. 92, pp. II-45 to II-58; Exh. 87, pp. 47-48.)

"SoCalGas and SDG&E have attempted to assuage concerns about such ratepayer risks by proposing a so-called 'infrastructure

development adjustment mechanism' or 'capital limiter,' which seeks to control overbuilding of stations by conditioning prospective capital outlays on the actual throughput from existing stations. In concept, if existing throughput is below acceptable levels, capital outlays will be constrained to prevent overbuilding. (See, e.g., Exh. 92, pp. III-6A to III-6C and Exh. 174, pp. 24-25, and Attachments A and B.)

"There are a number of problems with this 'capital limiter' mechanism, but suffice it to say that by the utilities' own account it would still allow SoCalGas and SDG&E to spend at least 66% of the capital requested (i.e., over $22 million) even if station throughput is only 50% of that needed for ratepayers to break even. (Exh. 174, Attachments A and B.) Clearly, the 'capital limiter' mechanism still leaves ratepayers with a 'substantial' risk on their investment.

"SoCalGas and SDG&E also propose to use so-called 'site selection criteria' regarding their station development efforts. These criteria are alleged to reduce risks to ratepayers by ensuring that funds are only invested in those stations which meet the criteria, and have 'expected' returns that meet or exceed the companies' weighted average cost of capital, currently 9.2 percent before taxes. (See, e.g., Exh. 92, Chapt. I, Appendix I, and Exh. 174, p. 24.) However, the utilities have completely rejected any mandated 'take or pay' requirements, and the actual application and enforcement of these 'site selection' criteria appear to be completely within the companies' discretion. Thus, the assurances derived from these criteria are uncertain at best.

> "From the [Energy Commission's] perspective the continued existence of substantial ratepayer risks, notwithstanding all of the utility assurances to the contrary, is unquestionably proven by two simple facts: first, the gas utilities refuse to put any substantial shareholder funds into these infrastructure programs; second, the gas utilities have also refused to offer any sort of 'performance' incentive proposals for even sharing the risks and rewards of these proposals. As we stated in our written testimony, 'plainly and simply, the gas utilities expect the ratepayers to bear [all of] the risk and pay the [entire] price if things do not work out.' (Exh. 87, p. 48.)
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> "Clearly, the NGV infrastructure programs proposed by SoCalGas and SDG&E do not protect the ratepayers' long-term interests as required by the LEV statutes and guidelines. However, given the nascent nature of the industry, we are less certain about whether these programs, as proposed, will actually be anti-competitive on either an intrafuel or interfuel basis. Therefore, we leave it to others in this proceeding to brief this issue, both pro and con."

The utilities do not contest the facts cited by the Energy Commission. They do, however, contest the conclusions. SDG&E simply states (without citation to the record), that "[w]ithout a viable substitute, the prohibition of utility funded or partially funded customer stations would immediately stop the growth of [compressed natural gas] stations in the San Diego area, and would thereby greatly curtail the growth of [natural gas vehicles]." No one is arguing that additional refueling stations would not be useful. The question is whether the ratepayers have an interest in paying for their construction and operation, and bearing the risk of their failure.

Under the utility proposals, the utilities would make all the decisions about where and when stations would be constructed, but the ratepayers would bear virtually all the risk of failure. This is not a formula for success. In exchange for accepting this risk, the ratepayers would stand to benefit only if the natural gas vehicle market becomes sufficiently successful and the company-built stations attract enough business to pay back the cost of construction and operation and make a contribution to other fixed costs of the utility system.

As discussed above, SoCalGas cites seven factors that militate against the ratepayers ever realizing any benefits. Balanced against these risks is the utilities' confidence that a significant market for natural gas vehicles will develop if their programs are implemented. If the utilities are confident that a refueling station program would succeed, and if they can design a program that would compete fairly, they should be allowed to use shareholders' funds to do so. In exchange, they should have an opportunity to benefit from program success based on the revenues generated at each new station they build. The utilities are free to submit proposals for such a program in this docket. However, we will not approve the use of ratepayer funds for future customer-site stations.

Several parties raise concerns about unfair competition stemming from the utilities' proposed programs. Since we are not approving the programs, we need not fully address those issues here. However, in designing any future shareholder-supported refueling station programs, the utilities should bear in mind the lessons to be derived from the record currently before us. There are many companies that are interested in competing in the market for the construction and operation of refueling stations at

customer or other private sites. Any future utility refueling station program must be designed to avoid giving the utility any market advantage, based on its monopoly status. Among other things, construction, operation, and commodity charges must be fully compensatory.

The utilities propose selling their customer-site stations in six years. However, the utilities propose that ratepayers absorb any resulting losses when the stations are sold. This proposal would undermine the utilities' incentive to sell the stations promptly and for the highest value. Instead, we will require the utilities to remove all customer-site stations from ratebase when they are sold, or six years from the effective date of this decision, whichever comes first. The utilities will absorb twenty-five percent of any resulting losses and can retain twenty-five percent of any resulting gains. These requirements should encourage the utility to dispose of the stations quickly and profitably.

The utilities should be allowed to receive continuing reimbursement for operation of the existing customer-site facilities until the facilities are closed or sold, but in no event for longer than the next six years. No party objects to this.

9. Research, Development and Demonstration (RD&D) Programs

SDG&B asks for no funds for vehicle related RD&D. The SoCalGas seeks $25,900,000 and PG&E seeks $6,838,000 following table summarizes all RD&D requests in this proceeding

> "From the [Energy Commission's] perspective the continued existence of substantial ratepayer risks, notwithstanding all of the utility assurances to the contrary, is unquestionably proven by two simple facts: first, the gas utilities refuse to put any substantial shareholder funds into these infrastructure programs; second, the gas utilities have also refused to offer any sort of 'performance' incentive proposals for even sharing the risks and rewards of these proposals. As we stated in our written testimony, plainly and simply, the gas utilities expect the ratepayers to bear [all of] the risk and pay the [entire] price if things do not work out." (Exh. 87, p. 48.)
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SoCalGas also seeks $4,450,000 for natural gas infrastructure projects, designed to improve the efficiency, reliability and safety of refueling equipment. These goals are consistent with the Commission's guidelines and funding for these projects should be approved. The Energy Commission would increase the funding for SoCalGas' Liquefied Natural Gas study by $300,000 to ensure the company fully participates in the study. We will not require SoCalGas to increase its budget in that manner.

SoCalGas also requests that its natural gas vehicle research funding no longer be tracked through its RD&D Balancing Account. Instead, they would be tracked through the company's Natural Gas Vehicles Operations Balancing Account. This change would be inconsistent with our long-standing efforts to treat RD&D funding as a unique expense that is separately monitored. We reject this proposed accounting change.

10. Utility Rebates

All three utilities seek to offer rebate checks to people or firms that choose to acquire a natural gas vehicle, or convert a gasoline vehicle to natural gas. SoCalGas asks for $10,922,000, SDG&E seeks $1,050,000 and PG&E requests $2,585,000. All three companies propose to stop offering rebates within the next two or three years. We will not approve these programs, because they are not in the ratepayers' interest. These offerings also raise unfair competition issues that we need not address in this order.

The programs differ, somewhat, by utility. SoCalGas would make payments ranging from $1,400-$7,000. SDG&E would offer $2,000 at first, with payments then declining to $1,000 in 1997. For both of these companies, the goal of the payment would

be to absorb some of the extra expense of buying a vehicle that uses natural gas, rather than a more conventional fuel. PG&E would offer a base payment that could be increased if the vehicle in question met improved fuel economy and air quality standards. SDG&E and PG&E would limit the size of the payments to half of the cost premium for buying a vehicle that uses natural gas.

The Energy Commission, DRA and WSPA oppose these programs in their entirety. The utilities have not demonstrated that these programs create a direct ratepayer benefit. They argue that the rebates would contribute in some unquantified manner to the ability of the collective natural gas vehicle programs to deliver a net increased contribution to the fixed costs faced by each company's ratepayers. But they have not moved beyond a statement of ambitions to demonstrate how these savings will result from offering rebates. Nor have they shown that rebates actually result in the vehicle customers realizing lower costs than they would without rebates.

PG&E has attempted to design a rebate program that is more responsive to the Commission's guidelines. It would limit payments to no more than the expected contribution to fixed costs that would be generated within six years. It would offer larger payments to vehicles that promised greater energy efficiency or less pollution. PG&E has moved substantially in the right direction.

On balance, however, its program fails to deliver ratepayer benefits, as well. By pegging rebate levels to the expected savings, the effect on ratepayers is neutral, if a sufficient amount of fuel is eventually purchased from PG&E to fuel the vehicle. However, as discussed earlier, there are various reasons that this might not occur, ranging from variances

in prices and taxes to the use of noncore gas for refueling. A program that is neutral or worse is not in the ratepayers' interest. Further, despite the societal benefits, a payment that results in a less polluting vehicle does not comprise a ratepayer interest under the Commission's guidelines or related statutes.

11. Natural Gas Vehicle Program Administration/Overhead

SoCalGas' requested budget in this category is a residual number, derived by subtracting certain segregated budget requests from its overall labor and non-labor budgets. This leaves an expense level of $23,614,000, covering such activities as market research, regulatory and legislative coordination, engineering and technical analysis, organizational memberships, vehicle resale program, measurement and maintenance programs, advertising, tradeshows and exhibits, information systems, vehicle refueling appliance incentive program, and various staff positions to carry out or support these functions.

SoCalGas seeks the following amounts:

1. $2,682,000 for brochures, newsletters, decals and personnel "to discuss crucial decisions such as purchasing or converting existing vehicles to (natural gas vehicles)."

2. $920,000 to develop custom and portable exhibits for trade shows, conferences and seminars "to educate large groups of potential customers,

3. $480,000 for membership in various organizations that promote natural gas vehicles

promote the benefits of [natural gas vehicles] and to build awareness of the SoCalGas [natural gas vehicle] program."

In total, SoCalGas is seeking $7,692,000 for these purposes, an amount the company characterizes as modest, but necessary. In support of these expenditures, SoCalGas argues, "[i]f the motoring public remains ignorant of the economic and environmental benefits offered by [natural gas vehicles], as well the availability of [natural gas vehicles] and the requisite refueling infrastructure, no reasonable person can contend that the [natural gas vehicle] market will just happen. SoCalGas responsibility under state law is to make it happen."

We find that the utility bears no such responsibility under state law. Within certain limitations, the law does, however, encourage this Commission to approve utility programs that support the development of a market for natural gas vehicles. One limitation is that no ratepayer funds can be expended unless the program will provide direct benefits to ratepayers in the form of safer, more reliable, or less costly gas or electric service. SoCalGas has not demonstrated that the proposed expenditures would meet any of these criteria.

The company refers to the Commission's earlier statement that consumer education activities are part of the utilities' duty to ensure safe service. Educational activities can promote safety. However, SoCalGas has not demonstrated that its brochures, displays or advertising will be designed to promote the safe use of natural gas vehicles. SoCalGas mentions that the Commission wants the company to perform as an environmentally and socially responsible corporate citizen.

However, the Commission has identified a ratepayer interest in such behavior only as it relates to the provision of utility service. There is no direct ratepayer interest in having the utility encourage others to use less-polluting vehicles. Further, the company has not demonstrated that these activities will produce a net savings to ratepayers.

All parties have acknowledged, however, that there is a ratepayer interest in having the utilities provide customers with objective information related to the safe, reliable, efficient and cost-effective operation and refueling of natural gas vehicles. The challenge is to identify the portions of the utility's proposed budget that would meet these criteria. SoCalGas argues that it is proposing not to sell natural gas vehicles, but to promote "a concept, that (natural) gas vehicles are safe, reliable and efficient." There is no ratepayer interest in this type of promotional activity. Instead, ratepayers would have an interest in the provision of information that will help them select and utilize natural gas vehicles and related equipment in a manner that is safe, reliable and efficient. DRA recommends that SoCalGas be granted a $2,000,000 budget to provide customer information consistent with this goal. The Energy Commission opposes funding for any promotional activities. WSPA proposes disallowing all of the funds requested in this area. We will approve $2,000,000 for use in appropriate educational activities. It is not reasonable for SoCalGas to spend any ratepayer funds on activities that promote the purchase of natural gas vehicles instead of the purchase of vehicles using another type of fuel.

In addition to the programs discussed above, SoCalGas also requests funding for the following programs as part of its Overhead Budget:

1. $699,000 for marketing research: a program to identify potential Natural Gas Vehicle markets by use of surveys to determine preferences and attitudes allowing "SoCalGas to better target sales efforts and product offerings."

2. $200,000 for technical analysis of engine performance testing of natural gas vehicles and emissions monitoring. SoCalGas states that the results of these tests will be used as a "powerful sales tool" for fleet operators considering Natural Gas Vehicles.

3. $420,000 for public affairs: essentially a full-time news media representative position for coordination of media activities with policy and marketing activities by SoCalGas.

4. $133,000 for a Vehicle Refueling Appliance incentive program which is a cash rebate program designed to help reduce the cost of a Vehicle Refueling Appliance in the early years of the Natural Gas Vehicle program.

5. $1,050,000 for a Vehicle Resale Program which is a resale clearinghouse to ensure the existence of a used Natural Gas Vehicle market.

6. $1,078,000 for Reimbursable expenses: it is unclear from SoCalGas's testimony what this program constitutes.

Like the programs described earlier, the first three programs in this list are clearly marketing or promotional efforts by SoCalGas that do not carry direct benefits for

ratepayers in terms of greater safety or reliability. Each of these will be disallowed.

The proposed Recharging Appliance incentive program is similar to SoCalGas' vehicle rebate program in that it provides cash rebates to potential vehicle buyers to offset the cost of recharging equipment. This incentive program will be disallowed based on the same principle as discussed in the vehicle rebate section. The Vehicle Resale Program is another promotional tool that produces no clear ratepayer benefit and is beyond the traditional responsibilities of a utility. Ratepayer funding for the resale program will not be allowed. The sale of used natural gas vehicles should be developed by the market without ratepayer funding. SoCalGas provides little information about its reimbursables, and therefore those funds cannot be approved.

SoCalGas' Overhead component also includes numerous staff positions (in additional to those already discussed) for promotion and sales of Natural Gas Vehicles, operation and maintenance of fueling stations, marketing research, development of market and growth strategies, and daily business management. Based on the organization chart provided by SoCalGas, we find that the following positions requested by SoCalGas are essentially marketing in nature and therefore inappropriate for ratepayer funding:

- Manager of Natural Gas Vehicle Marketing (1 position) and Secretary (1 position)
- Natural Gas Vehicle Marketing Manager (1 position)
- Marketing Development Administrators (2 positions)
- Research Project Coordinators (2 positions)
- Vehicle Specialists (2 positions)

- Market Development Administrator (1 position)
- Marketing and Information Administrator (1 position)

SoCalGas also requests that it receive funding for three (3) full-time Operation and Maintenance Specialists. Since this decision reduces SoCalGas' funding for its fleet and fueling infrastructure programs, it is appropriate to reduce the number of Operation and Maintenance Specialists to two (2). Finally, SoCalGas indicates that it needs an Natural Gas Vehicle Project Manager position that has no personnel to manage. There is no clear description of function for this position, so it will be disallowed. Thus, SoCalGas' Natural Gas Vehicle staff budget is reduced from $8,742,000 to $4,133,000. We have also reduced SoCalGas' overhead expenses for office supplies proportionately.

SoCalGas also included an expense item it called "Indirect O&M" that does not fit into any other program category. This $7,844,000 figure is composed of four sub-items: clearing accounts, reassignments, franchise fees and uncollectables, and benefits. Benefits will be reduced in proportion to the percentage of reduction made to SoCalGas' labor costs. This was approximately 48%. The indirect O&M budget is therefore reduced to $6,638,000. The remaining items (franchise fees and uncollectables, clearing accounts and reassignments) will be presumably adjusted through SoCalGas' balancing accounts established in later sections of this decision.

SDG&E seeks $5,320,000 to cover computer and office supplies, equipment, telephone and postage, travel dues and staff overhead costs. In addition, this category includes parts and equipment needed to maintain the fueling stations. We will adopt the Energy Commission's suggested reduction of $1,934,000 from the $4,074,000 station maintenance budget to reflect the fact

that SDG&E will not be building and operating additional stations on customer sites. In addition, because SDG&E has offered very little justification for its proposed budget and because it appears that some personnel reflected in the overhead budget would be involved in marketing natural gas vehicles, we will also adopt the Energy Commission's recommendation that the marketing component of the overhead budget be reduced by approximately 50% (from $1,185,000 to $595,000). The resulting overhead budget is $2,791,000.

PG&E requests $3,512,000. As is true with most of its current request, this number is a reduction from earlier plans. In reducing its overheads, PG&E has strived to remove the marketing and promotional components that many parties earlier found objectionable. With the exception of overheads related to positions disallowed elsewhere, the current proposal appears reasonable and will be approved.

12. Balancing Accounts and Funding Fungibility

All active parties agree that the utility natural gas vehicle program expenses should be tracked in one-way balancing accounts. This means that funds that have been reflected in rates but left unspent would be refunded to ratepayers, while undercollections would not be tracked or recovered. We will approve the use of one-way balancing accounts as proposed by the utilities. The utilities may track their approved expenses and recover any such reasonable costs in rates the following year. We will not approve any expenditures that exceed authorized levels.

The utilities also want permission to shift funds from one program area to another. They refer to this as "fungibility." SoCalGas and SDG&E request complete fungibility,

which means they would be able to move funds from one program to another without limitation. This would mean that funds could be shifted from the fleet vehicle program to education or program administration, or RD&D funds could be used for purposes other than RD&D. It would be inconsistent with this decision to allow such flexibility. We are approving a fleet vehicle budget based on the utilities' EPAct obligations. We are approving RD&D funding based on the value of the proposed research. We are limiting the types of technology introduction and education activities that can receive ratepayer funding. It would provide the utilities with an opportunity to undermine these determinations if we then told the utilities they could shift the funds at will. We will not allow SoCalGas and SDG&E to shift funds as they have requested.

PG&E, on the other hand, has requested spending flexibility within its natural gas vehicle RD&D program within its Infrastructure Evaluation and Management program, and within a combination of its electric and natural gas fleet purchase programs. We will allow PG&E to shift funds between its approved RD&D programs under the same rules that govern fund-shifting for other RD&D expenditures. We will grant PG&E the flexibility it requests in other areas. Because of the modest nature of PG&E's electric vehicle program, it is appropriate for the company to be able to respond to market conditions and make the most prudent possible vehicle purchases.

13. SoCalGas' Ecotrans Proposal

SoCalGas seeks to borrow $3,000,000 of ratepayer funds to establish two businesses that would produce natural gas vehicles. The funds to be used would be unspent dollars previously approved for a DSM program. The ratepayers would bear

the risk of a business failure. SoCalGas first made this request in Application (A.) 93-07-004. The Commission deferred this issue to this proceeding. One business would perform "upfits," which means installing natural gas fueling equipment in new vehicles. The other business would "convert" vehicles, which means that the natural gas fueling equipment would be installed after the vehicle is sold to a customer. SoCalGas has already invested $3,000,000 in shareholder funds in these businesses. SoCalGas has not demonstrated a ratepayer interest in investing in this business. In addition, the use of regulated monopoly funds for the development of a private business in this emerging market raises the potential for unfair competition. SoCalGas shall not invest ratepayer funds in Ecotrans. The unspent DSM funds should be returned to ratepayers.

14. Cost Allocation

Currently, the three natural gas utilities spread the cost of their natural gas vehicle programs on an equal-cents-per-therm basis over all volumes sold to all customer classes. The exception is that the Commission has expressly exempted SDG&E from bearing costs for the SoCalGas program as one of its wholesale customers. PG&E proposes addressing revenue allocation for its future program costs in its upcoming Biennial Cost Allocation Proceeding. SoCalGas asks to change to an equal-percentage-of-marginal cost across all customer classes. The result of this change would be to shift more of the program costs from larger to smaller customers. SoCalGas says that this change is an effort to treat these costs in a manner consistent with the Commission's Long-Run Marginal Cost decision (D.92-12-058).

SDG&E asks to continue allocating its program costs on an equal-cents-per-therm basis. In addition, because its ratepayers are

supporting the company's own natural gas vehicle program, SDG&E asks to continue its exemption from paying for the SoCalGas program through its wholesale rates.

DRA advocates a continued use of the equal cents per therm cost allocation methodology, asserting that SoCalGas' proposal demonstrates a lack of confidence in the ability of its programs to provide net benefits. DRA argues that if the programs were as successful as SoCalGas predicts, then noncore customers would benefit more than core customers since it would result in a greater reduction in future gas costs. We agree that the burden of these special programs should most accurately track the path of potential benefits and will require all three companies to continue allocating program costs on an equal cents-per-therm basis.

In addition, there is no apparent reason for discontinuing SDG&E's exemption from paying for the SoCalGas' programs through its wholesale rates. We will allow the exemption to continue.

15. Rate Design

PG&E's current natural gas vehicle rate schedules (G-NGV1 and G-NGV2) are designed to recover the cost of gas and delivery-related electricity. However, as PG&E's rate witness points out, the rates reflect below cost pricing because they do not recover any portion of PG&E's capital outlay, maintenance, or fuel taxes in supplying natural gas as a vehicle fuel.

SDG&E's current rate schedules are similar in design to those of PG&E (D.91-09-086). SDG&E states that the present design was established to be competitive with other transportation fuels. SDG&E has two rate schedules:

(1) compressed and uncompressed gas service (with different rates depending on the type of customer) and (2) transportation service for customer-owned gas (only uncompressed gas).

Similarly, SoCalGas' rate schedules were not designed to cover the total costs of the service (D.92-01-021), but are market-based to make natural gas vehicles competitive with other clean fuel vehicle options. SoCalGas offers: (1) compressed and uncompressed gas service, and (2) transportation service for customer-owned gas (both compressed and uncompressed gas.)

PG&E proposes a change in design and level for one of its four rate schedules, G-NGV2, which is used for the compressed natural gas supplied at its company-owned stations. The company acknowledges that as a result of the current below cost pricing, fleet operators and potential retail competitors see an unrealistic picture of the economics of retailing and using compressed natural gas. PG&E notes that this inappropriate economic signal becomes more of a problem as the number of natural gas vehicles grows. Because PG&E's compressed gas is presently priced below cost, third parties are prevented from establishing a competitive price that would also be profitable.

PG&E is also concerned about the current price signals sent to fleet operators. Since the present compressed gas price does not reflect the full cost, it cannot be sustained into the future.

PG&E, therefore, proposes that the current price of compressed gas ($0.50562 per therm) be raised to $0.6000 per therm, and that the current customer charge of $13.42 per month (billed regardless of the number of therms purchased) be eliminated. PG&E argues that $0.6000 per therm achieves the necessary balance between the needs of the fuel retailers and the

Rate Proposals NGV Programs

	Rate Schedules	Compressed Natural Gas (CNG) Rate	Uncompressed Natural Gas Rate	Customer or Minimum Charge
Pacific Gas & Electric G-NGV1	Applies to the sale of uncompressed natural gas for the sole purpose of compressing it to vehicle fuel. Compression occurs on customer's premises.	Not applicable.	$0.39732 per therm.	$13.42 per month.
Pacific Gas & Electric G-NGV2 (Present)	Applies to the sale of compressed natural gas to customers who use it for vehicle fuel.	$0.50462 per therm.	Not applicable.	Same as G-NGV1.
Pacific Gas & Electric G-NGV2 (Proposed)	Applies to the sale of compressed natural gas to customers who use it for vehicle fuel. Proposed to take effect on Jan. 1, 1995	$0.6000 per therm.	Not applicable.	Eliminated.
Pacific Gas & Electric G-NGV3	For customers with minimum usage of 250,000 therms annually. Applied to the combined sale and transport of uncompressed natural gas for vehicle fuel.	Not applicable.	Sale charge: $0.188 per therm. Trans. charge: $0.085 (s) $0.099 (w) per therm Dist. charge: $0.137 (s) $0.151 (w) per therm	Ranges from $10.05 per mo. to $3,294 per mo. depending on monthly use. (Higher use increases the charge.)
Pacific Gas & Electric G-NGV4	For customers defined as "noncore", applies to transportation of customer-owned natural gas on PG&E system for use as a vehicle fuel.	Not applicable.	Trans. charge: $0.040 (s) $0.054 (w) per therm Dist. charge: $0.092 (s) $0.107 (w) per therm	Ranges from $10.11 per mo. to $3,314 per mo. depending on monthly use. (Higher use increases the charge.)

Rate Proposals NGV Programs

	Rate Schedules	Compressed Natural Gas (CNG) Rate	Uncompressed Natural Gas Rate	Customer or Minimum Charge
Southern California Gas G-NGV	Applies to the sale of natural gas at the customer's premises for use in motor vehicles.	$0.5419 per therm.	$0.2849 per therm. (Compression performed by customer at premises.)	For P-1 customers: $13 per mo. For P-2A customers: $65 per mo.
Southern California Gas GT-NGV	Applies to the transportation of customer-owned gas for use in motor vehicles.	$0.307 per therm. (compression performed by utility.)	$0.05 per therm. (compression performed by customer.)	For P-1 customers: $13 per mo. For P-2A customers: $65 per mo.
San Diego Gas & Electric G-NGV (Present)	Applies to the sale of natural gas to customers who use it for vehicle fuel. Three proposed rates, 2 for compressed gas, 1 for uncompressed gas.	1. For bus/military fleets: $0.50 per therm. 2. For all other fleets/vehicles: $0.70 per therm.	3. For motor vehicle fleet usage: $0.35 per therm.	None.
San Diego Gas & Electric G-NGV (Proposed)	Utility proposes a 10% increase in rates starting 1/1/93 to cover increases in fuel and program costs.	1. For bus/miliary fleets: $0.55 per therm. 2. For all other fleets/vehicles: $0.77 per therm.	3. For motor vehicle fleet usage: $0.385 per therm.	None.
San Diego Gas & Electric GT-NGV (Present)	Applies to the transportation of customer-owned natural gas for vehicle use for customers whose monthly gas use is at least 20,800 therms per mo.	Not applicable. (Customer is responsible for compression at customer's premises.)	$0.06607 per therm (intrastate transmission charge).	None.
San Diego Gas & Electric GT-NGV (Proposed)	Same as SDG&E's GT-NGV.	Not applicable. (Customer is responsible for compression at customer's premises.)	To be determined in SDG&E's BCAP proceeding.	None.

The Energy Commission and DRA argue that natural gas vehicle tariffs should be set at levels which will recover all direct and fully allocated long-run marginal costs for the services provided. They argue that lower rates are contrary to ratepayer interest and send inaccurate market signals to fleet purchasers and competing fuel providers.

Public Utilities Code § 745 states that the Commission may establish incentive tariffs to apply to gas sold for use as a vehicle fuel, but that the tariffs must be designed to recover costs and should not result in any direct or indirect subsidy from residential gas and electric customers. This provision only remains in effect until January 1, 1997.

In D.91-07-018, as modified in D.91-09-087, the Commission interpreted this provision in the context of PG&E's natural gas vehicle program. To provide compressed natural gas, the utility faces costs that include not only the purchase of the commodity, but also the construction and financing of the refueling station, electricity to run compressors, operation and maintenance of the station, and various taxes. If the refueling customer only pays for the gas and electricity, then the customer is not paying the full cost of the product being received. As a result, residential and other ratepayers are subsidizing the sale of compressed natural gas.

Nonetheless, the Commission approved PG&E's tariff, and found that the resulting subsidy was not unlawful, by explaining that PG&E was actually undertaking two different programs. Under one program (as authorized under § 740.3), the utility was building and maintaining refueling stations. Under the other program (as authorized by § 745), the utility was selling

compressed natural gas that happened to be dispensed at the utility's stations. Since § 740.3 allows for recovery of program costs from ratepayers (presumably including residential ratepayers) in some circumstances, then surely it is lawful to charge refueling customers only for the unrecovered costs.

There are at least two reasons, however, that we cannot rest upon this interpretation of the relevant statutes to support the continued offering of subsidized service. First, the provisions of § 740.3(c) must be interpreted in light of our guidelines and § 740.8, neither of which were available to the Commission when it reached the conclusions reflected in D.91-07-018 and D.91-09-087. Section 740.3(c) requires, in part, that the Commission "ensure that the costs and expenses of those programs are not passed through to electric or gas ratepayers unless the commission finds and determines that these programs are in the ratepayer's interest." As discussed above, the utilities have not demonstrated that their customer-site refueling stations are in the ratepayer's interest.

Section 740.3(c) also states that the "commission's policies shall also ensure that utilities do not unfairly compete with nonutility enterprises." The record in this proceeding demonstrates that if ratepayers subsidize the cost of compressed gas service, the resulting below-cost prices will skew the economic signals in a manner that will create a competitive disadvantage to those offering competing fuels and to any other providers of compressed natural gas. This is unfair competition because of the utilities' ability to rely on captive, regulated customers to provide the subsidy, rather than depend on retained earnings, as would any competitor. The record also indicates

that there are other firms that are interested in competing within and against the compressed natural gas market.

The second additional factor is that the express authority under which we have approved both incentive tariffs and refueling station programs expires, effective January 1, 1997. The Legislature may very well have recognized that as the alternative vehicle market develops, these subsidies and market boosts have an even greater likelihood of influencing market development in an unfair and potentially inefficient manner. We will honor the January 1, 1997 sunset date included in both of the code sections currently at issue by making sure that no utility is offering compressed natural gas at subsidized rates as of that date.

Although we will enforce the requirement that all subsidies end by January 1, 1997, the utilities should strive to ease the rate transition for those customers who have purchased natural gas vehicles with these subsidies in place. We want to do this even though the existing rates have been offered only as part of a pilot program and the sunset provisions in the law are clear. We will direct the utilities to file tariffs that will allow for gradual transition from the current rate levels to rates that reflect the direct and fully allocated long-run marginal cost of the service being provided. The transition should be completed no later than January 1, 1997.

E. Other Issues

1. Reporting Requirements

Each utility has described the information it proposes to provide to the Commission on an annual or biennial basis concerning the activities and results of its LEV programs.

addition, CEC and DRA have worked with each utility to agree on certain basic information which should be provided by all utilities. We will direct all utilities to provide, at a minimum, the uniform information, as summarized by PG&E in its opening brief:

Annually Reported Information (Generally Quantitative):

(1a) Total electric vehicle or natural gas vehicle population.

(1b) Electricity consumption for electric vehicles (i.e., total electric vehicle kWhs and total kWhs by rate schedule) and natural gas and electricity consumption for natural gas vehicles (i.e., total kWhs and therms and total kWhs and therms by rate schedule).[2]

(2a) Infrastructure installations (i.e., total connected load and total load by application [including residential, public parking for commuter applications (electric vehicles), public parking for non-commute applications (electric vehicles), commercial fleet and general public access for quick charging (electric vehicles)], public fueling sites (natural gas vehicles), and private fleet fueling sites (natural gas vehicles)]).

B. Other Issues

[2] PG&E will make a good faith effort to report accurate information but some limitations apply to vehicle monitoring and energy sales. In commercial and residential applications, where EV-specific TOU rate schedules do not apply, it may be difficult to track EV energy use. Where PG&E provides wholesale electric or gas service, information about EVs or NGVs served by such accounts may not be available to PG&E.

(2b) Summary of accomplishments for R&D, System Impact, Fleet and Technology Introduction/Customer Information.

(2c) Summary of spending for Infrastructure, R&D, System Impact, Fleet, and Technology Introduction.

(4a) Relevant legislative and regulatory updates.

Biennially Reported Information (Generally Analytical):

(3a) Electric vehicle charging and natural gas vehicle fueling patterns (i.e., total system-wide electric vehicle/natural gas vehicle load profile, total load profile by charging or fueling application, and summary of load management methods and their effectiveness).

(3b) Transmission and distribution system impacts (i.e., quantified magnitude and type of upgrading attributed to electric vehicle/load growth).

(3c) Generation system impacts (electric vehicles) or gas supply and storage impacts from natural gas vehicle loads.

(3d) Inactive electric vehicle charging or natural gas vehicle fueling capabilities (i.e., a very general explanation for the type of charging or fueling load taken out of service).

(4b) Technology developments (i.e., new vehicle battery and charging technologies, fuel storage and fueling technologies, and changes in the technology development goals of major organizations).

These reports shall be submitted to CACD no later than November 1st of each year during which LEV programs are funded. The first such report is due November 1, 1996.

2. The Application of DSM Rules to Low Emission Vehicle Activities

During the hearings, the parties debated the relationship of the LEV guidelines issued in D.93-07-054 and the DSM guidelines as revised in D.93-11-017. This issue results from the fact that many of the justifications offered by the applicants for approval of their proposed LEV programs rely on DSM concepts such as energy efficiency, load management and load building.

Each set of guidelines defers to the other without explaining how the two should interact. In the DSM guidelines decisions, the Commission says that the applicability of DSM guidelines to LEV programs should be addressed in the LEV docket. The LEV guidelines state that DSM guidelines should be followed where applicable.

In reviewing the programs proposed in this docket, we have not been troubled by the ambiguity of the current DSM rules, because we have been able to approve or reject programs on other grounds. However, the record is clear that the natural gas utilities are attracted to the load building potential of the natural gas vehicle market and that electric utilities want to explore the energy efficiency potential of vehicle rebates. In addition, the electric utilities are motivated by load management concerns to pursue their customer infrastructure programs.

We will approve these programs in the absence of clearly applicable DSM guidelines. However, we are persuaded

that to ensure the implementation of a consistent DSM policy, we must apply DSM criteria to review and approve those programs that are designed to meet traditional DSM goals. Aspects of the customer infrastructure approved in this decision clearly fit into this category. If the utilities ultimately propose electric vehicle rebate programs, they are likely to be DSM programs as well.

All active parties have submitted DSM guideline proposals in this docket. In the event that any electric utility submits a new rebate proposal, we will direct CACD to convene workshops for the purpose of designing DSM rules to apply to LEV programs. These rules should be consistent with current DSM policy. It is only clear that the new rules should differ from exiting DSM rules in two respects. First, they should take into account problems raised by technological and logistical differences, such as the fact that vehicles can be refueled in more than one location. Second, we are not persuaded that utilities should receive additional incentives to undertake LEV activities.

3. Division of Weights and Measures

The Division of Measurement Standards, housed within the California Department of Food and Agriculture, establishes tolerances, specifications and other technical requirements for commercial weighing and measuring devices, such as those measuring the flow of gasoline from the pump to the customer's tank. California Business and Professions Code § 12510(a)(4) exempts from this oversight the measurement of commercially delivered natural gas and electricity when the delivery systems are under the jurisdiction of this Commission.

The Department of Food and Agriculture seeks this Commission's determination that the exemption does not apply to commercial deliveries of electricity and natural gas to LEVs. The Department makes this request because it has already established uniform commercial standards of measurement for these commodities and because it understands that utility involvement in these activities will be short-lived.

Parties were invited to react to this proposal in comments filed in response to this proposed decision. Based on those comments, we are persuaded that this issue raises questions of fact requiring limited additional hearings.

IV. Conclusion

This decision establishes LEV program budgets for the next six years. However, we will direct the assigned Administrative Law Judge to schedule further hearings in response to three concerns raised by utilities in comments on the proposed decision. First, as discussed in the preceding section, we will allow parties to submit evidence concerning the implications of finding that utility-provided retail refueling services should not be exempt from the oversight of the Division of Measurement Standards in the California Department of Food and Agriculture. Second, SoCalGas and SDG&E state that, prior to the issuance of the proposed decision, they entered into commitments to build new compressed natural gas refueling stations or to provide natural gas vehicle rebates to customers and that their approved budgets should be increased to support these commitments. We will allow parties to submit additional evidence to address this contention.

The utilities must demonstrate the existence of these commitments, show why they are reasonable, and explain why the resulting expenses cannot be supported with previously approved bridge funds. Third, SoCalGas states that the proposed decision does not approve sufficient funds to support the company's mandatory fleet purchases under EPAct for the next six years. SoCalGas must provide evidence as to the number of vehicles it will be required to acquire pursuant to EPAct over a six-year period beginning with the effective date of this decision. SoCalGas also must demonstrate the reasonable incremental cost of the additional vehicles.

Findings of Fact

On July 21, 1993, the Commission issued D.93-07-054, the Phase I decision in this docket, which prescribed broad policy guidelines to govern utility activities to help develop and facilitate the use of LEVs and further the legislative goal of substantial market penetration.

2. The Commission directed PG&E, SCE, SoCalGas, and SDG&R to refine their plans for activities related to LEVs in light of these guidelines and to file, in Phase II, special applications requesting funding for any ongoing LEV program.

3. The Commission asked the utilities to address, in their applications, all funding requirements related to LEVs for a six-year cycle.

4. On January 1, 1997, the Commission loses its express discretion to establish special incentive tariffs for the use of natural gas and electricity as vehicle fuels (PU Code § 745), and loses its specific authority to allow natural gas utilities to construct and maintain natural gas refueling stations, to support

vehicle conversion centers, to offer incentives for vehicle conversions and for the purchase of factory-equipped compressed natural gas vehicles, and to pass the reasonable costs of such programs on to utility customers, where a ratepayer interest can be established (§ 745.5).

5. After January 1, 1997, the Commission retains its responsibility to work with the California Energy Commission, the ARB, the air districts, the utilities and the motor vehicle industry to evaluate and implement other policies to promote natural gas and electric vehicle equipment and infrastructure development (§ 740.3).

6. The impetus for the automobile manufacturers to develop and sell electric vehicles is the ARB's requirement that, by 1998, 2% of all vehicles produced for sale in the state must yield no tailpipe emissions when in operation.

7. Thus far, battery-powered electric cars, vans and buses are the only motorized vehicles that can operate without creating localized air emissions.

8. Unbridled demand for electric current to recharge depleted vehicle batteries could strain the existing system, undermining reliability and hastening the need for new generating resources as well as upgraded substations, distribution lines, and transformers.

9. The potentially rapid adoption of new electric technologies raises significant safety concerns.

10. The utilities and their ratepayers share a strong interest in affecting the behavior of electric vehicle owners and operators who will make daily decisions about how and when to recharge the on-vehicle storage batteries.

11. Utility electric vehicle use will help the utilities to meet the fleet requirements under EPAct.

12. Although the energy utilities must purchase alternative fuel vehicles, they are under no obligation to buy either natural gas or electric vehicles.

13. It is sensible and appropriate for the electric utilities to use electric vehicles.

14. Each utility must exercise its discretion to determine what vehicles to buy and when to buy them.

15. The proposed electric vehicle acquisition budgets are reasonable.

16. All of the system impact evaluation activities proposed by SCE and SDG&E in their settlement agreements as well as those proposed by PG&E are consistent with the guidelines and the related categories suggested by the Energy Commission and should be approved.

17. The statutes and guidelines would be rendered virtually meaningless if all of a particular utility's electric or natural gas vehicles programs could be lumped together for the purpose of determining if they are in the ratepayers' interest.

18. We do not find in the statutes or our guidelines a suggestion that we should or could approve, for cost recovery, programs that fail to benefit ratepayers.

19. Concerns about safety and system impacts dictate that the electric utilities be involved from the outset, to work closely with initial users and to understand how to fully mine the potential for load management and the appropriate use of pricing signals.

20. All of the proposed residential electric infrastructure programs will promote safety and off-peak charging. As such, they are each consistent with the guidelines.

21. There is no apparent reason that the direct beneficiaries of customer-side wiring programs should not reimburse the utility for those installations over a reasonable period of time.

22. SCE's and SDG&E's time-of-use tariffs for electric vehicle recharging should specifically include and identify a surcharge designed to recoup the customer-side wiring cost within a reasonable period of time.

23. The utilities should be involved with their fleet customers in their early efforts to use and recharge electric vehicles.

24. While residential customers are not likely to use more than one electric vehicle at a time, fleet purchasers are.

25. Fleet owners are more likely to use knowledgeable fleet operators who can oversee the installation and use of the equipment.

26. The need to influence electricity usage patterns is not as acute on the commercial/industrial side as it is on the residential side.

27. By opening public charging stations, the utilities would be making a clear statement, one reason to use an electric vehicle is that daytime recharging is fast and convenient. This is the opposite of the rationale offered for approval of all other electric vehicle programs; that electric vehicle recharging load is good for everybody, but only if it is off-peak.

SCE's and PG&E's currently proposed electric vehicle RD&D programs are reasonable.

29. Under the low emission vehicle statutes and guidelines, it is appropriate for utilities to assist their customers in obtaining accurate information related to the safe, efficient, reliable and cost-effective recharging and operation of electric vehicles.

30. It is not appropriate for utilities to use ratepayer funds to simply promote the market growth for electric vehicles.

31. SCE has not demonstrated that the proposed $3.6 million funding for the ATTAC Center is reasonable or that it is otherwise consistent with the guidelines.

32. SCE's stated intention to limit its contributions to CALSTART programs that are consistent with ratepayer interests provides little assurance that the proposed expenditures will be consistent with the guidelines.

33. SDG&E and PG&E do not explain what type of administrative staffs they would maintain.

34. We are not persuaded that a program with annual funding of approximately $16,000,000 needs the services of two budget analysts.

35. SCE has not shown why its electric vehicle program needs more than one media representative.

36. SCE has not demonstrated that those personnel "dealing" with legislation and regulation will avoid the types of ratepayer-funded lobbying activities proscribed under long-standing Commission policy.

37. The portions of SCE's Program Administration/Department Overhead budget request providing funds for the following positions are unreasonable:

(1) one budget analyst ($242,424)

(2) one media representative (writer) ($226,548)

(3) a Regulatory Affairs Manager and a four-person staff ($1,235,556)

38. PG&E's proposed administrative costs represent an average annual expenditure of $160,500, which appears to be a modest amount to spend in overseeing and supporting electric vehicle activities.

39. SDG&E has failed to support its $2,512,000 administrative budget request with specifics.

40. Because SDG&E proposes to spend roughly the same amount of money as PG&E for its electric vehicle effort, it is reasonable to allow SDG&E to receive the same amount of ratepayer support for its Administration/Program Overhead costs ($963,000).

41. It is appropriate that the utilities should be required to use the funds approved in this decision only for the special purposes for which they are initially intended.

42. Because of the uncertainty about how quickly electric vehicles will become available and whether or not consumers will respond favorably, it is important to provide assurances that unused funds will be returned to ratepayers.

43. SCE's one-way balancing account and fund-shifting proposals, as described in its settlement, are reasonable.

44. With the proviso that SDG&E's recovery would be limited to those actual expenditures that are proven to be reasonable, its proposed balancing account approach is acceptable.

45. SDG&E's electric vehicle program fund-shifting proposal is acceptable because it is offered as part of a comprehensive settlement.

46. With a large differential between off-peak and on-peak rates, electric vehicle customers may be encouraged not only to avoid on-peak usage, but also to avoid using a dedicated electric vehicle meter entirely when on-peak charging is desired or required.

47. Customers faced with a 35 cent/kWh rate might be encouraged to connect their charging units to a normal household meter in order to pay only 15 cents/kWh. If many customers switched to flat rate service during peak periods, the time-of-use tariff would be less than revenue-neutral, other customers would be subsidizing electric vehicle users, and the tariff would comprise an incentive rate.

48. The utilities' time-of-use rate proposals are reasonable so long as no subsidies exist as of January 1, 1997.

49. Major vehicle manufacturers are not expressly required to offer natural gas vehicles.

50. Natural gas vehicles face a promising market.

51. Perhaps the single greatest hurdle to customer acceptance of natural gas vehicles is the sense that gasoline refueling stations are ubiquitous, but natural gas refueling stations are hard to find.

52. There appears to be a mismatch between the parties to the natural gas vehicle program agreement and the interests it affected.

53. The vagueness of various terms and conditions in the proposed natural gas vehicle program settlement militate against its approval.

54. It would be inconsistent with the guidelines and applicable statutes to approve all of a particular utility's programs in the aggregate.

55. The utilities have failed to demonstrate that the various proposed natural gas vehicle programs would be reasonably likely to increase throughput in a manner that would make the programs beneficial to ratepayers.

56. The utilities have failed to demonstrate (and only take credit for) the incremental effects of their programs.

57. The utilities have not demonstrated a linkage between any particular proposed program and an increase in gas throughput.

58. The pilot programs already undertaken by the utilities stand for the proposition that throughput projections may be overly optimistic.

59. Most of the throughput benefits of the proposed natural gas vehicle programs are speculative, leaving ratepayers with the risk that the program costs will not be reimbursed.

60. It is unrealistic to assume that all of the benefits of increased throughput will flow to ratepayers.

61. The potential for increased throughput resulting from vehicle fuel sales does not establish a sufficient ratepayer interest to satisfy applicable statutes and our guidelines.

62. It is consistent with our guidelines for utilities to purchase vehicles that operate on alternative fuels in order to comply with EPAct.

63. The utilities have not demonstrated that it would be prudent to accelerate their acquisition of natural gas vehicles to meet EPAct's requirements when the viability and cost of vehicles using various alternative fuels could change in the intervening years.

64. It is reasonable for the gas utilities to satisfy all of their EPAct vehicle requirements in early years by acquiring natural gas vehicles.

65. In order to rely on the use of natural gas vehicles for their fleets, the utilities need to make sure that adequate refueling facilities exist.

66. SoCalGas has not met its burden of proving the need for a specific number of additional stations.

67. It is reasonable for SoCalGas to add 20 utility refueling stations to the 10 it already has.

68. Because SoCalGas has not demonstrated that the funds allocated in D.94-10-035 were acquired for purposes outside of the proposals made in this proceeding, SoCalGas has not shown that the funds cannot be used for building its additional fleet stations.

69. SDG&E's proposed addition of 3 utility fleet stations appears to be a reasonable investment to support the company's EPAct requirements.

70. It is reasonable for PG&E to place new tube trailers into rates only when they are used and useful for utility purposes.

71. SoCalGas has not demonstrated that its brochures, displays or advertising will be designed primarily to promote the safe use of natural gas vehicles.

72. There is no direct ratepayer interest in having the utility encourage others to use less-polluting vehicles.

73. Ratepayers have an interest in the provision of information that will help them select and utilize natural gas vehicles and related equipment in a manner that is safe, reliable and efficient.

74. It is reasonable for SoCalGas to spend ratepayer funds on appropriate educational activities.

75. It is not reasonable for SoCalGas to spend any ratepayer funds on activities that primarily promote the purchase of natural gas vehicles instead of the purchase of vehicles using another type of fuel.

76. There is no ratepayer interest in funding SDG&E's proposed vehicle demonstration program.

77. It is reasonable for SDG&E to spend $1,000,000 to provide constructive, non-promotional information to its customers.

78. It is reasonable for PG&E to spend $3,622,000 on the natural gas vehicle technology introduction and education activities.

79. The sums requested by PG&E for natural gas system impact studies are modest and all parties concerned could benefit

from a more precise understanding of how the refueling of natural gas vehicles affects utility systems.

87. The customer-site natural gas refueling station programs proposed by SoCalGas and SDG&E do not protect the ratepayers' long-term interests as required by the LEV statutes and guidelines.

88. The utilities' proposal that ratepayers absorb any resulting losses when existing refueling stations are sold would undermine the utilities' incentive to sell the stations promptly and for the highest value.

89. It is appropriate for the utilities to remove all customer-site stations from ratebase when they are sold, or six years from the effective date of this decision, whichever comes first.

90. (This number is not used.)

91. SoCalGas' proposal to spend $6,600,000 to develop heavy and medium duty engines, $5,100,000 to develop light duty vehicles, and $9,750,000 to develop "system and component technology" is inconsistent with the Commission's guidelines because SoCalGas has not demonstrated that these efforts would provide a direct benefit to ratepayers.

92. SoCalGas' proposal to spend $4,450,000 on natural gas infrastructure projects, designed to improve the efficiency, reliability and safety of refueling equipment consistent with the Commission's guidelines and funding for these projects should be approved.

86. The proposed natural gas vehicle rebate programs are not in the ratepayers' interest.

87. It is reasonable for SoCalGas to spend $9,308,000 on overhead expenses and $6,638,000 for indirect program expenses.

88. It is reasonable for SDG&E to have an overhead budget of $2,791,000.

89. PG&E's proposed overhead budget is reasonable with the exception of a fractional salary of a Legislative/Regulatory Representative.

90. The utility natural gas vehicle program expenses should be tracked in one-way balancing accounts.

91. It would be inconsistent with this decision to allow SoCalGas and SDG&E the absolute funding flexibility they have requested.

92. PG&E's natural gas vehicle budget flexibility request is reasonable.

93. SoCalGas has not demonstrated a ratepayer interest in investing in the Ecotrans business.

94. The use of regulated monopoly funds for the development of a private business in this emerging market raises the potential for unfair competition.

95. It is reasonable for SDG&E to continue its exemption from paying for the SoCalGas program through its wholesale rates.

96. The burden of these special programs should be accurately track the path of potential benefits, with program costs allocated to all customers on an equal-cents-per-therm basis.

97. To provide compressed natural gas, the utility faces costs that include not only the purchase of the commodity, but also the construction and financing of the refueling station, electricity to run compressors, operation and maintenance of the station, and various taxes.

98. PG&E's current natural gas vehicle rate schedules reflect below-cost pricing because they do not recover any portion of PG&E's capital outlay, maintenance costs, or fuel taxes related to supplying natural gas as a vehicle fuel.

99. SDG&E's current rate schedules are similar in design to those of PG&E.

100. SoCalGas' rate schedules were not designed to cover the total costs of the service, but are market based to make natural gas vehicles competitive with other clean fuel vehicle options.

101. If the refueling customer only pays for the gas and for electricity, then the customer is not paying the full cost of the product being received. As a result, residential and other ratepayers are subsidizing the sale of compressed natural gas.

102. If ratepayers subsidize the cost of compressed gas service, the resulting below-cost prices will skew the economic signals in a manner that will create a competitive disadvantage to those offering competing fuels and to any other providers of compressed natural gas.

103. The Commission should direct the utilities to file natural gas tariffs that will allow for gradual transition from the current rate levels to rates that reflect the direct and fully allocated long-run marginal cost of the service being provided.

Conclusions of Law

1. We will not approve ratepayer-funded activities to extend past December 31, 1996 in areas for which the legislature has provided a sunset date.

2. The electric vehicles settlements should not be approved in their entirety because, while they contain many constructive proposals, there are provisions in each which are inconsistent with Commission policy as set forth in the guidelines.

3. The utilities should receive the funds necessary to monitor some public charging facilities if and when they are created by others, but should not receive funds to sponsor, promote, or construct such facilities.

4. We will require that electric vehicle recharging rates for those customers receiving free installations include a surcharge to allow for repayment of the customer side installation costs within a reasonable period of time.

5. SCE's and PG&E's currently proposed electric vehicle RD&D programs should be approved.

6. The utilities and any other interested parties should be allowed to study the need for ratepayer-funded electric vehicle rebate programs and the utilities should allowed to make a future request for such funding, if it appears appropriate.

7. No later than September 1, 1996, we should require each electric utility to submit an advice letter filing demonstrating whether or not the battery recharging tariffs have proven to be revenue-neutral and proposing any changes necessary to ensure revenue-neutrality as of January 1, 1997.

8. The proposed natural gas vehicle program settlement is not in the public interest and should not be approved.

9. The potential for increased throughput resulting from vehicle fuel sales does not establish a sufficient ratepayer interest to satisfy applicable statutes and our guidelines as the basis for program approval.

10. The utilities should not require additional funds to acquire and use vehicles that are less expensive than those reflected in their current budgets.

11. The gas utilities should receive sufficient ratepayer funds to meet their EPAct requirements during the next six years with natural gas vehicles.

12. CACD should convene a workshop to develop a consistent manner of accounting for fleet savings.

13. The Commission should direct the utilities to file natural gas tariffs that will allow for gradual transition from the current rate levels to rates that reflect the direct and fully allocated long run marginal cost of the service being provided.

14. No later than November 1st of each year during which LEV programs are funded (beginning in 1996), each utility should submit reports to the Commission as described in this decision.

15. The utilities' programmatic and funding requests should be approved subject to the discussion, modifications, limitations, and requirements set forth in this decision.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas), and San Diego Gas & Electric Company (SDG&E) are granted approval to proceed with their proposed Low Emission Vehicle (LEV) programs, subject to the discussion, modifications, limitations and additional requirements set forth in this decision.

2. This order affects all ratepayer funded LEV activities for the next six years. To the extent that the authority granted in this order conflicts with previous LEV funding decisions, those earlier orders are superseded.

2a) SCE is authorized to transfer the balance within the Electric Vehicle Bridge Funding Memorandum Account to the appropriate balancing or memorandum account as authorized in this decision, and to reflect the removal of the Electric Vehicle Bridge Funding Memorandum Account from its tariffs.

3. No later than November 1st of each year in which ratepayer funds are approved for LEV activities (beginning in 1996), each utility shall file with the Commission Advisory and Compliance Division (CACD) reports as described in this order and in the utility's proposals.

4. Within 20 days of the effective date of this order, each utility shall file revised tariffs consistent with this decision.

5. CACD shall schedule a Fleet Savings workshop, as described in this decision.

This order becomes effective 30 days from today.

Dated November 21, 1995, at San Francisco, California.

DANIEL Wm. FESSLER
President
P. GREGORY CONLON
HENRY M. DUQUE
JESSIE J. KNIGHT, JR.
JOSIAH L. NEEPER
Commissioners

I will file a concurring opinion.

/s/ JESSIE J. KNIGHT, JR.
Commissioner

APPENDIX A
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List of Appearances

Respondents: Gibson, Dunn & Crutcher, by Arthur L. Sherwood, Attorney at Law, for Southern California Edison Company; Ivan J. Tether, Attorney at Law, for Southern California Gas Company; Maribeth Bushey, Keith Melville and Judy Anderson, Attorneys at Law, for San Diego Gas & Electric Company; R. L. Ballew, and S. D. Patrick, Attorneys at Law, for Southern California Gas Company; Doreen Ludemann, Michelle Wilson, and Harry W. Long, Jr., Attorneys at Law, for Pacific Gas and Electric Company; and Carol B. Henningson, John Tinker, Thomas E. Taber, Lowell H. Orren, and Sumner J. Koch, Attorneys at Law, for Southern California Edison Company.

Interested Parties: Ater, Wynne, Hewitt, Dodson & Sheritt, by Julie Simon and Michael Alcantar, Attorneys at Law, and Doug Henderson, for Western States Petroleum Association; Kathleen Abbott, for Caltrans - Division of Transportation Planning; Chris Calwell, for Natural Resources Defense Council; Jerome Candelaria, Attorney at Law, for Wright & Talisman; Grueneich, Ellison & Schneider, by Dian Gruenrich and Mary J. Novak, Attorneys at Law, Elaine Chang and William B. Marcus, for South Coast Air Quality Management District; Steven M. Cohn and David Abelson, Attorneys at Law, for California Energy Commission; Robert Finkelstein and Peter V. Allen, Attorneys at Law, for Toward Utility Rate Normalization (TURN); John P. Gaydash and Robert Wragg, for General Motors Corporation; Richard O. Geiss, for Chrysler Corporation; James R. Ryden, Attorney at Law, and Gary Honcoop, for California Air Resources Board; Kevin Kernan and Lisa Danyluk, for Transwestern Pipeline; Adrian J. Hudson, for California Natural Gas Bulletin; Harvey I. Klein and Marilyn Riley, for Ford Motor Company; Joel Singer Awad & Singer, by Raymond A. Lewis, Attorney at Law, for American Methanol Institute; David L. Modisette, for California Electric Transportation Coalition; Ronald C. Myron, for LP Gas Clean Fuels Coalition and Western Liquid Gas Association; Arlen Orchard, Attorney at Law, for Sacramento Municipal Utility District; Patrick J. Power, Attorney at Law, for City of Long Beach; Andrew Brown, Attorney at Law, for Barakat & Chamberlin, Inc.; Robin Segal, for Social Science Research Institute, University of Southern California; James R. Ryden, Attorney at Law, for Air Resources Board; Randolph Wu and Wayne Le Pine, Attorneys at Law, for El Paso Natural Gas Company; Robert B. Klausner, for California Environmental Vehicle Consortium;

List of Appearances

Kevin R. McSpadden, Attorney at Law, for California CNG, Inc.; Thomas D. Oliver, for Chevron U.S.A., Inc.; Terry Price, for U.S. Electrician; Christopher Pedersen and Jason McMillen, for Fleet Star, Incorporated; Dusty Ruel, for American Gas & Technology; Michael Shames, Attorney at Law, for United Consumer Action Network (UCAN); Mickey D. Smith, for Sierra Detroit Diesel Allison; James Squeri, Attorney at Law, for Armour, Goodin, Schlotz & MacBride; Nancy Vandenberg, for Transwestern Pipeline Company; Gary Pope, for Liquid Carbonic Corporation; Helene V. Smookler, Attorney at Law, for Southern California Association of Governments, Harry W. Lo, Electric Company; and Carol B. Hennigson, John Tinker, Division of Ratepayer Advocates; Pamela Nataloni, James E. Scarff, at law, for Southern California Edison Company.

Interested parties: Alter, Wynne, Hewitt, Dobson & Sheritt, by Julie Simon and Mic(END OF APPENDIX A)rneys at law, and Doug Henderson, for Western States Petroleum Association; Kathleen Abbott, for Caltrans - Division of Transportation Planning; Chris Caswell, for Natural Resources Defense Council; Jerome Chandelaria, Attorney at law, for Wright & Talisman; Gruenich, Ellison & Schneider, by Dian Grueneich and Mary J. Novak, Attorneys at law, Elaine Chang and William B. Marcus, for South Coast Air Quality Management District; Steven R. Cohn and David Abelson, Attorneys at law, for California Energy Commission; Robert Finkelstein and Peter V. Allen, Attorneys at law, for Toward Utility Rate Normalization (TURN); John P. Gaydash and Robert Wragg, for General Motors Corporation; Richard O. Geiss, for Chrysler Corporation; James K. Ryden, Attorney at law, and Gary Hoocoop, for California Air Resources Board; Kevin Keenan and Lisa Danyluk, for Transwestern Pipeline; Adrian G. Hudson, for California Natural Gas Bulletin; Harvey I. Klein and Marilyn Riley, for Ford Motor Company; Vogl Singer Awad & Singer, by Raymond A. Lewis, Attorney at law, for American Methanol Institute; David L. Modisette, for California Electric Transportation Coalition; Ronald C. Myron, for LP Gas Clean Fuels Coalition and Western Liquid Gas Association; Arlen Orchard, Attorney at law, for Sacramento Municipal Utility District; Patrick J. Power, Attorney at law, for City of Long Beach; Andrew Brown, Attorney at law, for Barakat & Chamberlin, Inc.; Robin Segal, for Social Science Research Institute, University of Southern California; James R. Ryden, Attorney at law, for Air Resources Board; Randolph Wu and Wayne le Pine, Attorneys at law, for El Paso Natural Gas Company; Robert B. Klausner, for California Environmental Vehicle Consortium;

I.91-10-029, R.91-10-028
D.95-11-035
Commissioner Jessie J. Knight, Jr., Concurring:

I am pleased today to join my colleagues in supporting the revised Proposed Decision. This is an issue on which I have spent a great deal of personal reflection, even going so far as to issue, with Commissioner Henry Duque, an alternate. While this airing of views may have delayed our conclusion of this already lengthy case, which began in October 1991, I believe that the final outcome is one which best serves the ratepayers of California while allowing utility participation in an important environmental initiative.

This decision contains important philosophical principles which, for me, guide my thinking on many of the emerging issues that confront the electric services industry as a whole as it moves to a more competitive environment. There are, however, two principles that are not reflected explicitly in the revised proposed decision. Those principles are:

1. LEV programs are laudable social goals which are best achieved by sending proper price signals; the pollution problems that low emission vehicle programs are trying to address should be solved through direct taxes on pollution sources.

The cost of solving our vehicle-related air pollution problems should be borne directly by the users of gasoline and diesel vehicles. Saddling utility captive consumers with the cost of programs to stimulate the development of markets for low emission vehicle programs sends improper price signals; it serves to mask the cost of pollution caused by gasoline-fired engines. The behavior we are trying to alter will best be changed by direct price signals, not a tangential and, in many cases duplicative, tax. The Commission recognizes that although the population of ratepayers and drivers of non-LEV vehicles substantially overlaps, their consumption behavior can differ. For example, a single worker who commutes daily over perhaps long distances, will likely utilize less electric energy during peak hours than a retired person who stays at home and drives less.

It is consistent with the LEV guidelines promulgated in Phase I of this proceeding (D.93-07-054) to ensure that vehicle users receive appropriate economic signals. If the cost of buying and using conventional gasoline and diesel vehicles remains artificially low because the resulting pollution costs are transferred to utility charges, low emission vehicles will look artificially expensive and the market for these vehicles will be under-stimulated. Furthermore, the most responsible policy, be it environmental or otherwise, is one that explicitly connects causes with effects. Asking

captive consumers to fund LEV programs sends a very muted and indistinct message about the negative impacts of driving gasoline-fueled vehicles.

2. Products or services for which there are alternate providers should be obtained in the marketplace; utilities should not be given automatic market share because they have access to captive consumers.

As traditional monopoly providers, utilities have easy access to potential LEV customers. Those potential customers, however, should be able to benefit from the competitive markets for LEVs and their accompanying infrastructures. A utility in a LEV market should earn every customer, and not acquire customers merely because the utility historically has sold the customer electricity or natural gas. This principle, too, is consistent with the guideline about not interfering with the development of a competitive market.

As stated, both of these principles are seen by many to be implicit in today's decision. By the explicit words of this concurrence, these additional principles stand as clear indicators of my way of thinking about a competitive future.

Dated November 21, 1995, at San Francisco, California.

/s/ Jessie J. Knight, Jr.
Jessie J. Knight, Jr.
Commissioner