F. Surcharge Distributed As A Production Credit

Proposal Jointly Sponsored by[1]:

California Solar Energy Industries Association
Cambrian Energy Development LLC
Environmental Defense Fund
Genesis Energy Systems
Laidlaw Gas Recovery Systems
LA Sanitation District
NEO Corp.
Orange County
City of Sacramento
Sonoma County
San Diego Gas & Electric
Pacific Gas and Electric
Southern California Edison

1. Abstract

The Surcharge Distributed as a Production Credit Program (the Proposal) for implementing a new renewables policy is offered for consideration as a method to meet the Commission's goals as stated in its Opinion on Electric Industry Restructuring (D. 95-12-063 issued December 20, 1995 as modified in D. 96-01-009 issued January 10, 1996). This Proposal recognizes that renewables are intended to provide benefits that are statewide and nationwide in value, not just regional. Accordingly, this Proposal encourages the continued development of renewable projects and technologies in California, through a statewide, state-administered program funded by means of a uniform, statewide public goods surcharge collected from all end users in the State.

The surcharge is intended to foster new development in renewable generation projects. The program would be available to wind, solar thermal and photovoltaic, geothermal, biogas, landfill gas, solid fuel biomass and waste-to-energy technologies. This Proposal can accommodate provisions for emerging technologies. The program is applicable to existing projects to the extent that (1) existing projects add new capacity (applicable to additional energy resulting from such addition) or (2) existing projects replace existing generation technology with new generation technology (applicable to portion of energy resulting from replaced generation) and (3) no energy or capacity resulting from the new or replaced facilities are subject for sale under a standard offer contract.

[1] The organizations listed (the sponsors) have not obtained full management/organization approval for this Proposal.

The Proposal is intended to be funded through a statewide, legislatively determined surcharge collected from all end users in the State, although in an initial phase it could be implemented for CPUC-jurisdictional end-users alone. Funds would be transferred to and distributed by the California Alternative Energy and Advanced Transportation Financing Authority or some other State agency.

This Proposal prescribes an administratively straightforward, non-discretionary method of allocating the surcharge funds: renewable projects compete for funds on the basis of the incremental above market cents-per-kilowatt-hour level of support they require. Funds would be provided as a cents-per-kilowatt-hour production credit only for the actual energy produced. The cents-per-kilowatt-hour production credit would be set up-front, and would be fixed for a 10-year period in order to support the financing of renewable projects. The production credits would supplement the revenues renewable projects receive from marketing their power, either through sales to the Power Exchange, or sales through contracts for differences or bilateral arrangements.

New allocations of production credit awards are intended to be made each year over a five-year period beginning in 1998. Credits awarded in any year would be secure for their 10-year duration. In accordance with the direction provided by the Commission in D. 95-12-063, the program would be reviewed in the year 2000 before subsequent production credit allocation awards were made.

Distribution companies, including municipal utilities, would be responsible for collection of the surcharge. The sponsors of this Proposal strongly advocate implementation on a uniform statewide basis. Renewables have statewide benefits and statewide effects. Implementation of a program to support renewable development which relies on only a discrete segment of ratepayers in the state is inconsistent with the movement to regional electric markets and may potentially competitively disadvantage one segment of the market over another. In addition, in order for any program to be successful, it must have the broad support of parties in the State for funding and implementation. This program could, if necessary, be implemented in two stages. Stage 1: funded through the IOUs only and implemented under existing Commission authority; Stage 2: once legislation is passed would expand program to statewide implementation.

2. Interpretation Of Commission's Goals And Rationale For Strategy

In D. 95-12-063 the Commission stated:

> "We are committed to establishing restructuring policies which maintain California's resource diversity for existing resources as well as encourage development of new renewable resources." (p. 147)

> "We continue to believe that a minimum renewables purchase requirement is the best approach to meet our resource diversity goals.....We have not concluded at this time on whom this obligation should be placed. We hope that the Working Group will provide us with further guidance on this, and will address this question further as we implement this decision....We prefer that the requirement be set at the same level for all electric utilities on a statewide basis, but recognize that it may be appropriate to develop a transitional strategy given the current resource portfolios of some utilities....We would expect that these minimum renewables levels would be in place beginning in 1998 and continuing through 2000, at which point we would revisit whether the requirement should be modified." (p. 150)

In summary the sponsors believe this Proposal meets the Commission's objectives because the Proposal:

- Sets a statewide funding level to be allocated for continued renewable development
- Can be implemented by 1/1/98
- Assures that new state-of-the-art technologies will be developed
- Sets an overall cost cap for the program
- Relies on a simple to administer auction process to allocate production credits to the most cost-effective projects
- Promotes a broad range of technologies
- Does not require penalties to assure implementation
- Would not provide a subsidy in addition to the prices QF projects receive under SO#2 or SO#4 contracts.
- Provides for administration of the program by an independent State agency already familiar with funding independent projects
- Would not result in any inconsistent obligations being placed upon investor-owned utilities which would be in conflict with the goals of a restructured electric industry
- Promotes renewable participation in the market mechanisms envisioned by the Commission - Power Exchange, contracts for differences, bilateral contracts

The sponsors offer this Proposal for consideration by the Commission as a method to accomplish the Commission 's objectives and to do so in an effective, cost-quantified, and fair manner.

This program will be effective. It is consistent with restructured electricity markets that replace mandates with customers preferences and market incentives. The production credit for new projects supports only successful projects, while the 10-year term allows long-term financing. Since production credits, once awarded, are assured, this program can effectively

promote renewable projects from its inception, even under the uncertainty of near-term review.

This program will quantify costs. Cost considerations have been a crucial element of the Commission's policy decisions on electric restructuring to date. The cost of this Proposal is neither open-ended nor uncertain. Total costs are subject to a certain cap. Renewables-on-renewables competition ensures that only the most cost-effective projects are supported. In addition, customer preferences for renewables and their attributes, such as their value as a hedge against fuel price increases, will serve to reduce the cost of this program.

This program will be fair. The costs of this Proposal are borne equitably by the State's electricity consumers and as such consumers in different service territories will not have to pay different amounts in order to fund the renewables program. This Proposal targets the cost of developing renewable generating projects in a manner designed to promote financability and development of these facilities. This Proposal does not heavily favor existing projects over new projects.

This Proposal does not require extensive monitoring or penalties for non-compliance. The Proposal is consistent with the separation of utility procurement and distribution functions. The sponsors believe this Proposal is unlikely to result in substantial litigation.

This Proposal has been developed specifically to avoid administrative complexity. In addition, it removes responsibility for implementation and administration from the investor-owned utilities.

The sponsors believe that any Proposal adopted by the Commission should foster consistent goals among parties. Continued renewable development is an important statewide goal, and to effectively accomplish this goal any mandated program should not place parties in conflict with the intent or market functions envisioned for electric industry restructuring. Any program must also foster voluntary cooperation of the parties, rather than forcing compliance through arbitrary penalties or mandates. The sponsors urge the Commission to consider adopting this Proposal as the method for continued renewable development in the State.

3. Program Overview And Description

I. Funds Collected Via Nonbypassable Surcharge

a. Funding

Program applicability and surcharges should apply to all end users on a uniform basis and requires Legislative action to implement on statewide basis.

Any legislation to effect this program:

Must be uniform statewide surcharge

Must identify and cap the cost for the renewables program

Must provide for periodic review of process and need for continued funding

Amendments to current legislative bills can be crafted or a new bill can be drafted to meet the objectives of Proposal. AB 1123 (Sher) is an example of a proposed Bill which can be crafted to accommodate this process. As currently drafted, AB 1123 would set a maximum of 3.3 % for energy efficiency, RD&D, and renewables (low-income services are outside this constraint).

If legislation is not signed into law prior to 1/1/98, a two-phase process could be implemented. Initially surcharges could apply only to CPUC jurisdictional entities, until Legislative action expands authority for surcharge collection to all providers in the state; however, legislative action should be strongly pursued to implement the program statewide effective 1/1/98.

b. Applicability of surcharge and implementation

Funds collected through statewide nonbypassable surcharge on all end users.

A fixed dollar amount collected through the surcharge.

The program will be administered by a State agency not by retail sellers. (e.g. California Alternative Energy and Advanced Transportation Financing Authority or other State agency as deemed appropriate).

The actual amount of renewables development will be dependent on the cost-effectiveness of renewables compared to the market.

c. Review of Program

The Proposal is intended for implementation over a five year period. The program should be reviewed in the year 2000 as envisioned in D. 95-12-063.

II. Funds distributed as per-kWh production credit

a. Allows renewables to compete in the market

The Production Credit provided for a 10-year term.

Funds are paid based on how much the developer believes it requires above the market price in order to make its project commercially viable. (e.g.: If the developer believes the

market price for its project is 4 cents/kWh, but it requires 5.5 cents/kWh, then it would require a production credit of 1.5 cents/kWh to allow it to compete.)

Renewable generation projects, limited to wind, solar (including solar thermal electric and photovoltaic), biomass (including solid waste biomass, solid waste-to-energy facilities, landfill gas, anaerobic digester gas), and geothermal, may qualify, subject to the following:

- Production credits apply only to energy sold (not off-grid or on-site usage)
- Applies to new projects or new additions to existing projects provided such new capacity is not available for sale under Standard Offer contracts
- The production credit applies only to developers selling into the California market

No project or technology will be prevented from seeking and using additional funds from grants, state or federal tax credits or industry financial or material participation.

RD&D projects should be funded separately from renewables projects. It is recommended that the agencies which will administer the renewables and RD&D programs coordinate to establish principles for funding of projects that wish to participate in funding from both agencies.

b. Production Credits paid only to successful projects

The surcharge funds are paid only when and to the extent that projects actually generate electricity.

c. Limited to new projects

Production Credits are available for: (1) new renewable projects which begin operation on or after December 20, 1995; and (2) existing projects to the extent that (a) existing projects add new capacity (applicable to additional energy resulting from such addition) or (b) existing projects replace existing generation technology with new generation technology (applicable to the portion of energy resulting from replaced generation) and (c) no energy or capacity resulting from the new or replaced facilities are subject for sale under a standard offer contract.

III. Production credit level determined in periodic auction

a. Simple auction process

Following are the principal rules that should be used to allocate funds. The State Agency should ultimately have discretion on the details of implementation of the program.

- Simple auction. Developer bids ¢/kWh amount needed to allow project to compete in market and the expected annual kWh production level as the sole parameters
  - Single price bid for entire 10-year term of Production Credit

Single annual production level bid for entire 10-year term of Production Credit

Production Credit payments not to exceed annual production level bid

Payments only for energy produced/sold

Developer makes its own decisions and arrangements on marketing of its output

Must bid for 10-year term

Hybrid renewable projects eligible for production credits only for renewable portion of kWh production

No penalties necessary

No forecasts of market price or other factors necessary

Unused Production Credits distributed back into state fund, re-awarded as part of next auction

No pre-condition that bidder have a contract for sale of its power in order to participate in the Renewables Program

This Proposal can easily accommodate emerging technologies.

b. A State agency should administer the program

A State agency should administer this program. This Proposal identifies the California Alternative Energy and Advanced Transportation Financing Authority as an agency that has prior experience with administering funds for QF-related programs. Alternately, another state agency could be chosen to carry out the administrative functions of this program.

IOUs/retail sellers, however, should not be obligated to administer the program. After restructuring, the IOU distribution companies will no longer be responsible for power procurement. Placing a mandate for procurement of renewables on the IOUs would be inconsistent with the visions of market functions post restructuring.

Funds collected will not be required to be grossed-up since the surcharge will not be considered taxable so long as the funds are distributed to the State for distribution.

State administration of this program will eliminate potential conflicts and regulatory monitoring otherwise necessary to accommodate utility subsidiary projects which may seek funding under this program.

4. Implementation Issues and Section II Questions

a. What Is The Obligation?

a.1 How is "renewables generation" defined for purposes of qualifying for tradable "renewable energy credits" under this proposed program? Do existing and

incremental utility-owned renewable-resource generation qualify for Renewable Energy Credits?

The surcharge distributed as a production credit program does not involve tradable renewable energy credits; in the case of this proposal "renewables generation" must be similarly defined in order to determine those projects eligible for surcharge funds. The same definition adopted in the AWEA/etc. proposal is proposed here: biomass (including solid waste biomass, solid waste-to-energy facilities, landfill gas, and anaerobic digester gas); geothermal; solar (including solar thermal electric and photovoltaics); and wind.

Only energy-producing facilities that are not under contract or under cost-based or PBR-type regulation would be eligible to receive production credits.[2] In addition, eligibility should be limited so that only new projects or existing projects that have made significant new capital investments can qualify for production credits.

There are two principal reasons for limiting renewable development supported by the public goods charge to projects not under contract or regulation. First, projects under contract in many cases already receive above-market support for their production. Second, past ratepayer support of contracts for renewable projects was based in part on the assumption that the beneifts of those contracts – both direct (energy and capacity) and indirect (e.g., avoided pollution) – would continue over the life of the contracts without additional support.

In addition, there are two principal reasons for limiting eligibility to new projects or existing projects that have made significant new capital investments. First, an emphasis of this proposal – in addition to recognizing public benefits such as the pollution avoided by renewable energy generation – is to advance the development of renewable energy technology. Second, if existing projects under contract could obtain public goods funding by leaving existing contracts, then this would have the effect of subsidizing contract buy-outs with public goods funding. Above-market contracts for existing projects are analogous to any other stranded investment. Such stranded investments should be addressed through CTC mechanisms rather than through public goods charges.

Out-of-state renewable facilities would be eligible to receive production credits, provided that their energy output is delivered to end-users who contribute surcharge funds. It is believed that this feature is necessary and sufficient in order for this proposal to comply with the "Commerce Clause" (see the response to question a.7).

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[2] An exception may be made for facilities which are largely dediciated to non-energy purposes, such as distributed renewable generation. The primary value of distributed renewable generation may be in serving distribution functions such as substituting for substation or distribution investments. There are important issues related to unbundling of utility functions – such as self-dealing and cross-subsidization – that the Commission must address before such an exception can be made.

This proposal also calls for the surcharge to be implemented on a statewide basis, in which case a project that delivers kilowatt-hours to the California market would be eligible for production credits.[3] If legislation is not enacted by 1/1/98 this proposal should be implemented by the Commission for CPUC-jurisdictional end-users. In this first phase, the nonbypassable surcharge to support renewables would be applied to CPUC-jurisdictional end-users, and renewable facilities would be eligible to receive production credits if their energy was delivered to CPUC-jurisdictional end-users. Legislation could extend the nonbypassable surcharge to support renewables to all California grid-connected end-users. In this second phase, renewable facilities would be eligible to receive production credits if their energy was delivered to any California end-user.

Since it may be difficult to trace kilowatt-hour transactions through multiple intermediaries, this proposal suggests a simple rule: kilowatt-hours will be eligible to receive production credits if they are sold to the Power Exchange (or ISO, which may make ancillary service purchases), or if they are sold via bilateral contract to a retail supplier that supplies only CPUC-jurisdictional end-users (in the first phase), or to all California end-users (in the second phase). Kilowatt-hours that are otherwise sold to CPUC-jurisdictional or California end-users may be eligible for credits, but the burden of proof will fall on the renewable supplier to show what fraction of its kilowatt-hours are provided for the benefit of these end-users.

a.2 What are renewable energy credits? How do they relate to energy portfolio management?

NA.

a.3 How is a diversity of renewables encouraged?

This proposal does not make any specific provisions to encourage a diversity of renewable technologies. It does contemplate support for "emerging" technologies by specifying a separate production credit level (determined by a separate bid process) for such technologies. Constraints that would encourage diversity among renewable types (for example, set-asides that would allocate specific portions of surcharge funds to specific technologies) would tend to increase costs both by allocating funds to some resources which are not the least-cost resources across available technologies.

a.4 Are currently-high-cost technologies or pre-commercial technologies fostered by this program?

[3] Rather than "delivered to," it would probably be more correct to say "provided for the benefit of" or "paid for by." The conventional usage of "delivered" is assumed to reflect these physical and financial realities.

Yes, as mentioned in response to the previous question, this proposal contemplates a separate production credit level (determined by a separate bid process) for technologies designated as "emerging." The extent to which high-cost technologies or pre-commercial technologies that are supported by RD&D funds would also be eligible to receive production credits should be a matter reviewed in coordination by the agencies administering the renewables and RD&D programs.

a.5 How is renewable self-generation handled? Is self-generated renewable energy eligible for Renewable Energy Credits, or for other means of support?

Renewable generation should be eligible for production credits only if it is sold through the grid to either the Power Exchange (or ISO) or to an end-user. Renewable self-generation thus is not eligible for production credits except for that portion that is a net delivery to the grid (that is, the surplus of generation over consumption). One reason for this restriction is that it may be administratively difficult to determine how much renewable energy is delivered for on-site consumption. In the case of net metering – where only one meter is allowed – only the net generation can be determined

Off-grid renewable self-generation applications should not be eligible for production credits. One reason for this restriction is that such applications are typically not metered. In addition, even if such an application were metered, public policy should not advantage electric applications over other applications (for example, compare a windmill that directly pumps water with a windmill that generates electricity which is then used to pump water). Finally, off-grid applications will likely avoid the CTC and the public goods surcharge that supports the production credit program. This avoidance would result in cost shifting to other customers and should not be supported by the program.

a.6 How are hybrid fossil-fuel/renewable facilities handled?

Production credits should be awarded only to the portion of kilowatt-hour production that is renewable as defined in the response to question a.1.

a.7 Does out-of-state generation qualify for Renewable Energy Credits? Is it desirable or necessary to protect in-state California renewable energy generators from out-of-state competition? Is it possible?

Out-of-state generation will be eligible for production credits provided the energy is sold to in-state end-users (see the response to question a.1). Commerce Clause concerns probably prohibit any restrictions on the applicability of this program to out-of-state generation.

a.8 If hydro is included, how are practical issues associated with hydropower handled?

Hydro is not included. See the response to question a.1, above.

a.9 How is utility-owned generation of distributed renewables handled? Is it eligible to receive RECs or surcharge funds? Does the proposal permit RECs or surcharge funds to accrue to distributed or other renewable applications that may involve the cross-subsidization of generation with T&D savings, or vice-versa? Does the proposal permit or prohibit distributed or other utility-owned renewable power not sold through the power exchange to receive credits or surcharge funds?

Note: the CPUC ruled that during the five-year transition to direct access, UDCs must sell all of their electric generation (presumably central or distributed) through the Exchange, and must serve their customers with power purchased solely through the Exchange. Taking power outside of the Exchange is prohibited. Some applications of distributed renewables may not, however, lend themselves to sale through the Exchange.

As mentioned in the response to question a.1, distributed renewable generation may be an exception to the general prohibition against providing production credits to energy-producing facilities that are under cost-based or PBR-type regulation, because these facilities may serve primarily distribution functions rather than energy generation (see footnote 1). As also mentioned previously, this is an exception that should not be made until the Commission addresses issues – such as cross-subsidization – involved with such facilities.

Even distributed renewable generation that is not utility owned but which is owned by a utility (or UDC) affiliate involves issues of market power, self-dealing, and cross-subsidization. Affiliate ownership could also be inconsistent with functional unbundling and with the Commission's requirement that all UDC power be bought and sold through the Power Exchange. Again, these are issues the Commission must address before such distributed renewable generation facilities should be eligible to receive production credits.

a.10 What is the level for the requirement?

While the surcharge distributed as a production credit program does not require that a minimum purchase requirement be specified, it does analogously require that the level of the surcharge funds be specified. The surcharge as a portion of customer bills should be uniform statewide.

A surcharge funding level of $100 million per year has been proposed for the three investor-owned utilities. Such a level is achieved by a surcharge of approximately 0.6% of 1995 total electric revenues in the utility service territories. A surcharge of 0.6% of revenues should be applied statewide.

Initially, if legislation is not enacted by 1/1/98, the 0.6% surcharge should be applied by the Commission to entities under its jurisdiction. The surcharge should be extended by legislation to apply statewide on a nonbypassable basis to all grid-connected end-users. The specific funding level should then be decided as part of legislative action.

Note that this proposal does not require that individual customer surcharges be collected on a per-kilowatt-hour basis. In order to avoid cost shifting, both CTC and Public Goods Charges should be implemented on a percentage-of-bill basis.

How does this level relate to the level of renewables from 1990 to the present?

There is no guarantee that the proposed level for surcharge funds will preserve or increase the level of renewables compared to current or historical levels. The purpose of this proposed public policy program is to secure environmental benefits, diversity benefits, and other public goods associated with renewables. This program introduces competition among renewable producers to lower the cost to society of securing those benefits. This is an appropriate strategy when benefits have not been precisely quantified.

Does the level of the requirement increase over time?

No.

a.11 Describe how, if at all, the compliance obligation adjusts during a transition period.

The requirement may increase slightly over time in response to changes in kilowatt-hour sales and to inflation, as described in the response to the previous question. The major impacts of the program over time will be due, however, to the manner in which production credits are awarded to projects. The proposal is that surcharge funds should not be allocated in a single year. Rather, the proposal contemplates a five-year implementation period. One fifth of the surcharge funds would be allocated each year until the maximum level is allocated in the fifth year. Once funds are allocated to a project, and that project begins production, that funding level continues for 10 years. The results of this allocation method, with the simplifying assumption that projects begin production in the same year that funds are allocated and that there is no inflation, are shown in Table 1:

Table 1
Illustration of Costs Over Time of
Surcharge Distributed as a Production Credit

(million $)

	New awards--production credits per year	Total production credits distributed each year
1998	20	20
1999	20	40
2000	20	60
2001	20	80
2002	20	100
2003		100
2004		100
2005		100
2006		100
2007		100
2008		80
2009		60
2010		40
2011		20
Total		1000

Table 1 assumes that the first allocation of funds occurs in 1998, and that one-fifth ($20 million per year) of the total funding ($100 million per year) is allocated to projects in that year. Assuming for the sake of illustration that projects begin operating immediately, this allocation of $20 million per year continues for 10 years, through 2007. Thus, the "vintage-1998" projects receive a total of $200 million ($20 million per year for 10 years). The second allocation of funds occurs in 1999, and results in an additional $20 million per year being distributed through the year 2008. The last allocation is made in the year 2002. Funds from that allocation continue through 2011.

The last column of Table 1 shows the total effect of the funding allocations. The total amount of production credits distributed ramps up as a result of the five incremental allocations made in the years 1998 through 2002. The maximum is reached in 2002, and total continues at that level through 2007. After that, the total declines as the end of each 10-year period is reached. Since each of the five "vintages" (1998 through 2002) receives a total of $200 million ($20 million per year over 10 years), the grand total of funds distributed to projects is $1 billion.

The administering agency should have some discretion in the implementation of the program. For example, since it is unlikely that all projects which are awarded an allocation of funds will come into operation, more than one-fifth of the funds could be allocated in the initial years. Allocations in later years could be adjusted to account for the success of projects in initial years while assuring that the overall funding cap was not exceeded. That is, funds initially allocated to projects that do not proceed to construction and operation could be reallocated in subsequent years.

The sponsors also anticipate that the agency would impose certain minimum requirements on bidders. "Bid bonds" – where bidders must post a bond equal to a certain percentage of their bid – are common in competitive awards, and state agencies have experience in their administration.

There are several options for the collection of surcharge funds:

1. Surcharge funds could be collected on a "pay-as-you-go basis"
2. Surcharge funds could be collected up-front, to cover the 10-year obligation to provide production credits.
3. Surcharge funds could be collected partially up-front.

Table 2 illustrates these options, using the payment pattern shown in Table 1 as a basis for the illustration:

Table 2
Illustration of Options for Collection of Surcharge Funds

	Pay as you go	Up-front collection*	Partially up-front*
1998	20	200	100
1999	40	200	100
2000	60	200	100
2001	80	200	100
2002	100	200	100
2003	100		100
2004	100		100
2005	100		100
2006	100		100
2007	100		100
2008	80		
2009	60		
2010	40		
2011	20		
Total	1000	1000	1000

*Ignoring interest on undistributed balances

In each case the total amount of funds collected (Table 2) equals the total amount of funds distributed (Table 1) – $1 billion. Table 2 simply shows different time-patterns for collecting the funds.

The first column of Table 2 illustrates the pay-as-you-go option. In this option surcharge funds are only collected as they are needed.

The second column illustrates the up-front collection option. In this case, surcharge funds are collected as soon as a commitment is made to provide production credits. For example, in 1998 a commitment is made to provide production credits of $20 million per year for 10 years. Thus, $200 million is collected to provide for those production credits. (This example ignores the effects of interest. In reality, less than $200 million would need to be collected, since the funds could be placed in interest-earning accounts until they were distributed.)

The third column illustrates an intermediate option, in which funds are collected partially up-front.

The first option – to collect funds on an as-needed basis – appears to be the simplest option, especially when variation in the time when renewable projects begin production, and variation in the year-to-year energy production from renewable projects is considered. The second and

third options are illustrated, however, due to an important consideration: for the purposes of financing renewable projects, renewable developers must have assurance that the production credit funds will be provided. Such an assurance will extend the effectiveness of surcharge funds, by reducing the financing costs of renewable projects. If sufficient assurances can be provided by other means (for example, a contract-like commitment to provide the production credit funds) then the first option is preferred.

a.12 Does the proposal include a uniform requirement for all electric providers, including utilities, on a statewide basis?

Yes. The surcharge should apply to all California retail electric providers on a nonbypassable basis. If legislation is not enacted by 1/1/98, then the surcharge should be applied initially to all CPUC-jurisdictional retail electric providers, again on a nonbypassable basis.

a.13 What is the time horizon for the program?

Note: Financing of new renewable facilities, which increases competition, may be contingent on an expectation that a market for renewable power will exist for an extended period of time.

The program is proposed to be reviewed in the year 2000. The program should terminate – in terms of new awards to new projects – after the year 2002, when the maximum level of funding would be achieved. This "sunset" provision will not affect the financing of renewable facilities in years preceding the review, since production credits awarded in those years would be guaranteed for a ten-year period to those specific facilities.

a.14 Is the requirement established on a percentage of megawatts or percentage of megawatt-hours basis?

Production credits are proposed to be provided only a per-megawatt-hour basis.

a.15 Does the proposal establish floors for certain technology types?

No.

b. Where Is The Obligation To Comply?

b.1 On whom is the requirement applied? Is the requirement applied only to entities under the Commission's jurisdiction, or is it applied statewide?

The surcharge distributed as a production credit program does not impose a minimum purchase requirement on any entity. Rather than requirements and non-compliance penalties,

this proposal provides the production credits as positive incentives for the development of renewable energy. The production credits are funded by a surcharge that should be applied on a nonbypassable basis to all grid-connected end-users in California. If legislation is not enacted by 1/1/98 the Commission should implement a nonbypassable surcharge applied to grid-connected end-users subject to the Commission's jurisdiction.

The surcharge should be applied statewide. Initially, if legislation is not enacted by 1/1/98, the surcharge should be applied by the Commission to entities under its jurisdiction. The surcharge should be extended by legislation to apply statewide on a nonbypassable basis to all grid-connected end-users.

b.2 Are regulated retail providers treated similarly to unregulated retail providers?

Yes, as long as unregulated retail providers are subject to the nonbypassable surcharge.

b.3 What is the penalty for non-compliance? Should this penalty be interpreted as a cost cap for the program?

As mentioned in the response to question b.1, the surcharge distributed as a production credit program does not involve a penalty for non-compliance. The level of surcharge funds defines the cost cap for the program.

b.4 How is non-compliance determined?

NA.

b.5 What provisions add flexibility to compliance, if any?

NA.

b.6 How does the program ensure that the policy and its costs are nonbypassable, such as the CTC or the Public Goods Charge?

The surcharge for renewable energy is identical in form to the CTC and the Public Goods Charge, except that it should be extended by legislation to apply to all grid-connected end-users throughout the state.

c. How Are Renewable Energy Credits Initially Allocated?

c.1 How are Renewable Energy Credits generated from existing renewable facilities (QFs and utility-owned) initially allocated?

NA.

c.2 What is the relationship of the allocation of renewable energy credits and the CTC or Public Goods surcharge?

NA.

c.3 If customers or ratepayers are initially allocated Renewable Energy Credits, how are the credits administered?

NA.

c.4 How would the proposed Renewable Energy Credit allocation affect negotiations to buy out existing QF contracts? Would it encourage or discourage such buyouts? Would it make them more or less cost-effective to ratepayers?

NA.

c.5 How does the initial allocation deal with the possibility of windfall profits accruing to individual renewables generators, or types of generators?

NA.

c.6 Does the proposal potentially increase the value of utility-owned renewable resources in a way that would encourage their divestiture? If so, how should ratepayer interests be addressed?

Existing utility-owned renewable resources would be eligible for production credits only if they were divested and they made significant new capital investments (see the response to question a.1). As a result, the value of existing assets should be largely unaffected by this proposal, since in essence only the future increment to the asset is eligible for production credits. Thus, this proposal should have little effect on incentives for divestiture.

d. How Is The Program Administered?

d.1 What agency certifies Renewable Energy Credits?

This proposal does not require that generation from every renewable project be certified. Only those new projects which have won an allocation of production credits must have their kilowatt-hour generation and sales to California end-users verified before production credit

funds are distributed. This proposal suggests that the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) may be an appropriate independent agency to administer this program, although legislation could designate another agency if that were deemed appropriate.

There are two different responsibilities that the administering agency has under this proposal. The first responsibility is to allocate funds to projects through a simple auction mechanism for the cents-per-kilowatt-hour level of the production credit. The second responsibility is to distribute the surcharge funds in accordance with the production credit level awarded and the amount of energy generated.

CAEATFA is an independent agency that appears to have the necessary expertise and resources to administer this program. Its Board includes the President of the CPUC and the Chair of the California Energy Commission, as well as representing the State Treasurer, Controller, and the Department of Finance. Its administrative staff is within the Department of the Treasurer **[correct title?]**. CAEATFA has experience in financing independent projects, including evaluations of due diligence.

In an initial phase of this program, which may be necessary if legislation is not enacted before January 1, 1998, the Commission would have oversight responsibility for the administration of this program. Administration should be delegated to an appointed board or contracted to an independent party.

d.2 What mechanisms are proposed for trading of Renewable Energy Credits?

NA

d.3 What mechanisms are proposed for program oversight and mid-course corrections?

As described in the response to question d.1, this proposal should be implemented by legislation statewide, and administered by a State agency. If legislation is not enacted by 1/1/98, the Commission would have oversight responsibility. The program should be reviewed in the year 2000 before subsequent allocations of production credits are made.

There are a number of administrative details – such as ensuring that projects that have been awarded a credit allocation are actually proceeding to production (and credit use), or if they are not, re-allocating the credits to a new auction – which should be left to the discretion of the administering agency or board.

d.4 What agency monitors and enforces compliance with the program, and how is it carried out?

As mentioned in the response to question d.1, the California Alternative Energy and Advanced Transportation Financing Authority is suggested as an administrator for this program. Its responsibilities will be (1) to administer the auction, including accepting bids from eligible projects and (2) distributing funds, which involves the verification of renewable kilowatt-hour generation and sales to California end-users from winning bidders.

e. Cost-Related Issues

e.1 What are the costs associated with the program, and who pays?

The surcharge should be applied on a nonbypassable basis to all grid-connected end-users statewide. As mentioned in the response to question a.10, the surcharge is proposed to be 0.6% of 1995 total electric revenues, which is approximately $100 million per year for the investor-owned utilities. If legislation is not enacted by 1/1/98, then initially the surcharge should be applied to all grid-connected end-users under the Commission's jurisdiction. Ultimately, the specific funding limit should be determined by legislative action.

After implementation, program costs and effectiveness can be measured on the basis of the cost-per-kilowatt-hour value of the production credits needed to support new projects.

e.2 What cost-containment measures, if any, are provided?

See the response to question e.1.

e.3 If the program utilizes floors for certain technology types, what are the cost implications?

Floors for technology types are not proposed in this program.

e.4 Will implementation of the program lead to cost-shifting between consumer groups or regions of the state?

No.

e.5 How is competition within and between renewable technologies encouraged?

All renewable technologies compete to receive production credits – which represent the increment above market that renewables need to compete with conventional generation. The competition among renewables means that production credits are awarded only to those renewables that are closest to market.

Between existing renewables facilities and potential new facilities?

Such competition is encouraged by this proposal only to the extent that existing facilities leave existing contracts or leave cost-based or PBR-type regulation and make significant new capital investments. See the response to question a.1.

e.6 What implications, if any, does the proposal have in defining the roles of the LDC and of competitive suppliers of electricity?

None. The proposal is compatible with any number of roles for the LDC and competitive suppliers of electricity.

e.7 What is the consistency of this proposal in relation to cost-related guidance provided by the Commission Roadmap?

The Commission Roadmap Decision did not specify a level of funding. This proposal provides a firm cap on overall costs.

f. How Does The Program Fit With Other Aspects Of Electric Industry Reform?

f.1 Is the program compatible with existence of an Independent System Operator? A Power Exchange? A Direct Access Market? Is the proposal consistent with the Commission's vision of the role of the Power Exchange and ISO?

Yes.

f.2 Is the proposal dependent in any way on the Power Exchange and or ISO? If so, are any additional protocols necessary?

No. Since decisions to build new renewable facilities are left to the market (with the incentive of production credits for new renewable energy), the competitiveness and cost-effectiveness of renewables will be enhanced, of course, by a properly functioning Power Exchange and ISO, as well as by the multiple purchasers provided by a Direct Access market.

f.3 Does the proposal involve conflicts of interest between distribution and competitive retail service?

No.

f.4 How does the program avoid conflicts of jurisdiction between state and federal levels?

State-federal jurisdictional issues are not believed to arise under this proposal.

f.5 What is the relationship between the proposal and Direct Access "Green Marketing"?

This proposal encourages the development of "Green Marketing." Those renewable projects that are best able to sell their attributes – including price stability, as well as environmental benefit – to direct access customers will best be able to compete in the market, and require a lower production credit. Thus, those projects that are best at marketing will be favored to win a production credit allocation in the auction.

f.6 What is the relationship between the proposal and performance based ratemaking (PBR)? Does the proposal place Renewable Energy Credits under PBR, or exclude Renewable Energy Credits from PBR?

This proposal is independent of PBR.

f.7. Does the program create any potential market power problems involving the generation market or Renewable Energy Credits?

No.

f.8. How does the proposal relate to any consumer protection or consumer education efforts? For example,

a) Rules for New Entrants. Does the proposal entail any licensing requirements for new entrants?

No. The only requirement is that renewable projects that wish to be awarded production credits must be determined to be eligible.

b) Consumer Education. Does the proposal require any consumer education? For example, how does the proposal protect consumers from "green marketing" programs where marketers collect twice – once for credit sales and once for "green" power sales, thereby not increasing total green power?

This proposal avoids the specific problem mentioned in the example. This proposal encourages green marketing (see the response to question f.5). At the same time, this proposal requires verification of renewable kilowatt-hours before production credits are provided (see the response to question d.1).

There will still be a need for consumer protection activities. The same renewable kilowatt-hours should not be marketed to two different consumers, for example.

f.9 How, if at all, does the proposal relate to RD&D programs funded by the Public Goods Charge?

This program will help mature renewable technologies become competitive with conventional energy supplies. It will also help emerging technologies become market competitive. Less-mature renewable technologies that nevertheless promise important societal benefits will depend in part on RD&D, energy efficiency, or other public goods funding for their continued development. These other sources of funds can be augmented by the surcharge/production credit funds provided by this program.

f.10 How, if at all, does the proposal relate to energy efficiency programs funded by the Public Goods Charge?

Renewable self-generation, which is not covered by this proposal (see the response to question a.5), may be a component of energy efficiency programs.

f.11 How does this proposal affect the CEQA compliance work recently initiated by the CPUC?

This proposal will lead to development of new renewables. It does not assure that existing renewables will remain in production. Thus, the net effect of the proposal should be estimated and included in the overall impacts of the Commission's proposals.

5. Legislative Requirements

5.a Can the PUC implement this proposal by itself, or is legislation needed? What is the status of entities not under PUC jurisdiction in this program?

To implement this program on a statewide basis, legislation is required. If legislation is not enacted by 1/1/98, then the PUC should implement this proposal for those entities within its jurisdiction.

As mentioned in the response to question b.1, the surcharge should be applied statewide, to include all electric end-users on a nonbypassable basis. If legislation to extend the program statewide is not enacted by 1/1/98 then the program should be initially implemented for CPUC-jurisdictional entities.

5.b What steps are needed to implement the program, and how long would it take? How does this implementation timing relate to the Commission's 1998 implementation goal?

- The surcharge must be put into place.
- An administrator – to run the auction that determines production credit levels, and to verify renewable kilowatt-hours and sales to California end-users from "winning" projects" – must be selected.
- The administrator must design procedures for the auction and for the provision of production credits.

6. Positions of the Parties in Favor/Neutral/Oppose

DRA Comments On Surcharge Proposal By EDF et. al.

DRA can support this proposal if and only if it includes the following:

1. The implementing entity may modify the credit auction at any time to assure that it does not encourage gaming.

2. The Commission should advocate statewide adoption of the program and may terminate the program for IOUs if it is not enacted statewide within a reasonable interval.

3. Production credits cannot accrue to distributed renewables owned by UDCs and affiliates. (See CEC comment #3.) Unbundling, T&D cross-subsidization, market power and other issues also loom large.

4. UDCs must pass through local T&D benefits to accelerate the commercialization of distributed renewables owned by customers and competing providers.

AWEA/CBEA/GEA/STEA Comments on Proposal by EDF, et al.

OPPOSE. Surcharge/subsidy approach is not a minimum purchase requirement, thus is inconsistent with Commission's decision and is less efficient than market standard approach. Proposal fails to recognize environmental and diversity benefits of renewables as required under current law. Amount of funds proposed would support less than 20% of current level of renewables. Administrative disbursement of funds is subject to inefficiency and practical pitfalls. Program would result in new renewables at earliest 2-5 years after policy adoption and potentially later if winning bidders fail during development stage. One large project could absorb all available funds. Please see appendix.

Sponsors of the Surcharge/Production Credit Proposal Comments on EDF, et al.-Surcharge/Production Credit Proposal

1. Minimizes/clearly identifies overall costs: Uniform, statewide funding of program.

2. Meets public policy goals in the short and long run: State agency can focus on projects that produce the public policy goals of improving the environment, conserving resources, meeting societal needs, etc. New, efficient, environmentally sensitive technology projects receive support, and customer costs are controlled.

3. Uses effective means for long-term success: This collaborative effort, by a diverse group of stakeholders representing environmentalists, independent producers, municipal sanitation districts, and utilities interests will succeed.

4. Has capability for implementation by 1/1/98.

Comments of Orange County, Sonoma County, the City of Sacramento, NEO Corporation on Proposal by EDF, et al.

We support this proposal because it is only for new projects and market driven with funds award through a price only auction. Awards are financeable with a 10-year life. It allows participation by emerging technologies or higher priced green power. This is because they can get funds from the WEPEX, this Surcharge Production Credit and additionally, seek tax credits, grants, etc. Renewables that have a distinct regional benefit may get funds from the benefiting enterprise, such as public or private solid waste operations. Technologies can (should) compete by marketing to ratepayers their specific green power.

Comments of the Union of Concerned Scientists on Proposal by EDF, et al.

Oppose.
Good points: Exclusion of hydro avoids subsidization of a mature, fully commercialized technology and problems with annual variability.
Bad points: Conceived as an alternative to RPS, but inadequate. Does not maintain existing renewables. Does not guarantee any set level of renewables development. New project awards end after five years. Price-only bid may encourage under-bidding.
Other: Although a renewables surcharge alone is inadequate, as a supplement to an RPS a small, focused charge could help promote a greater diversity of renewables options by leveraging some less mature technologies into the RPS.

Los Angeles Department of Water and Power (LADWP) Comments on Proposal by EDF, et al.

The procurement of renewable resources should be the responsibility of some state entity or the state power pool and the above-market costs of compliance should be borne uniformly by all customers served by the UDC on a non-bypassable basis. Rather than having many entities responsible for procurement of renewables, having one entity responsible for the state's procurement of renewable resources will minimize the transaction costs of compliance. The level and diversity of renewable resource mix should be established by the state legislature. The renewables program should be reviewed every five years or so.

Comments of Southern California Edision on Proposal by EDF, et al.

[106 words]

This proposal has many positive points from the public policy perspective and should be considered by the Commission as an alternative to the MRPR mentioned in the Restructuring Decision. This proposal explicitly sets the cost of the program by setting the level of the surcharge. Moreover, this cost is known and visible to customers, regulators, and legislators. The proposal does not provide any additional subsidies to existing facilities but does provide incentives to build a new generation of renewable energy projects. This proposal limits the administrative impact to a small group of market participants and therefore has a low probability of distorting the emerging electricity market.

CALSEIA/SEIA/CEC/ETD Comments on EDF, et al. Proposal

[120 Words]

SUPPORT WITH MODIFICATIONS
Diveristy and Emerging Technologies: Since lowest bid price is only determinant for winning credits, well-established technologies are expected to recieve all credits. Depending on level of funding, diversity, even among low, current-cost, well-established technologies, may be limited. To provide any support for newer, emerging technologies, some portion of the surcharge must be set asside (see CALSEIA proposal). With moditication, surcharge approach provides similar competitive funding process to RD&D process, which is appropriate for technologies transitioning from RD&D to full commercialization.
Credit Contract Term: Ten year term is advantageous, especially for emerging technologies, as it permits ten year project financing. Even longer contract term would allow longer financing amortization resulting in still lower annual costs and lower overall annual program cost.

Comments of the California Integrated Waste Management Board on EDF, et al. Proposal

The production credit model by providing ten years of guaranteed prices will result in the construction of a limited amount of new renewable generation.

The proposal ignores the problem that renewables generation technologies cannot presently economically compete with natural gas and hydro-electric power, and that renewables offer a variety of social and environmental benefits.

Would expect that the current level and diversity of renewable generation will decline under this proposal. The bidding process may become subject to "gaming" by bidders, and will tend to reward lower cost technologies and financially stronger bidders.

Comments of Don Augenstein on Proposal by EDF, et al.

[102 Words]

The advantage of a surcharge and auction-based proposal such as EDF's is that more renewables can be deployed for a given amount of money, since bidding develops least-cost projects first. Also the fixed premium for 10 years will help financing. However an objection to this EDF, et al. proposal is that the surcharge is too low. At an anticipated $0.02-0.03 cost for a REC (as some expect) this proposal approach appears likely to fund a fraction of the renewables--possibly less than half--of several other extant proposals. The low surcharge, thus low renewables funding seem a serious disadvantage as it stands.

Comments of SoCAL Gas on Proposal by EDF, et al.

[123 Words]

This proposal's major attribute is the clear identification of the cost of the program. This is the only proposal that lets the consumer know the cost of energy diversity up font. It is closely aligned with the CPUC's desire to reduce the cost of electricity in Califomia. The

proposal calls for a kWh production credit applied only to energy actually sold. The nonbypassable surcharge is not included as part of investor owned utility rates. The program is relatively simple. It is based on a price-only, first-price auction for a fixed production level for 10 years. It requires no penalties, does not call for the creation of a tradable energy credits market, and has a sunset provision. Of all the proposals, this is best.