BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Own Motion to Conduct a Comprehensive Examination of Investor Owned Electric Utilities' Residential Rate Structures, the Transition to Time Varying and Dynamic Rates, and Other Statutory Obligations.	RULEMAKING 12-06-013 FILED JUNE 21, 2012

DISTRIBUTED ENERGY CONSUMER ADVOCATES RATE PROPOSAL

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May 29, 2013

DISTRIBUTED ENERGY CONSUMER ADVOCATES
RATE PROPSAL

Distributed Energy Consumer Advocates ("DECA") submits here its rate proposal for consideration in the above referenced proceeding consistent with the Administrative Law Judge McKinney's March 19, 2013 ruling and subsequent rulings by email.

I. Introduction

DECA appreciates the opportunity to submit a transformative rate design and applauds the Commission's consideration of rate reform. The proposal contained herein took to heart the recommendation that this proceeding look to address issues that cannot be addressed in other proceedings. Accordingly, it is offered not as a patch on the existing paradigm, but as the foundation for an implementable alternative to it. DECA's rate proposal is grounded in the transformative economics of lower cost energy generation options and the continued reduction in the cost of telemetry and control equipment. These are not matters of idle speculation. The ability of significant portions of utilities' customer base to provide electricity for themselves or otherwise obtain electricity cheaper than utilities are currently providing it is very real. This is not, as some might speculate, a result of Net Energy Metering. Rather it is an artifact of the very long life of generation, transmission, and distribution resources as well as a bureaucratic inertia that has perpetuated uneconomic infrastructure investments that have been authorized for recovery through rates. Transformative technologies are about to bring about an end to those practices. Rate structures must either adapt to these new technologies or face the very real

possibility of a large number of customers leaving the grid, taking potential benefits with them. The potential for large-scale departures from the grid would be an unfortunate result of individual parties making rational economic decisions under a rate system that creates incentives for un-economic outcomes. DECA urges the Commission to adopt a framework that will value the contributions of distributed energy producer-consumers, creating optimal economic and environmental outcomes.

DECA seeks to provide the framework for enabling California's transition to this future via a rate structure that encourages load to stay connected to the grid, rather than encourage load to leave the grid simply because it is economic to do so. In particular DECA's rate proposal does so by re-orienting an energy consumer's relationship to the grid by making available to the consumer the full suite of economic benefits associated with staying connected to the grid including the ability to be paid to generate electricity or provide ancillary services and potentially receive benefits outside the scope of their monthly energy bill (or credit) based on their electricity consumption and production. DECA's proposal is based on the Credit for Responsive Energy Distribution Infrastructure and Timing (CREDIT) framework that sees all consumers as producer-consumers ("prosumers") from this perspective in distributed generation and integrated demand side management. These so called Distributed Energy Resources ("DER"), are the small-scale infrastructure that are the core underpinnings of DECA as an organization, and also represent a fundamentally orthogonal element to traditional energy markets. Stated perhaps bluntly, for the grid to survive it must actively seek to keep as many customers as possible from leaving the grid. It must do so not with threats and penalties, but with promises and rewards. Failure to do so will leave an increasingly smaller class of customers stuck paying for

underutilized and overbuilt infrastructure.

DECA recognizes that this transformation will not spontaneously happen a few months after the conclusion of this proceeding. Telemetry equipment is not yet in place, standards are not yet finalized, wholesale markets are not capable of efficiently seeing aggregated resources or providing them usable price signals. But the economics of transformative technologies will not wait for conditions to be just right before they start changing things. For that reason DECA's CREDIT proposal for rates seeks to begin the transformation toward a sustainable energy infrastructure by establishing a framework that can function in both the current environment and in the future when a suite of energy services will be provided more cost effectively than just electricity is now.

To do this DECA suggests the Commission embrace an expansive view of the potential for its investment in smart meters – hopefully just its initial investment - envisioning rate structures that are paired with safe islanding technology as well as grid-tied telemetry and control capabilities as it approaches rate reform. This grid-softening, as opposed to the anti-distributed generation grid-hardening being proposed by some, is how reliability, cost effectiveness, and environmental impacts will be improved over time and how consumers will be convinced to become better engaged and stay grid connected. It is also how utilities can see a path forward to competitive energy service providers and distribution network owners or managers without risking a collapse of their businesses.

How can a rate design embrace as yet undeveloped markets and technologies? By incorporating into its design philosophy the possibility of those resources in the abstract. DECA's CREDIT rate proposal enables this by ensuring compatibility with a high renewables

penetration future characterized by low incremental generation costs, widely distributed economic storage infrastructure, and widespread vehicle electrification.

How is such a design philosophy realized? Simply by reducing it to its core elements. Perhaps the most fundamental element of the future of the electrical grid is high penetration renewables and their increased cost effectiveness as distributed resources. This transformation is already manifesting itself in the struggles of the current grid to integrate those resources cost effectively. Ramp issues were not on the radar ten years ago. It seemed at the time that all anyone could think about was peak load and needing more resources to meet it. While we still do not have a clear sense of how ramp needs will change wholesale energy prices, the value of ramping capacity, or the cost of capacity itself, there is a very real possibility that the most expensive electricity consumed during the year will be during periods of high ramp rates with relatively low energy usage levels.

Nothing in the Commission's quiver of programs and rates is capable of effectively addressing this issue now, but very soon these issues will have to be dealt with. As the Commission considers doing so in the RA and LTPP proceedings it is essential that its rate programs are re-oriented to help address the issue or at a minimum, not exacerbate the problem. Certainly peak load remains a critical element of the grid, but as lower capacity factor resources proliferate heat rates to meet that load will lower and prices will drop accordingly. While rates in the future cannot be based on the assumption that peak load will be the primary concern for cost avoidance or program evaluation, it will continue to have a role.

Accordingly, DECA's CREDIT proposal is based on a philosophy that recognizes that while peak load remains critical, ramp mitigation is becoming more so, with both sharing center

stage in future grid operations. Addressing both the peak load and the peak ramp periods will require incentives to increase electricity consumption during low electricity usage periods and the ability to mitigate load's contribution to ramps in both the upward and downward directions with an overall goal of reduced diurnal variance in aggregated load.

To do so while being mindful of the need to keep prosumers grid connected, DECA submits here a rate proposal that is grounded in four basic concepts:

1) Time of use rates that differentiate between peak load, peak ramp, and off peak periods, with only energy costs authorized for recovery during the off peak period.
2) Recovery of all non-energy costs during peak load and peak ramp periods via an avoidable demand charge, with the ability for a customer to opt out of the demand change and opt into a per-kWh non-energy cost recovery adder that is weighted toward the peak energy period.
3) Incorporation of the concept of a "net contributor" electricity customer which recognizes that a customer whose load mitigates the wholesale grid's needs should be able to avoid being assigned costs associated with their interconnection to the grid because the grid benefits from their presence rather than exists to serve it. The authorized cost avoidance is calculated by a net contributor's "score" based on a range of use factors.
4) An explicit mechanism by which rates will change over time within the existing framework and clear and understandable descriptions of both how and why.

These basic concepts are addressed in greater detail in subsequent pages, but their simplicity should serve as a lodestone for the details that follow.

DECA has, consistent with its statements in workshops and related inter-party communication, cautioned that the bill impact calculators were not designed to accommodate this kind of rate proposal and remain inadequate for calculating the bill impacts associated with the proposal's design. In particular DECA remains concerned that there is no readily available mechanism for estimating changes in usage based on consumers' elasticity of demand. Also worrisome to DECA is the fact that the "net contributor" concept provides a concrete incentive

mechanism for changing customer demand that remains unmodeled and, at least at this time, apparently unmodelable. There are however several indications based on PG&E's customer survey conducted for this proceeding that suggest customers are likely to find elements of the proposal appealing. DECA addresses these issues to varying degrees below.

Additionally, DECA emphasizes that many elements of this rate proposal can be incorporated into other rate designs and still provide benefits. It is very likely that some parties will view this proposal as incomplete. It certainly is. DECA expects that the Commission will need to address the issues raised in this proceeding in subsequent phases and subsequent proceedings if it expects to make anything other than a minor adjustment to the existing rate paradigm. DECA certainly hopes that the Commission takes the long view in this regard.

Finally, DECA reserves here the right to address how elements of this proposal may be integrated into other proposed rate designs through the comment cycle and of course welcomes and appreciates the critical analysis of stakeholders and Commission staff in improving this proposal.

II. DECA's Rate Proposal

A. DECA's CREDIT Rate Proposal

1) Time of Use rates that differentiate peak load, peak ramp, and off peak.

DECA supports Time of Use rates as the most effective mechanism for linking consumption of electricity with the actual costs of providing it. Importantly, we now are seeing the beginning of changes to the functioning of wholesale markets that are changing the intuitive

correlation between the amount of consumption, in the form of aggregated demand, and the cost of supplying the generation to meet it, in the form of an implied market heat rate and its corresponding price for energy.[1] DECA believes that now is the time to embrace a rate structure that has the ability to reflect the emerging divergent relationship between supply and demand during period of high ramp need. DECA's CREDIT rate proposal draws on this distinction to augment a traditional peak-energy oriented ToU rate structure, and in so doing moves ToU rates into greater long term compatibility with a high renewables penetration environment. A failure to transition to a peak ramp and peak energy ToU paradigm runs the risk that the Commission will force itself to assign all costs to all customers rather than in a manner consistent with a cost causation paradigm. Such a practice will almost certainly end up accelerating the departure of prosumers from the grid.

While much of this section is spent addressing the high ramp period, the other periods still provide insight into the underlying design. Peak energy oriented ToU rates are well described and well understood. Consistent with those, DECA's CREDIT rate proposal includes a peak energy period during which a large percentage of the fixed and variable costs associated with peak-oriented costs (including distribution, transmission, and capacity infrastructure, but also the higher energy costs associated with peak demand) are recovered. However, DECA believes the energy costs (and some related ancillary services costs) should explicitly be kept separate from the grid need-based adders covering the peak energy and ramp periods. Doing so allows consumers to see that while electricity may cost more during periods of high demand,

[1] Traditionally we have seen units that have the marginal heat rate set market clearing prices, but for a host of reasons generally associated with increased renewable penetration (though not necessarily directly caused by those resources) periods of high ramp need may require out of merit order clearing of resources. These units will need to recover their costs via some mechanism, resulting in high prices normally associated with peak energy demand that will occur during periods of peak ramp need.

peak energy driven infrastructure and other investments are made on behalf of peak energy users as well. It also makes explicit that those costs can be avoided with a change in their energy consumption or production. The peak energy period is discussed in greater detail in subsection 2), below.

The issue of the off-peak period requires separate treatment because it contains an element that is not traditionally found in time of use rate designs. Specifically, DECA's CREDIT rate proposal explicitly requires that during non-peak ramp and non-peak energy periods only energy costs are recoverable. The purpose for this is to make explicit that there are substantial benefits to increasing load during the diurnal valley. As stated above, reducing the ramp need by starting at a higher base load has significant economic and environmental benefits, especially considering the emissions inefficiency of combustion resources that are tasked with providing ramp. The decision to avoid covering non-energy costs is one that obviously requires inter-hour cost shifting, but it is a relatively small amount of inter-hour cost shifting (since the amount of energy consumed during that period is low by design and the number of hours are relatively few) and it makes explicit and tangible the benefit of temporal load shifting for all consumers.

Finally, DECA's proposal handles peak ramp periods separately from peak load because of this divergent relationship between supply and demand, but also because ramp needs represent a unique market element. The concept of a rate designed for a peak ramp period recognizes that one cannot simply charge load for the costs associated with meeting ramp needs on an as-temporally-incurred basis because even desirable responsive load would be encouraged to avoid those costs by not consuming. Once that peak ramp period is over the load will return creating an even steeper ramp need; reductio ad absurdum. There is also a more practical matter of

needing to capture the increased value of load shifting which has the ability to mitigate the ramp need more effectively than load elimination.

Alternatively, assigning ramp-related costs to the peak use time period for recovery is more desirable. The ramp exists because load must be met at peak and so a consumer's contribution to peak load is in fact driving the need for ramp. DECA's rate proposal chooses to bias recovery of ramp-related costs and fixed costs to the peak period to balance the cost opportunities for providing incentives to load for being responsive to ramp needs and the ability to reduce peak load through higher peak period prices. To accomplish this DECA's rate proposal allows recovery of some portion of non-energy costs on a per-kWh basis during the peak ramp period but also integrates with the net contributor element. The net contributor calculus is addressed in greater detail below but specifically allows for cost avoidance associated with participation in responsive demand programs that provide ramp mitigation including, as an example, the ability to avoid 25% of the fixed charge based on participation in demand response programs or a customer with distributed generation to allow curtailment of those resources during high ramp need days.

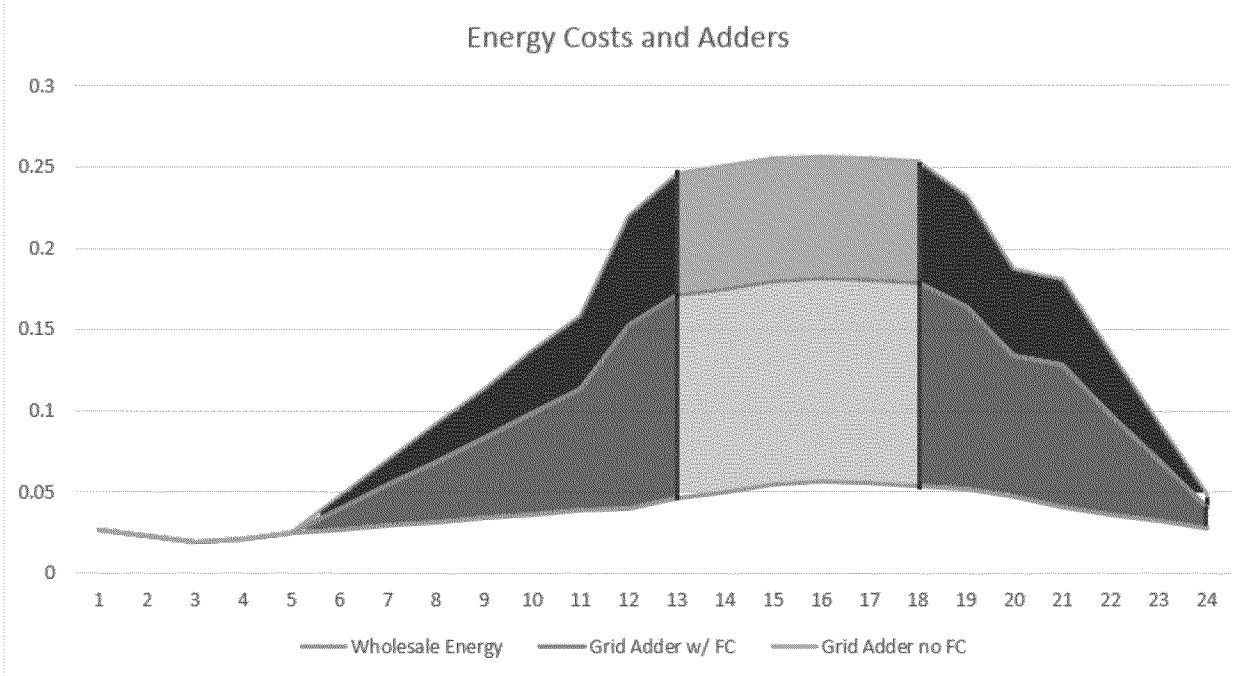
2) The explicit recovery during peak hours of T&D charges and any other non-energy charges that might otherwise be recovered via a fixed charge or a demand charge.

DECA's rate proposal recognizes that there are a great many costs associated with the electricity grid other than electricity costs. These costs include capacity costs, transmission costs, distribution costs, and the costs of programs such as energy efficiency and demand response efforts. For ease of reference this proposal refers to them as "grid costs". There are a

number of ways to recover grid costs via rates. DECA proposes specifically that customers be allowed to choose between either a combination of per-kWh adder to the peak energy period and a separate peak ramp adder for the ramp period or a default rate structure that recovers roughly twenty five dollars of those costs via an avoidable monthly fixed charge. Key to the DECA proposal is the *avoidability* of the grid cost charges. DECA's rate proposal is based on a customer's mitigation of or contribution to the system's aggregated load and ramp needs. The amount of peak load charge avoidance the customer enjoys is driven by the amount of mitigation provided by that customer relative to their customer class and climate zone. That avoidance manifests itself in the customer's net contributor status, addressed in greater detail below.

It is important to draw a distinction between cost recovery via a fixed charge during peak hours and cost recovery via a per kWh charge. DECA's rate proposal recognizes that there are costs and benefits to a fixed grid charge versus a per kWh cost recovery mechanism, but emphasizes that, regardless of the mechanism for recovery of those costs, the rate structure needs to provide a signal that a customer can avoid those costs by consuming less during those hours rather than all hours of the day. DECA's CREDIT rate proposal provides customers a choice between an opt-in per kWh charge or a defaulted fixed capacity charge with a lower per-kWh rate because some customers may prefer to avoid a fixed charge on principle. However, in DECA's proposal regardless of the customer's selection the customer will receive price signals to avoid energy consumption that exacerbates the costs associated with peak grid needs. In a per kWh design this avoidance occurs by not consuming electricity during peak hours. In a fixed

charge design a customer's ability to avoid those costs is driven by their behavior relative to the peak demand and peak ramp periods as captured in their net contributor score.



The chart above represents an approximately $25/month avoidable fixed grid charge based on a usage curve that matches a hypothetical aggregated peak load with an incremental grid charge recovery amount that starts at the beginning of the morning peak ramp period and increases through the peak of the peak load period before decreasing through the end of the evening peak ramp period. The area between the orange and blue lines is the reduced adder to the wholesale prices that is charged to consumers who are subject to a fixed grid charge. The lighter yellow area represents the portion of the grid's peak energy period recoverable non-energy costs that a customer who pays a grid charge will still be obligated to pay based on their electricity usage. The light green represents the portion of the grid charge associated with the peak ramp period that a customer who is subject to a grid charge will still pay based on their

electricity usage.

The area between the grey and orange lines represent the per kWh adder for consumers who elect to not pay a fixed grid charge. They also pay the reduced adder for the area below the orange curve. The area between the grey and orange lines is the equivalent in dollars to the fixed charge for the typical residential consumer – in this example it is roughly $25/month on a ~$100/month bill. Because a consumer who is subject to a fixed grid charge can avoid some or all of that charge as a result of their net contributor status this area also represents the avoidable fixed grid costs associated with participation in a range of Commission program as addressed in greater detail below.

3) Incorporation of the concept of a "net contributor" electricity customer which recognizes that a customer whose load mitigates the wholesale grid's needs should be able to avoid being assigned costs associated with their interconnection to the grid because the grid benefits from their presence rather than exists to serve it.

DECA believes that the net contributor concept is the key to the next century of the electrical grid's development. Market factors will continue to increase the availability of DERs while driving down their costs. In the very near future, well within the scope of this proceeding, a great many customers will be presented with the very real calculation of their own economic self-interest relative to being connected to the grid. If there is a hope for a transition that is not fundamentally destructive to current utility structure, it lies with the planned incorporation of potentially disruptive technologies and their managed introduction over time. DECA's rate proposal manages this introduction via the net contributor concept.

To restate the net contributor concept, a customer whose consumption or production of electricity provides a benefit to the grid should receive compensation for that contribution. This

contribution can take the form of reduced consumption during peak energy periods, generation during peak energy periods, participation in demand response programs, participation in triggered curtailment programs for DG resources, or a wide range of actions that reduce the stress on the system associated with the diurnal ramp such as increased load during off peak hours or ADR. This is in no way intended to be an exhaustive list.

DECA's rate proposal sees two possible scenarios for structuring the net contributor element. The first is a passive solution which relies entirely on time of use rates to implement a net contributor goal. DECA sees this as less preferable because it undermines consumers' understanding of net contribution to the needs of the grid, but is provided as an opt-in option for customers that prefer avoiding an explicit grid charge. The second, more desirable option is to make a separate and explicit but avoidable peak-oriented charge that is designed to recover costs associated with grid connectivity and the costs associated with aggregate peak energy usage and peak ramp periods of grid use. The need to recover these costs is made apparent to consumers via this charge and the reward for choosing to actively mitigate or at least not contribute to the problem is made tangible to electricity consumers and acts as a concrete and attainable incentive for changing behavior.

While the status of a consumer as a net contributor allows the customer to qualify for avoidance of the grid charges in DECA's rate proposal, it is not an all or nothing calculus. DECA proposes that subsequent phases of this proceeding further explore what a net contributor program might look like in its final form, but puts forth a suggestion here for consideration. DECA proposes that an approximately twenty five dollar per month grid charge be applied to residential accounts unless they opt into the "per-kWh adder only" rate plan. Being subject to

the fixed grid charge then reduces the per-kWh adder that the customer is subject to, as described in section 2), above. The customer's average monthly use is then compared to similarly situated customers (i.e. same climate zone and customer class) and a metric is applied.

The metric is designed to evaluate how helpful the customer is in mitigating the needs of the grid throughout the day. Points are earned during the three rate periods based on the customer's load and participation in Commission programs such as demand response and energy efficiency. Each program or usage level has a certain number of points associated with it. DECA proposes that the net contributor calculus be based on a scale of 100 points with 50 points associated with peak load periods and 35 points associated with peak ramp and 15 points for off peak periods.

As an example, if the customer uses 50% less peak energy than the average customer they earn a net contributor score of 25 points for their peak energy usage.[2] If they use 75% less peak energy than the average customer they earn 35 net contributor points. If they use no energy from the grid or export energy to the grid during peak energy hours they earn a full 50 points. In the chart above (see fig 1, p. 12) this would allow a netting or avoidance of the yellow portion of the grid charge adder, but would not in and of itself allow a netting of the green peak ramp adder period.

Participation in peak demand response programs may be worth 10 points for some programs and 5 points for others, depending on their efficacy. Curtailment of distributed generation via a residential curtailment program may earn 15 points for the ramp period. Increased consumption in off peak hours may earn them 5 points for off peak while timed electric vehicle charging may earn 15.

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[2] To further explain, 50% of the average consumer's peak load means 50% reduced contribution to peak load needs. If 50 points are associated with the peak energy, and a customer has only 50% of the typical peak energy consumption, they earn 50% of the total point associated with that period: 25.

Through this net contributor status the Commission has the ability to value a customer's contribution to the grid based on a spectrum of programs and can ensure that a consumer who may be contributing to the grid during peak hours is still paying for their net use of the grid during non-peak hours.

DECA emphasizes that net contributor status and the points associated with it do not necessarily have to be limited to a cap of 100 points, excess points can earn cash payments or bill credits. Importantly, DECA strongly urges the Commission to consider an expansive view of the net contributor program whereby identification of a net contributor status could apply to non-energy areas as well. For example qualifying customers could earn discounts with participating merchants as a result of their net contributor status as a way to encourage energy conservation. There is no reason to limit the socialization of energy consumption to a once a month experience with a utility bill.

4) An explicit mechanism by which rates can be changed over time within the existing framework and clear descriptions of both how and why.

Most important to DECA's rate proposal is an explicit mechanism by which the rate structure can change over time. Electricity consumers do not want a change in rate structures every ten years that is designed to reflect regulators' awareness of the changing needs of the grid. They want to understand their rates. The best way to ensure this happens is to lay out the rules that govern rate design in a clear and explicit way so that as factors change over time the effect is incorporated into rates on an incremental and predictable basis. Accordingly, rather than perpetuating tiers that obscure costs, DECA's rate proposal breaks down rates into an explicit set

of categories: First, temporally variable costs incurred by the system as a whole. Second, fixed and other cost recovery that is assigned to specific time periods for cost recovery. Third, an explicit reward for behavior that reduces those costs for the system as a whole. These three categories remain fixed over time, but the costs and benefits associated with each of them and therefore their relationship to each other and the grid change over time.

B. Questions for Rate Design Proposal from the March 19, 2013 Ruling, Attachment A

1. *Please describe in detail an optimal residential rate design structure based on the principles listed above and the additional principles, if any, that you recommend. For purposes of this exercise, you may assume that there are no legislative restrictions. Support your proposal with evidence citing research conducted in California or other jurisdictions.*

DECA's rate proposal is based on three overarching principles. First, the current rate structure is intrinsically flawed and should be changed. Second, transmission and generation procurement practices and the design and function of wholesale energy markets are colliding with increased costs for emissions, technological advances in generation and demand-side technology, and telemetry infrastructure. Third, these changes require a rate structure that creates transparency with regard to costs as they are incurred and provides the opportunity for individual consumers to avoid those costs through their own actions including their own direct investment in cost effective alternatives.

DECA supports a rate design structure that creates an orderly transition to the future and proposes here a rate structure that enables a transition away from an over-built, transmission heavy, central station based electricity infrastructure to one that emphasizes smaller scale, customer specific energy service solutions and distribution-level investments in energy infrastructure.

DECA's rate proposal is based on a migration to an explicit re-categorization of cost recovery through rates that better emphasize what is being recovered as well as when and how those costs are incurred. The proposal does so while simultaneously making transparent the ability to avoid paying for these costs through changes in electricity consumption and investments in generation, storage, and conservation technologies. It is easiest to think of DECA's rate proposal as containing three key elements: 1) explicit delineation of fixed and variable costs, 2) temporal recovery of those costs in a Time-of-Use based rate paradigm, and 3) an incorporation of a "net contributor" customer designation that provides explicit incentives for a customer that mitigates or otherwise provides balance to the aggregate load and the costs incurred to meet that load.

Fixed and variable costs and temporal recovery restrictions

Specifically DECA's rate proposal breaks all rate recoverable costs into two categories: 1) electricity and 2) infrastructure and program charges.[3] These recoverable cost categories are recovered via rates that vary over time but fall generally into three periods: 1) peak load, 2) peak ramp, and 3) off peak. Infrastructure and program charges are able to be recovered only during the peak load and peak ramp periods, and are weighted toward peak load period. Electricity costs are recovered during all three periods but, because they are the only type of cost that can be recovered during the off peak period, off peak rates reflect only direct wholesale energy prices.

DECA proposes that infrastructure and program charges be split between per kWh charges during peak load and peak ramp periods and a fixed charge of approximately twenty dollars (inflation adjusted from 2013 dollars). The assignment of the fixed charge should be

[3] . Greater detail is provided below as to what electricity costs consist of, but it should generally be thought of as only wholesale energy prices and does not included the costs associated with ancillary services.

based on an explicit calculus of the customer's customer class adjusted for climate zone. The ability to avoid this charge is based on their status as a net contributor as discussed in greater detail below. As an alternative, customers may select to have no demand charge but instead opt into a rate structure that allows for a per kWh adder during the peak demand period and a roughly 50% decrease in the per kWh adder during peak ramp periods. Those adders should be designed to generate the equivalent cost recovery associated with the fixed grid charge. Regardless of the option selected all other costs should be recovered on a per kWh adder to wholesale energy prices for energy consumed during peak periods.

The net contributor designation

DECA's rate proposal also includes a new customer designation: the "net contributor". The net contributor designation makes explicit a customer's relationship to the costs incurred by the grid as a whole. While energy prices are high or during periods of elevated ramp needs, the resources of the grid are being strained and a great many fixed costs are incurrent to meet the load during these periods. At the same time a large portion of variable non-energy costs are incurred and should likewise be recovered during these periods. If a customer's electricity usage dampens these negative network effects by minimizing the contribution to aggregated load during peak load periods or consuming more electricity during off peak periods, the customer can be considered an asset to the grid. As an asset to the grid the customer should benefit by avoiding these costs since they reduce them through their actions.

During peak ramp period a customer's relationship to the grid is a bit more complicated, because not consuming electricity during that period does not necessarily ensure the costs

incurred for the operation of the grid are reduced. For this reason participation in responsive demand programs becomes the factor by which net contributor status is measured.

As may be apparent, the net contributor status is not an all or nothing designation. In is, instead, intentionally tiered. DECA believes that the net contributor designation may serve as the foundation for a great many incentive mechanisms. As an example, under a net contributor based rate structure, Net Energy Metering for newly generating customers may be tiered based on the customer's net contributor status so that the customer's annual load may be netted only if the customer invests in distributed generation and demand response programs such as curtailment driven by peak ramp need. Please see the description of the net contributor in section A. above for additional information.

2. *Explain how your proposed rate design meets each principle and compare the performance of your rate design in meeting each principle to current rate design. Please discuss any cross-subsidies potentially resulting from the proposed rate design, including cross-subsidies due to geographic location (such as among climate zones), income, and load profile. Are any such cross-subsidies appropriate based on policy principles? Where trade-offs were made among the principles, explain how you prioritized the principles.*

Regarding income cross subsidies, the DECA rate proposal recognizes that until such a time as more effective community solar and virtual net metering options are developed there is a risk for cross subsidies associated with investments in distributed generation, especially with regard to the net contributor designation. For this reason DECA emphasizes that additional weight be considered for responsive demand in any net contributor calculus for non-owner occupied housing. By this mechanism customers who are disadvantaged by facing additional hurdles for investing in distributed generation are afforded greater opportunities for non-generation dependent contributions to overall grid efficiency.

3. *How would your proposed rate design affect the value of net energy metered facilities for participants and non-participants compared to current rates?*

DECA proposes that existing residential Net Energy Metering customers be allowed to fully net their load as they currently are permitted to do and that they be held harmless relative to any reduction in the value of netted energy should that occur for lesser of 15 years or the duration of their PPA contract, if they have one.[4] Net metering customers share some characteristics with residential ratepayers, and other characteristics with utilities making capital investments. Accordingly, their rates should be set by considering principles applicable their unique situation. "The basic principle [of ratemaking] is to establish a rate which will permit the utility to recover its cost and expenses plus a reasonable return on the value of property devoted to public use." (*City and County of San Francisco v. Public Utilities Com.* (1971) 6 Cal.3d 119, 129.) Net metering customers provide public benefit, but they do not have the ability to petition for rates in the same manner as utilities. As a substitute, net metering customers invested in distributed generation on the calculation that they could recover their costs and a reasonable rate of return through net metering. Absent any other means to assure recovery of costs and return on investment, it is essential that net metering customers not be "kicked out" of their arrangement. To do so would in effect engage in retroactive ratemaking, long prohibited in California.[5] In addition to creating enormous risk that investments would fail due to Commission decision to change rates, to reduce the ability to recover costs without a producer-specific process would

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[4] The fifteen year term suggested herein is based on the fact that the average residential NEM customer who enters into an leasing arrangement with a third party agrees to a 10 – 15 year term – source: various industry sources.

[5] See *Pacific Tel. & Tel. Co. v.Public Util. Com.* (1965) 62 Cal. 2d 634 (establishing prohibition on retroactive ratemaking).

violate due process principles and upset expectations that formed the basis of investments of net metering customers.

Other than these grandfathered NEM customers, DECA proposes that investments in distributed generation be considered a primary element in any net contributor designation if that generation contributes to lower net aggregated demand during peak demand periods. Similarly, it is worth considering that if distributed generation resources produce electricity during off peak periods, their participation in responsive demand program should be required for any full netting rights to be earned.

4. *How would your proposed rate design structure meet basic electricity needs of low-income customers and customers with medical needs?*

DECA's rate proposal does not include any changes to the medical base line program. DECA asserts that the current low-income program provides the wrong incentives relative to energy consumption by low-income households, although that incentive misalignment is clearly mitigated by greater sensitivity to overall bill size. DECA supports revisions to the low-income programs that enable customers to receive cash payments for reduced electricity consumption that are based on avoided subsidy costs, but such an incentive program is not necessary for the core elements of DECA's proposal to be implemented. By that DECA means that low-income households should qualify for increased demand response compensation rates in light of the greater avoided costs associated by reducing subsidized electricity consumption and those avoided costs can and should include cash payments rather than just bill credits.

5. *What unintended consequences may arise as a result of your proposed rate structure and how could the risk of those unintended consequences be minimized?*

DECA's proposal does not provide an explicit, stable transition to a post-NEM environment, as such there is a risk that providers of NEM-dependent services may experience a disruption in their business models as a result of a transition to a net contributor framework. There are potential solutions to this problem, such as extending NEM to 5% of the peak load within a class, which would likely allow residential customers to have access to NEM for a transition period, but those solutions are perhaps beyond the scope of this proceeding.

DECA recognizes that some CARE customers are likely to experience higher rates as a result of a shift to a Time of Use rate design, especially as modeled by the bill impact calculators. Some amount of this increase is likely attributable to the consumption effects of the CARE program's design captured by the samples of current users, but DECA believes there are solutions that can mitigate the broader concerns about CARE customer impacts that are consistent with the proposal's overall design philosophy. In particular DECA emphasizes that the CARE programs households can receive multipliers for participation in responsive demand programs, or, alternatively, residential demand response programs can be weighted more highly for capturing the ability of renters to participate in such programs as compared to investments in distributed generation or energy efficiency.

DECA also supports more aggressive, nontraditional measures for treatment of CARE households as consistent with the overall design philosophy of DECA's rate proposal. In particular DECA believes that CARE program households should be considered for eligibility for rewards for demand reduction that enable fixed cost recovery avoidance on a forward going basis such as subsidies on demand response enabled equipment or in some cases cash rewards for critical responsiveness.

6. *For your proposed rate structure, what types of innovative technologies and services are available that can help customers reduce consumption or shift consumption to a lower cost time period? What are the costs and benefits of these technologies and services?*

DECA believes that there are a range of innovative technologies and services that are available to help customers reduce or shift energy consumption. Of those technologies, perhaps the most important element is augmentation of smart metering to incorporate wholesale market oriented telemetry. DECA supports augmentation of the smart meter as a bridge mechanism for migrating the relationship between the consumer, utilities, and the grid's wholesale markets.

7. *Describe how you would transition to this rate structure in a manner that promotes customer acceptance, including plans for outreach and education. Should customers be able to opt to another rate design other than the optimal rate design you propose? If so, briefly describe the other rate or rates that should be available. Discuss whether the other rate(s) would enable customers opting out to benefit from a cross-subsidy they would not enjoy under the optimal rate.*

DECA's rate proposal represents a new way oftalking to ratepayers about the cost of electricity and will likely require a combination of strategies to maximize acceptance. Key to the education and outreach process is socializing the idea that consumers are rewarded for being better net contributors than their neighbors and that they should not have to pay more for electricity because their neighbor wants to keep their air conditioning on high. Statewide outreach campaigns should be designed around the concept of the net contributor and the savings associated with participation in responsive demand programs on critical need days.
DECA supports an implementation strategy that transitions to the new rate structure incrementally over roughly five years, but allows customers who select early adoption to be rewarded for it and provides financial incentives for participation in net contributor qualifying programs, especially those that allow for renewable infrastructure investment coupled with

curtailment and other responsive program elements.

8. *Are there any legal barriers that would hinder the implementation of your proposed rate design? If there are legal barriers, provide specific suggested edits to the pertinent sections of the Public Utilities Code. If there are legal barriers, describe how the transition to your proposed rate design would work in light of the need to obtain legislative or other regulatory changes and upcoming general rate cases.*

DECA recognizes that a broad spectrum of legal issues surrounding implementation of the DECA rate proposal may exist, but is unaware of barriers at the time of submission of the rate proposal. The net contributor element of proposal is within the CPUC's authority. The restriction on rates for specific customers from AB 1X are not likely to apply in the time period that it will take to implement the DECA proposal, and the current governing statutes permit the Commission to make necessary related decisions.[6] Also, the rule against discriminatory rates does not apply to the net contributor proposal because the proposal reflects actual costs and benefits of a product, making it less discriminatory, or at least involving less cross-subsidy, than the present system. See Cal. Pub. Utils. Code § 451(c).

9. *How would your proposed rate design adapt over time to changing load shapes, changing marginal electricity costs, and to changing customer response?*

DECA's rate proposal is expressly designed to capture changing load shapes and marginal electricity costs. Additionally, its goal is to encourage customer responsiveness based on those factors. It is designed in particular with a recognition that the value of capacity is likely to shift to periods when ramp mitigation is the most valuable and when extra-marginal units needed for their flexibility are setting wholesale prices at time when peak energy is not occurring. In

[6] See Cal.Water Code § 80110.

particular DECA's rate design inherently incorporates the concept that peak ramp periods may shift based on factors other than the shape of the aggregated load curve itself.

10. *How would your proposed rate design structure impact the safety of electric patrons, employees, and the public?*

DECA's rate proposal is vastly superior to the current paradigm for the safety of electric patrons, employees, and the public. Electricity patrons are afforded technology that is resistant to service interruption by enabling islanding as well as the ability to be compensated for providing black start capabilities as a DG resource. Utility employees are provided islanding technology for distributed generation resources, including those resources that have been interconnected without the knowledge of the utility, while the public benefits from a grid that is more resilient during times of stress or crisis.

III. Conclusion

For the reasons set forth herein, DECA hereby submits its CREDIT rate proposal.

Respectfully submitted this 29th day of May, 2013.

By */s/*
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