

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

COMMENTS OF NRG ENERGY, INC.

ON

RETAIL COMPETITION IN CALIFORNIA AND THE GREEN BOOK

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NRG Energy, Inc. (“NRG”) hereby submits the following comments about how California may want to structure its future energy markets to allow the free flow of customers seeking to leave utility default service or migrate back to utility default service. The California Public Utilities Commission’s (“Commission” or “CPUC”) Green Book represents a comprehensive examination of four competitive retail choice options across the country and in Great Britain. The Green Book also identifies a number of significant challenges facing California’s electric industry. In its comments, NRG will offer a structure that will address those challenges.

I. Introduction

Establishing a framework to achieve the State’s long-term energy goals is of the utmost importance to California consumers and to this Commission. California’s retail policies should accelerate the transition to the energy economy of the future by encouraging investment in green infrastructure and expanding customer access to innovative energy solutions and products. But as the Green Book acknowledges, challenges brought about by load migration are threatening to slow the State’s transition to an environmentally sustainable grid.

Many of California’s most pressing energy issues have their genesis in the current resource adequacy and preferred resource procurement systems. Both procurement systems largely rely on California’s Investor Owned Utilities (“IOUs”) to handle the financial and administrative responsibility for the procurement of new generation. The current system creates an understandable reluctance to direct the IOUs to serve as the contracting counterparty for additional rounds of contracting due to concerns over whether the utilities will have a sufficient customer base to bear the costs of long-term preferred and conventional resource contracts.

Aligning the financial incentives of all parties involved in the load migration cycle is critical to increasing private deployment of capital into California’s energy infrastructure, as well as paving the way for additional resource procurement opportunities at a price that is affordable to California consumers.

Three factors in particular have set the stage for potential wide-spread load migration and the disruption of the existing contracting model. *First*, renewables are coming down in cost as time passes, which encourages entities to future-date new infrastructure investments as far into the future as possible. Because of the incredible success of California’s program in “driving down” renewables prices, an identical renewable generator today costs approximately half of what that same generator would have cost a decade ago.¹ *Second*, there is an abundance of Renewable Energy Credits (“RECs”) from hydro facilities in the Pacific Northwest available on the secondary REC market, which allows shopping customers to meet their short- and medium-term RPS obligations without investing in new steel (or more appropriately, silicon). *Third*, there is substantial uncertainty about how the Commission will calculate the Power Charge Indifference Adjustment (“PCIA”) charge in the future. The PCIA only works if it accurately captures the full costs associated with departing load. Under-stated or over-stated PCIA charges are equally harmful to California’s efforts to build the grid of the future.

NRG submits that one way the Commission can accelerate California’s achievement of its environmental objectives and to facilitate customer choice is to allow a centralized counterparty to administer long-term contracts and to allocate resource adequacy “tags” for the portion

¹ “2018 Padilla Report: Costs and Cost Savings for the RPS Program (Public Utilities Code 913.3),” California Public Utilities Commission, *available at*: http://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About_Us/Organization/Divisions/Office_of_Governmental_Affairs/Legislation/2018/MASTER%202018%20PADILLA%20REPORT_FINAL.pdf

of supply service that is currently administered by the IOUs. The goal would be to have the centralized counterparty perform the following key functions:

- Conduct a forward procurement of the resources necessary to meet California’s aggressive carbon reduction targets at the least possible cost to consumers;
- Equitably allocate *future* resource adequacy and preferred resource procurement costs to IOUs, CCAs, and other providers of Direct Access service;
- Apportion *legacy* resource adequacy and preferred resource procurement costs to IOUs, CCAs, and other providers of Direct Access service;
- Allocate costs, manage credit, and true-up any variations between the estimates and final metered usage for IOU, CCA and other Direct Access providers; and
- Eliminate the need for high-stakes litigation over PCIA charges, since each shopping customer leaving utility service would pay its actual share of costs, based on its usage.

Importantly, any re-ordering of the State of California’s procurement authority can be structured so as to avoid creating any additional concerns about jurisdiction over the centralized counterparty procurement function.

Finally, the Commission’s retail competition paradigm should be designed to encourage shopping customers to seek to *exceed* existing Renewable Portfolio Standard (“RPS”) requirements. A centralized counterparty structure would allocate existing preferred resource costs on a load-ratio share, allowing the free migration of customers to CCAs and, potentially, back to the IOUs. A successful market structure will incent CCAs and other shopping customers to invest in green infrastructure, including driving investment in active management of energy usage to reduce consumption (and therefore, the costs allocated to the shopping customer). Most important, California consumers win regardless of whether those needs are met through purchases of existing RECs or additional investment in physical preferred resources.

II. About NRG

NRG is one of the largest wholesale generators in the nation, with large footprints on the East Coast and Texas. NRG will continue to own two generating stations in California, once all announced sales are completed. NRG is also one of the nation's largest sellers of retail power, including brands such as Reliant Energy and the renewable power-focused brand Green Mountain Energy. Overall, 22% of NRG's over 3 million retail customers are on 100% renewable energy plans. NRG also has an active demand response business and is one of the nation's leading developers of customized energy solutions for business customers.

III. Comments

In moving California's retail market forward, NRG provides three specific recommendations. *First*, NRG discusses goals that the Commission should adopt for its retail market restructuring efforts. Those goals focus on enlisting consumers to better achieve California's clean energy objectives. *Second*, NRG proposes a centralized procurement mechanism that would better align today's IOU-dominated procurement model to the State's long-term clean energy goals. *Third*, NRG urges the Commission to go beyond the immediate issues teed up in the Green Book and adopt additional rate reforms that would encourage third-party deployment of green energy infrastructure, including physical resources and active demand-side management, through market-based tariff mechanisms at the distributed resource level. Active competition on the distribution level is equally important to meeting California's future energy aspirations.

As a preliminary matter, retail market design initiatives that increase customer engagement with electricity choice is a worthy goal. Customers who engage with their electricity choices are more likely to purchase 100% green power contracts or to participate in

energy-saving programs like the time-of-use retail demand response products NRG operates in select markets (those with appropriate meters and real-time data access, both of which California already has the infrastructure to provide). Indeed, NRG's experience is that many shopping customers engage deeply with energy issues, and many of NRG's three million retail customers nationwide have elected a power plan that includes a renewable energy component (in excess of the mandated minimum) or enrolled in some sort of energy management or efficiency program.

The natural evolution of the CCA concept is the ability of all California consumers to shop for electricity. After all, what is universal competition but millions of tiny CCAs, each comprised of a single meter rather than an aggregation of customers? Given that California consumers are already demanding this type of enhanced choice, as witnessed by the recent and expected migration of large amounts of load to CCAs, the Commission should consider embracing a carefully designed, but fully competitive, retail model.

A. The CPUC Should Adopt Clear Goals to Guide Future Policy Discussions.

Before suggesting a solution-set to California's retail market issues, NRG recommends a set of goals to follow in designing a future retail energy construct. NRG recommends that the Commission focus on solutions that meet the following criteria:

1. Goal #1: Allow load migration away from Investor Owned Utilities ("IOUs") in a way that does not unduly rely on PCIA charges or endanger the financial health of the utilities.

California's current structure suffers from the serious flaw that IOUs are the primary funding vehicle for long-term contracts. This structure worked reasonably well so long as the utilities have adequate numbers of captive customers over which to assign the costs of the contracts. However, as load migration to CCAs increases, the number of customers paying for these long-term contracts is decreasing, although the fixed costs of the contracts remains relatively static. Were this trend to continue unabated, the financial health of the utilities would

be threatened, as they remain on the financial hook for the contracts, but would lack the customers to absorb the costs of those contracts.

The current means of counteracting this trend is the assignment of departing load charges to entities leaving the IOU ecosystem, largely through the application of PCIA charges. NRG recommends against relying on PCIA allocations to secure the long-term health of the California energy grid. Specifically, today's departing load charges risks creating an inadvertent competitive dynamic that may actually delay investment in new green infrastructure. Over-reliance on PCIA charges risks creating a financial incentive for CCA to pay the PCIA, meet near-term RPS obligations with RECs available on the open market, and defer investment in new preferred resources until sometime in the indefinite future. Given the need for approximately 10 GW of additional preferred resources to meet California's aggressive climate goals over the next decade, financially incenting entities to delay building those same needed resources points to a disconnect in the Commission's departing load charge policies.

Other issues with the PCIA include: (i) denying customers the ability to control their energy usage and the source of their energy; (ii) the inherent uncertainty in how PCIA is calculated and the incentive to engage in high-stakes litigation over cost assignment; (iii) whether the PCIA structure is sustainable in the face of wide-spread and increasing load defections; (iv) the fact that departing load charges also make it prohibitively expensive for many corporate campuses or other large customers to install customer-sited green infrastructure and engage in active demand-side management; and (v) the ability of the IOUs to maintain reliability and meet green energy targets if faced with the mass migration of load *back* to POLR service.

Indeed, the current reliance on PCIA charges creates the specter of nested PCIA charges, where a CCA pays a PCIA to the IOU, and then in turn charges load defecting from the CCA

(whether back to the IOU or other customer-serving entity) *another* PCIA charge. The complexity associated with such a system should be of great concern to policy makers.

Thus, NRG recommends that Goal #1 of this retail reform process should be to develop a system in which the IOUs and CCAs are indifferent to load migration patterns and welcome the free flow of customers, including to self-funded customer-sited green initiatives, without undue reliance on a PCIA structure.

2. Goal #2: Allow load migration back to IOUs as the Provider of Last Resort (“POLR”) as customers leave CCAs or migrate away from Direct Access.

A corollary to the problems created by customers migrating away from utility service is that these customers may someday migrate *back* to an IOU that is not prepared to receive them; either because they do not have the appropriate resource adequacy resources under contract or lack sufficient quantities of preferred resources. In a competitive market, the transition can be gradual or sudden, if for example, a CCA or ESP dissolves or defaults on its obligations.

Clearly, the ability to handle two-way load migration is critical to a successful market.

3. Goal #3: Retail markets should encourage shopping customers to achieve premium environmental outcomes.

The supply portion of consumer’s bills in California can be conveniently (if somewhat simplistically) divided into two segments: (i) the supply charges associated with meeting California’s RPS requirements from preferred resources, and (ii) the supply charges associated with energy and capacity, which are largely purchased from emitting resources.

Today’s retail market risks creating the incentive for CCAs and other shopping customers to focus on minimizing the supply charges associated with the preferred resource portion of the bill. The danger is in creating a scenario where CCAs appear financially attractive because, even after paying the PCIA charge, customers can replace legacy preferred resource contracts with

commodity RECs or post-dated investment in renewable generation. (By contrast, the supply charges associated with generic energy and capacity costs from conventional generation does not markedly change year-over-year, and if anything, is increasing as California’s supply of gas-fired resources slowly dissipates, so these same issues do not exist with the conventional generation market.)

The result of the current market structure is that CCAs are financially incented to displace long-term utility contracts for preferred resources with new preferred resources, but have far less financial incentive to focus on the conventional resource adequacy piece of their bill. In NRG’s opinion, an effective retail market structure should incent CCAs and other shopping customers to focus on maximizing the customer benefits associated with preferred resources and conventional resource adequacy resources, whether that be on cost, environmental characteristics, service, or some combination of these attributes.

4. Goal #4: Encourage private investment in low- or no-carbon infrastructure located behind-the-meter by installing the IOUs as “distributed platform operators.”

An important part of California’s retail market evolution will be the transition of the IOUs from competitors in the energy markets to facilitators of retail market transactions. California currently lags behind other parts of the country in attracting demand response and other forms of controllable demand (*i.e.*, encouraging customers to actively manage their consumption based on environmental or price characteristics). Things like departing load charges make it difficult for private capital to find a foothold. Eroding the sanctity of legacy preferred resource contracts likewise send the signal to investors that their investments will not be protected (or, more accurately, that they should demand higher risk premiums in future bids).

In addition to supporting development of the necessary utility-scale generation, another goal of California’s retail market reform should be to jumpstart the deployment of green-focused

capital behind the customer's meter. This could include exempting carbon-free solutions from departing load charges and a distribution-level procurement structure that sends a locational price signal, open to behind-the-meter customers installing green solutions.

5. Goal#5: Ensure equity issues, such as leaving disenfranchised communities with higher cost utility service while more affluent communities defect, are addressed by making all customers bear an equal share of contracting costs.

One problematic aspect of California's current retail model is that it threatens to leave low and moderate income communities as an ever-increasing share of the IOU customer base, while more affluent communities increasingly elect a CCA-type structure or otherwise find a way to depart from utility service. Communities of limited means are less likely to have the credit or other financial metrics that would allow them to go outside the IOU structure. Taken to an extreme, we see a future where less affluent communities represent an ever growing share of utility customers and bear an ever increasing share of the utilities' fixed procurement costs.² Thus, Goal #5 is that the retail market minimize equity concerns by enabling all customers to have access to low-carbon and affordable power supply arrangements.

B. Customers Should be Encouraged to Shop for Green Solutions that Meet & Beat Existing RPS Standards.

As noted above, the current market structure risks creating a financial incentive for CCAs to replace higher-cost vintage preferred resource contracts with lower-cost RECs and future-dated renewables purchases. While many of today's CCAs are committing to locally-sourced preferred resources, California's energy policy should reinforce this virtuous outcome and avoid creating financial incentives for shopping customers to defer investment in energy infrastructure.

² Note that this is closely related to the equity concerns sometimes expressed about net metering. Net metering potentially removes wealthy customers from contributing to the fixed costs of operating the *transmission* and *distribution* systems. What we are talking about here is that wealthy customers would no longer be paying the IOU's fixed *procurement* costs, despite application of PCIA charges.

California needs an estimated 10 GW of additional clean generation to meet its renewable energy goals and that means that clean energy capital deployment must continue unabated. Further, unless we align financial incentives properly, we risk incurring the adverse equity impacts discussed above. Thus, a well-designed retail market structure should incent CCAs and other vehicles for customer choice to focus on the portion of their energy supply where competition has the potential to drive new investment. Replacing long-term IOU contracts (whether conventional or for preferred resources) with non-firm, short-term purchases from the market does nothing to bring additional investment dollars to the table. Attracting additional capital will drive achievement of California’s carbon reduction goals more quickly than if CCAs are incented to “compete” to replace existing long-term contract arrangements with cheaper short-term resources.

C. A Centralized Procurement Structure Addresses Many of the Flaws in the Existing California Market Structure.

One of the biggest steps California could take to encourage electric choice at the retail level, whether at the CCA or Direct Access level, would be to transition to a centralized entity responsible for allocating long-term contract costs, and potentially, serving as a contracting counter-party.

1. Benefits of a Centralized Counterparty Relationship.

The most important role of a centralized entity is to allocate long-term contract costs to each Load Serving Entity (“LSE”)³ based on their share of annual usage (*i.e.*, load-ratio share). As the annual usage of any particular LSE changes, for example, because load migrates away from or migrates back to the IOUs, the allocation tracks the new usage patterns. This way, long-

³ We use the term LSE to refer simply to the entity that is contractually responsible for a share of total customer load. It could include IOUs, CCAs, Direct Access, or other shopping customer types.

term procurement costs are allocated on an equitable basis and there is a reduced danger of stranded cost recovery problems, as well as minimizing the possibility that lower income and resourced customers end up bearing increased costs as wealthier customers migrate away from POLR service. Because the centralized counter-party is responsible for allocating legacy contracting costs equitably, each LSE would know the cost of the contracts before it enters into a commercial relationship with load.

The allocation of legacy contract costs is not designed to deter CCAs or other shopping customers from deploying capital. Because every LSE is required to bear its proportional cost of legacy preferred resource contracts, the CCAs would be incented to focus on improving the portion of the supply stack on which they compete; namely, by improving the environmental characteristics of the portion of their supply arrangements that is not already being served by contracted resources, providing improved customer service, or focusing on lowering ratepayer costs. Thus, instead of a CCA seeking to defect from utility service in order to replace long-term contracts with short-dated replacement resources, they will focus on deploying the additional capital needed to build the energy economy of the future.

A centralized counter-party relationship has a number of additional benefits as well. *First*, the centralized counter-party replaces the IOU credit profile with a stronger credit profile that reflects the full faith and credit of all affected California ratepayers. Such an arrangement could result in even lower cost of credit, which could become a particularly large savings should IOU credit issues, such as wildfire liability, continue. Even if the IOUs remain credit-worthy counterparties, there is no downside (other than administrative costs) of establishing a centralized procurement entity. *Second*, one of the major limits on new long-term resource contracting is the (very reasonable) concerns of the IOUs about serving as the sole contracting

counterparties with no ability to know how much of California's load they will serve in the future. Adopting a centralized allocation of long-term contract costs would provide the IOUs comfort that their financial position will not deteriorate as new resource procurements necessarily take place. *Third*, one the major barriers to CCA and other shopping arrangements is that the shopping entity is required to have an extensive credit profile and the managerial expertise to enter into and negotiate long-term contracts. A centralized counterparty arrangement will allocate the costs on an annual basis, instead of a longer-term basis. The credit needs associated with a yearly allocation are considerably less, as would be the managerial requirements. *Fourth*, a default by a CCA or other form of LSE would have relatively minor ramifications under a centralized counter-party system. The customer would be returned to POLR service (or allocated pro-rata to other shopping arrangements), and the long-term contract cost allocation would automatically follow them to their new LSE relationship.

Finally, a centralized procurement mechanism will provide price signals that enhance economic transparency and finance-ability of renewable projects. Instead of one-off procurement event held by IOUs and CCAs, a centralized counter-party could offer standardized contract and disclose procurement prices, without concerns of giving away commercially sensitive information. Forward prices can be used as guidance to incentivize competition and driving down future project cost. Prices could also serve as an index that project developers can use to hedge and optimize risks through additional financial products.

2. Various structures for how a centralized procurement entity could work.

The centralized procurement entity could be structured in multiple ways. The Commission would want to address three major questions early on. *First*, should the centralized procurement entity focus exclusively on administering existing contracts and allocating the costs

of those existing contracts fairly, or would the Commission want to utilize the new entity to procure additional resources under long-term contracts? *Second*, if the Commission desires that the procurement entity take a direct role in driving new resource procurement, would the Commission want the new entity to contract directly with resources? *Third*, should the new procurement entity be utilized to backfill conventional resource adequacy resources if the LSEs fail to make a forward showing that they have the necessary resources?

The simplest structure would be to simply assign the IOUs' responsibility under the long-term contracts to the centralized entity. The existing contracts would remain in place, but the financial side of the contracts would be managed by the centralized entity. Given that a centralized procurement entity would be backed by the full faith and credit of California ratepayers, it is reasonable to assume that the counterparties to these contracts would not object to this assignment. Assignment would allow the centralized entity to establish annual credit metrics and allocations of preferred resource "capacity tags" as transparently as possible.

Using the centralized entity to more actively procure necessary new resources also has its advantages. A centralized procurement structure would ensure that the entire State remains on target for achieving our carbon mandates. For example, if California wants to stay on track toward its current goals of 50% renewable electricity and a reduction of greenhouse gas emissions to 40% below 1990 levels by 2030, the centralized procurement entity could, on a four-year forward basis, conduct resource solicitations that would ensure that the State remains on target to achieve its goals. Such a centralized procurement role could be particularly attractive if Western Regionalization takes hold, since it would allow the procurement entity to look both inside and outside of California for cost-effective resources.

The third major question is whether the Commission should utilize this retail market reform to procure conventional resource adequacy resources, as well as preferred resources. Over the past year, the Commission has witnessed a proliferation of reliability must run (“RMR”) and backstop procurements administered by the California Independent System Operator, all of which are indicative of problems with the current resource adequacy procurement model. These issues are only likely to grow more pronounced as load migration continues to accelerate. The most efficient way to stop the need for RMRs and backstop procurements would be to have each LSE to make a forward showing that they have sufficient resource adequacy lined up several years in advance. But, of course, this becomes difficult if LSEs do not know how much load they will have in the delivery year. The Commission could elect to have the centralized procurement entity procure and allocate conventional resource adequacy as well, which would truly free CCAs and IOUs from having to be the sole contracting entities. Of course, either way, an LSE would always be free to over-procure preferred resources and thus reduce its reliance on the centralized entity’s allocation of conventional resource adequacy obligations. Moreover, a centralized procurement entity could help minimize the need for CAISO backstop procurement by ensuring that all resource adequacy requirements (e.g., system, local, and flexible) are met through its centralized procurement.

3. Jurisdictional concerns and who should perform the procurement function.

The Commission could establish a centralized procurement entity without creating new or additional concerns over jurisdiction. The Commission already has the jurisdiction to assign the primary responsibility for conventional and preferred resource procurement to the IOUs. Allocating that same responsibility to a new centralized procurement agency does not materially change the jurisdictional analysis.

It would even be possible to have a non-FERC jurisdictional affiliate of the CAISO handle the centralized procurement function, if the Commission wished. For example, PJM and other grid operators routinely create affiliates to administer various market products that are outside of FERC’s jurisdiction and have no FERC jurisdictional tariffs. Two recent examples include PJM’s administration of the Generator Attribute Tracking System (“GATS”)⁴ and the PJM Peak Reliability entity, which provides reliability services to the Western Interconnect. Both services are administered by PJM, but outside of the FERC footprint.

D. Customer-Driven Investment in Clean Energy Technologies Should be Encouraged.

For California’s retail markets to drive pro-environmental (and cost) outcomes, the Commission should also consider aligning utility rate recovery with the objective of moving away from ratepayer capital toward private capital investment in distributed energy resources (“DERs”) at distributed locations. NRG asserts that in addition to the “Big Four” incentives (outage duration, number of outages, customer service, and safety) that should underlie well-designed rates, the Commission should strongly consider adding additional rate incentives, including adoption of competitively-sourced DERs, information transparency, and improved resiliency. To accomplish this alignment, the Commission should strongly incent utilities to maximize competitive investment and minimize ratepayer expense. While the universe of potential rate reforms is large, all these ideas have in common the goal of aligning utility incentives with the goal of removing barriers to the deployment of private capital into California.

For example, there is broad recognition across the industry that encouraging end-users to adopt behind-the-meter generation, storage and other technologies that can operate in “islanded” mode in the event of catastrophic loss of the distribution system will enhance overall reliability.

⁴ <https://www.pjm-eis.com/getting-started/about-GATS.aspx>

Positioning these resources at strategic points across the state can ensure continuity of emergency first-responder services and ensure that key community resources, such as hospitals, remain online. Micro-grids or nano-grids that can operate even during a widespread outage thus contribute to reliability as they can reduce the demands on the system when operating in a grid-connected mode and be deployed during outages to avoid customer interruptions.

To promote the deployment of private capital in support of state policy goals, the Commission should consider tying rate-of-return-based earnings to new metrics, including: interconnection processing times; provision of real-time grid and metering data to customers and their agents; attraction of private capital in DERs; and establishment of local market price signals that provide guidance on where investors should build DER projects. Additionally, utilities should be strongly incented to create a competitive framework that attracts private green energy capital regardless of who is serving the customer. By expressly including a benchmark that migrating load should not deter privately-funded green investments in the determination of earnings, the Commission can send a strong message that utilities will be rewarded for meeting and exceeding expectations for increased resiliency of their systems – even though the resiliency increase occurs through non-utility spending.⁵

This philosophy has direct implications for how the Commission treats long-term distribution market development by the utilities. We recommend that the Commission allow recovery for any investments made to establish a competitive *framework* for private DER investment.

IV. Conclusion

⁵ See, e.g., <https://www.edison.com/content/dam/eix/documents/our-perspective/clean-energy-in-2030.pdf>.

