ADVANCED ENERGY ECONOMY
the business voice of advanced energy

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California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

Re: California Public Utilities Commission's Draft Customer Choice "Green Book"

Advanced Energy Economy Comments

Introduction

Advanced Energy Economy (AEE) respectfully submits these comments in response to the California Public Utilities Commission (CPUC) Planning and Policy Division's Draft Customer Choice White Paper released on May 3, 2018. This is a timely effort as California grapples with the challenges of a changing electric system and meeting greenhouse gas (GHG) emissions goals. As such, we greatly appreciate the opportunity to participate in and support this effort.

AEE is a national association of businesses dedicated to transforming public policy to enable a prosperous world that runs on clean, secure, affordable energy. We are comprised of over 100 companies both large and small across the technology spectrum, including energy efficiency, solar, wind, storage, fuel cells, biofuels, electric vehicles, demand response, advanced metering, and enabling software. Our membership also includes large purchasers of advanced energy products and services who are looking to achieve their own business sustainability goals. As an organization that represents a wide range of companies, we balance a wide variety of interests and address issues with a technology-neutral perspective. In these comments, AEE will be referenced collectively as "AEE", "we," and "our."

AEE has substantial experience participating in regulatory proceedings and facilitating conversations between many of the stakeholders who will be affected by and tasked with overcoming the challenges inherent in the changing electricity system – utilities, private advanced energy companies, corporate purchasers, and policymakers. The issues and questions raised in the Draft Green Book will impact our membership and their future market in California.

AEE believes that the continued ability of customer choice, as well as the increased participation of advanced energy technologies in the California electricity market, will not only help California meet its environmental objectives, but also strengthen grid reliability and reduce overall costs for consumers. In these comments, we have based our responses on targeted categories, as laid out below.

Overall Position on the Customer Choice Project

How does California continue its course as a global leader in achieving deep decarbonization as regulated utilities provide electricity to fewer Californians?

AEE supports efforts to ensure the California electricity market is fair, affordable, and reliable and offers consumer choice, and the many benefits it can provide. We also believe the market should drive and encourage innovation moving forward. As such, we applaud the CPUC in their efforts to investigate and evaluate the regulatory framework options for an evolving electricity market.

We recognize the cautionary tale that the California Energy Crisis provides, however, we believe it is important to note that the energy market of today is very different than it was in the early 2000s. As noted in the paper, the Energy Crisis was driven by flaws in market design, weak monitoring programs, and gaming by large out-of-state arbitrageurs that resulted in skyrocketing prices in the new market, the collapse of some of the competitive providers in the marketplace, and shortages in energy supply that resulted in rolling outages to customers. Because of a myriad of factors, AEE believes that a situation similar to the Energy Crisis is unlikely to occur again. Nevertheless, we appreciate and support the CPUC's efforts so far to investigate how to navigate the changing market environment and recognize the importance of developing a comprehensive plan moving forward.

AEE recognizes that in the absence of a cohesive market plan or structure, California may face some challenges in the future, as laid out in the Draft Green Book. That said, we disagree with the premise of the Draft Green Book that seems to identify greater customer choice as an instigator, creating many of these challenges. Instead, we believe that California would be facing many of these challenges, such as those involving resource adequacy and the integration of large-scale renewables and distributed energy resources (DERs), regardless of market structure. As the CPUC and other state agencies and participants in the market work to address these challenges, AEE urges an approach that enhances, rather than walks back, customer options.

In fact, once a proper plan and regulatory construct is in place, there is no reason that participants in a competitive market cannot contribute to California's course as a global leader in achieving deep decarbonization. Customer choice, and the entrance of competitive players in the market, can bring to the table innovation and financial creativity that can save ratepayers money. In addition, the competitive players in the market today (i.e., direct access providers and community choice aggregators, or CCAs) have met or exceeded their regulatory obligations when it comes to items such as the renewable portfolio standard (RPS), greenhouse gas (GHG) reduction, and resource adequacy under the current structure. Therefore, AEE believes that if California gets the regulatory structure right – and without a brand-new compliance authority or extensive regulation - increased customer choice can benefit ratepayers, strengthen the grid, and help the state achieve its goals cost-effectively.

Recommendations on the Path Forward

AEE encourages the CPUC to give thoughtful consideration to next steps for the changing electricity system, including a more thorough analysis of different options and their impact on affordability, fairness, reliability, and customer choice. The Draft Green Book is a helpful start in exploring options but does NOT include sufficient information and analysis to move directly to implement any potential changes. Before California can craft a strategy, we believe it is important to clearly lay out the state's vision of its energy system. In other words, what is the goal of this transition? An overarching set of goals or vision developed with stakeholder input will help guide the process of considering potential market changes and allow the state to ask and consider potential answers to the question, 'where do we want to go?' *before* asking 'how do we get there?'

In AEE's view, the goal is for California to continue to be a national and global leader in the use of advanced energy resources and the adoption of innovative technologies by developing a dynamic electricity system that meets a diverse set of customer needs. The core attributes for this modern, integrated power system include:

- Outstanding reliability and power quality, particularly for this highly networked environment
- Affordability, so that no undue burden is placed on ratepayers
- Environmental responsibility
- Resiliency, to adapt to changing circumstances and extreme weather events
- Safety for ratepayers, employees, and the public
- Robust cybersecurity and physical security, including assurance of data privacy
- Universal access

- Efficiency via system optimization utilizing the most cost-effective resources

In order to achieve this vision, the principal regulatory agencies, utilities, generators, aggregators, technology and service providers and other key stakeholders must be aligned in working to meet the state's overarching policy objectives in a cost-effective and resource efficient way while maintaining these core attributes. As such, prior to any potential legislative action, the CPUC should work closely with the principal regulatory agencies (i.e., CAISO and CEC), the Legislature, and all stakeholders, including CCAs, DA providers, DER providers, and utilities, to ensure there is a seamless plan moving forward.

AEE also believes that this conversation would be remiss without mentioning the potential role of regionalization efforts. A regional grid would bring multiple benefits that are relevant to the customer choice conversation, such as: facilitating greater renewable energy integration; allowing companies, including AEE members, access to a larger market for renewable energy to meet our needs in the west; and by delivering efficiency in meeting resource needs and asset utilization. Although we will not go into detail on regionalization in these comments, we do want to emphasize that regionalization is a valuable option to explore to ensure greater reliability and affordability in a more competitive environment.

Finally, when developing a cohesive plan, it is also important that the CPUC consider processes and reforms already underway. For example, the CPUC's investigation of the Power Charge Indifference Adjustment (PCIA) mechanism – intended to ensure that there is true customer indifference to departing load - should be taken into account as additional steps are contemplated.[1] In addition, the CPUC's on-going development of a new integrated resource planning (IRP) framework that is working to optimize California's load-serving entities' (LSE's) portfolios of resources to reach state policy goals – most notably the goal of reducing economy-wide GHG emissions 40 percent from 1990 levels by 2030 – should also be taken into consideration.[2] Future iterations of the new IRP process should greatly contribute to the optimization of system-wide all-resource planning and help the CPUC achieve its goals of affordability, decarbonization, and reliability.

Customer Choice in California Should be Protected and Strengthened

The trends outlined in the Draft Green Book reflect significant customer interest in greater choice. For example: 1) the Direct Access program filled up immediately and has remained fully subscribed; 2) CCAs are here to stay and are growing at a more rapid pace than anticipated; and 3) customers are increasingly

[1] CPUC R.17-06-026
[2] CPUC R.16-02-007

developing behind-the-meter resources (BTM) to source and manage their energy supply from clean energy sources, as well as their demand for grid resources. Customer choice can bring benefits to the CPUC's goals of affordability, decarbonization, and reliability while also moving California towards the end-state vision for a modern, integrated power system. Specifically:

- **Affordability.** Studies have shown that competition has driven down prices. For example, a key finding in a recent report by Rice University's Center for Energy Studies found that in Texas, rates in the competitive markets have done notably better than rates in the non-competitive portions of Texas, all other aspects being held equal.[3]
- **Decarbonization**. Direct access providers and CCAs are currently complying with (or exceeding) all aspects of state renewable and climate goals. Therefore, we believe there is little reason to think that they will not abide by and meet goals any different than the IOUs in the future.
- **Reliability.** With the investor-owned utilities (IOUs) continuing their role maintaining the transmission and distribution system; the CPUC, CEC, and CAISO coordinating and implementing resource adequacy; and the CAISO controlling dispatch and market rules, there will be no change to reliability moving forward.

The Role of "Preferred Resources"

In the 2003 Energy Action Plan, California identified a loading order of preferred resources to meet energy needs. Energy efficiency and demand response are positioned first, followed by renewable energy sources and then clean DERs such as energy storage. California has time and again identified the importance of DERs in meeting the state's energy needs, and so we are concerned with the characterization of DERs in the Draft Green Book. The Draft Green Book noted that "Customers are once again departing from the utilities as providers of their electricity. They are getting power from rooftop solar panels…" We are concerned that this perspective could reinforce a misconception that future BTM customers should be subject to departing load charges. Instead, we believe that BTM DERs should be characterized as distributed assets, NOT departing load, that when paired with grid modernization technologies, can be utilized to provide services to the grid in response to grid conditions, so that supply and demand are more interactive than was previously possible. In order to support the build-out of these distributed assets, LSEs need analytical constructs to determine the locational value of DERs. There is robust work being done in the Integrated DER (IDER)[4], Distribution

[3] https://www.bakerinstitute.org/media/files/research_document/7d32313b/CES-pub-TXElectricity-060717.pdf
[4] CPUC R.14-10-003

Resource Plan (DRP)[5], and other CPUC proceedings. Additionally, much work has already been done in the TOU omnibus proceeding[6] and the respective IOU rate cases to develop time-variant rates that reflect the temporal value of electricity. Once the locational and temporal value of DER are well understood, LSEs can provide appropriate price or control signals to customer DERs to provide, and be compensated for, grid services. Additionally, charges to compensate for the impact DER might have on the grid could be assessed.

DERs include: energy efficiency, demand response or other energy management technologies, BTM solar, wind, fuel cells or other forms of distributed generation, electric vehicles, on-site batteries or other forms of energy storage, control technology for air-conditioning or lighting, programmable controllable thermostats, and building energy management systems. Customer choice for DERs results in networks of flexible resources that can respond in real-time (5 minutes or less) to grid operator and utility needs, offering fast-dispatch (especially when coupled with storage), flexible, and highly targeted local solutions for grid congestion, load reduction, and smoothing of variable generation. So, while DERs are unequivocally changing the grid environment, we believe they should not be characterized as departing load, but rather as resources that, when valued properly and utilized by grid operators, can optimize the grid and help California meet its overarching goals.

The Role of Technology and Grid Modernization

DERs can serve the dual purpose of providing greater customer choice and control, and grid power quality and reliability benefiting both customers and utilities, provided that the necessary enabling technologies and adaptive regulatory frameworks are implemented. These conditions drive the need for enabling technologies that can incorporate the capability of DER assets, provide greater visibility, digital intelligence (monitoring as well as predictive maintenance) and control as well as the ability to measure and manage power flow and power quality. As such, grid modernization investments are needed to optimize the role of DERs.

Utilities and grid operators are already in the process of adapting, with investments in grid modernization and modifications to traditional distribution planning processes in the CPUC's DRP and IDER proceedings. California must continue this progress and support the transition to a modern, integrated power system.

[5] CPUC R.14-08-013
[6] CPUC R.15-12-012

The Customer Must Not Be Left in The Dark

While the Draft Green Book understandably focuses on customer choice impacts at the macro level, it is critical that the individual customer not get lost in the conversation. One of the most important questions not asked by the Draft Green Book is: who is ultimately responsible for the customer relationship? The Draft Green Book discusses the electric "provider of last resort" at length, however, there is no discussion of the "energy advisor of last resort." This question is particularly salient for residential and small business customers, who are generally far less sophisticated in their energy management than larger C&I customers. While CCAs may become the LSE for a majority of non-publicly owned utility (POU) customers in the near future, these homes and businesses are still IOU customers for transmission, distribution, billing, and other services, and it is unclear whether individual CCAs will seek a larger customer facing role that could disintermediate customers from utilities. When a CCA or DER customer has a question about a high bill or an outage, most often that customer is going to pick up the phone and call his or her utility company. We are concerned that in the changing market environment there is a risk that the overall customer experience may become fragmented and disparate.

Surveys have consistently shown that the vast majority of customers look to their utility more than any other source to provide them with accurate and personalized information about their energy usage. Whether a customer is part of a CCA, has solar, storage, EVs, or controllable thermostats, he or she still receives a bill from one of the major IOUs and continues to look to the utility to help explain those bills and provide information about what can be done to optimize them. This information is currently largely provided by utilities, which the CPUC has frequently directed to invest in advanced tools and programs that provide the energy insights customers need to make the best decisions for their own energy management needs. While many third party DER companies provide excellent data-driven information to their customers, the vast majority of customers still rely on their utility for energy management information and recommendations, and the looming fragmentation of the energy marketplace threatens to sever this tie. Maintaining access to this information, such as their usage data and programs and incentives available to them, can better enable customers to make decisions that can lower their own costs, provide broader system benefits, and possibly give them additional revenue by providing grid services. As such, AEE urges the CPUC to consider the importance of the customer relationship and the implications of setting any policy that disintermediates the utility from that relationship.

California Must Ensure Reliability, Affordability and Fairness

In order to ensure reliability, affordability, and fairness in a new electricity system, there needs to be a level playing field between all LSEs including IOUs, CCAs, and other electric service providers (ESPs). As such, any changing state standards, goals, compliance requirements, policies, and/or incentive programs should be applied fairly and transparently to all entities. All customers, regardless of their energy provider, should have equal access to all programs, such as energy efficiency and demand response programs, that are currently available to bunded IOU customers – ensuring equivalent access to cost-effective and proven energy management technologies, tools, and related incentives.

Furthermore, in order to foster a competitive environment, state-wide programs such as the Electric Program Investment Charge (EPIC) – that provides funding for applied research and development, technology demonstration and deployment, and market facilitation for clean energy technologies – should be available to all LSEs. Allowing all LSEs to participate in programs – in which all ratepayers pay – will only further customer choice and benefit customers.

Finally, in this changing landscape, the CPUC should revisit customer protections to ensure they are uniformly applicable to all customers.

Coordination Among LSEs' Programs and Policies Is Key

Moving forward in a coordinated fashion is key to derive the greatest benefits possible from all the changes taking place, and in avoiding potentially adverse outcomes. All LSEs should be required to coordinate to ensure all programs and policies are complementary and align with the state's policy goals. That said, we do believe that LSEs should be given substantial flexibility in meeting state goals. One of the benefits of competition is its ability to drive innovation and create new solutions.

All LSEs, including CCAs, should be on equal footing in driving the adoption of electric vehicles (EVs) and other DERs to meet state goals. In addition, there needs to be strengthened coordination between IOU and other LSEs' customer-facing DER programs to make sure they are complementary rather than duplicative.

Finally, the CPUC should ensure that there are communication protocols, policies, and systems put in place that will ultimately enable IOU vendors and other third-party service providers, whose customers are participating in existing IOU programs specifically, to be notified when an end-use customer's service is shifted to a non-IOU source or provider. Ensuring communication and transparency will enable a smoother transition for all parties involved.

Changes to the Current Utility Business Model and Regulatory Framework

The current regulatory construct and utility business model are struggling to keep pace with changes that support the principles of universal service and equitably covering and sharing the costs of essential grid services, while also supporting individual customer-level options and the achievement of state policy objectives. The CPUC has already embarked on several parallel paths, via individual proceedings, to address a range of issues emerging from the changes taking place in the electricity sector, such as resource adequacy and DER integration. This has set California on a path to achieving important state policy objectives and has also set the stage for the industry to evolve to a new structure. As these changes become more profound and far-reaching, it will become necessary to consider additional changes, particularly restructuring/aligning incentives (e.g., through performance-based regulation) to achieve the desired outcomes while maintaining the long-term viability of the utility. As such, we believe that regulators should consider changes to current regulatory frameworks and utility business models as utilities potentially transition towards "wires only" entities to ensure their financial incentives align with consumer interests and state policy goals.

Conclusion

AEE supports efforts to ensure the California electricity market is fair, affordable, and reliable and offers consumer choice, and the many benefits it can provide. We believe that the California electricity market will thrive in a more competitive environment. We appreciate the opportunity to provide the CPUC with these comments on the Draft Green Book and would be happy to serve as a resource moving forward as the CPUC works with other agencies and policymakers to develop potential next steps.

Sincerely,

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