California's "Market First" Energy Procurement Policy

Cynthia Mitchell, Energy Economics, Inc.
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This White Paper provides an overview of California's "Market First" energy procurement process, which was initiated in response to the 2000-2001 energy crisis and has evolved ever since.

Oregon SB 978 gives the state an opportunity to learn from California's experience to create diversity in resource type and ownership and avoid complications, such as building costly excess capacity.

California 2001-2004: Deregulation and Crisis

The advent of California deregulation helped make possible the economically crushing energy crisis. One serious consequence of the crisis was erosion of the financial community's confidence in the regulatory process underpinning the health of the state's three investor-owned utilities (IOUs). For nearly 100 years, California IOUs owned substantial portfolios of cost-of-service generation to supply their loads. Under deregulation, California IOUs were required to divest their fossil-fired power plants.

In the 1990s, California led the nation in deregulating its electric utility industry. California's approach limited the role of the state's utilities and relied on new, federally mandated economic entities to provide service to customers. The result was disastrous. In the years 2000-2001, the state experienced extraordinarily high power prices and rolling blackouts during a period of energy and capacity shortages.

Once the energy crisis ended, California policymakers shifted from short-run responses aimed at "keeping the lights on" to longer-term strategies to encourage competitive resource acquisition. The Legislature recast the state's regulatory structure, which in turn meant reestablishing the utilities' obligation to provide adequate service. Other policy addressed processes for utility resource procurement, including the pre-approval of utility plans for acquiring power. Over all, California reinvigorated the role of integrated resource planning.[1]

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[1] Key statutes and policies included: Assembly Bill (AB) 57 (2002, ch. 835) returning utility obligations to their pre-deregulation status, requiring the CPUC to review and approve utility energy procurement plans, and implement a long-term resource planning process; and SB 1078 (2002) 20% RPS by 2020,

As part of its effort to ensure a reliable and cost-effective electricity supply for California, the Legislature with AB 57 directed the California Public Utilities Commission (CPUC or Commission) to initiate a procurement review process, which required the IOUs to submit biennial long-term procurement plans (LTPP). Each LTPP proceeding served as the umbrella proceeding for the CPUC to consider, in an integrated fashion, electric resource procurement plans. LTPP proceedings operate on a two-year cycle, with IOUs responsible for submitting procurement plans to meet their power need over a 10-year horizon.

The first LTPP proceeding, R. 01-10-024,[2] was the vehicle the CPUC used to reinsert the IOUs back in the procurement business following the deregulation experiment. This reintroduction of system planning represented a stark reversal from the deregulation policy of relying on generation developers to build new capacity on a "merchant" or speculative basis, without long-term utility contracts.

California 2004-2007: Hybrid Wholesale Market Procurement

With the first LTPP,[3] the IOUs were directed by the CPUC to follow the state's newly adopted resource procurement "loading order" contained in the state's Energy Action Plan (EAP 2003). This policy required that energy efficiency and demand-side resources be deployed to meet need before new generation.[4] When these preferred resources were exhausted, renewable generation was procured to the fullest extent possible. Whenever an IOU issued a Request for Offers (RFO) for generation resources, the CPUC required the IOUs to defend their selection of fossil generation

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with an annual competitive procurement process for new renewable energy sources. AB 32 (2006) established a target for greenhouse gas emissions and allowed the state Air Resources Board to use market mechanisms to help achieve those reductions.

[2] Order Instituting Rulemaking to Establish Policies and Cost Recovery Mechanisms for Generation Procurement and Renewable Resource Development. Rulemaking 01-10-024 (Filed October 29, 2001).
[3] Rulemaking 04-04-003, D.04-12-048, 12/16/2004, IOUs' LTPPs filed July 2004, 10-year planning period 2005-2014.
[4] EAP I was issued jointly on May 8, 2003, by the Commission, the California Energy Commission (CEC) and the California Consumer Power and Conservation Financing Authority. EAP I was updated with the adoption of EAP II, as a joint policy plan of the CPUC and the CEC, in October 2005.

over renewable generation offers.

In effect, selection of utility-scale renewable generation became California's rebuttable presumption guiding IOU procurement.[5]

At this initial stage of state's evolving procurement process, the CPUC presumed a hybrid wholesale electric market consisting of power purchase agreements (PPAs) with independent power producers and IOU-owned resources. The balance the Commission sought was based on "least cost best fit" (LCBF) principles. The CPUC required PPAs and utility-owned resources to compete in the same all-source open solicitations with the expectation that LCBF results would be achieved.[6]

The Commission's structured approach required all resources, including Utility-Owned Generation (UOG), to go through RFOs, but it also attempted to put utility shareholders, rather than ratepayers, at risk for the utilities' generation resources. This was intended to equalize the allocation of risk between UOG and PPA projects and to impose "market discipline" on utility bids. The policy capped UOG costs at prices bid into the RFO; shareholders would have to absorb any cost overruns. If actual UOG costs turned out to be less than bid, the savings would be shared 50/50 between ratepayers and shareholders.[7]

Before long, tension surfaced between regulators and the IOUs over how to solicit and compare UOG and independent power producer (IPP) offers. The IOUs argued that it was difficult to reasonably compare utility-owned generation with PPAs without potential bias. This utility attitude was in part based on recognition that fossil

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[5] The goal of AB 57 was to allow the IOUs to reliably serve their customers' needs at just and reasonable rates, and also to set forth achievable standards and criteria for rate recovery. If the IOUs made procurement decisions consistent with their approved plans, there would be no need for after-the-fact reasonableness review by the CPUC of the IOUs' procurement actions. D.04-12-048 established upfront standards and criteria for rate recovery and authorized the IOUs to make procurement decisions that incorporated the CPUC's policy direction from other procurement proceedings.

[6] D. 04-12-048 Findings of Fact 80 – 84.

[7] D.04-12-048 pp.140-141

generation was falling out of favor in California, and that the IOUs were not skilled in developing utility-scale solar and wind power projects.

The following excerpts from the CPUC's first LTPP are noteworthy, with Southern California Edison (SCE) pointing out the difficulty of comparing UOG and IPP bids given the differences in how each treat expenses.

> "Both utility cost-of-service generation and third party contracts have advantages and disadvantages. SCE believes that its customers' interests are best served in the long term by a portfolio of ownership which includes both types. The comparability of these alternatives is challenging and although it may be possible to do, it also may be in the best interest, as a matter of public policy, to keep third-party procurement and utility-owned generation separate in the near-term."[8] (underscore added).

Also, in the same proceeding Pacific Gas and Electric (PG&E) called comparisons of UOG and IPP generation judgment based:

> "The briefs [filed in this proceeding] confirm what PG&E has asserted all along – there is no way to compare utility-owned generation with PPAs that does not involve the exercise of judgment. The Commission's "hybrid market" approach was based, in part, on the absence of a methodology to compare utility-owned generation with PPAs."[9] (underscore added).

California 2007: Adopts "Market First" Procurement

The second biennial LTPP review[10] represented a turning point in the CPUC's hybrid procurement process, as SCE continued to press the point that PPAs could not be directly compared to UOGs because they are fundamentally different products with substantially different risks to ratepayers.

> "SCE's proposal would not have the IOU bidding directly into a solicitation. Several parties agree with SCE that PPAs cannot be exactly compared to UOG.

[8] CPUC initial procurement proceeding, R.01-10-024, SCE Rebuttal Testimony, pp. 42-43, July 14, 2003.
[9] CPUC R.04-04-003, Reply Brief of PG&E, p. 5.
[10] R 06-02-013

> TURN [The Utility Reform Network] notes that, 'In reality, a perfect apples-to-apples comparison between utility–owned generation and PPAs is unachievable.'… TURN notes that 'there is no simple formula that will inevitably produce the least-cost, best fit resource in every situation. TURN's comments are consistent with SCE's view that utility-owned generation and contracted-for generation are fundamentally different products.
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> IEP [Independent Energy Producers] simply confirms one of the many reasons UOG is a different product than third party-owned generation – the costs included in the bid may be different.…What SCE has asserted is that head-to-head comparisons of unlike products…are impractical because there are too many differences in the products for the comparison to be meaningful. This is particularly true, if, as IEP proposes, the comparison is completed in the form of a simple "lowest bid" competitive process."[11] (underscore added)

The CPUC's decision in the second biennial LTPP review stepped away from its prior requirement of all-source solicitations in which UOG and PPAs competed. Instead it established "Market First" approach where only PPAs were considered. The Commission did allow for UOG applications outside of an RFO but only if the utility could demonstrate that specific criteria had been met:[12]

> "IOUs can not issue RFOs that seek both Power Purchase Agreements (PPAs) and Utility build bids.
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> "UOG applications by the IOUs outside of an RFO must fit into a unique circumstance, which were limited to market power mitigation, reliability, preferred resources, expansion of existing facilities, or be a unique opportunity, as described in this decision, and each application will be considered on a case by-case basis. The IOU is required to make a showing that holding a competitive RFO is infeasible.
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> "The IOUs will no longer be allowed to consider as an option in their competitive PPA RFOs the transfer of the fully depreciated resource underlying a PPA to the IOUs." (underscore added)

The CPUC also adopted a more flexible ratemaking approach, concurring with parties that a "one-size-fits-all" ratemaking regime was not desirable and that the "50/50

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[11] CPUC R.06-02-013, SCE Reply Testimony, April 9, 2007, pp. 16-17, 19.
[12] D.07-12-052, Ordering Paragraphs 30-32, 12/2007.

cost cap" directed in D.04-12-048 would be eliminated. The CPUC stated that it would consider cost and savings sharing ratemaking mechanisms such as those utilized by PG&E or proposed by San Diego Gas & Electric on a case-by-case basis, based on the unique circumstances associated with the procurement, and proposals for the requested treatment must be justified by these unique circumstances. The CPUC also agreed with San Diego Gas & Electric (SDG&E) that bids received in RFOs should be finalized upon review by the Commission. The CPUC further agreed that there are legitimate reasons why a bid price might need to be adjusted between the time it is originally submitted and when it is finalized and brought to the Commission for approval.

> "Limiting bids to the initial offer price, and subsequently ignoring any changes to the terms and conditions of the deal, will undoubtedly lead to increased costs for consumers due to the need for entities to anticipate contractual negotiation risk and therefore price that risk into the initial bid."[13]

California 2012: Reaffirms "Market First" Procurement

Since the 2007 LTPP decision, the California IOUs have generally declined to pursue utility-owned generation because they were having trouble making the case for such generation as cost effective under their own business model given the cheaper resources available in the market. The competitive process was revealing very low prices and other attractive attributes and terms. The IOUs, particularly SCE, began to turn more of their focus to their transmission and distribution systems – upgrades and expansions, which were needed.

The CPUC's 2010 LTPP proceeding re-examined its 2007 decision to limit solicitations to all-source PPA solicitations. The Commission's April 2012 decision reaffirmed the basis for stepping away from where UOG competed with PPAs, and strengthened the Commission's commitment to a "Market First" approach to procurement. It found its policy as a manageable process that also avoided the unacceptable appearance of favoritism created in the selection of a UOG project in an all source bidding:

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[13] D.07-12-052 p. 221

> "Under our current electricity market structure, the utilities purchase power from independent generators under power purchase agreements (PPAs), and also generate power at utility-owned generation facilities (UOG). UOG facilities may either be constructed by the utility itself, or purchased by the utility. These different sources of electricity tend to be difficult to compare, particularly in the context of evaluating competing bids….A number of (usually disparate) parties tend to agree that it is not possible to fairly compare UOG and PPA projects in an RFO…. An RFO that requires comparisons of UOG versus PPA projects is neither credible nor manageable. Finally, and of equal importance, having the IOUs in a position to evaluate their own UOG projects in comparison to PPA bids creates a very real perception of bias that in turn compromises the competitiveness of the RFO."[14] (underscore added)

California's Procurement Future

California's energy system faces a period of tremendously complex challenges. As California moves toward a 50 percent RPS to reduce greenhouse gas emissions[15] coupled with a more decentralized network of variable renewable resources,[16] the state faces daunting issues. These include: responding to solar over-generation and meeting dramatic evening ramps when the sun sets.[17] CPUC President Michael Picker, at a recent conference on California's Distributed Energy Future, described the paradox in reducing the power sector's greenhouse gas emissions:[18] "As we have seen from Germany and China, you can increase the amount of renewables and still have to build backup [gas-fired] generation, thus contributing to more greenhouse gas (GHG) emissions."

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[14] LTPP 2010 D. 12-04-046, 4/19/2017, p. 28.

[15] California has adopted the most ambitious GHG reduction targets in North America. 2016 amendments to AB 32 (2006) require the state to cut GHG emissions to 40% below 1990 levels by 2030 (and by 80 percent below 1990 levels by 2050), a more ambitious target than the previous goal of hitting 1990 levels by 2020

[16] 2015 California increased its RPS requirement to 50% by 2030.

[17] California "Duck Curve".

[18] Green Tech Media Squared GTM2, California's Distributed Energy Future Conference, Fireside Chat: The State of the California Energy Transformation, March 9, 2017, www.gtmsquared.com.

In addition to GHG reduction mandates and renewables integration, California must confront local reliability needs and capacity requirements resulting from the early retirement of the San Onofre Nuclear Station (SONGs) and the outage of the Aliso Canyon natural gas storage facility, both in the LA Basin, as well as the planned retirement of several Once Through Cooling (OTC) fossil-fueled power plants along the California coast. The LA Basin has significant in-basin load requirements, and even with large amounts of energy coming in from the East over long distance transmission lines, there is significant need for in-basin generation and spinning reserves for grid stability. This means that the state must also pay more attention to locating generation (central or distributed) where it is most needed.

Meanwhile, California currently has an approximate 30% generation capacity surplus. This has resulted in part from stringent and growing RPS requirements at a time when load has been flat or declining since the 2008 recession. But this surplus will dramatically shrink in the next several years (2019-2025) as the state loses thousands of megawatts of OTC generation, as well as the 2000 megawatt Diablo Canyon nuclear plant.[19] With "Market First" and IOUs no longer competing in generation, the utilities can focus on what they know best -- their transmission and distribution systems and direct new generation to locations where the load pocket needs must be met.

Senate Bill (SB) 350, which the California legislature passed in 2015, sets ambitious goals for the state, including a 50% renewables portfolio standard and a doubling of energy efficiency by 2030. To help encourage a coordinated approach to meeting these goals, SB 350 mandates that the CPUC examine the future of California's energy procurement practices through an Integrated Resource Planning (IRP) process. The Commission's IRP proceeding, opened in 2016, attempts to take a coordinated approach to planning energy generation and transmission in the state. Traditionally, the CPUC has relied on the LTPP proceeding to determine what type and quantity of generation resources California utilities should procure. However,

[19] PG&E's filed an application in 2015 with the CPUC for the early retirement of The Diablo Nuclear Facility (9% of the state's electric supply).

with the recent growth of new energy technologies such as energy storage and demand response that do not fall within the scope of the traditional LTPP proceeding, the CPUC recognizes that it needs to take a more holistic approach to utility procurement strategies.

The IRP will largely build upon the work done in previous LTPP proceedings. But the CPUC also intends for the IRP to be an "umbrella" resource planning proceeding, which will be informed by and influence a number of current resource-specific proceedings. The CPUC has already moved 19 related proceedings under the IRP umbrella. The Commission will also look at the scope of SB 350's required integrated resource plans that load serving entities will submit to the CPUC starting in 2017. Although the CPUC intends to coordinate with LTPP requirements, it does not foresee that the IRP proceeding will result in California utilities filing additional procurement plans. The CPUC will also consider procurement policy issues stemming from the growth of community choice aggregation, including cost-sharing mechanisms and procurement that could benefit customers who live in different utility service territories.

Conclusion: "Market First" – A California Success Story

While the California energy market has wrestled with complex challenges over the past twenty years, the "Market First" policy has proven to be a notable success. Competitive solicitations have ensured that ratepayers received the best possible price for those new resources found to be needed and to meet ambitious RPS targets. While UOG has not been completely barred, they have been limited to specific justifiable situations and have arisen only rarely. Yet the IOUs continue to enjoy strong rate base growth from their transmission and distribution investments, and remain in good favor with the financial community despite their lack of new generation investment.

Cynthia K. Mitchell is the founder of Energy Economics, Inc. and has 40 years experience working on power sector issues on behalf of consumers. Ms. Mitchell received her B.A. and M.S. in Economics from the University of Utah.

Mitchell worked in the Nevada Office of Consumer Advocate at the Nevada Public Service Commission and has consulted with TURN, California's advocate for residential ratepayers for over 20 years. She has testified before utility commissions throughout the United States and helped the National Association of Utility Regulatory Commissioners promote widespread adoption of integrated resource planning in the 1980's.