

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

Order Instituting Rulemaking to Oversee the  
Resource Adequacy Program, Consider Program  
Reforms and Refinements, and Establish Forward  
Resource Adequacy Procurement Obligations.

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Rulemaking 21-10-002  
(Filed October 7, 2021)

**COMMENTS OF THE INDEPENDENT ENERGY PRODUCERS ASSOCIATION ON  
THE FUTURE OF RA WORKING GROUP REPORT**

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March 24, 2022

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**I. INTRODUCTION**

In Decision (D.) 21-07-014, the Commission instructed parties to the then-current resource adequacy (RA) proceeding, Rulemaking (R.) 19-11-009, to undertake a series of workshops to finalize implementation details for a new slice-of-day (SOD) RA compliance framework that had been proposed by Pacific Gas and Electric Company (PG&E).<sup>1</sup> Parties eventually scheduled ten workshops that occurred between September of 2021 and January of 2022. During the course of the workshops, the challenges of integrating use-limited resources and standard import products that do not align neatly with the four-hour slices PG&E proposed became clearer to PG&E and other parties. Two other SOD proposals emerged that seemed promising as alternatives to PG&E's original proposal: a 24-hourly slice framework from Southern California Edison Company (SCE) and a two-slice (peak and net peak) framework from Gridwell Consulting (Gridwell). Eventually, PG&E withdrew support for its own proposal in favor of SCE's 24-hourly slice approach. According to the results of the party position matrix, parties were nearly evenly split between their support of the SCE and Gridwell frameworks, with nine parties supporting 24-hourly slices and eight parties (including the Independent Energy Producers Association (IEP)) supporting two slices.<sup>2</sup>

Below, IEP provides a summary of our recommendations regarding the core structural elements of the RA framework (the number of slices per compliance showing and the number of

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<sup>1</sup> D.21-07-014, pp. 51-52.

<sup>2</sup> Future of Resource Adequacy Working Group Report (FRAWG Report), p. 93.

compliance periods) and the other topics the Commission ordered parties to consider: resource counting, need determination and allocation, hedging requirements, and multiyear forward contract requirements. We then address questions that ALJ Chiv requested parties to respond to in her March 4, 2022 ruling (Ruling) regarding the implementation timeline and the Energy Division's loss of load expectation (LOLE) study.<sup>3</sup> In final section, we provide more detailed comments on the various elements of RA reform.

## **II. SUMMARY OF RECOMMENDATIONS**

IEP supports the following RA reforms:

- Transition to a two-slice compliance framework,
- Reduce the compliance periods from monthly to seasonal (summer/winter),
- Determine total need based on portfolio that achieves an annual LOLE of 0.1,
- Allocate the need according to each load-serving entity's (LSE's) contribution to coincident gross peak,
- Use effective load carrying capability (ELCC) to attribute qualifying capacity (QC) value to all variable and use-limited resources,
- Use unforced capacity (UCAP)-light (potentially full UCAP subject to certain conditions) for thermal non-use-limited resource,
- Do not require hedging components in RA contracts,
- Require LSEs to procure system RA at least three years forward.

In D.21-07-014, the Commission enumerated five principles to guide the development of the final framework. While both the 24-hourly slice and two-slice proposals may be feasible and may achieve the ultimate goal of ensuring that LSEs procure a mix of resources that will achieve the LOLE standard, Gridwell's two-slice proposal surpasses the 24-hourly slice approach on Principles 3, 4, and 5. In the table below, IEP compares both proposals across the five principles.

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<sup>3</sup> Administrative Law Judge's Ruling Seeking Comments on the Future of Resource Adequacy Working Group Report and the Local Capacity Requirement Working Group Report, issued March 4, 2022.

Principle	Two-Slice	24-Hourly Slice
1. Balance ensuring a reliable grid with minimizing costs	Use of updated ELCC resource counting and net-peak check ensure reliability; costs reduced via superior transactability	24 hourly obligations ensure reliability in all hours but additional work needed to properly account for resources with monthly use limits and to resolve reliability concerns due to multiday low renewable generation events
2. Balance addressing hourly energy sufficiency with advancing environmental goals	Assesses energy and capacity sufficiency in all 8,760 hours across a wide range of load and production conditions; neutral regarding environmental goals	Addresses energy sufficiency by requiring explicit showing of available energy to charge storage but does not address multiday energy sufficiency; neutral regarding environmental goals
3. Balance granularity with a reasonable level of simplicity and transactability	Simpler and more transactable because all resources continue to be denoted in MW of net QC	Harms transactability by fragmenting the RA market into a separate product for each generation profile; will probably require continued use of maximum cumulative capacity buckets for monthly use-limited resources
4. Be implementable by 2024	Requires fewer changes for resource counting and validation by the California Independent System Operator (CAISO)	CAISO cannot validate 24-hourly showings
5. Be durable and adaptable	By deriving ELCC values from the LOLE model, QC values automatically adjust to changing loads and supply portfolios sending LSEs the right procurement signals; peak and net peak assessments will cover hours with LOLE for the foreseeable future and an additional slice can be added if longer-term modeling reveals a need	Adaptable as long as LOLE events are not driven by multiday low variable generation events

To elaborate on IEP’s assessment of the two proposals vis-à-vis the principles, we focus on Principles 3, 4, and 5. The two proposals are fairly comparable with respect to Principles 1 and 4, although the 24-hourly slice proposal runs a slightly higher risk of not being implementable by 2024. With respect to Principle 2, some parties have criticized the two-slice proposal for failing to *explicitly* account for the energy needed to charge storage. However, the lack of an explicit charging sufficiency check is not tantamount to simply assuming that there will always be sufficient energy for charging. Analysis of the expected 2030 portfolio of Commission-jurisdictional LSEs shows that there is ample energy to charge storage resources by

the time they are needed during net peak.<sup>4</sup> No party presented analysis demonstrating a foreseeable shortage of charging energy, but to the extent this ever emerges as a reliability constraint, the ELCC for storage will decline and the ELCC for solar and other resources that can provide charging energy will increase. These trends will appear in long term analysis of the integrated resources planning (IRP) proceedings and incremental procurement can be directed to ensure such shortages do not occur. Ultimately, as long as the IRP process is primarily responsible for ordering procurement of incremental capacity, only IRP can ensure there is sufficient energy, particularly renewable energy, installed to fully charge energy storage before it's needed.<sup>5</sup>

In IEP's assessment, both proposals are essentially neutral regarding the advancement of environmental goals. After accounting for any RA value associated with long-term contracts, such as Renewable Portfolio Standard resources, an LSE could meet the rest of its RA obligation entirely with gas-fired generation, entirely with renewable energy and storage, or any combination of resources. Neither framework inherently advantages, or disadvantages, zero-greenhouse gas (GHG) or fossil-fueled resources.

The biggest advantage to the two-slice proposal lies in Principle 3, the transactability of the product LSEs use to comply with their RA obligations. Under the 24-hourly slice framework, generation profiles will need to be developed for multiple wind regions and potentially multiple solar regions and/or technology types (e.g., tracking vs fixed-tilt). The RA market will fragment into multiple product categories as each resource type (use-unlimited thermal, hydropower, solar type, wind region, and hybrid configuration) becomes a different RA product with a different compliance value across all 24 hours. In contrast, under the two-slice proposal all resources will continue to be denoted in MW of NQC. In other words, the two-slice proposal preserves fungibility of the RA product, leading to a deeper, more liquid market.<sup>6</sup> Additionally, product

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<sup>4</sup> Gridwell. Resource Adequacy Two-Slice Proposal, presented December 1, 2021, slide 11. [https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/resource-adequacy-homepage/workshop-6-gridwell\\_resource-adequacy-reform---gridwell-consulting---december-2021.pdf](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/resource-adequacy-homepage/workshop-6-gridwell_resource-adequacy-reform---gridwell-consulting---december-2021.pdf)

<sup>5</sup> FRAWG Report, pp. 35-36.

<sup>6</sup> FRAWG Report, p. 36.

fragmentation under the 24-hourly slice framework may complicate planned outage substitution requirements in ways that parties have not discussed in depth in the working group process.<sup>7</sup>

The two-slice framework also excels with respect to Principle 5 since the ELCC values of different resources will evolve over time as a function of changes in the magnitude and shape of the system load and the portfolio mix. In particular, without additional (and thus far completely undeveloped) reliability checks, the 24-hourly slice framework will fail to ensure adequate resources are under contract to cover multiday periods of low variable energy generation.

### **III. RESPONSES TO ALJ RULING**

The Ruling asks parties to comment on the milestones that are necessary to implement the preferred RA framework and the timing of achieving those milestones.<sup>8</sup> The seasonal, two-slice framework IEP supports necessitates resolution of the following items: refining the ELCC and PRM values presented in Energy Division's recent study, finalizing net peak QC values for wind and solar (although these may be available from the CEC and/or CAISO<sup>9</sup>), and determining the number of seasons that best balances administrative efficiency and cost minimization objectives. In order to implement the new program for RA year 2024, the Commission must issue a decision resolving these issues by the late summer or early fall to give LSEs enough time to execute their year-ahead contracts. Issuing such a decision by this deadline will be extremely difficult. A final decision on the basic RA framework cannot realistically occur before June. Ordinarily, the Commission would schedule one or more workshops on the open issues identified above, or the 24-hourly slice alternative, and then issue a staff proposal or request proposals from parties. Realistically this would push a final decision on implementation details out to at least the end of 2022.

As an alternative approach, the Commission could work informally with parties to craft questions related to both frameworks, issue a ruling, and incorporate the feedback from parties into one comprehensive proposed decision that the Commission would issue before the end of the third quarter this year. If the Commission takes that path, staff must begin outreach immediately on the questions parties should respond to regarding final implementation details.

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<sup>7</sup> Vistra informal comments, FRAWG Report, pp. 325-329.

<sup>8</sup> Ruling, pp. 1-2.

<sup>9</sup> FRAWG Report, pp. 79-80.

## **IV. DETAILED RECOMMENDATIONS**

### **A. Number of Slices**

IEP supports the two-slice proposal put forth by Gridwell, which offers several advantages compared to the 24-hourly slice model. Gridwell's proposal focuses compliance obligations on the peak and net peak hours, which Energy Division's modeling results show will remain the key hours with reliability concerns through at least 2030. While production cost modeling results presented at the September 1, 2021 IRP workshop showed small quantities of expected unserved energy in winter mornings in 2030 (a 7 MWh shortfall across the entire CAISO territory),<sup>10</sup> it is unknown whether that shortfall persists after improvements in the storage dispatch algorithm were found to reduce the LOLE of the 2030 portfolio by a factor of 100.<sup>11</sup> Adding only a net peak requirement better achieves the simplicity criterion alluded to in Principle 3 because limiting compliance activity to the hours of concern avoids the need for LSEs to demonstrate adequate capacity during the large majority of hours that have zero LOLE. Other compliance checks, such as a winter morning "slice," can be added if long-term LOLE modeling reveals looming shortfalls during other time periods.

Compared to SCE's proposal, Gridwell's approach also better meets the transactability criterion included in Principle 3. Because LSEs would only need to demonstrate sufficient capacity for two points in time, product definitions in RA markets would not need to change much compared to the status quo, continuing to be denoted in MW of net qualifying capacity (NQC). If the net peak hour is late enough in the day such that little to no solar generation will occur, solar-only capacity can be ignored and only wind energy would need to have secondary NQC values based on historical production during net peak hours. In contrast, the 24-hourly slice approach will require the trading of representative daily generation profiles for variable energy resources. This may lead to a greater disruption in the transactability of RA associated with variable energy resources as the market will need to determine how to value different

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<sup>10</sup> "Integrated Resource Planning (IRP) Proposed Preferred System Plan Analysis," slide 56. <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltp/2019-2020-irp-events-and-materials/psp-workshop-slides.pdf>

<sup>11</sup> D.22-02-004, p. 103; Integrated Resource Planning (IRP) Proposed Preferred System Plan Analysis, slide 52.



generation profiles. For example, how will the market price the RA value of 1 MW of New Mexico wind versus 1 MW of Idaho wind, 1 MW of single-axis tracking solar, or 1 MW of gas-fired generation? This type of product definition diverges sharply not only from the status quo in California but, to IEP's knowledge, any other jurisdiction in the world. Keeping RA values denoted in more readily comparable MW NQC terms rather than generation profiles will facilitate a smoother transition to a new RA framework.

## **B. Frequency of Compliance Obligations**

Initially Gridwell described its proposal as a peak/net peak obligation with semi-annual showings, one for the summer season and one for the winter. During the recap workshop, Gridwell stated that the framework could also be used with monthly compliance showings, and the proposal included in the FRAWG Report would maintain monthly obligations.<sup>12</sup> IEP supports Gridwell's original proposal primarily due to the substantially lower administrative and compliance burdens compared to the monthly status quo. A two-slice/two-season framework results in only four hours per year for which California Energy Commission (CEC) staff must prepare LSE-specific load forecasts, two compliance filings that LSEs must prepare and that the Commission and CAISO staff must review, and two LOLE analyses and corresponding sets of ELCC values, and two hours of wind exceedance analysis (summer net peak and winter net peak) that Commission staff must produce.

Despite assertions by some parties that monthly showings allow LSEs to meet their RA obligations at lower cost by contracting only for the amount of capacity needed each month, IEP is not convinced that monthly obligations yield significant, if any, savings. In theory, generation and storage facilities will price their annual fixed costs into their capacity bids, with the expectation that they will recover variable costs in energy markets. Compressing the duration of a capacity contract simply forces generators to increase their kW/month bids to recover their costs over a shorter timeframe. Generators do not avoid fixed costs during the months they lack RA contracts. IEP questions whether the administrative burden of monthly compliance obligations yields a countervailing benefit.

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<sup>12</sup> FRAWG Report, p. 32.

### **C. Need Determination and Allocation**

Whichever SOD structure the Commission chooses, the total system-wide need should be calibrated using LOLE analysis, rather than continuing to rely on a relatively arbitrary PRM applied to coincident peaks. This broadly aligns with the process described in Vistra’s chapter in the FRAWG Report and the recent LOLE analysis conducted by the Energy Division.<sup>13</sup> Instead of establishing a fixed, ex ante PRM, the Commission should periodically adjust the PRM such that LSEs procure the capacity levels identified by the LOLE analysis, and no more, to maintain a 0.1 LOLE.

Once the total system need has been established, the Commission should allocate RA obligations to LSEs based on their proportional contributions to either the peak/net peak or across all 24 hours of the peak day load profile for each month or season. The California Energy Commission (CEC) explained at the December 1, 2021 workshop how the current coincident peak allocation process could be modified to create LSE-specific representative hourly load forecasts, adjusted for contribution to coincident peak days. In this respect, a peak/net peak system with semi-annual or other seasonal showing requirement would lower the administrative complexity for both LSEs and the CEC by reducing the number load hours that must be analyzed (i.e., 360 hours for a 12-month/24-hourly slice framework vs four hours for a two-season/two-slice framework).

For the 24-hourly slice proposal, parties have discussed two options for producing the peak day load profile: “worst day” and “max hour.” IEP prefers using a load profile that is representative of an actual peak day rather than constructing a synthetic load profile from the maximum individual peak hours of each month. Such a load profile will not be expected to occur on any actual day. However, since no party has yet constructed a “max hour” profile, we have not had an opportunity to compare results from the two approaches. It may turn out that the two approaches differ very little in practice.

### **D. Resource Counting**

#### **1. Thermal, Use-Unlimited Resources**

We start by discussing thermal, use-unlimited resources, since the resource counting convention for these resources does not depend on the SOD framework. Parties discussed two

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<sup>13</sup> FRAWG Report, pp. 73-82.

reforms during the course of the workshops: a UCAP-light methodology that derates facilities' summer month capacity ratings due to ambient temperature effects and a full UCAP proposal offered by CAISO that derates facilities' QC based on ambient temperature effects and other types of forced outages that occur during tight supply conditions.<sup>14</sup> IEP supports UCAP-light but has significant concerns about the lingering impact of a major forced outage on a facility's NQC value even after it makes substantial investments to improve availability. Although IEP understands the impetus to motivate plant operators to achieve high availability rates by adjusting plant-specific NQC to reflect plant-level performance, IEP has strong reservations that implementing UCAP as proposed would punish plants for up to three years despite investments to improve performance.

CAISO proposes that the Commission base thermal generators' QC for a given year on plant performance data during tight supply conditions in the three prior years. Specifically, CAISO would base the QC on an average of prior years' availability factors with weightings of 45% for Year -1, 35% for Year -2, and 20% for Year -3.<sup>15</sup> If UCAP were adopted as CAISO proposes, a plant that experiences a major failure would suffer a diminished capacity value for the next three years after coming back online, even if the plant's investments enable it to match, or exceed, its previous performance. The three-year lag that occurs before a plant's QC value accurately reflects its improved performance will potentially deter such investments and will deprive the RA program of the plant's full capacity, harming both the plant's operators and LSE customers.

During the workshops, one participant suggested that in order to avoid this perverse outcome, certain types of investments could allow a plant to reset its UCAP baseline as if it were a new plant. To accommodate new resources, CAISO suggested that new facilities would be rated at their full deliverable capacity in their first year of operation. In the second year of operation, UCAP capacity would be weighted at 70% of first year availability and 30% of deliverable capacity. By the fourth year of operation, a new facility's qualifying capacity would be based on the three prior years' performance, the same as any other plant.<sup>16</sup> If the Commission

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<sup>14</sup> FRAWG Report, beginning p. 50.

<sup>15</sup> FRAWG Report, p. 57.

<sup>16</sup> FRAWG Report, p. 58.

adopts UCAP, the methodology must recognize major plant investments to improve availability.<sup>17</sup> It will also be important to exempt certain outages due to factors beyond operators' control. CAISO listed several factors that would and would not be included in the UCAP calculations, but other factors, such as curtailments of gas delivery, may need to be added.<sup>18</sup>

## **2. Variable and Use-Limited Resources, Two-Slice, Gross Peak**

IEP favors the Gridwell framework largely because it allows for the continued use of ELCC to attribute capacity value to variable energy resources, and would add application of ELCC to storage and potentially other use-limited resources.<sup>19, 20</sup> Compared to exceedance and Pmax value approaches, ELCC is a more sophisticated, probabilistic method for attributing capacity value to variable and use-limited resources that captures their contributions to reliability throughout the year.<sup>21</sup> Moreover, deriving capacity values from the production cost models used to calculate the LOLE, PRM, and other reliability metrics of the total portfolio better reflects variable and use-limited resources' contributions to reliability under a wide range of conditions and aligns the capacity values with the model results for the entire portfolio. In contrast, SCE has not yet explained how the total capacity requirement identified in an LOLE analysis should be translated to a PRM in an RA regime that employs fundamentally different resource counting conventions.

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<sup>17</sup> Similarly, the UCAP-light methodology should immediately recognize investments to reduce ambient temperature effects on plant performance.

<sup>18</sup> FRAWG Report, p. 61.

<sup>19</sup> FRAWG Report, pp. 38, 40.

<sup>20</sup> IEP supports transitioning from an average ELCC framework to either a vintaged marginal or delta ELCC. Both methodologies are described in Schlag et al., Capacity and Reliability Planning in the Era of Decarbonization: Practical Application of Effective Load Carrying Capability in Resource Adequacy, Energy and Environmental Economics, Inc., 2020. <https://www.ethree.com/wp-content/uploads/2020/08/E3-Practical-Application-of-ELCC.pdf>

<sup>21</sup> A critical point regarding the two-slice framework is that the procurement targets resulting from the LOLE analysis are designed to ensure that LSEs procure a total portfolio that achieves the reliability target during *all hours of the year*, not only during gross peak conditions. The fact that the PRM and the allocation of procurement responsibility are denoted with respect to the gross peak does not mean that the construct only focuses on assessing reliability during the gross peak. Rather, it is a somewhat arbitrary convention shaped by past practice. Theoretically, the RA program could peg the PRM (which would be higher due to a smaller denominator) and allocation of need to the net peak. See Schlag et al. (2020), p. 3.

### **3. Variable and Use-Limited Resources, Two-Slice, Net Peak**

While resource counting for the gross peak compliance obligation relies on ELCC values that represent contribution to reliability during all hours of the period analyzed (month, season, or year), the secondary net peak verifications are similar to the 24-hourly slice model in that the goal is to evaluate resources' contribution at a specific point in time.<sup>22</sup> Consequently, ELCC cannot be used for variable resources and the NQC values must be adjusted with an exceedance-based analysis, or similar approach, specific to resources' performance in the summer net peak and winter net peak hours. Vistra proposes that the net peak hour be set as the hour in each month (or season) with the greatest expected unserved energy (EUE), which based on Energy Division analysis occurs in summer months between 6 pm and 8 pm.<sup>23</sup> Vistra proposes capping the net peak contributions of wind and solar using the output shapes that CAISO relies on for its local RA net load assessments.<sup>24</sup> IEP is unsure whether the generation shapes described by Vistra are available for all resource regions. Alternatively, Commission staff can derive expected net peak hour values for wind and solar using the exceedance, or similar, methodologies described below.

### **4. Variable and Use-Limited Resources, 24-Hourly Slice**

If the Commission adopts a 24-hourly slice framework, IEP generally supports the exceedance and Pmax resource counting methodologies described by SCE and PG&E in their SOD proposals.<sup>25</sup> Although ELCC is superior, the method does not lend itself to use in multiple-slice framework because a more granular generation profile is needed to layer variable energy resources into LSEs' load curves. ELCC-based resource counting methodologies are incompatible because they return a single value that represents a resource's capacity value during all hours of the time period in question.

For a 24-hourly slice framework, variable energy resources require capacity valuations at an hourly level of granularity, using an exceedance approach, or similar methodology. The

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<sup>22</sup> Once an RA program based on LOLE and ELCC resource counting is correctly implemented and regularly updated, IEP agrees with Gridwell that deficiencies in the net peak should occur rarely, if ever. See FRAWG Report, p. 36.

<sup>23</sup> FRAWG Report, p. 78.

<sup>24</sup> FRAWG Report, pp. 79-80.

<sup>25</sup> FRAWG Report, pp. 8-31.

methodology described by PG&E, in which exceedance values are compared to actual production on peak load days, is a good starting point although more discussion is needed before IEP can fully endorse PG&E's proposed exceedance values of 60% for solar and 70% for wind.<sup>26</sup> IEP is concerned that generation data from a small number of historical peak load days is an inadequate dataset on which to base the comparisons. To conduct its analysis, PG&E relied on only six historical production data points for each hour (generation on the peak load day of each month over the last six years) to calculate the hourly exceedance values. This small sample size could produce values with a high degree of year-to-year variability, a concern shared by the California Wind Energy Association (CalWEA).<sup>27</sup> IEP suggests using the top five peak demand days for each month, or the comparable Effective Net Load Reduction approach proposed by CalWEA, to yield a more robust sample size.<sup>28</sup> Whether exceedance values are used in a 24-hourly slice framework or for the secondary compliance checks in the two-slice approach, more analysis is needed before parties can confidently recommend specific exceedance values.

For storage, SCE proposes that LSEs use the current method of counting projects at Pmax in any hour (up to facilities' interconnection limits), subject to the energy capacity of the storage system.<sup>29</sup> Similarly, the capacity value of hybrid and co-located resources would use the same methodology for the storage component with any excess capacity above the level needed to charge the storage system converted to its own capacity value by applying an exceedance profile to the excess capacity.

While the 24-hourly slice approach works well for resources with *daily* use limits (e.g. storage), no solution has been identified so far to account for resources with monthly or seasonal use limits (e.g., demand response or thermal units with limits on number of starts or total run hours). This is an aspect of resource counting where a two-slice ELCC-based approach is clearly superior to the 24-hourly slice construct because the capacity value of resources with monthly use limits will decline in relation to the severity of the limits. PG&E suggests that a cap on DR

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<sup>26</sup> FRAWG Report, pp. 27-29.

<sup>27</sup> FRAWG Report, p. 46.

<sup>28</sup> FRAWG Report, pp. 45-47.

<sup>29</sup> FRAWG Report, p. 14.

should be maintained if the Commission adopts a 24-hourly slice program but does not offer a specific suggestion.<sup>30</sup>

#### **E. Hedging Requirements**

In the FRAWG Report, PG&E presents two hedging options: Price Cap Rebate and the Variable Cost Hedge.<sup>31</sup> In essence, the Variable Cost Hedge is a quasi-tolling arrangement that requires facilities with an RA contract to rebate all earnings from the energy markets in excess of plant-specific variable operations and maintenance costs. The Price Cap Rebate is a similar, but simpler, version that requires generators with RA contracts to rebate energy market earnings that exceed a predetermined threshold in any given hour. For illustrative purposes, PG&E suggested a threshold of \$500/MWh.<sup>32</sup>

IEP objects to requiring hedging provisions in RA contracts for several reasons. First, market reforms and the creation of CAISO's Department of Market Monitoring (DMM) have resulted in highly competitive energy markets for which there is no evidence of market manipulation, even when markets are tight. The DMM, whose mission is to monitor the competitiveness of the wholesale energy market and recommend market power mitigation mechanisms, stated in its most recent annual report that "The performance of California's wholesale energy markets remained competitive, with prices during most hours at or near the marginal cost of generation."<sup>33</sup> DMM further explained that:

Actual market prices were very close to these [DMM's] estimated competitive baseline prices, even during the heat wave period of August 14 to 19, indicating that replacing high-priced energy bids with cost-based bids did not lower prices. Resources that may be subject to mitigation, such as gas-fired and other resources, were generally infra-marginal during high-priced hours. When performing day-ahead market reruns using cost-based bids, high prices were set by demand response and other resources not subject to mitigation. System-wide mitigation of

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<sup>30</sup> FRAWG Report, p. 31.

<sup>31</sup> FRAWG Report, pp. 83-85.

<sup>32</sup> FRAWG Report, p. 85.

<sup>33</sup> DMM. 2020 Annual Report on Market Issues and Performance, p. 90.

<http://www.caiso.com/Documents/2020-Annual-Report-on-Market-Issues-and-Performance.pdf>

imports and gas-fired resources during this period would not have lowered prices.<sup>34</sup>

Based on the DMM's analysis, and no finding by the Commission to the contrary, IEP is not convinced that a problem has been identified that would be resolved by mandatory hedging mechanisms in the RA program.

Second, LSEs already have a variety of means at their disposal to hedge their exposure to high market prices. As PG&E stated in its presentation, it has already negotiated some contracts with a Variable Cost Hedge, which indicates that other LSEs are capable of negotiating similar contracts with willing generators. The hedging proposals described by PG&E aren't necessarily the only, or best, hedging strategies for all LSEs. No evidence or analysis has been provided that LSEs are generally failing to hedge their wholesale price risks, and requiring the use of one specific mechanism would crowd out other strategies preferred by some LSEs. Third, the Energy Division acknowledged during the hedging workshop that it had not yet requested data on LSEs' hedging practices, which indicates that more information gathering and analysis are needed before a determination can be reached that any specific hedging requirement is necessary or desirable.

IEP strongly recommends that Energy Division's analysis consider the offsetting effects of mechanisms that require generators and storage operators to transfer energy market earnings to their LSE counterparties. If market participants earn less from energy markets, they will likely compensate for this loss by increasing capacity bids. An analogous phenomenon occurs in the health care market, in which lower insurance deductibles are associated with higher insurance premiums. Simply looking at the decrease in monthly premiums does not guarantee that insurance customers' overall costs will be lower.

Unless detailed analysis can be provided, and workshops scheduled, quickly enough to allow more informed hedging deliberations to occur in parallel with the implementation of broader RA reform, IEP supports SCE's recommendation to consider hedging in a subsequent phase. As SCE argued in comments on the proposed decision on Track 3B2: "the issues mentioned in the PD may conflate LSE hedging and market power mitigation, which raise separate concerns and potential solutions, and that these are complicated topics that will take

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<sup>34</sup> DMM. 2020 Annual Report on Market Issues and Performance, p. 90.



significant time to resolve and may distract from developing the other implementation details of the final proposed RA framework.”<sup>35</sup> IEP concurs with SCE’s sentiment that deferring consideration of hedging requirements “would also allow the discussion to benefit from the information collected by Energy Division on LSE hedging...”<sup>36</sup> Expressing similar concerns, Vistra suggests that the Commission more clearly define the problem it is attempting to solve and develop solutions in more appropriate Commission or CAISO dockets.<sup>37</sup>

#### **F. Multiyear Forward Contracting Requirements**

The FRAWG Report includes a joint proposal of IEP and the Western Power Trading Forum (WPTF) present a joint proposal for multiyear forward requirements. We suggest that the RA rules require LSEs to contract for 100% of their system RA requirements for one and two years forward, with an indeterminate level set for the third year forward. While we do not recommend a specific percentage, we believe that the requirement needs to be relatively high to have a material impact on sending investment signals to generators.

IEP and WPTF note several advantages to longer forward requirements. First, three-year contracts allow facilities to amortize major investments over a longer timeframe and provide plant operators more certainty about recouping those investments. The greater certainty afforded by multiyear requirements will help to avoid premature retirements of facilities needed for reliability. Stimulating investments in plant availability may also help to avoid RMR designations from CAISO for facilities deemed critical for reliability. Second, multiyear requirements can incentivize LSEs to invest in incremental new capacity at a steady cadence, rather than relying on sporadic procurement orders from the IRP process. Third, while multiyear forward requirements may help to retain existing capacity that has rolled off long-term contracts, it may also help to facilitate more orderly retirement of assets that are no longer needed. Facilities that fail to secure a contract two and three years ahead may decide that the facilities are no longer competitive and file notices of intent to retire or mothball the facilities with longer lead time than they would have otherwise. Finally, multiyear requirements will ensure that California

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<sup>35</sup> SCE Opening Comments on Track 3B.2 PD, p. 8.

<sup>36</sup> SCE Opening Comments on Track 3B.2 PD, p. 9.

<sup>37</sup> FRAWG Report, pp. 86-88.

LSEs secure sufficient capacity further into the future as supply conditions tighten across the West.

Other jurisdictions, such as PJM and ISO-New England (ISO-NE), have three-year forward requirements. Unlike CAISO, those regions use centralized capacity markets, and PJM and ISO-NE are the counterparties. Even though contracts are procured three years ahead, costs are allocated to LSEs based on prior year contributions to peak load. Because LSEs do not contract directly with generators, they do not face an overprocurement risk as load shapes or markets shares change. In California, LSEs may be significantly long or short on capacity due to load migration between the time forward contracts are executed and the RA compliance year. The Commission and stakeholders should consider mechanisms to facilitate assignment of contracts to other parties or consider allowing LSEs to swap load obligations on a bundled monthly or annual basis (i.e., not disaggregated by hour or slice) in order to mitigate overprocurement concerns. Over- or underprocurement risk is not completely absent under the current RA and IRP constructs. In D.21-06-035, the Commission ordered all LSEs to procure incremental capacity up to five years forward on the basis of their anticipated future load shares.

## V. CONCLUSIONS

While IEP encourages the Commission to act quickly on RA reform, it is critically important that the Commission make the right decision. Opportunities to fundamentally reform the program Californians depend on to maintain a reliable electricity supply do not arise very often. IEP hopes the Commission will carefully consider the arguments advanced by IEP and other parties in favor of the two-slice framework.

/s/ Scott Murtishaw

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March 24, 2022