Rulemaking	**R.20-11-003**
Exhibit	____
Date	**September 1, 2021**
Witness	**Various**
ALJ	**Brian Stevens and Sarah R. Thomas**

DIRECT TESTIMONY OF

LAUREN CARR
FRED TAYLOR-HOCHBERG
MARIE Y. FONTENOT

ON BEHALF OF

CALIFORNIA COMMUNITY CHOICE ASSOCIATION

ORDER INSTITUTING RULEMAKING TO ESTABLISH POLICIES, PROCESSES, AND RULES TO ENSURE RELIABLE ELECTRIC SERVICE IN CALIFORNIA IN THE EVENT OF AN EXTREME WEATHER EVENT IN 2021.
R.20-11-003

DIRECT TESTIMONY OF
LAUREN CARR
FRED TAYLOR-HOCHBERG
MARIE Y. FONTENOT
ON BEHALF OF
CALIFORNIA COMMUNITY CHOICE ASSOCIATION

Table of Contents

CHAPTER 1. WITNESSES LAUREN CARR AND FRED TAYLOR-HOCHBERG.....1

I. INTRODUCTION 1

II. EXISTING PROCUREMENT TO MEET FUTURE NEEDS THAT WILL COME ONLINE BY 2022 OR 2023 MUST BE COUNTED TOWARD REQUIREMENTS ADOPTED IN THIS PROCEEDING 2

CHAPTER 2. MARIE Y. FONTENOT.....4

III. THE "LOW HANGING FRUIT" ON THE SUPPLY SIDE, GIVEN THIS EXPEDITED TIMEFRAME, MAY BE SECURING MORE IMPORTS FOR THE CALIFORNIA MARKET; THE COMMISSION SHOULD REVISIT EXISTING RA IMPORT RULES AND AUTHORIZE PROCUREMENT OF DELIVERABLE IMPORTS UP TO THE AVAILABLE MIC LEFT OVER AFTER RA SHOWINGS.....4

IV. BECAUSE ACCELERATED PROCUREMENT OF UP TO AN ADDITIONAL 5,000 MW BY SUMMER 2022 MAY NOT BE POSSIBLE -- DESPITE LSE'S BEST EFFORTS -- THE COMMISSION SHOULD NOT INTRODUCE NEW PENALTIES ON LSES FOR DELAYS OUTSIDE OF THEIR CONTROL.....8

V. THE COMMISSION SHOULD NOT MODIFY PENALTIES FOR LSES TAKING REASONABLE ACTIONS TO MEET RA REQUIREMENTS GIVEN CHANGES TO THE PENALTY STRUCTURE RECENTLY ADOPTED IN D.21-07-014.....9

VI. IF NEW PROCUREMENT REQUIREMENTS COME WITH PENALTIES, THE COMMISSION SHOULD EXAMINE MORE EFFECTIVE METHODS TO EXPEDITE THE NECESSARY PROCUREMENT.....11

VII. THE COMMISSION SHOULD MAKE THE REQUIREMENTS TRADEABLE AMONG LSES 11

Appendix A

CHAPTER 1. WITNESSES LAUREN CARR AND FRED TAYLOR-HOCHBERG

I. INTRODUCTION

On July 30, 2021, Governor Gavin Newsom signed an emergency proclamation ordering all energy agencies, including the Commission, to work with load-serving entities (LSEs) on "accelerating plans for the construction, procurement, and rapid deployment of new clean energy and storage projects to mitigate the risk of capacity shortages and increase the availability of carbon-free energy at all times of day." The proclamation also directs the Commission to expand and expedite approvals of demand response programs and other clean energy projects to reduce strain on energy infrastructure.[1] The Commission commenced Phase 2 of this proceeding to examine ways to increase peak and net peak supply resources and reduce peak and net peak demand in 2022 and 2023.

CalCCA's opening testimony focuses on addressing energy supply issues, including expedited and incremental procurement of supply-side resources that can begin commercial operation by summer 2022. While not discussed in this testimony, demand side programs are also important components of ensuring summer reliability. Testimony on demand-side solutions, however, are being addressed by individual Community Choice Aggregators (CCAs), including Marin Clean Energy and Peninsula Clean Energy.

CalCCA offers the following conclusions and recommendations on increasing supply resources to maintain reliability in summer 2022 and 2023:

- Existing procurement to meet future needs that will come online by 2022 or 2023 must be counted towards requirements adopted in this proceeding;

- The "low hanging fruit" on the supply side, given this expedited timeframe, may be securing more imports for the California market; the Commission should revisit existing RA import rules and authorize procurement of deliverable imports

[1] Proclamation of a State of Emergency: https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf.

up to the available Maximum Import Capability (MIC) left over after RA showings;

- Because accelerated procurement of up to an additional 5,000 MWs by summer 2022 may not be possible -- despite LSEs' best efforts -- the Commission should not introduce new penalties on LSEs for delays outside of their control;

- The Commission should not modify penalties for LSEs taking reasonable actions to meet Resource Adequacy (RA) requirements given changes to the penalty structure recently adopted in D.21-07-014;

- CalCCA strongly disagrees with new penalties; however, If new procurement requirements come with penalties, the Commission should examine more effective methods to expedite the necessary procurement; and

- The Commission should make the requirements tradable among LSEs.

II. EXISTING PROCUREMENT TO MEET FUTURE NEEDS THAT WILL COME ONLINE BY 2022 OR 2023 MUST BE COUNTED TOWARD REQUIREMENTS ADOPTED IN THIS PROCEEDING

The Assigned Commissioner's Amended Scoping Memo and Ruling for Phase 2 (Phase 2 Ruling) cites a summer reliability analysis conducted by the California Energy Commission (CEC) that estimates the potential gap between supply and demand under extreme and average weather conditions.[2] At a high level, the CEC's analysis estimates hourly available capacity from 3 p.m. to 9 p.m. in July, August, and September in 2022 and 2023 and compares the supply stack to the current 15 percent planning reserve margin (PRM) and a 22.5 percent PRM, meant to represent average and extreme weather conditions, respectively. This analysis projects an additional 600 MW to 5,200 MW of resources may be needed to ensure reliability during the peak and net-peak hours of summer 2022. These figures represent approximately 1 to 11 percent of California Independent System Operator (CAISO) peak load in 2020.[3] This large range

[2] Assigned Commissioner's Amended Scoping Memo and Ruling for Phase 2, August 8, 2021: https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M398/K465/398465770.PDF

[3] California ISO Peak Load History 1998 through 2020. Peak load in 2020 was 47,121 MW. Available at: https://www.caiso.com/documents/californiaisopeakloadhistory.pdf

highlights the limits of stack analyses — it is not clear how to translate this range into a procurement requirement, nor is it clear the level of reliability risk achieved by procuring somewhere within this range. Further, additional detailed information about the generating resources and assumptions used in the Stack Analysis is needed for parties to understand exactly how the capacity shortfall was calculated. This information includes a list or summary (depending on confidentiality restrictions) of resources used in the supply stack, the methodology used to determine the hydro derate of 1,500 MW, the amount of demand response assumed, and considerations of how drought conditions impact RA import assumptions. Specific recommendations on the more detailed information required to interpret the results are included in CalCCA's comments to the CEC's Stack Analysis included in Appendix A. This information should be provided for parties to interpret the results.

Additionally, the CEC issued a *Midterm Reliability Analysis & Incremental Efficiency Improvements to Natural Gas Power Plants* loss-of-load expectation analysis that examined years 2022-2026 on August 30, 2021, two days before the deadline for this testimony.[4] The CEC's loss-of-load expectation study should inform this proceeding's examination of 2022 and 2023 even though it was issued after the Phase 2 Ruling.[5] CalCCA continues to advocate that the Commission conduct a loss-of-load expectation study to inform procurement needs going forward. While loss-of-load expectation analyses are being conducted, the CCAs have been actively engaged in procurement.

CCAs have already moved aggressively to procure new resources, some of which are scheduled to come online in 2022 and 2023 above and beyond their requirements in D.19-11-

[4] https://efiling.energy.ca.gov/GetDocument.aspx?tn=239554&DocumentContentId=72991

[5] Since the loss-of-load expectation analysis was issued two days before the deadline for testimony, CalCCA may include additional analysis on its results in reply.

016. Based on new PPA data provided by its member CCAs, CalCCA estimates that its members will exceed the D.19-11-016 procurement requirements by 208 September NQC MW in 2022, and 649 September NQC MW in 2023. Table 1 below shows the derivation of these values.[6]

Table 1: CCA Procurement for D.19-11-016 Mandate, by resource type (Sep NQC MW)

	2022	2023
Hybrid Solar + Storage	352	911
Standalone Storage	253	253
Wind	137	142
Solar	61	139
Geothermal	12	12
Total NQC MW (sum of lines above)	814	1457
Total D.19-11-016 Procurement Requirement for CCAs	606	808
CCA Procurement in excess of D.19-11-016 requirement	208	649

These excess amounts should count towards any new procurement requirement, if any. Additionally, if resources CCAs procure to meet the IRP mid-term reliability requirements in D.21-06-035 can be expedited to reach commercial operation prior to summer 2022 and 2023, those should count as well.

CHAPTER 2. MARIE Y. FONTENOT

III. THE "LOW HANGING FRUIT" ON THE SUPPLY SIDE, GIVEN THIS EXPEDITED TIMEFRAME, MAY BE SECURING MORE IMPORTS FOR THE CALIFORNIA MARKET; THE COMMISSION SHOULD REVISIT EXISTING RA IMPORT RULES AND AUTHORIZE PROCUREMENT OF DELIVERABLE IMPORTS UP TO THE AVAILABLE MIC LEFT OVER AFTER RA SHOWINGS

The Staff Concept Paper lists potential resources that could be considered eligible under emergency procurement mandated in this proceeding including firm imports above RA limits.[7]

[6] This table converts nameplate values to NQC values using the September tech factors from the 2021 NQC list, available at http://www.caiso.com/Documents/NetQualifyingCapacityList-2021.xlsx. Storage resources receive their nameplate capacity as NQC, unless they are less than four hours, in which case they are derated by (duration in hours / 4 hours). As a conservative assumption, hybrid resources receive only the battery's capacity as NQC—the associated generating unit is ignored.

[7] Staff Concept Paper at 23-4.

CalCCA encourages the Commission to make imports – the only low-hanging fruit of any sizeable magnitude – a focal point of its efforts to ensure the state is resourced for 2022 and 2023. Contracted imports have been declining with the Commission's change in policy. It is critical to secure these imports for California in an increasingly constrained market, rather than hoping that economic imports show up in the market when needed. Given the challenges with building new resources on such an expedited timeframe, the Commission must ensure that its requirements for imports are not overly restrictive – driving the resources to contract in alternative markets. Including firm imports above RA limits as eligible resources could result in relying on undeliverable imports to meet emergency procurement targets. The Commission can shore up California's ability to attract imports, however, without sacrificing deliverability requirements.

CalCCA recommends two modifications to existing import RA requirements that would apply for imports procured to meet any summer 2022 and 2023 emergency procurement requirements adopted in this proceeding:

- Do not apply the requirement to bid zero dollars or below for year 2022 and 2023; and,
- Allow LSEs to meet emergency reliability procurement targets by contracting with imports after the RA showings deadline up to the available unused MIC.

D.20-06-028 requires RA imports to bid at or below zero in the availability assessment hours beginning for RA year 2021.[8] As California continues to face stressed summer grid conditions, so do other regions across the west and this requirement hinders California LSEs' ability to contract with imports for RA. As the Western Electricity Coordinating Council's (WECC) *August 2020 Heatwave Event Analysis Report* finds, increased demand during summer

[8] *Decision Adopting Resource Adequacy Import Requirements*, D.20-06-028, June 25, 2020.

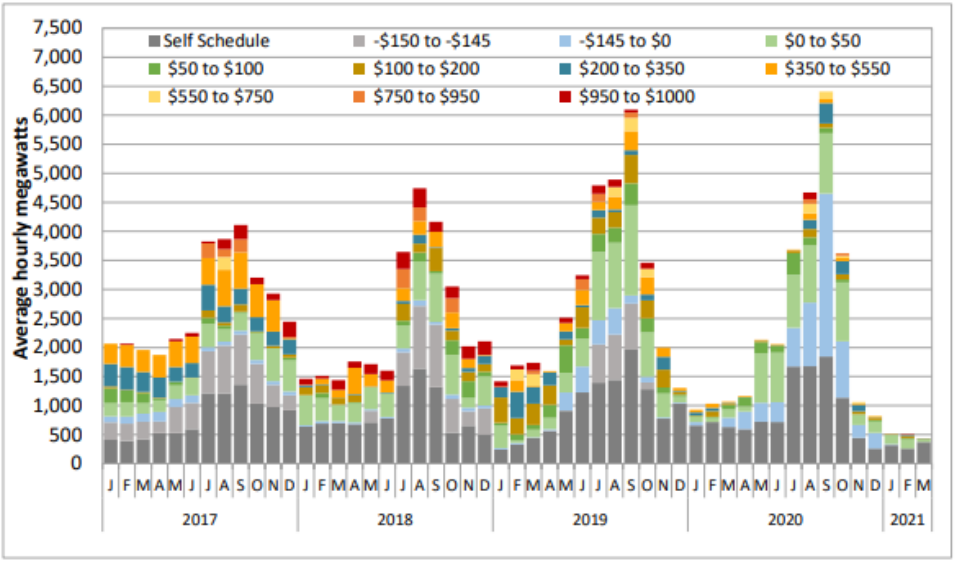
months across the Western Interconnection has created more competition for available generation.[9] Requirements on RA imports to bid zero dollars during the net peak hours limit the ability for California LSEs to competitively contract with imports given opportunities for imports to contract elsewhere in western regions without such bidding requirements. Given it may not be possible to expedite new procurement within the timeframe of this proceeding to meet emergency procurement targets, the Commission should limit barriers to contracting with imports by not imposing bidding requirements on imports resources procured to meet orders in this phase of the proceeding.

The CAISO's Department of Market Monitoring's (DMM) *First Quarter Report on Market Issues and Performance* demonstrates a "dramatic decline" in the quantity of RA import bids in the first quarter of 2021 compared to the first quarter of previous years.[10] Figure 1 below taken from DMM's report shows the quantity and price of RA import bids into the CAISO market through the first quarter of 2021.

[9] Western Electricity Coordinating Council, *August 2020 Heatwave Event Analysis Report,* March 19, 2021 at 2-3.

[10] CAISO Department of Market Monitoring, *First Quarter Report on Market Issues and Performance,* June 9, 2021.

Figure 1: Average Hourly Resource Adequacy Imports by Price Bid



Source: CAISO DMM, First Quarter Report on Market Issues and Performance, June 9, 2021, at 20.

This trend is especially concerning given the emergency conditions California faces in the coming summers. Imports contracted for 2022 and 2023 to meet procurement orders in this proceeding should not be subject to the zero-dollar bidding requirements adopted in D.20-06-028 to allow LSEs to more competitively contract during this time of strained supply.

The Commission should ensure deliverability of imports counting towards emergency procurement targets so those imports procured can reliably deliver to CAISO load. This can be best achieved by procuring additional imports after RA showings, up to the amount available MIC that was not used for monthly RA showings. Doing so would obviate the need for LSEs to procure additional MIC or take MIC from their own portfolio and then determine the value of that MIC. By procuring imports after the month-ahead showing process, the amount of MIC not used for RA showings will be known, indicating a high probability that a firm energy import at that location would flow to the CAISO load.

IV. BECAUSE ACCELERATED PROCUREMENT OF UP TO AN ADDITIONAL 5,000 MW BY SUMMER 2022 MAY NOT BE POSSIBLE -- DESPITE LSE'S BEST EFFORTS -- THE COMMISSION SHOULD NOT INTRODUCE NEW PENALTIES ON LSES FOR DELAYS OUTSIDE OF THEIR CONTROL

The Staff Concept Paper contemplates applying fixed or capacity-based penalties to LSEs for not bringing resources online in accordance with the timelines in D.19-11-016.[11] While CCAs will make their best efforts to expedite procurement mandated in D.19-11-016, it may not be possible to accelerate new resource build to meet targets adopted in this proceeding given the extremely short timeline and barriers outside of the control of the LSE that can create project delays. The Commission should not adopt such a proposal for cases in which the penalties would apply retroactively to contracts already executed or in which projects delays were not controllable by the procuring entity. Penalties that apply retroactively on contracts already executed do not allow LSEs to consider penalties in their risk assessments when selecting projects under an expedited timeline. The result then is a contract in which due dates and consequences may not match the new penalties adopted and may leave the LSE with few or no options to implement the new generation in a manner that is compliant with new penalty mechanisms.

Additionally, projects may experience delays that make it infeasible to meet targeted online dates despite LSEs contracting with project developers up to their procurement requirement to achieve commercial operation as expeditiously as possible. While LSEs may execute contracts with project developers with delay provisions, circumstances outside the control of the LSE may impact commercial online dates. These circumstances can include supply-chain problems, transmission interconnection delays, or COVID-19 impacts, among others. Recent examples of delays on projects contracted by LSEs to comply with expedited

[11] Staff Concept Paper at 21-2.

procurement mandates demonstrate situations outside an LSEs control can impact project schedules despite LSE compliance with procurement mandates. Both PG&E and SDG&E submitted Advice Letters on July 23, 2021 informing the Commission of delays preventing projects from meeting targeted online dates of August 1, 2021.[12] These projects were contracted and approved to meet procurement obligations under D.19-11-016 and had targeted online dates of August 1, 2021. Both LSEs complied with the procurement requirement set forth in the Decision but did not have direct control over project development and the delays that prohibited commercial operation of the projects by the August 1st deadline. PG&E cites impacts of the COVID-19 pandemic and supply chain disruptions, both impacts outside of their control, for project delays.[13] These recent examples demonstrate that penalties for project delays will not always result in projects meeting their target online dates because delays are not driven by the procuring entity. The Commission should not administer penalties to LSEs who took reasonable actions to procure if projects are delayed by actions or circumstances that are not controllable by the LSE as the procuring entity.

V. THE COMMISSION SHOULD NOT MODIFY PENALTIES FOR LSES TAKING REASONABLE ACTIONS TO MEET RA REQUIREMENTS GIVEN CHANGES TO THE PENALTY STRUCTURE RECENTLY ADOPTED IN D.21-07-014

The Staff Concept Paper also asks parties to consider doubling penalties for LSEs who may be short in meeting their RA requirements in August and September 2022.[14] This proposal is premature given the modifications made to the penalty structure in D.21-06-029 and does not

[12] See PG&E AL Notification Regarding Delay of Projects Approved Under Decision 19-11-016, July 23, 2021, and SDG&E AL Notification Regarding Delay of Projects Approved Pursuant to Decision 19-11-016, July 23, 2021.

[13] See PG&E AL Notification Regarding Delay of Projects Approved Under Decision 19-11-016, July 23, 2021.

[14] Staff Concept Paper at 22.

address the root causes of reliability risks. D.20-06-031 raised the penalty price for failures to meet month-ahead system RA obligations in summer months from $6.66/kW-month to $8.88kW/month.[15] The Commission subsequently adopted D.21-06-029, which introduced a tiered penalty structure in which LSEs accrue points for each month of a deficiency.[16] LSEs with one to five points fall into Tier 1 and pay the applicable RA penalty in $/kW-month; LSEs with six to ten points fall into Tier 2 and pay twice the applicable RA penalty; and LSEs with 11 or more points fall into Tier 3 and pay three times the applicable RA penalty. This new tiered structure is effective for the 2022 RA compliance year. Once in place, LSEs will already face doubled, or even tripled, penalty prices if they accrue six or more points and the effects of this change has yet to be analyzed.

Given the Commission and stakeholders have not yet had the opportunity to assess the impact of the new penalty structure, the Commission should not adopt additional changes to the RA penalty structure in this proceeding and instead focus on other efforts to increase available supply. Making RA penalties more punitive when electric supply is already tight will not result in additional RA procurement; this approach will only increase the costs to consumers without a commensurate benefit. RA deficiencies cannot be attributed to inadequate penalties but rather scarce market conditions and regulatory decisions that hinder LSEs' ability to meet their system RA obligations. For these reasons, the Commission should not modify RA penalties until the impact of the new changes have been assessed.

[15] D.21-06-031.

[16] D.21-06-029. *Decision Adopting Local Capacity Obligations for 2022-2024, Flexible Capacity Obligations for 2022, and Refinements to the Resource Adequacy Program*, R.19-11-009, June 24, 2021.

VI. CALCCA STRONGLY DISAGREES WITH NEW PENALTIES; HOWEVER, IF NEW PROCUREMENT REQUIREMENTS COME WITH PENALTIES, THE COMMISSION SHOULD EXAMINE MORE EFFECTIVE METHODS TO EXPEDITE THE NECESSARY PROCUREMENT

Expedited procurement or any additional procurement (*e.g.,* additional accelerated mandated procurement or Planning Reserve Margin increases) under tight time constraints will place significant pressure on the market to provide those resources. As described in sections IV and V, penalties are unlikely to arrive at the desired outcome. CalCCA strongly recommends the Commission not adopt new penalties in this proceeding. If the Commission does implement additional procurement or subject LSEs to penalties within this proceeding, it should do so for 2022 only and reassess them in 2023 once more information about procurement and reliability needs are known. The Commission must consider the significant impact to the market of having multiple LSEs compete for limited resources or the expedited operation of already procured resources. This impact is likely to increase market prices and will unnecessarily increase costs for customers.

Therefore, if the Commission determines additional or expedited procurement and penalties are necessary for 2022, then the Commission should consider centralizing procurement for the amount needed in 2022 using the three IOUs with appropriate allocation of costs and benefits. It should then reassess if centralized procurement is needed in 2023.

VII. THE COMMISSION SHOULD MAKE THE REQUIREMENTS TRADEABLE AMONG LSES

When addressing potentially small procurement requirements by multiple LSEs with relatively small loads compared to the total, it is critical that the Commission allow entities to work together to procure resources to meet the total need. The most practical manner to do this is to allow LSEs to trade their procurement requirements. Allowing such a mechanism will enable

LSEs with short positions to sell their requirement to an entity with a long position such that the total need of customers can be most effectively procured.

Appendix A

COMMENTS OF THE CALIFORNIA COMMUNITY CHOICE ASSOCIATION TO THE CALIFORNIA ENERGY COMMISSION ON THE DRAFT CEC PRELIMINARY 2022 SUMMER SUPPLY STACK ANALYSIS
August 11, 2021

Docket Number 21-ESR-01
Energy System Reliability

I. INTRODUCTION

The California Community Choice Association (CalCCA)[1] submits these comments to the California Energy Commission (Commission) in Docket Number 21-ESR-01, on the *Draft CEC Preliminary 2022 Summer Supply Stack Analysis*, dated August 11, 2021 (Stack Analysis). CalCCA appreciates the efforts taken by the Commission to perform this analysis and the opportunity to comment on the assumptions and results.

II. COMMENTS

Recommendation 1: The Commission should favor loss-of-load study results when evaluating the reliability shortfall estimated to occur in summer 2022 and when informing future procurement decisions.

Stack analyses, by their nature, provide only a single point estimate of capacity sufficiency. They thus fail to account for uncertainty about supply, demand, weather, renewable generation, and the complexities of storage dispatch. While stack analyses are a useful data point

[1] California Community Choice Association represents the interests of 22 community choice electricity providers in California: Apple Valley Choice Energy, Baldwin Park Resident Owned Utility District, Central Coast Community Energy, Clean Energy Alliance, Clean Power Alliance, CleanPowerSF, Desert Community Energy, East Bay Community Energy, Lancaster Choice Energy, Marin Clean Energy, Peninsula Clean Energy, Pico Rivera Innovative Municipal Energy, Pioneer Community Energy, Pomona Choice Energy, Rancho Mirage Energy Authority, Redwood Coast Energy Authority, San Diego Community Power, San Jacinto Power, San José Clean Energy, Silicon Valley Clean Energy, Sonoma Clean Power, and Valley Clean Energy.

in identifying the existence of possible reliability issues (i.e. they show that the system may be underbuilt relative to the load under certain assumptions), they are not on their own sufficient for calculating the size of a procurement need, because the result is highly dependent on the input assumptions made.

CalCCA notes that the stack analysis has an enormous range of possible quantities of procurement needed, from 600 MW to 5,200 MW.[2] These figures represent approximately 1 to 11 percent of CAISO peak load in 2020.[3] This large range highlights the limits of stack analyses—it is not clear how to translate this range into a procurement requirement, nor is it clear the level of reliability risk achieved by procuring somewhere within this range. Ratepayers will ultimately bear the cost of this procurement, and they deserve a careful and measured consideration of actual system need rather than broad-brush estimates from a single stack analysis.

In contrast to stack analyses, loss-of-load expectation (LOLE) models capture the complexities of actual system operation, including economic dispatch, must-run generation, and economic imports (which are not included in the Stack Analysis). LOLE models are also capable of modeling many different scenarios, giving a much better picture of actual risk and thus providing more accurate metrics about the probability of a resource shortfall in any given hour, which is crucial information for decision-making.

The CEC issued a *Midterm Reliability Analysis & Incremental Efficiency Improvements to Natural Gas Power Plants* LOLE analysis that examined years 2022-2026 on August 30,

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[2] CEC Stack Analysis at 4. https://efiling.energy.ca.gov/GetDocument.aspx?tn=239251&DocumentContentId=72701

[3] California ISO Peak Load History 1998 through 2020. Peak load in 2020 was 47,121 MW. Available at: https://www.caiso.com/documents/californiaisopeakloadhistory.pdf

2021.[4] The Commission should favor the results of the LOLE analysis when evaluating the reliability shortfall estimated to occur in summer 2022, and when informing future procurement decisions, for the reasons outlined above.

Recommendation 2: The Commission should publish more detailed information about the generating resources used in its analysis, and clarify some of the assumptions made.

Table 2 and Figures 1-3 of the Stack Analysis summarize the set of supply-side resources used in the analysis[5], but they do not provide detailed information that would allow stakeholders to meaningfully evaluate whether this set of resources is appropriate. CalCCA has the following specific requests so that it can assess the appropriateness of these data.

First, the Commission should provide more information about the resources assumed in this analysis. The analysis references "CPUC Procurement of 840 MW by August 2022" and "CPUC Expedited Procurement carry over of 556 MW from 2021," but it is not clear what those resources are, and exactly what CPUC proceedings are being referred to. To the extent this information is confidential, the Commission can aggregate up to resource types to mask it, but getting a more granular picture of the resource mix would help parties to better evaluate the analysis.

Second, the Commission should validate its resource stack versus the 2022 Preliminary CAISO NQC list[6]. In theory, all or nearly all the resources used in this analysis should be on this list.

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4 https://efiling.energy.ca.gov/GetDocument.aspx?tn=239554&DocumentContentId=72991

5 CEC Stack Analysis at 3-7.

6 http://www.caiso.com/Documents/Draft-Final-Net-Qualifying-Capacity-Report-for-Compliance-Year-2022.xls

Third, the Commission should clarify why an additional 1,500 MW of hydro derates[7] are being applied on top of the hydro's Net Qualifying Capacity (NQC) value. NQC should already capture drought conditions, because it is derived using a rolling average of actual historical hydro generation data, some of which will contain drought years. Although CalCCA understands that the Commission wishes to model a system that is much dryer than this rolling average, it should describe why 1,500 MW is an appropriate number to be applied on top of the NQC amount.

Fourth, the Commission should quantify the amount of demand response assumed, and explain why it is appropriate.

Fifth, the Commission should publish the charts in tabular form to allow stakeholders to review.

Sixth, for consistency with the rest of the analysis (which assumes that droughts reduce pumping load and hydro capacity), the Commission should revisit its assumptions on imports. The analysis currently uses an average of resource adequacy (RA) import showings from 2015-2020, and appears to use a single imports value in Figures 1-3, regardless of the month.[8] This single value does not account for variation in imports across months[9], does not count economic imports (which are likely to be greater than zero), and ignores the fact that there is likely less import capacity available in drought months. Figure 1, shown below, shows historic California

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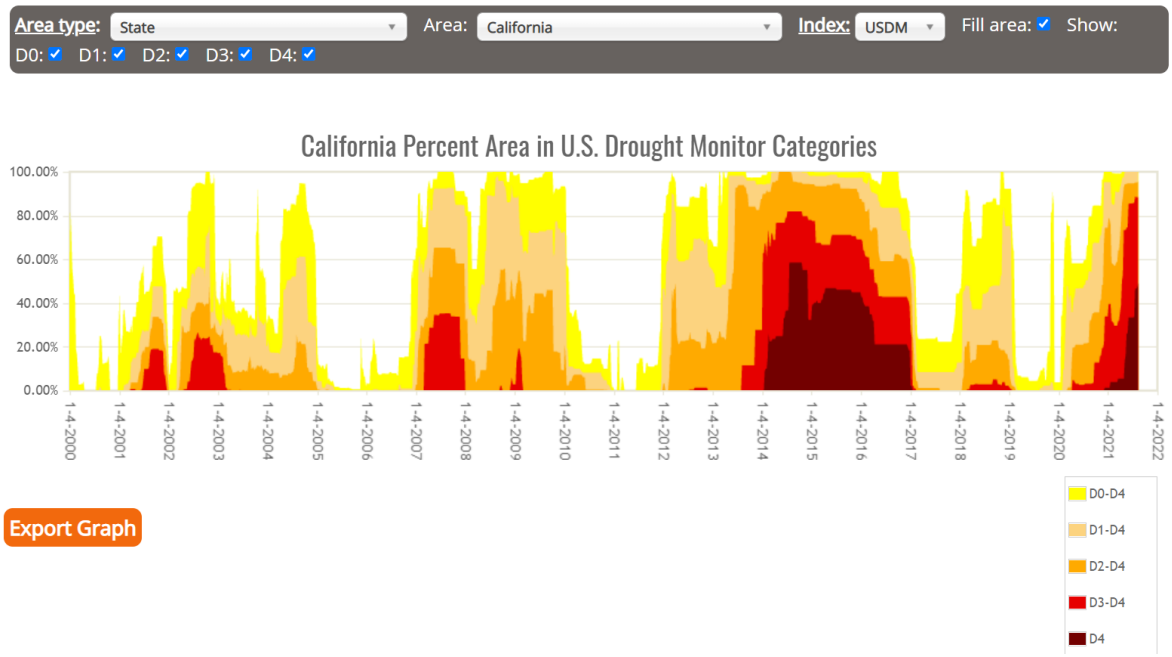
7 CEC Stack analysis at 3.

8 CEC Stack analysis at 5-7.

9 Across-month variation is substantial—according the CPUC's 2019 RA report, in July, August, and September, import RA was 4,901 MW, 3,968 MW, and 4,737 MW respectively. This is a difference of 933 MW between the largest and smallest value. CPUC 2019 Resource Adequacy Report at 15, Table 4. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/resource-adequacy-homepage/2019rareport-1.pdf

drought data from the US Drought Monitor, with darker colors indicating more severe drought.[10] 2014-2016 are abnormally dry years, with more exceptional droughts, and are thus the most appropriate for evaluating available imports under drought conditions. Using an average from 2015-2020 likely overstates import availability, as it captures both dry and wet years.

Figure 1: Drought Data in California



Therefore, CalCCA recommends using specific monthly values based on RA Import data from July-Sep in the dry years of 2014-2016, and counting economic imports as well.

Seventh and finally, the Commission should confirm whether its analysis includes or does not include publicly-owned utility (POU) loads and resources in the CAISO footprint. POU load represents approximately 9 percent of load in the CAISO footprint,[11] and it is important that

[10] Data is from https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx for California. The color scale in the legend consists of the following categories: D0 (Abnormally Dry), D1 (Moderate Drought), D2 (Severe Drought), D3 (Extreme Drought), and D4 (Exceptional Drought).

[11] https://www.cmua.org/2021-issue-brief-electric-relaibility "Collectively, POUs serve about 9 percent of the electric load in the CAISO system."

any procurement order that is applied to CPUC-jurisdictional LSEs (i.e. not POUs) take this into account.

Recommendation 3: The Commission should clearly identify what would count as incremental to the new procurement requirement.

From the Stack Analysis, it is not clear what types of resources could be used to fulfill the purported gap between supply and demand. Additionally, it is unclear whether the gap can be filled by existing resources, new build, or both—it is unlikely, for example, that 5 GW of new resources can be brought online before next summer. In other words, it is not clear if the problem is a shortage of RA contracts on existing resources, a shortage of new build, or both.

Therefore, the Commission should clarify which of the following categories of resources below would be eligible for filling this gap. To the extent these resources have identifiers such as a CAISO ID or a project name in the CAISO Interconnection Queue[12], the Commission should provide those.

- Additional RA Contracting of existing in-state generation
- Additional RA imports contracting
- Repowering thermal generation
- Extending retirement dates
- New build
- New Storage
- Demand response

[12] http://www.caiso.com/planning/Pages/GeneratorInterconnection/Default.aspx

III. CONCLUSION

CalCCA appreciates Commission staff's efforts in performing its Preliminary Summer 2022 Stack Analysis and looks forward to further collaboration on this topic.

Dated: September 1, 2021

(*Original signed by*)

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Attachment A

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Experience

California Community Choice Association (CalCCA)

Senior Market Policy Analyst, May 2021 to Present

- Responsible for policy analysis, consensus building, and policy development on resource adequacy policy issues facing CalCCA members
- Develop written comments and regulatory filings to support CalCCA positions
- Represent CalCCA in California Independent System Operator, California Public Utilities Commission, and California Energy Commission forums

California Independent System Operator (ISO)

Infrastructure and Regulatory Policy Specialist, June 2018 to May 2021

- Led cross-functional internal teams to develop resource adequacy and demand response policy proposals
- Wrote policy proposals and present proposals to stakeholders
- Represented the California ISO in California Public Utilities Commission proceedings through presentations, written proposals, and comments

Corporate Rotation Trainee, August 2016 to June 2018

- Trained in several departments within the California ISO, including market policy, operations, project management, finance, market quality, settlements, and customer service
- Summarized and responded to stakeholder comments on policy proposals
- Documented business requirement specifications
- Analyzed market data used for policy development and reporting

California Energy Commission

Energy Analyst Student Assistant, September 2015 to June 2016

- Analyzed benefits of Electric Program Investment Charge (EPIC) program research projects
- Wrote project summaries and benefits reports for EPIC annual report
- Assisted in reviewing grant proposals for possible approval

California ISO

Market and Infrastructure Policy Intern, June 2015 to September 2015

- Developed resource adequacy policy with input from operations, technology, and market analysts
- Wrote and edited policy proposals
- Presented formalized infrastructure policy presentation to stakeholders
- Reviewed tariffs and manuals of other ISOs and Regional Transmission Operators (RTOs) to identify best practices

Education

University of California, Davis, September 2012 to June 2016

- Graduated with Honors with a Bachelor of Arts in Economics and Bachelor of Arts in History

Attachment A

Lauren Carr

Phone: 510-841-3006 • E-Mail: lauren@cal-cca.org

Experience

California Community Choice Association (CalCCA)

Senior Market Policy Analyst, May 2021 to Present

- Responsible for policy analysis, consensus building, and policy development on resource adequacy policy issues facing CalCCA members
- Develop written comments and regulatory filings to support CalCCA positions
- Represent CalCCA in California Independent System Operator, California Public Utilities Commission, and California Energy Commission forums

California Independent System Operator (ISO)

Infrastructure and Regulatory Policy Specialist, June 2018 to May 2021

- Led cross-functional internal teams to develop resource adequacy and demand response policy proposals
- Wrote policy proposals and present proposals to stakeholders
- Represented the California ISO in California Public Utilities Commission proceedings through presentations, written proposals, and comments

Corporate Rotation Trainee, August 2016 to June 2018

- Trained in several departments within the California ISO, including market policy, operations, project management, finance, market quality, settlements, and customer service
- Summarized and responded to stakeholder comments on policy proposals
- Documented business requirement specifications
- Analyzed market data used for policy development and reporting

California Energy Commission

Energy Analyst Student Assistant, September 2015 to June 2016

- Analyzed benefits of Electric Program Investment Charge (EPIC) program research projects
- Wrote project summaries and benefits reports for EPIC annual report
- Assisted in reviewing grant proposals for possible approval

California ISO

Market and Infrastructure Policy Intern, June 2015 to September 2015

- Developed resource adequacy policy with input from operations, technology, and market analysts
- Wrote and edited policy proposals
- Presented formalized infrastructure policy presentation to stakeholders
- Reviewed tariffs and manuals of other ISOs and Regional Transmission Operators (RTOs) to identify best practices

Education

University of California, Davis, September 2012 to June 2016

- Graduated with Honors with a Bachelor of Arts in Economics and Bachelor of Arts in History

California Community Choice Association
R.20-11-003

DECLARATION OF LAUREN CARR

DIRECT TESTIMONY OF LAUREN CARR was prepared by me or under my supervision. To the extent my testimony states facts, those facts are true and correct to the best of my knowledge.

To the extent my testimony contains opinions, those opinions are the product of my best professional judgment. I adopt this testimony as my sworn testimony in this proceeding.

/s / **LAUREN CARR**
September 1, 2021

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Concord, CA 94520
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Attachment B

Frederick Taylor-Hochberg

1021 Yale Street, Sacramento CA 95818 • fth6079@gmail.com • (510) 684-2308

WORK EXPERIENCE

Technical Manager (Regulatory/Modeling), California Community Choice Association June 2020 – Present

- Manage technical team building an electric rate forecasting model.
- Oversee all aspects of model development and deployment, including requirements gathering, prioritization of developer tasks, data collection and cleaning, QA/QC, code review, and testing.
- Advise and educate California's community choice providers of electricity on grid planning, reliability, and rates.
- Write testimony and briefs for submission to the California Public Utilities Commission (CPUC) on electric cost allocation policy and grid reliability procurement.

Senior Regulatory Analyst, California Public Utilities Commission (CPUC) June 2017 – June 2020

- Served as technical lead on electric grid simulation modeling. Managed data development, model runs, analysis of outputs, and production of reports and presentations to inform decision-making on California's energy procurement.
- Wrote and documented suite of flexible, modular Python programs that automated the creation of an electric generator database to save staff time and improve quality of analysis.
- Supported CPUC decision-making as the subject matter expert on electric grid operations, natural gas costs, hydroelectric energy procurement, and power plant criteria pollutant emissions.

Senior Data Analyst, WattzOn November 2014 – March 2017

- Built, maintained, and documented scalable energy analytics tools and databases in Python, Stata, and Excel.
- Built linear optimization model to reduce utility bills by optimizing solar panel assignments at a large commercial property, saving the property owner over $20,000 per year.

Senior Electric Rates Analyst, Pacific Gas and Electric June 2012 – October 2014

- Prepared detailed reports to the California Public Utilities Commission (CPUC) on matters related to electric rate cases, including cost of service to solar customers, electric grid marginal costs, and time-of-use periods.
- Built scalable Excel model to test the effects of implementing electric time-of-use periods.

SKILLS

- Python, Excel, Stata, PostgreSQL, statistics, regression modeling
- Technical project management
- Teaching (former statistics teaching assistant and Excel course teacher) and mentorship
- Fluent in spoken and written Spanish (lived in Mexico for six months and Spain for two years)

EDUCATION

Master of Public Policy (MPP). *University of California at Berkeley* ***2010 - 2012***

Bachelor of Arts, Political Economy, *magna cum laude*. *University of California at Berkeley* ***2004 - 2008***

PUBLICATIONS

"Pricing of Electricity Could Use a Jolt" (op-ed in November 13, 2011 Los Angeles Times)

California Community Choice Association
R.20-11-003

DECLARATION OF FRED TAYLOR-HOCHBERG

DIRECT TESTIMONY OF FRED TAYLOR-HOCHBERG was prepared by me or under my supervision. To the extent my testimony states facts, those facts are true and correct to the best of my knowledge.

To the extent my testimony contains opinions, those opinions are the product of my best professional judgment. I adopt this testimony as my sworn testimony in this proceeding.

/s / **FRED TAYLOR-HOCHBERG**
September 1, 2021

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Concord, CA 94520
(510) 684-2308 | fred@cal-cca.org

Attachment C

Marie Y. Fontenot
2436 Great Highway #4
San Francisco, CA 94116
mobile: (303)378-2706 | e-mail: marieyfontenot@gmail.com

SKILLS

Leadership

- Confident and engaging, able to influence others building trust, respect, and highly communicative relationships at all levels.
- Successful inspiring and leading cross-functional teams while maintaining high levels of employee commitment and engagement.

Deal Structuring & Business Development

- Deal origination, structuring, analysis, due diligence, contract negotiations, deal closing. Work closely with valuation teams including, reality check valuation model assumptions, utilizing knowledge of market conditions and opine on market changes and trajectory.
- Evaluate strategic opportunities and make recommendations to senior management and Boards of Directors concerning strategies and tactical plans to implement new business activities; translating the recommendation(s) into action.

Due Diligence & Response

- Research industry trends and technologies, as well as seasonality and cyclicality on cash flow requirements, analyze markets, provide insights on key players to contribute to assessments of growth opportunities.
- Establish diligence response team to manage inquiries from and replies to >15 bankruptcy parties including official and unofficial committees, legislative and regulatory stakeholders, equity and bondholders.

Stakeholder & Project Management

- Develop and manage relationships with outside parties (potential counterparties, advisors, industry resources, etc.).
- Develop and lead the deal pipeline, deal structuring, contract negotiations and management of stakeholder expectations.
- Quickly synthesize large amounts of information into actionable plans. Develop tactical plans, align stakeholders to achieve goals.
- Rally resources to execute and deliver under critical timelines.

PROFESSIONAL BACKGROUND

East Bay Community Energy (EBCE) – www.ebce.org – Oakland, CA — October, 2020 - present

Senior Director of Power Resources

- Lead the power procurement team, setting the strategy and directing team's daily responsibilities. Utilize my strong communication and analytical skills to manage small team while executing large commercial transactions as an individual contributor.
- Set the procurement strategy for all wholesale power products (including resource adequacy, RECs, carbon free energy, and other energy hedges) and execute on this strategy.
- Guide short-term power procurement, including executing <5 year energy transactions to meet all power content requirements set by EBCE's board; monitor power prices and work with executive leadership to forecast energy costs and product liquidity; active engagement with energy suppliers and establishing strong commercial relationships for the organization.
- Lead long-term power procurement including executing 10+ year energy contracts for renewable energy, storage, and other energy products. This includes managing the solicitation process, evaluating proposals, and leading negotiations with counterparties.
- Preside over Integrated Resource Planning to evaluate and inform key strategic procurement decisions. Keeping abreast of developments in resource planning processes and energy resource technologies; ability to seek out and evaluate new technologies.
- Oversee and manage EBCE's risk management policies, including risk metrics, protocols, and tools. This includes leading day to day energy risk compliance and preparation of compliance reports and materials related to EBCE power supply, including those required by the California Public Utilities Commission (CPUC), California Energy Commission (CEC), The Climate Registry, and the Department of Energy (DOE).
- Collaborate closely with executive leadership and cross functionally to support EBCE's organizational goals, programmatic priorities, business development objectives, marketing efforts, etc.
- Lead analysis of EBCE's load forecasting and provide strategic decision support to CEO and Board on policy decisions that implicate EBCEs load, energy supply portfolio, and energy expenses.
- Manage external vendors and consultants to complete project-based work and supplement EBCE's internal capabilities

Pacific Gas & Electric – www.pge.com – San Francisco, CA

Chief of Staff to General Counsel & Executive Vice President — April, 2018 – October, 2020

- Serve as trusted strategic advisor to EVP/General Counsel, support managing four departments with ~1,000 full-time employees: Law, Enterprise Records and Information Management, Land and Environmental Management, and Marketing and Communications.
- Provide critical support to senior leaders in midst of bankruptcy, proxy fight and ~95% turnover of board of directors. Provide guidance to achieve objectives in a fast-paced environment; identify, prioritize and focus efforts in the face ambiguous business environment.
- Internal "fixer" assigned to projects that are at risk or high profile. Notable contribution includes role guiding completion of January 2019 Chapter 11 first day filings & standing up bankruptcy project management office (PMO) to coordinate supplemental filings, lead team responding to diligence requests, managing relationships with stakeholders, and ensure bankruptcy workstreams have appropriate subject matter leaders and governance structures, and provide progress reports to senior leadership and Board of Directors.
- Oversee business operations for the EVP organization including fiscal and strategic planning, providing oversight of ~$200M expense budget, risk evaluation and review of service gaps with other lines of business, and balancing and prioritizing competing objectives.
- Refined monthly business process review to rely more on objective, data-driven analysis measuring internal capabilities and performance.

- Develop and implement complex corporate initiatives engaging leaders from different lines of business and building teams using a matrixed organizational structure.
- High-profile enterprise-wide activities. Examples include future-focused strategy development; California wildfire policy and planning; cost reduction, performance and affordability; enterprise governance and accountability; and senior leadership and staff retention.

Manager, Competitive Solicitations August, 2016 – March, 2018

- Lead team to develop solicitations (requests for offers and requests for bids) for electricity and electricity-related products.
- Develop proposals to address commercial issues, develop nascent business opportunities, and drive business strategy, presenting to executive management for final approval before designing solution, developing go-to-market strategy and eventual commercialization.
- Manage assignments and delegate responsibilities among team balancing importance of providing opportunities for learning and professional growth with need to meet regulatory deadlines and deliver high quality products. Under my leadership, multiple team members were promoted and entire team expanded their commercial experience.
- Strategic focus on team development. Select team members to support solicitations, developing their commercial acumen including teaching the significance of contract terms, negotiation strategy, and the regulatory and compliance environment.
- Manage relationships with key internal stakeholders to reflect multidisciplinary teams' needs in contract terms.
- Work with compliance department to identify, track and ensure compliance with requirements established by state authorities.

Principal, Renewable Transactions June, 2014 – July, 2016

- Lead negotiations and execute renewable energy transactions and energy storage offtake agreements to meet PG&E's state-mandated procurement obligations. Conduct due diligence and build the business case for or against a particular transaction.
- Commercial lead for PG&E's first energy storage solicitation, leading negotiations with three counterparties and steering organizational response to counterparty proposed edits to the agreement. Succeeded in meeting organizational objective of executing multiple standardized contracts while minimizing exposure to commercial risk in a developing market.
- Developed business case and implemented program to monetize excess volumes of renewable energy credits (RECs). Program ultimately grew to ~$150M/year revenue stream that will be returned to customers as savings, offsetting customer costs.
- Analyze and resolve commercial issues, including contract amendments and consents to assignment, during contract life cycle. In the event of default or breach of contract, perform relevant analysis to build business case for or against contract terminations.
- Expertise with renewable energy power purchase agreements, energy storage agreements, WSPP and EEI master agreements.

Senior Market Design Analyst December, 2012 – May, 2014

- Lead PG&E's position in the California Independent System Operator (CAISO) initiative process, from proposal through policy revision to tariff development and filing with FERC. Ensure responsible and efficient CAISO market design through the policy development process and monitor for potential abuses and manipulation.
- Support market monitoring team as needed including providing analysis of Bid Cost Recovery and Residual Unit Commitment uplift costs to PG&E in 2012 and 2013 to team's quarterly market performance report.

XCEL ENERGY – www.xcelenergy.com – Denver, CO 2008 – 2012

Power Systems Trader – Southwestern Public Service (SPS) & Northern States Power Company (NSP)

- Purchase, sell, and schedule energy to and from counterparties on an hourly basis to meet real-time demand.
- Management recognition for making single most profitable sale of 2010 among all marketers. Management recognition for largest gross margin of 2011 amongst group of 18 traders.
- Analyze load forecast, research load patterns and rate structures to make profitable trades with credit-approved counterparties.
- Operate within the confines of existing purchased power and renewable energy contracts. Identify any breaches on contracts and negotiate for more favorable terms and retribution.
- Identified new trading configurations, resulting in new and increased revenue streams for the organization. Utilize relationships and identify opportunities for future long-term deals and contract origination.
- Crisis management expertise, directing procurement of replacement energy upon loss of large electric generation. Successful corrective actions and event management resulted in avoiding power outages to customers and minimized equipment damage.
- NERC certified system operator with detailed knowledge of the Eastern Interconnection and transmission reliability metrics.

DATA-DYNAMIX, INC. – www.data-dynamix.com – Denver, CO 2002 – 2008

Direct marketing list brokerage & data firm.

Director of Operations & Business Development 2005 – 2008

- Worked with CEO to determine organizational sales goals resulting in clear expression of sales requirements to account executives.
- Evaluate new service offerings, make recommendations to CEO then operationalize and bring to market offerings. Implemented & managed services that grew business and resulted in 20% increase in revenues over two years.
- Performed cost/benefit analysis of potential marketing expenditures and determined ROI of implemented marketing practices.
- Negotiated volume-based rates with vendor partners resulting in better terms for organization and clients; lead negotiations with commercial lessors resulting in cost savings for the organization.

Account Manager 2002 – 2005

EDUCATION

MBA	December, 2007	University of Colorado at Denver
BS Journalism	May, 2002	University of Colorado at Boulder

Graduated with honors. Dean's List. Member of Golden Key International Honour Society. Awarded scholarship for study abroad.

LANGUAGES

English, conversational fluency in French, some Spanish.

California Community Choice Association
R.20-11-003

DECLARATION OF MARIE Y. FONTENOT

DIRECT TESTIMONY OF MARIE Y. FONTENOT was prepared by me or under my supervision. To the extent my testimony states facts, those facts are true and correct to the best of my knowledge.

To the extent my testimony contains opinions, those opinions are the product of my best professional judgment. I adopt this testimony as my sworn testimony in this proceeding.

/s / **MARIE Y. FONTENOT**
September 1, 2021

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San Francisco, CA 94116
(303)378-2706 | mfontenot@ebce.org