

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

Order Instituting Rulemaking to Develop an)
Electricity Integrated Resource Planning) Rulemaking 16-02-007
Framework and to Coordinate and Refine Long-) (Filed February 11, 2016)
Term Procurement Planning Requirements.)
_____)

**REPLY COMMENTS OF THE CALIFORNIA COMMUNITY CHOICE ASSOCIATION
ON ADMINISTRATIVE LAW JUDGE’S RULING ON GREENHOUSE GAS EMISSIONS
ACCOUNTING METHODS AND ADDRESSING UPDATED GREENHOUSE GAS
BENCHMARKS**

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Pursuant to the directions set forth in the Administrative Law Judge’s *Ruling Seeking Comment on Greenhouse Gas Emissions Accounting Methods and Addressing Updated Greenhouse Gas Benchmarks* (“ALJ Ruling”) issued on April 3, 2018, the California Community Choice Association (“CalCCA”) respectfully submits the following reply comments. Opening comments, which responded to eight questions presented in the ALJ Ruling relating to the Energy Division’s *GHG Accounting Methodology for LSE Portfolio Development in the IRP 2017-2018: A CPUC Staff Proposal* (“Staff Proposal”), were submitted on April 20, 2018. CalCCA’s reply comments address issues raised by a number of parties in their respective opening comments.

As stated in CalCCA’s opening comments, CalCCA recognizes the importance of accurately accounting for Greenhouse Gas (“GHG”) emissions, and both CalCCA and its member Community Choice Aggregation (“CCA”) programs are committed to achieving Senate Bill (“SB”) 350’s GHG reduction goals by meeting and exceeding their individual GHG reduction targets, and by contributing to even greater system-wide GHG reductions. CalCCA also recognizes, as a general matter, the importance of aligning zero-GHG generation with

system load requirements, and CalCCA supports the ultimate goal of developing a more granular GHG accounting methodology that accurately tracks the real-world GHG impacts of each Load Serving Entity's ("LSE") generation.

However, the opening comments of a number of parties, including CalCCA, clearly establish that the Staff Proposal's Clean Net Short ("CNS") GHG accounting methodology is incompatible – and in many cases in direct conflict with – a wide range of State requirements and policies. Specifically, CNS is incompatible with the requirements of, and incentives created by: 1) the California Air Resources Board's ("CARB") Cap-and-Trade program; 2) CARB's proposed methodology for setting electric-sector and LSE-specific GHG reduction targets under SB 350; 3) the Assembly Bill ("AB") 1110 Power Content Label requirements; 4) the California Public Utilities Commission's ("Commission") RESOLVE model and the Reference System Plan ("RSP") developed by the Commission in the Integrated Resource Plan ("IRP") process; 5) the State's electricity market structure and policies in favor of open electricity markets and regionalization; and 5) the Renewable Portfolio Standard ("RPS") program and Cap-and-Trade program's treatment of Renewable Energy Credits ("REC"). Each of these inconsistencies is discussed in detail below.

In addition, CalCCA is concerned that CNS does not address an actual, real-world problem, and is not supported by adequate evidence or modeling. Given these inconsistencies and weaknesses, CNS is not a viable, consistent, or reasonable path to achieving SB 350's important goals. Instead, for this first iteration of the IRP process, CalCCA requests that the Commission adopt an alternative GHG-accounting methodology based on the GHG accounting methodology used in the CARB Cap-and-Trade program. In future iterations of the IRP process, the Commission should work with interested agencies and stakeholders to develop a more granular GHG accounting methodology that (unlike CNS) is fully consistent with all of the

above-listed requirements and policies, and does not share the CNS methodology's significant flaws, which are discussed below.

I. CNS IS INCONSISTENT WITH EXISTING GHG REDUCTION POLICIES

In opening comments, a number of parties identified ways in which CNS is inconsistent with the methodologies used in two key State GHG-reduction programs: the Cap-and-Trade program; and the State's AB 1110 Power Content Label requirements. CalCCA agrees with these parties. CNS is fundamentally inconsistent with the accounting methods used in these programs. If CNS is approved by the Commission, these inconsistencies that will increase costs for ratepayers, increase burdens for LSEs and regulators, and create conflicting incentives that may jeopardize the State's ability to achieve its important SB 350 goals. In addition, and perhaps most problematically, the CNS methodology's incompatibility with Cap-and-Trade means that it will likely be incompatible with CARB's electric sector and LSE-specific GHG targets, raising significant SB 350 compliance issues.

A. CNS Is Incompatible With CARB's Cap-And-Trade Methodology And CARB's Proposed Electric Sector and LSE-Specific GHG Targets Based on Cap-and-Trade

In opening comments, a number of parties, including the Alliance for Retail Energy Markets and Direct Access Customer Coalition ("AREM/DACC"), the Office of Ratepayer Advocates ("ORA"), and the California Environmental Justice Alliance and the Sierra Club ("CEJA/SC") identified significant incompatibilities between the CNS methodology and GHG accounting methodology used in CARB's Cap-and-Trade program as well as CARB's proposed methodology for determining electricity sector and LSE-specific GHG targets, which is based on Cap-and-Trade.¹ CalCCA agrees.

¹ See AREM/DACC Comments at 6, ORA Comments at 5, CEJA/SC Comments at 2-3.

The CARB Cap-and-Trade program tracks each ton of GHG emissions on an annual basis,² and nothing in the Cap-and-Trade statute or related regulations treats zero-GHG generation that exceeds an LSE's load as GHG-emitting or otherwise denies that generation zero-GHG treatment, whether that generation is sold into the market or curtailed. Put simply, Cap-and-Trade recognizes that a zero-GHG resource does not emit GHGs, regardless of where or how the electricity generated by the resource is used. In contrast, the CNS methodology would track GHG emissions on an hourly (not annual) basis and would only treat zero-GHG generation as zero-GHG if that generation matches an LSE's hourly load. CNS would treat zero-GHG generation in excess of an LSE's hourly load as GHG-emitting, even if that generation is sold onto the market and directly offsets GHG-emitting generation in California. Thus, the CNS and Cap-and-Trade methodologies are fundamentally inconsistent in terms of time-scale and treatment of GHG-free generation.

Further, CalCCA agrees with CEJA/SC and AReM/DACC that CNS is in conflict with the electric sector and LSE-specific GHG reduction targets currently being set by CARB.³ SB 350 requires that CARB, not the Commission, set both electricity sector and LSE-specific GHG targets.⁴ On April 27, 2018 CARB began its formal rulemaking process to set these targets. CARB's April 2018 *Draft Staff Report on Senate Bill 350 Integrated Resource Planning Electricity Sector Greenhouse Gas Planning Targets* makes clear that CARB is intending to set both electricity-sector and LSE-specific GHG reduction targets consistent with the Cap-and-Trade methodology.⁵ CARB's proposal is essentially the same as its March 2, 2018 preliminary

² California Code of Regulations, Title 17, Sections 95855 and 95856.

³ CEJA/SC Comments at 2, AReM/DACC comments at 6.

⁴ Public Utilities Code Section 454.51(a)(1)(A).

⁵ CARB *Draft Staff Report: Senate Bill 350 Integrated Resource Planning Electricity Sector Greenhouse Gas Planning Target*, available at <https://www.arb.ca.gov/cc/sb350/sb350.htm>

staff proposal.⁶ The Commission was aware of the preliminary proposal, and CalCCA referenced the preliminary proposal in its opening comments.

CARB's proposal for setting individual LSE targets is to base the target on the ARB's Cap-and-Trade allowance allocation methodology.⁷ This is the same methodology the Commission itself proposed when it adopted its interim GHG targets for each LSE.⁸

This methodology relies on an annual, not hourly, calculation of an LSE's GHG emissions, and would not treat GHG-free generation in excess of an LSE's hourly load as GHG-emitting.⁹ As CalCCA stated in its opening comments:

The ARB's cap and trade allocation methodology assumes an LSE meets its 50% RPS target, and then provides additional allowances reflecting the remaining mix of resources. The ARB's methodology gives full credit to an LSE for all of the RPS-eligible energy it procures. It is not limited, as it would be under the CNS proposal, solely to the RPS-eligible energy procured that exactly matches the LSE's load and is only procured from PCC 1 resources.¹⁰

CalCCA also shares the practical concerns raised by a number of parties. For instance, ORA notes that in the IRP proceeding, the Energy Division previously proposed using the Energy Resource Recovery Account ("ERRA") GHG accounting methodology, which is based on Cap-and-Trade, and expresses the concern that "it is unclear whether or how using two different methodologies [CNS and Cap-and-Trade] towards the same goal could send conflicting signals"¹¹

CalCCA shares ORA's concern. At a minimum, using two inconsistent GHG accounting methodologies for procurement planning (CNS) and actual GHG compliance (Cap-and-Trade)

⁶ ARB staff presentation for SB 350 Integrated Resource Plan Workshop, March 2, 2018.

⁷ Draft Staff Report: Senate Bill 350 Integrated Resource Planning Electricity Sector Greenhouse Gas Planning Targets, p. 27-30.

⁸ D.18-02-018 at 124-127.

⁹ CARB Draft Staff Report at 23-30.

¹⁰ CalCCA Comments at 6.

would be grossly inefficient and would require significantly more work from the LSEs and regulators, resulting in greater costs to ratepayers. Further, CalCCA agrees with CMUA that “using one methodology to measure an entity’s actual GHG emissions and using a different methodology to determine if an entity is on track to meet its long-term GHG reduction goals could send conflicting or confusing messages to the public.”¹²

More problematically, for many LSEs, CNS and Cap-and-Trade are likely to incentivize very different procurement strategies. Compared to Cap-and-Trade, CNS is likely to reduce the generation and procurement of zero-GHG system power, reduce the value of and investment in variable availability zero-GHG resources (especially solar), significantly increase the value of non-variable zero-GHG resources like geothermal, and incentivize significantly more energy storage procurement. Having two inconsistent GHG accounting methodologies would place LSEs in the difficult position of deciding whether to pursue the optimal resource mix to comply with IRP planning requirements, or whether to procure the optimal resource mix for actual GHG-reduction compliance through Cap-and-Trade.

As noted in CalCCA’s opening comments, “it would be exceedingly difficult, if not impossible, for the Commission to reconcile this inconsistency. It would require taking the ARB’s adopted targets, set on an annual basis, and converting these into hourly requirements to determine what CARB’s targets would be under a CNS approach.” This would require developing a separate 8,760 hour forecast for each LSE (not just a system-wide forecast as was done in the RESOLVE model).¹³ As the Joint Utilities note: “load profiles...assumptions significantly affect the results of the [RESOLVE planning] tool, and if an LSE identifies that the assumed shapes will not reflect the expected operating realities of its system, the tool will also

¹¹ ORA Comments at 5.

¹² CMUA Comments at 1-2.

incorrectly estimate emissions attributable to that system.”¹⁴ Although AReM highlights the impact of this effect on Electric Service Providers (“ESP”), it is applicable to all LSEs, all of which have differing load profiles. This is particularly true for CCA programs that serve smaller, more discrete areas.

Further, as noted in CalCCA’s opening comments, determining each LSE’s GHG emissions under CNS would require hourly forecasts for every supply source that each LSE uses to meet its demand. For some of these supply resources, there would be no hourly forecasts as the CARB methodology assumes a LSE procures the necessary RPS-eligible resources to meet its obligation, but does not specify which technology (each of which have different generating profiles) are acquired to meet this requirement.¹⁵ As CEJA/SC also note:

Moreover, it is unclear what facilities will be under contract with specific LSEs in 2030. Some facilities have long-term contracts that continue past 2030, but the vast majority of facilities are under shorter contracts. Given the changing nature of departing loads from direct access and Community Choice Aggregators (“CCAs”), future contracts with certain resources remain an open question. It does not appear that potential changes to future agreements will be taken into account in the simplified [CNS]methodology.¹⁶

Given the above infirmities and the paucity of modeling done in the RESOLVE model on an LSE-specific, rather than system-wide basis, it appears impossible for the Commission to develop and adopt meaningful GHG targets that; 1) reflect the individual GHG targets for each LSE that CARB is statutorily directed to set (and the Commission to follow); and then 2) convert these annual CARB targets into the corresponding hourly CNS targets.

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¹³ CalCCA Comments at 7 (FN. 6).

¹⁴ Joint IOU Comments at 7.

¹⁵ CalCCA Comments at 7 (FN 6).

¹⁶ CEJA/SC Comments at 4.

B. CNS Is Incompatible With The Power Content Label GHG Accounting Methodology

In opening comments, CMUA notes that the CNS methodology is incompatible with the methodology used to calculate GHG emissions for the AB 1110 Power Content Label reporting requirement.¹⁷ CalCCA agrees with CMUA’s assessment. AB 1110 measures GHG emissions intensity by taking “the sum of all annual emissions of greenhouse gases associated with a generation source divided by the annual production of electricity of the generation source.”¹⁸ Under this methodology, all generation a zero-GHG resource (a solar plant, for instance) would be treated as zero-GHG, regardless of whether the generation meets a specific LSE’s hourly load. Like Cap-and-Trade, CNS is directly incompatible with the AB 1110 methodology, as it would effectively treat zero-GHG generation in excess of an LSE’s load as GHG-emitting and would measure generation on an hourly basis rather than AB 1110’s annual measure.

II. CNS IS INCONSISTENT WITH RESOLVE AND WOULD PENALIZE LSES THAT PROCURE IN ACCORDANCE WITH THE RSP

A number of parties, led by the joint Investor Owned Utilities (“IOU”) submitted opening comments supporting CNS. Problematically, none of these comments recognized or addressed one of the CNS methodology’s most serious flaws – its incompatibility with the RESOLVE model.

RESOLVE and CNS are incompatible in terms of scope and focus. The RESOLVE model seeks to identify the optimal portfolio of resources needed to meet California’s GHG goals on a *system-wide* basis and then dispatch these same resources, also on a *system-wide* basis. Nothing in the RESOLVE model is designed to optimize resource procurement on an LSE-specific basis as the CNS approach proposes to do.

¹⁷ CMUA Comments at 1.

¹⁸ Pub Util. Code Section 398.2(a).

Even more problematically, CNS would penalize LSEs for following the “optimal” procurement strategy identified by RESOLVE. At the October 1, 2016 IRP Workshop, the Energy Division described the optimal statewide resource mix identified by RESOLVE. Specifically, RESOLVE selected an “optimized” portfolio that added additional renewable resources to the grid, *even if these resources were sometimes curtailed*, up to the point where the marginal cost of adding more renewables equaled the cost of mitigation (such as the need to add storage to maintain system reliability). As the RESOLVE model was described:

- The “Optimal Investment Point” is where the “marginal cost of overbuild” equals the “marginal cost of the solution.”¹⁹
- “Resources are added to meet RPS target, overbuilding the renewable portfolio if necessary.”²⁰

The Energy Division has further stated that it has studied several renewable integration strategies, and concluded that the overprocurement of wind and solar resources, even if these resources sometimes need to be curtailed, is the “optimal” renewable integration strategy for California, and is superior to other renewable integration approaches such as energy storage.

This approach and its underlying modeling assumptions were subsequently used by the Commission throughout the entire IRP proceeding – the Commission spent the following year using the RESOLVE model, addressing modeling issues and running scenarios. Based on this process, the RSP adopted in D.18-02-018 proposed a system-wide addition of 9,000 MW of new solar generation, even though the RESOLVE model recognized that some portion of the generation from these resources would be curtailed.

¹⁹ October 1, 2016 IRP Workshop at 7.

²⁰ October 1, 2016 IRP Workshop at 9.

CNS would directly penalize LSEs that plan for and procure the resource mix selected by RESOLVE. An LSE attempting to comply with RESOLVE's optimal resource mix would overprocure renewable resources with variable availability like wind and solar, even if those resources may, at some times, exceed not only the individual LSE's load requirements, but also system load requirements, and may have to be curtailed. However, under CNS, an LSE would be punished for following this procurement strategy, as the LSE would not be able to claim zero-GHG credit for generation in excess of its individual load. CNS would incentivize a very different procurement strategy – one in which LSEs procure zero-GHG resources to match their hourly load as closely as possible. This would involve procuring significantly less solar and wind, more non-variable zero-GHG power like geothermal and nuclear, and more energy storage resources that would allow them to shift excess wind/solar generation to a time when it is needed to meet hourly load.

The RESOLVE model in its present form directly undermines the notion that, from a cost perspective, it is desirable to acquire the resources incentivized by CNS. The RESOLVE model has considered a number of alternative portfolios (including high-geothermal and high-energy storage portfolios) and concluded that these portfolios were “non-optimal.” As the Commission concluded in D.18-02-018: “the curtailment alternative is lower cost than many of the more expensive renewable integration options for much of the time period analyzed.”²¹

Although, to date, the Commission has done no modeling on the CNS proposal (and thus should not adopt it), by looking at the sensitivity analyses already performed in this proceeding, the magnitude of the increased costs resulting from imposition of the CNS approach can be approximated. These cost estimates are likely conservative and understate the increased costs that California's residents will need to pay. The California Wind Energy Association

(“CalWEA”) and the Joint Utilities, for example, state that the CNS approach will encourage LSEs to invest in storage to better balance their GHG-free energy production with their load.²² Under the “no curtailment” sensitivity analysis performed by RESOLVE, which only sought to eliminate curtailment just for the portion of the renewable energy above and beyond what was needed to meet California’s demand (5.4% of available renewable generation) the increased total resource cost was \$1,348 million.²³ Having each LSE invest in additional storage to not only avoid curtailing renewable energy that would otherwise be provided out of state, but also to ensure that renewable generation exactly matches its load would likely cost several times this amount. As the RSP states: “The only 42 MMT sensitivity that includes pumped storage is the “zero curtailment” case, whose cost is significantly higher than others.”²⁴

Similarly, increasing geothermal energy as an alternative to solar was also dismissed by the RESOLVE model as non-optimal and increasing costs to California residents. The RESOLVE model concluded that adding only 1,000 MW of geothermal energy to the grid, significantly less than the 10,000 MW of other renewable resources proposed to be added to the system under the RSP, would increase total costs by \$427 million.²⁵ Once again, these increased costs are likely conservative as they do not model the total amount of geothermal energy LSEs would need to procure if they needed to match their load in real time.

The adopted RSP is inimical to the CNS proposal and creates a “Catch 22” situation. Essentially, LSEs are being told on the one-hand by the Commission to procure solar resources to meet the system-wide GHG reduction goal, yet are then criticized for doing so by the CNS

²¹ D.18-02-018 at 40.

²² CalWEA Comments at 2, Joint IOU Comments at 4.

²³ RSP at 79, 199.

²⁴ RSP at 76.

²⁵ RSP at 222.

proponents. None of these other alternatives, posited by CNS supporters as desired outcomes of a CNS requirement, are consistent with the “optimal” portfolio selected by RESOLVE.

It is also worth noting that in the IRP process, several of the parties that have expressed strong support for CNS, including the Center for Energy Efficiency and Renewable Technology (“CEERT”), CalWEA, Southern California Edison (“SCE”), and Pacific Gas and Electric (“PG&E”), have previously supported the RESOLVE methodology of procuring resources to optimize *system-wide*, rather than *individual* LSE GHG emission targets. PG&E, similar to CEERT and CalWEA supported the use of curtailment²⁶ while also stating that:

Through the establishment of LSE-specific GHG emissions targets and benchmarks, the Commission could inappropriately reduce LSE portfolio flexibility in ways that raise customer costs and are unnecessary for achieving the statewide GHG target.²⁷

SCE described the *systemwide* benefits of the IRP process when it stated:

The IRP process is an important vehicle for facilitating California’s decarbonized future. By initiating a comprehensive and integrated planning process for *all* LSEs, designed to identify *the optimal mix of all supply- and demand-side resources* needed to cost-effectively *meet GHG emissions targets for the electric sector* and other state goals while ensuring grid reliability, the IRP process should provide strong central coordination and balanced tradeoffs across all resource options. *As the Proposed Reference System Plan notes, the “value proposition of integrated resource planning is to reduce the cost of achieving GHG reductions and other policy goals by looking across LSE boundaries and resource types to identify solutions that might not otherwise be found.”*²⁸

²⁶ *Opening Comments of Pacific Gas and Electric Company To The Administrative Law Judge’s Ruling Seeking Comment On The Proposed Reference System Plan And Related Commission Policy Actions* (October 24, 2017) at 21, stating: “Specifically, renewable curtailment; Improves system reliability...Helps to reduce over-generation conditions and to minimize ramping requirements... and the need to invest in operationally flexible resources... Is a useful metric for operational flexibility constraints [and] is shown by preliminary RESOLVE modeling to be a more cost-effective solution to integration challenges than investment in other integration resources”

²⁷ *Id.* at 2.

²⁸ *Comments of Southern California Edison Company On Administrative Law Judge’s Ruling Seeking Comment On Proposed Reference System Plan And Related Commission Policy Actions* (October 24, 2017) at 3-4. (*Emphasis added*).

Yet despite CEERT, CalWEA, ESCE and PG&E all recognizing the need for system-wide planning, over-building, curtailment, and regional import/exports as contributing to an optimal resource portfolio, each of these parties now supports the CNS approach that undermines all of those system level optimizations. In face of such inconsistencies, CalCCA believes it is critically important that the impacts of CNS and any transition to it as an accounting methodology must be more fully explored.

III. CNS IS INCONSISTENT WITH CALIFORNIA'S ELECTRICITY MARKET STRUCTURES AND POLICIES

CMUA observes that CNS runs counter to almost all of California's initiatives in the electric industry over the last twenty years, from the creation of the California Independent System Operator Corporation ("CAISO") to current regionalization efforts.²⁹ CalCCA agrees. CNS would allocate GHG-reduction benefits only to zero-GHG generation that meets an individual LSE's load profile on an hour-by-hour basis. Zero-GHG generation in excess of an LSE's hourly load would not be given credit for GHG reductions, even if this generation is sold into the system, meets a load demand somewhere in California, and offsets GHG-emitting generation that would have otherwise been relied upon. The CNS methodology's focus on *individual* LSE generation and load shapes runs directly counter to the State's consistent policy of encouraging more open energy markets and the development of an integrated statewide electric system. CNS would create a strong incentive against market participation for both Zero-GHG generators, who would not receive GHG reduction credit for their generation, and purchasers of system power.

Further, CalCCA agrees with CMUA's assessment that CNS would likely significantly devalue LSEs' existing investments in wind and solar resources, and would discourage new

²⁹ CMUA Comments at 4.

investments in these renewable resources.³⁰ This is due to not only the reduction of the value of variable-availability zero-GHG resources (especially solar) that exceed an LSE's hourly load, but also, as CMUA notes, the added complexity of obtaining financing for projects based on forecasted hourly generation limited to each LSE's load.³¹

IV. CNS DOES NOT ADDRESS A CLEARLY IDENTIFIED PROBLEM

The basic justification for CNS presented by the Staff Proposal appears to be the concern that LSEs will overprocure variable-availability renewable resources, leading to an oversupply of zero-GHG power at some hours of the day, and an undersupply at other times, resulting in the underutilization of zero-GHG resources and additional reliance on fossil generation during evening peak hours.³² However, nowhere in the Staff Proposal is there any accompanying analytical support for this justification. Most importantly, there is no analysis of the cost of requiring an LSE to meet its load on an hourly basis or the advantages or disadvantages of doing so compared to the RESOLVE model's system-wide approach.

Several parties, including the Joint IOUs, CEERT, Calpine, and CalWEA agree with, or present variations on, this justification.³³ For instance, the Joint IOUs argue that "[CNS] will incent LSEs to plan around the shape of their own load and, as a result, help address renewable integration challenges. By allowing storage resources to help mitigate an LSE's GHG exposure could encourage LSEs not to rely on a single technology type which could lead to increased levels of curtailment."³⁴ Similarly, CEERT argues that CNS is needed to prevent a scenario

³⁰ CMUA Comments at 3.

³¹ *Id.*

³² ALJ Ruling, Attachment A (Staff Proposal), at 2.

³³ Joint IOU Comments at 4-5, CEERT Comments at 2-3, Calpine Comments at 3-4, CalWEA Comments at 1-2.

³⁴ Joint IOU Comments at 5.

where there is a significant oversupply of solar midday and little to no reduction in emitted GHGs in non-daylight hours.³⁵

CalCCA strongly disagrees with these arguments. As ORA notes in its comments, “It is... not clear what problem Staff is trying to remedy by changing from the [Cap-and-Trade based] ERRA methodology to the CNS methodology.”³⁶ CalCCA agrees with ORA’s puzzlement – the “problem” that CNS is trying to prevent is, in fact, *the optimal portfolio and renewable integration strategy identified by the RESOLVE model*. The RSP concluded the major opportunity to reduce GHG emissions is to reduce natural gas usage throughout all hours of the day. Any surplus zero-GHG generation provided to the grid by one LSE, will help another LSE (or merchant generator) back down their gas-fired generation, thus reducing overall GHG emissions. The CNS proponents have never presented any analysis to back up their speculation that some LSEs are being unfairly penalized by having surplus zero-GHG energy provided to the grid.

The concern that LSEs will rush to procure mid-day solar to meet all of their load which will impose a cost on the system is a simplistic view that is contradicted by the fact that all LSEs are engaged in an iterative planning process in this docket to designed to reach an optimal outcome. In fact, some LSEs *already* have integrated resource plans that set goals at odds with the simplistic scenario posited by the CNS methodology’s proponents. CalCCA believes the Commission and all parties would be better served by grounding the Commission’s IRP process in data, not speculation. There are benefits to having each LSE procure GHG-free resources to meet their own load – that point is obvious – but the transition to that system needs to be better thought out given the concerns raised above.

³⁵ CEERT Comments at 2.

³⁶ ORA Comments at 2.

V. THE COMMISSION SHOULD NOT DISCOUNT THE GHG REDUCTION BENEFITS OF RENEWABLE ENERGY CREDITS

The Staff Proposal would only allow Portfolio Content Category (“PCC”) 1 Renewable Energy Credits (“REC”) to count as zero-GHG resources, and assign no GHG-reduction value whatsoever to PCC 2 or PCC 3 RECs. In opening comments, a number of parties supported the Staff’s proposed approach. For instance, The Utility Reform Network (“TURN”) argues that the purchase of RECs California LSEs procuring RECs for out of state (“OOS”) zero-GHG resources (TURN uses on the example of OOS hydroelectric resources) may not reduce total regional GHG emissions, since the local load that otherwise would have been served by those zero-GHG resources may instead be served by additional fossil generation.³⁷ CEJA/SC argue that while RECs are important for tracking renewables procurement for RPS compliance, they are not appropriate mechanisms for IRP GHG emissions accounting.³⁸ These arguments are in error and should be rejected. The Commission should assign GHG-reduction values to PCC 2 and 3 RECs that accurately reflect their real-world GHG-reduction benefits.

The CNS methodology’s treatment of RECs is incompatible with CARB’s Cap-and-Trade methodology, which gives LSEs *full credit* for RPS-eligible procurement, including PCC 2 RECs.³⁹ This is consistent with the real-world impact of RECs. As explained in CalCCA’s opening comments, RECs are an important tool for tracking and assigning appropriate value to renewable and GHG-free generation, and RECs represent actual zero-GHG generation. There is no reason why this generation should be treated as legitimate renewable generation for RPS requirement but denied zero-GHG credit for IRP GHG emissions accounting. To the contrary,

³⁷ TURN Comments at 4-6.

³⁸ CEJA/SC Comments at 9.

³⁹ AReM/DACC Comments at 10.

completely devaluing PCC 2 and PCC 3 RECs would fail to accurately account for their concrete, real-world GHG-reduction benefits.

In addition, the CNS methodology's treatment of RECs would have major negative practical impacts on renewables development. CNS would significantly devalue long-term investments in PCC 2 resources, would reduce LSEs ability to claim the value of those resources, and reduce regional investment in GHG-free renewable development.

TURN's concerns regarding RECs for OOS resources are unfounded and not supported by any evidence produced to date in the record. TURN has not provided any data to establish that large-scale offsetting is actually occurring. In addition, TURN's arguments ignore, and are contradicted by, the market impact of RECs. RECs represent real-world GHG-free generation. Ensuring that RECs receive their full value incentivizes more zero-GHG resource development. Because the supply of OOS hydroelectric generation is fixed and finite, increased demand for RECs, and increased REC values, will increase the financial incentive for the development of a wide range of new renewables.

TURN's claim that the purpose of the IRP process is to encourage new zero-GHG construction in California is likewise inaccurate. The purpose of IRP is to reduce the GHG emissions attributable to California's electric sector. In fact, a major part of the Commission's IRP process thus far has been to assess the possible benefits of large-scale OOS wind projects. These resources, obviously, would not be located in California or involve the construction of new generation resources in California. CalCCA, as a representative of entities that directly serve load, urges the Commission to reject TURN's speculative and unfounded arguments.

Other than CalCCA, no party addressed in opening comments the effect of the CNS proposal upon the use of banking to meet the 42 MMT GHG reduction goal proposed in the IRP. As noted in CalCCA's opening comments, it is difficult to reconcile the CNS requirement

that in order for a LSE to receive credit towards achievement of its GHG target, it must match its GHG-free load to generation in real-time, while at the same time allowing banked RECs associated with generation from previous years to be credited towards a LSE's GHG targets.

The potential effect of excluding banking from achievement of the IRP GHG planning target, as currently authorized by the Commission in D.18-02-018 is significant and would represent a significant deviation from the "optimal" resource plan approved by the Commission in that decision. According to the RSP, achievement of the 42 MMT goal by 2030 is equivalent to adopting a RPS requirement of 58%, 8% above the otherwise required 50% required by SB 350. One-half of this incremental 8% will come from the use of banked RECs. According to the RSP, the IOUs, the major holder of these RECs, will likely start drawing their surplus banked generation down starting around 2026 and rising significantly to 2030. Assuming a 2030 load of 230,000 GWh, this is equivalent to 9,000 GWh of zero-GHG load (3,000 MW of new capacity at a 35% capacity factor), an additional and significant cost currently not accounted for in the RSP.

Exclusion of banked RECs from achievement of the IRP's GHG target would further increase costs for California consumers, as well as devalue California's previous investments in these RPS resources. Such an approach is also inconsistent with the Commission's previous decisions recognizing the role of banking RECs in achieving California's RPS and GHG reduction goals.

VI. OTHER ISSUES RAISED BY THE CNS PROPOSAL

In opening comments, CalCCA proposed that if the Commission chose to adopt the CNS proposal it should make several changes to the proposal. Most importantly of these is calculation

of the CNS based on *annual* generation compared to load, and not hourly as currently proposed as well as the inclusion of PCC 2 resources in the IRP’s GHG calculations.⁴⁰

Other parties have identified further changes to the CNS that would also improve it. As the Joint IOUs note, the role of other zero-GHG resources (such as large hydroelectric and nuclear) need to be included in any calculation.⁴¹ As Powerex notes, resource portfolios owned by Asset Controlling Suppliers such as the Bonneville Power Administration (“BPA”) should also be credited as zero-GHG based on the de minimis GHG emissions of their primarily hydroelectric generation. This treatment would be similar to that adopted by the CARB for GHG emissions for its Cap-and-Trade program,⁴² and would also be consistent with the proposed treatment of these resources in the California Energy Commission’s AB 1110 proceeding.

As Calpine and CEJA/SC note, CNS presents a strict distinction between zero-GHG and non-zero GHG resources, which overlooks completely the role that low-GHG resources should also play in reaching California’s GHG target.⁴³ As CEJA/Sierra Club state:

The Clean Net Short methodology and its associated GHG calculator tool also lacks full internal consistency because it applies more granular source-specific performance metrics for GHG-free resources while only considering generalized performance metrics for GHG-emitting resources. For example, the Clean Net Short methodology incorporates the hourly performance of non-dispatchable GHG-emitting resources, GHG-free generation, and energy storage but then it simplifies the emissions associated with the remaining short for each hour.⁴⁴

CalCCA agrees with CEJA/Sierra Club on this point.

In its opening comments, CalCCA also proposed that GHG reporting should be done on an average rather than marginal basis, a position supported by both Calpine and CEERT.

⁴⁰ CalCCA Comments at 15.

⁴¹ Joint IOU Comments at 5.

⁴² Powerex Comments at 1-7.

⁴³ Calpine Comments at 2.

⁴⁴ CEJA/SC Comments at 5.

In opening comments, AReM/DACC request that CCA programs and ESPs whose customers pay for GHG-reducing resources through distribution rates or non-bypassable charges (“NBC”) should be assigned their fair share of the GHG-reduction credit for those resources.⁴⁵ Although CalCCA opposes “on behalf of” procurement by IOUs, and believes that all non-IOU LSEs should be given the opportunity to self-provide their share of required resources, to the extent that the costs of some IOU-procured GHG-reducing resources are recovered through NBCs, CalCCA strongly believes that CCA programs and ESPs should be allocated a fair share of those resources’ GHG-reduction benefits.

While assigning the GHG-reduction benefits of a resource would be fairly straightforward under the Cap-and-Trade GHG accounting methodology, assigning such benefits under CNS (on an hourly basis under load-matching constraints) would be much more difficult. Similar to all other aspects of the CNS proposal, it is unclear how the generation from these resources would be allocated to each LSE. Many NBC resources, for example, primarily provide capacity value, which is why some portion of these costs and associated Resource Adequacy benefits are assigned to LSEs, but the energy is treated separately and may or may not benefit all LSEs. This is yet another example of the many implementation programs associated with the CNS proposal.

VII. CONCLUSION

CalCCA thanks the Commission for taking the time to consider these comments. For the reasons stated above, the Commission should reject the proposed CNS methodology at this time. Instead the Commission should adopt a Cap-and-Trade based GHG accounting methodology for this iteration of IRP, and work closely with other agencies and stakeholders to develop a GHG-accounting methodology that achieves the levels of accuracy and specificity needed to achieve

⁴⁵ AReM/DACC Comments at 7-8.

SB 350s goals while avoiding the CNS methodology's many flaws, as identified in these reply comments.

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Respectfully submitted,

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