Standard LSE Plan

San Diego Community Power

2022 INTEGRATED RESOURCE PLAN

NOVEMBER 1, 2022

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I. Introduction and Executive Summary

a. Introduction

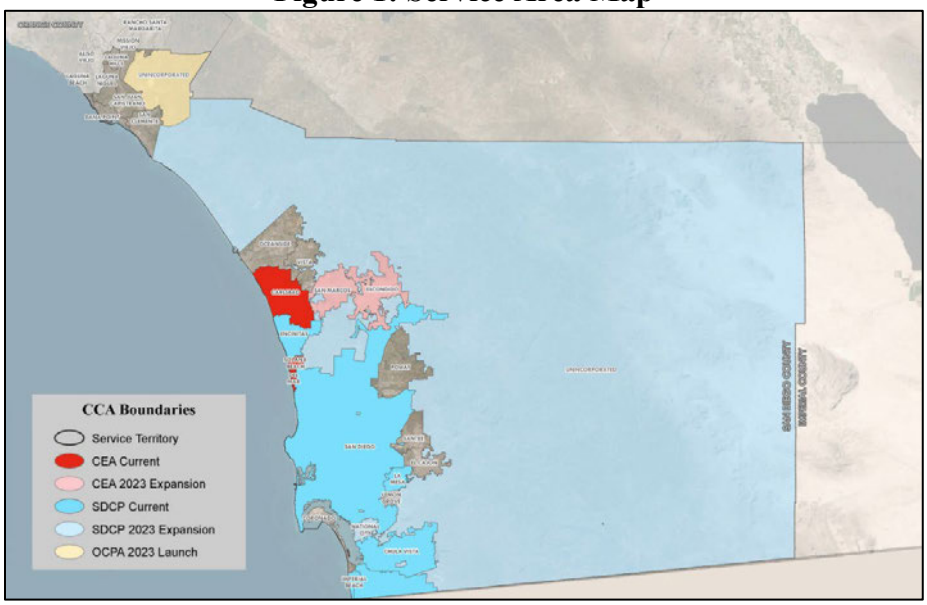
Description of San Diego Community Power

San Diego Community Power ("SDCP") is a Joint Powers Authority ("JPA") formed by the communities of Chula Vista, Encinitas, Imperial Beach, La Mesa, and San Diego in October 2019. In November 2021, SDCP's founding member agencies were joined by National City and the unincorporated areas of San Diego County. As a JPA, SDCP is a local government agency. SDCP is governed by a seven-member board composed of representatives of its member local governments. Through these representatives SDCP is controlled by and accountable to the communities SDCP serves. SDCP plans to provide retail electric generation services and complementary energy programs to customers within the municipal boundaries of the following communities:

- City of Chula Vista
- City of Encinitas
- City of Imperial Beach
- City of La Mesa
- City of National City
- City of San Diego
- County of San Diego

SDCP commenced retail electric service to its first phase of customer enrollments in March 2021. As of June 2022, SDCP successfully completed the majority of its planned phase-in activities of its founding five member agencies, with service to National City and the unincorporated areas of the County of San Diego expected to commence in April 2023. Net Energy Metering customers are being enrolled into SDCP as of their month of true up. Following the completion of upcoming expansion activities in 2023, SDCP expects to serve approximately 930,000 service accounts, which are expected to consume about 8,400 gigawatt hours ("GWh") per year.

Figure 1: Service Area Map



Source: https://www.sdge.com/customer-choice/community-choice-aggregation/active-ccas

As of June 30, 2022, SDCP served approximately 629,900 residential accounts and 70,800 commercial and industrial accounts based on meter count. SDCP provides retail generation service to a variety of customer classes, including residential, small, and medium commercial accounts, large industrial consumers, and agricultural and pumping facilities. SDCP's service area has a population of 1,811,684, the majority of which live in households or work at businesses that receive generation service from SDCP. In 2021, SDCP had a peak load of 751 ("megawatts") MW, and a total 2021 energy usage of 2,129 GWh.

At launch, SDCP's governing board approved a minimum 50 percent renewable energy supply portfolio for all participating customers with a 100 percent renewable retail service option available on a voluntary basis. These retail service offerings have been named "PowerOn" and "Power100," respectively. The minimum quantity of renewable energy delivered to SDCP customers is expected to increase over time, moving to 85 percent by 2030.

SDCP's Mission

SDCP was formed for the express purpose of empowering its member communities to choose the generation resources that reflect their specific values and needs. SDCP was established to procure and develop electrical energy for customers in participating jurisdictions, address climate change by reducing energy-related greenhouse gas emissions, promote electrical rate price stability and affordability, and foster local economic benefits such as job creation, local energy programs and local power development while prioritizing equity. Consistent with Public Utilities Code Sections 366.2(a)(5) and 454.52 (b)(3),[1] all procurement by SDCP, including the

[1] Pub. Util. Code, §§ 366.2(a)(5)(CCAs are solely responsible for all generation procurement activities absent other arrangements authorized by statute); 454.52 (b)(3) (CCA's IRPs must be approved by board and provided to Commission for certification).

portfolios set forth in this integrated resource plan ("IRP"), must comply with policy direction provided by SDCP's governing board.

Introduction to SDCP's IRP

In accordance with the requirements of California Public Utilities Code ("PUC") Sections 454.51 and 454.52 and California Public Utilities Commission ("Commission") Decision ("D.") D.22-02-004, *Administrative Law Judge's Ruling Finalizing Load Forecasts and Greenhouse Gas Emissions Benchmarks for 2022 Integrated Resource Plan Filings*,[2] and guidance provided by the Commission's Energy Division[3], SDCP is providing its load-serving entity ("LSE")-specific IRP to the Commission for certification and use in the Commission's statewide planning process.

In addition to this narrative, SDCP's IRP includes the following documents:

- SDCP's 2030 38 MMT & 2035 30 MMT Resource Data Template and Clean System Power Calculator
- SDCP's 2030 30 MMT & 2035 25 MMT Resource Data Template and Clean System Power Calculator
- SDCP's IRP Verification

As directed in D.22-02-004[4] and the *Final Ruling*, SDCP studied two Conforming Portfolios in this IRP. The first Conforming Portfolio achieves emissions that are equal to or less than the SDCP's proportional share of the 38 million metric ton ("MMT") greenhouse gas ("GHG") target by 2030 and 30 MMT by 2035 ("30 MMT"). The second Conforming Portfolio achieves emissions that are equal to or less than SDCP's proportional share of 30 MMT by 2030 and 25 MMT by 2035 ("25 MMT"). SDCP intends to exceed its proportional share of both the 2030 30 MMT GHG and 2035 25 MMT GHG Benchmarks, so SDCP only provides one Preferred Conforming Portfolio ("PCP"). This PCP is submitted in two sets of Resource Data Templates ("RDTs") and Clean System Power calculators ("CSPs") for each 2035 GHG target, per the *Final Ruling*, and the outputs of the RDTs and CSPs are discussed separately below.[5]

Projecting resource needs over the planning horizon covered by the IRP is a fluid process and SDCP expects changes over time. The future resources identified in SDCP's IRP represent SDCP's current good-faith projection of the resource mix that will be procured over the IRP planning horizon. Such projections are based on best available information regarding planning directives, SDCP policy, resource availability, and other key considerations. The resources

[2] Rulemaking ("R.") 20-05-003, *Administrative Law Judge's Ruling Finalizing Load Forecasts and Greenhouse Gas Emissions Benchmarks for 2022 Integrated Resource Plan Filings* ("Final Ruling"), June 15, 2022.

[3] Energy Division Guidance can be accessed at: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2022-irp-cycle-events-and-materials.

[4] D.22-02-004 at 2.

[5] *Final Ruling* at 12; Ruling Paragraph 2.

identified in future iterations of SDCP's IRP may change due to new information and evolving circumstances, and the ultimate resource mix that SDCP actually procures (in future years) may differ from what is reflected in this plan due to a number of variables, including availability of supply, technology changes, price of supply, and/or other market or regulatory considerations.

Examples of future regulatory changes include the upcoming "Slice of Day" framework for the Resource Adequacy ("RA") program,[6] as well as structural, programmatic changes to the IRP program.[7] Though the impact of these changes is uncertain at this time, they have the potential to materially reshape how capacity and energy are valued for reliability purposes, and in turn, such changes may impact SDCP's future procurement decisions. Through its relevant staff and involvement and membership in the California Community Choice Association ("CalCCA"), SDCP will continue to monitor and engage in Commission proceedings and incorporate pertinent planning and procurement adaptations as necessary.

Board Approval of IRP

In compliance with Public Utilities Code Section 454.52(b)(3), this IRP was formally submitted to SDCP's governing board for approval based on the IRP's compliance with Sections 454.51 and 454.52 and all relevant council-adopted procurement requirements of SDCP's governing board. On October 27, 2022, SDCP's governing board carried a motion by vote to formally approve this IRP and adopt SDCP's 30 MMT and 25 MMT PCP. In approving this IRP narrative, SDCP's board also makes the following determinations regarding SDCP's PCP:

- SDCP's PCPs are expected to achieve economic, reliability, environmental, security, and other benefits and performance characteristics that are consistent with the goals set forth in Section 454.52(a)(1)(A-I).
- SDCP's PCPs include a diversified procurement portfolio consisting of both short-term and long-term electricity and electricity-related and demand reduction products.
- SDCP's PCPs achieve the resource adequacy requirements established pursuant to Public Utilities Code Section 380.
- SDCP's PCPs are consistent with the procurement timing, resource mix, and operational attributes of the Commission's Preferred System Portfolio ("PSP").[8]
- SDCP's PCPs are compliant with all SDCP board-adopted procurement directives.

SDCP's governing board meeting details are available on SDCP's website.[9]

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[6] Decision 22-06-050.

[7] See Rulemaking 20-05-003, *Administrative Law Judge's Ruling Seeking Comments on Staff Paper on Procurement Programs and Potential Near-Term Actions to Encourage Additional Procurement* (September 8, 2022), Attachment A.

[8] In Decision 22-02-004 at 105 and Ordering Paragraph ("OP") 8, the Commission adopted the 30 MMT Core Portfolio with 2020 IEPR Demand and High Electric Vehicle ("EV") Penetration Scenario.

[9] SDCP Board Meeting Materials, available at https://sdcommunitypower.org/resources/meeting-notes/

Request for Certification

SDCP respectfully requests that the Commission certify this IRP.

As both the Legislature and the Commission have recognized, the Legislature has granted community choice aggregators ("CCA") broad authority to procure resources on behalf of their respective customers, an authority limited only where "other generation procurement arrangements have been expressly authorized by statute."[10] Likewise, the Legislature has granted CCAs autonomy in setting their own rates and managing interactions with their customers.[11] SDCP understands that the Commission has three primary interests in the CCA IRP process:

- Ensuring that CCA IRPs provide requisite procurement information needed by the Commission to develop its statewide plan.[12]
- Ensuring that CCAs' current and planned procurement is consistent with the RA requirements established pursuant to PUC Section 380.5.[13]
- Ensuring that CCAs' current and planned procurement satisfies the CCA's share of renewables integration resources identified in the Commission's PSP, and that the CCA either self-provides or pays for investor-owned utility ("IOU") procurement to support its share of any renewable integration shortfall.[14]

SDCP has prepared its IRP with these interests in mind, and thanks the Commission for recognizing and preserving CCA procurement autonomy as well as the benefits of a collaborative planning approach with CCA organizations in its certification review of SDCP's IRP.

b. Executive Summary

This narrative provides a detailed description of the development and content of SDCP's conforming portfolios and the PCP, each portfolio's compliance with applicable requirements, and an action plan detailing SDCP's next steps to promote conformance with such requirements.

[10] PUC Section 366.2(a)(5).
[11] D.05-12-041 at 9-11 ("Nothing in the statute directs the CPUC to regulate the CCA's program except to the extent that its programs may affect utility operations and the rates and services to other customers. For example, the statute does not require the CPUC to set CCA rates or regulate the quality of its services… We are confident that existing law protects CCA customers. Entities of local government, such as CCAs, are subject to numerous laws that will have the effect of protecting CCA customers and promoting accountability by CCAs…").
[12] D.19-04-040 at 17-18 ("The Commission's portfolio aggregation and evaluation process, which relies of fulfillment of IRP filing requirements by LSEs, is the only process capable of assessing the overall needs of the CAISO grid and meeting the statewide GHG, reliability, and least-cost goals collectively. While LSEs may use their IRP process to meet local planning needs as well, the statewide planning function is the statutorily required process . . . .").
[13] Section 454.52(b)(3)(C).
[14] Section 454.51.

SDCP developed its IRP through the following steps:

- SDCP compiled data for its existing energy contracts, RA capacity contracts, and its share of capacity for allocated Cost Allocation Mechanism ("CAM") resources.
- For each IRP planning year, SDCP identified its short positions relative to known planning targets and its assigned load forecast.
- SDCP populated the Resource Data Template with all current contracts.
- SDCP compiled detailed information on projects for which it is currently negotiating power purchase agreements, including information regarding project status and timing.
- SDCP identified future contracts it expects to secure for new solar, storage, biomass and wind generation. SDCP prioritized the selection of future resources to ensure that SDCP's overall portfolio of new resources is consistent with the PSP resource attribute/category mix, procurement timing, and SDCP's proportional share of planned new procurement.
- SDCP added generic future contracts with existing resources, including large hydroelectric generators, to help fill its remaining open positions.
- SDCP added planned purchases of an additional 10,470 GWh in 2035 to create a portfolio which far surpasses the emissions requirement for both benchmarks. SDCP used this portfolio as its "25 MMT PCP".
- SDCP used the Commission's Clean System Power Calculator Tool to verify its GHG emissions associated with the resulting portfolio to ensure that these emissions were lower than SDCP's assigned share of the 25 MMT and 30 MMT GHG Benchmarks.
- SDCP checked its 25 MMT PCP for reliability by comparing the total portfolio net qualifying capacity ("NQC") against SDCP's RA requirements for the month of September during each year of the planning period. SDCP further established that its planned incremental capacity procurement exceeded its pro rata share of the related incremental capacity procurement obligation.

SDCP reached the following findings regarding its 25 MMT PCP:

- SDCP's 25 MMT PCP includes the procurement of the following new resources:
    - New hybrid resources totaling 1,615 MW
    - New wind resources totaling 550 MW
    - New grid connected battery storage of 750 MW
    - New long duration storage of 60 MW
- SDCP's 25 MMT PCP provides for the following overall resource mix in 2035:
    - 35 MW of Large Hydro
    - 0 MW of Biomass
    - 100 MW of Geothermal
    - 0 MW of Small Hydro
    - 800 MW of Wind
    - 150 MW of Solar
    - 813 MW of Short Duration Battery Storage
    - 60 MW of Long Duration Storage
    - 540 MW of Natural Gas/Baseload/Other (Capacity-Only)

SDCP's 25 MMT PCP is consistent with procurement timing, resource quantities, and general resource attributes identified in the PSP.

- SDCP's 25 MMT PCP, when analyzed in the 25 MMT RDT and CSP, would have 2030 emissions of 0.84 MMT and 2035 emissions of 0.63 MMT, which is less than SDCP's assigned share of 2030 and 2035 emissions.
- SDCP's 25 MMT PCP, when analyzed in the 30 MMT RDT and CSP, would have 2030 emissions of 0.61 MMT and 2035 emissions of 0.45 MMT. This is less than SDCP's assigned share of 2030 and 2035 emissions.
- SDCP's 25 MMT PCP meets all relevant reliability metrics under both the 30 MMT and 25 MMT scenarios.
- SDCP's 25 MMT portfolio provides approximately SDCP's load-proportional share of renewable integration resources under both the 30 MMT and 25 MMT scenarios.
- SDCP's 25 MMT portfolio is also consistent with the Commission's PSP and can be used in either a 25 MMT or 30 MMT consolidated statewide portfolio.

To implement its PCP, SDCP is adopting the action plan described in Section IV, below. This action plan consists of the following steps:

- SDCP will periodically solicit offers for new renewable generation and storage projects. These resources are typically secured through long-term power purchase agreements. SDCP expects to secure power purchase agreements for new projects in multiple solicitations conducted over the next several years.
- Periodically throughout the year, SDCP will solicit offers for short-term renewable energy, resource adequacy, system energy, and other products needed to balance the portfolio and adhere to position limits established through SDCP's risk management policy and practices. These solicitations may take the form of formal request for offers, bilateral discussions, and/or transactions arranged through broker markets.
- SDCP will continue to procure resources to meet any remaining assigned requirements from D.21-06-035, as well as the specific sub-categories from that decision.
- SDCP will continue to develop a strategic plan for customer energy programs, called the Community Power Plan ("CPP") to provide a decision-making framework to guide SDCP's program strategy, selection and development of local programs based on community needs and gaps in program offerings. This framework will also address how SDCP can best serve disadvantaged communities within its service territory.

II. Study Design

a. Objectives

SDCP had the following objectives in performing the analytical work to develop its IRP:

1. Verify SDCP's 25 MMT PCP is lower than the GHG Benchmarks for SDCP's proportional share of the 30 MMT and 25 MMT GHG reduction benchmark, as determined using the Commission's emissions calculator.

2. Identify a 25 MMT PCP that achieves economic, reliability, environmental, security, and other benefits and performance characteristics that are consistent with the goals set forth in Section 454.52(a)(1) (A-I).
3. Identify diverse and balanced 25 MMT PCP that includes both short-term and long-term electricity products as well as electricity-related demand reduction products.
4. Identify a 25 MMT PCP that achieves the resource adequacy requirements established pursuant to PUC Section 380 and provide SDCP's share of system reliability and renewable integration resources.
5. Identify a 25 MMT PCP that complies with all of SDCP's Board-adopted procurement directives.
6. Identify a 25 MMT PCP that is compliant with SDCP's obligations under the Renewables Portfolio Standard ("RPS") program.
7. Identify a 25 MMT PCP that is cost-effective and minimizes rate impacts on SDCP's customers.

b. Methodology

i. Modeling Tool(s)

In developing its planned portfolios, SDCP made use of the modeling performed by the Energy Division using RESOLVE and SERVM and incorporated into the RDTv3 and CSP templates as a starting point. After studying this modeling and its conclusions, SDCP used its own experience and expertise in procurement to construct models to quantify portfolio targets for renewable energy content, capacity, and portfolio GHG emissions, as well as physical and financial positions to ensure adherence to SDCP's currently effective risk management policies and business practices.

SDCP uses proprietary models to assess annual, monthly, and hourly open positions, taking account of forecasted hourly electric loads and expected deliveries from SDCP's resource portfolio. SDCP uses a proprietary financial model to project power supply costs and incorporates existing and planned procurement into an overall financial assessment of revenues, costs, and cash flows. SDCP also utilizes a commercially available energy trading and risk management system to monitor positions, market exposure, credit exposure, value-at-risk, and other risk management metrics.

For new resource selection, SDCP relied upon the modeling and assumptions in the Preferred System Portfolio, and on SDCP's ongoing and recent procurement experience, which provides insight into resource availability and cost. The mix of new resources selected in the Preferred System Portfolio is similar to the mix SDCP would select based on its procurement experience.

GHG emissions were assessed using the Commission's Clean System Power tool for the 30 MMT and 25 MMT variations.

ii. Modeling Approach

Load Forecast

SDCP developed this IRP using its assigned load forecast from the file 2022 Final GHG Emission Benchmarks for LSEs[15] (also contained in the CSP templates), as directed in the *Final Ruling*.

SDCP's assigned load forecast is as follows:

Table 1: SDCP's 2023-2035 Load Forecast (GWh)

Year	Load Forecast
2023	7,422.00
2024	7,932.00
2025	7,979.31
2026	8,022.80
2027	8,065.19
2028	8,107.78
2029	8,153.91
2030	8,207.38
2031	8,274.38
2032	8,324.52
2033	8,381.84
2034	8,427.34
2035	8,476.83

Load Shape

In developing its portfolio SDCP used the default load shape from the Clean System Power Calculator, which reflects the California Independent System Operator ("CAISO") hourly system average load shape forecast for the 2021 Integrated Energy Policy Report ("IEPR") Mid Case.[16]

Use of this load shape does not change SDCP's total annual energy volumes for both load and load modifiers, and these energy volumes remain consistent with SDCP's assigned load forecast.

[15] See 2022 Final GHG Emission Benchmarks for LSEs, LSE Demand Forecast (June 28, 2022) (hereinafter "GHG Benchmarks"), *available at* https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2022-irp-cycle-events-and-materials/2022-final-ghg-emission-benchmarks-for-lses_public.xlsx.

[16] *Final Ruling* at 3.

Load-Proportional GHG Emissions Benchmark

SDCP's modeling was assessed against its 2035 load-proportional share of the respective 30 MMT and 25 MMT GHG benchmarks, as provided in the Commission's *GHG Benchmarks*.[17] This assessment yielded the following results:

Table 2: SDCP's Assigned Shares of GHG Reduction Benchmarks[18]

2035 Load (GWh)	Proportion of 2035 Load within IOU Territory	2035 GHG Benchmark – 30 MMT Scenario	2035 GHG Benchmark – 25 MMT Scenario
8,476.83	47.2%	1.072	0.863

Compiling Existing Resources

To populate its baseline resource templates, SDCP added existing resources from the following procurement categories:

- Energy Contracts.
- Capacity (Resource Adequacy) Contracts.
- SDCP's assigned share of capacity for CAM resources, taken from the most recent year-ahead CAM resource list available on the Commission's Resource Adequacy Compliance Materials webpage.
- SDCP's selected Voluntary Allocation and Market Offer ("VAMO") allocation of RPS resources from San Diego Gas & Electric Company ("SDG&E").
- SDCP's allocation of Modified CAM from SDG&E.

Selecting New Resources

To identify its new resource procurement opportunities, SDCP first determined the new resource capacity it intends to add each year, which considered resource needs (open positions), long-term renewable contracting requirements, renewable portfolio standards, resource adequacy requirements, the need for incremental resource adequacy capacity to contribute to system reliability and renewable integration needs, the potential for technological improvements, and financial considerations. SDCP selected resource types based on its experience with competitive solicitations for new renewable and storage resources as well as consideration of the studies and modeling underlying the adopted PSP.

Confirming Reliability

SDCP's portfolios were evaluated to ensure that sufficient dependable capacity (net qualifying capacity) is available to meet peak load requirements. This includes a 14% Perfect Capacity

[17] *GHG Benchmarks*.

[18] *GHG Benchmarks* at Tab "Benchmarks_30 MMT" and "Benchmarks_25 MMT".

("PCAP") Planning Reserve Margin.[19] SDCP used technology-specific Effective Load Carrying Capacity ("ELCC") factors provided by the Commission to assess the contribution of each resource to system reliability. SDCP's portfolios were designed to ensure that current incremental resource adequacy capacity obligations from D.21-06-035 are met.

Calculating GHG Emissions

SDCP calculated the emissions associated with its 25 MMT PCP using the Commission's 25 MMT and 30 MMT Clean System Power calculators. The assigned load forecast and default load shapes and behind the meter adjustments were used for this assessment, along with the planned supply portfolios. The results were checked against the assigned GHG benchmarks included in the Clean System Power tools.

III. Study Results

a. Conforming and Alternative Portfolios

As required by the Commission, SDCP is submitting two conforming portfolios – a 30 MMT Conforming Portfolio which achieves SDCP's share of the 38 MMT by 2030 and 30 MMT by 2035 GHG targets (referred to as the "30 MMT Conforming Portfolio"); and a 25 MMT Conforming Portfolio that achieves SDCP's share of the 30 MMT by 2030 and 25 MMT by 2035 GHG targets (referred to as the "25 MMT Conforming Portfolio"). SDCP is not submitting alternative portfolios. Please note, SDCP has used the same Conforming Portfolio to achieve both its 30 MMT and 25 MMT Conforming Portfolios. The portfolio inputs are the same but the outputs in the CSP and ELCC reliability section of the RDT will differ based on the 25 MMT and 30 MMT targets.

SDCP's 30 MMT Conforming Portfolio

SDCP provides a summary of SDCP's 2035 30 MMT Portfolio below, identifying resources by type and distinguishing between the following procurement categories:

- Existing resources (energy and capacity) that SDCP owns or contracts with, consistent with definitions provided in the Resource Data Template.
- Existing resources (energy and capacity) that SDCP plans to contract with in the future.
- Existing resources (capacity) that SDCP partially pays for through CAM.
- New Resources (energy and capacity) that are under development that SDCP is planning to procure.
- Future new resources (energy and capacity) that SDCP is planning to procure.

In summary, to meet SDCP's projected 2035 energy demand of 8,476.83 GWh, SDCP has selected a 2035 30 MMT Conforming Portfolio composed primarily of the following resources:

[19] See *Workshop: Reliability Filing Requirements for Load Serving Entities' 2022 Integrated Resource Plans-Results of PRM and ELCC Studies* (July 29, 2022) at Slide 31.

- Existing solar (owned or under contract) – 549 MW[20]
- Existing wind (owned or under contract) – 146 MW[21]
- Existing wind (planned procurement) – 250 MW
- Existing hydro (planned procurement) – 35 MW
- New solar (future resources) – 1,425 MW
- New wind (future resources) – 550 MW
- New geothermal (future resource) – 100 MW
- New short duration storage (future resources) – 750 MW
- New long duration storage (future resources) – 60 MW

Additionally, SDCP's 2035 30 MMT Conforming Portfolio includes capacity-only resources composed primarily of the following resources:

- CAM, Demand Response and Energy Efficiency Allocations – 626 MW
- Existing natural gas, baseload, and other (planned procurement) – 95 MW

SDCP's portfolio includes a mix of existing and new resources. Approximately 2,885 MW of SDCP's 30 MMT portfolio is composed of new resources, reflecting SDCP's role as an active player in the State's development of new renewable and storage resources. Furthermore, SDCP's 30 MMT portfolio is comprised of a mix of resources in which SDCP can minimize customer rate impacts while still achieving the State's GHG-reduction targets.

SDCP's 30 MMT Conforming Portfolio Is Consistent with the Preferred System Plan

The new resources included in SDCP's 30 MMT Conforming Portfolio are consistent with the PSP 2035 new resource mix. The Commission adopted the PSP, which established the 38 MMT GHG target by 2030 and 30 MMT GHG target by 2035 and adopted the resources in Tables 5 and 6 of D.22-02-004.[22]

The Decision identifies planned use of resources in the following categories: Biomass, Geothermal, Wind, Wind on New-Out-of-State Transmission, Offshore Wind, Utility-Scale Solar, Battery Storage, pumped (Long-Duration) Storage, Shed Demand Response.

As demonstrated in the following table, SDCP's 30 MMT portfolio is generally consistent with SDCP's proportional share of new procurement for each of the "resource types" identified in D.22-02-004:

[20] Estimated capacity of SDCP's ~56% share of long-term VAMO allocation of existing solar resources from SDG&E.

[21] Estimated capacity of SDCP's ~56% share of long-term VAMO allocation of existing wind resources from SDG&E.

[22] D.22-02-004 at 101-105. Note the Decision references Tables 6 and 7, but this was presumably a typographical error since there was no foregoing Table 7. Thus, SDCP understands the Decision to be referencing Tables 5 and 6.

Table 3: Comparison of SDCP's 30 MMT Conforming Portfolio vs. PSP

Resource Category	PSP	SDCP's 30 MMT Conforming Portfolio	SDCP's Proportional Share of PSP New Resources	Observations
Biomass	134	0	6	
Geothermal	1,135	100	52	
Small Hydro	0	0	0	
Wind	3,562	0	162	With limited locations in state for siting new wind resources, SDCP believes a focus on out-of-state or offshore wind is more viable but will promote and pursue offtake from new, existing, and re-powered in-state wind resources wherever possible.
Wind On New OOS Transmission	4,636	250	211	
Offshore Wind	4,707	300	214	
Utility-Scale Solar	17,418	1,765	793	
Battery Storage	17,350	2,580	789	Battery Storage for SDCP also includes the energy storage capacity associated with hybrid solar plus storage systems.
Pumped (Long-Duration) Storage	1,000	0	46	
Shed Demand Response	977	0	44	

SDCP's proportional share of the PSP New Resources and the resources reflected in SDCP's 30 MMT Portfolio are relatively aligned.

There are slight differences for in-state wind. Due to limited locations in state for siting new wind resources, SDCP does not believe it practical to plan around new in-state wind resources in its portfolio design and instead focuses on out-of-state or offshore wind for more viable long-term reliability planning and to help reduce siting delays in bringing projects online. That said, SDCP will continue to advocate for and pursue offtake from new, in-state, and re-powered in-state wind projects and has open Request for Proposals ("RFPs") for viable projects.

SDCP's 30 MMT Portfolio focuses on combined solar/storage projects since its locale and services territory have ample sites for local projects. In the Battery Storage category, SDCP also includes the energy storage capacity associated with hybrid solar plus storage facilities. This hybrid system will allow for higher renewable utilization rates and reduce production risk.

SDCP's 25 MMT Conforming Portfolio

SDCP provides a summary of SDCP's 25 MMT Conforming Portfolio (by 2035), identifying resources by type and distinguishing between the following procurement categories:

- Existing resources (energy and capacity) that SDCP owns or contracts with, consistent with definitions provided in the Resource Data Template.
- Existing resources (energy and capacity) that SDCP plans to contract with in the future.
- Existing resources (capacity) that SDCP partially pays for through CAM.
- New Resources (energy and capacity) that are under development that SDCP is planning to procure.
- Future new resources (energy and capacity) that SDCP is planning to procure.

In summary, to meet SDCP's projected 2035 energy demand of 8,476.83 GWh, SDCP has selected a 2035 25 MMT Conforming Portfolio composed primarily of the following resources:

- Existing solar (owned or under contract) – 549 MW[23]
- Existing wind (owned or under contract) – 146 MW[24]
- Existing wind (planned procurement) – 250 MW
- Existing hydro (planned procurement) – 35 MW
- New solar (future resources) – 1,425 MW
- New wind (future resources) – 550 MW
- New geothermal (future resource) – 100 MW
- New short duration storage (future resources) – 750 MW

[23] Estimated capacity of SDCP's ~56% share of long-term VAMO allocation of existing solar resources from SDG&E.

[24] Estimated capacity of SDCP's ~56% share of long-term VAMO allocation of existing wind resources from SDG&E.

- New long duration storage (future resources) – 60 MW

Additionally, SDCP's 2035 25 MMT Conforming Portfolio includes capacity-only resources composed primarily of the following resources:

- CAM, Demand Response and Energy Efficiency Allocations – 626 MW
- Existing natural gas, baseload, and other (planned procurement) – 95 MW

SDCP's portfolio includes a mix of existing and new resources. Approximately 2,885 MW of SDCP's 2035 portfolio is composed of new resources, reflecting SDCP's role as an active player in the State's development of new renewable and storage resources. Furthermore, SDCP's 2035 portfolio is comprised of a mix of resources in which SDCP can minimize customer rate impacts while still achieving the State's GHG-reduction targets.

SDCP's 25 MMT Conforming Portfolio Is Consistent with the Preferred System Plan

The new resources included in SDCP's 25 MMT Conforming Portfolio are consistent with the PSP new resource mix. The Commission adopted the PSP portfolio, which established the 38 MMT GHG target by 2030 and 30 MMT GHG target by 2035 and adopted the resources in Tables 5 and 6.[25] Subsequently, the Commission required load serving entities to also prepare a Conforming Portfolio meeting 30 MMT GHG by 2030 and 25 MMT GHG by 2035.[26] SDCP's 25 MMT Conforming Portfolio meets this latter requirement.

The Decision identifies planned us of resources in the following categories: Biomass, Geothermal, Wind, Wind on New-Out-of-State Transmission, Offshore Wind, Utility-Scale Solar, Battery Storage, pumped (Long-Duration) Storage, Shed Demand Response.

As demonstrated in the following table, SDCP's 25 MMT portfolio is generally consistent with SDCP's proportional share of new procurement for each of the "resource types" identified in D.22-02-004 and the *Final Ruling*:

[25] D.22-02-004 at 101-105. Note the Decision references Tables 6 and 7, but this was presumably a typographical error since there was no foregoing Table 7. Thus, SDCP understands the Decision to be referencing Tables 5 and 6.

[26] *Final Ruling* at 9-10.

Table 4: Comparison of SDCP's 25 MMT Conforming Portfolio vs PSP New Resources

Resource Category	PSP	SDCP's 25 MMT Conforming Portfolio	SDCP's Proportional Share of PSP New Resources	Observations
Biomass	134	0	6	
Geothermal	1,135	100	52	
Small Hydro	0	0	0	
Wind	3,562	0	162	With limited locations in state for siting new wind resources, SDCP believes a focus on out-of-state or offshore wind is more viable but will promote and pursue offtake from new, existing, and re-powered in-state wind resources wherever possible.
Wind On New OOS Transmission	4,636	250	211	
Offshore Wind	4,707	300	214	
Utility-Scale Solar	17,418	1,765	793	
Battery Storage	17,350	2,580	789	Battery Storage for SDCP also includes the energy storage capacity associated with hybrid solar plus storage systems.
Pumped (Long-Duration) Storage	1,000	0	46	
Shed Demand Response	977	0	44	

SDCP's proportional share of the PSP New Resources and the resources reflected in SDCP's 25 MMT Portfolio are relatively aligned.

There are slight differences for in-state wind. Due to limited locations in state for siting new wind resources, SDCP does not believe it practical to plan around new in-state wind resources in its portfolio design and instead focuses on out-of-state or offshore wind for more viable long-term reliability planning and to help reduce siting delays in bringing projects online. That said, SDCP will continue to advocate for and pursue offtake from new, in-state, and re-powered in-state wind projects and has open RFPs for viable projects.

As with the 30 MMT portfolio, SDCP's 25 MMT Portfolio focuses on hybrid solar/storage projects since its locale and services territories have ample sites for local projects. In the Battery Storage category, SDCP also includes hybrid solar plus storage systems. This hybrid system will allow for higher renewable utilization rates and reduce production risk.

b. Preferred Conforming Portfolios

i. 25 MMT Preferred Conforming Portfolio

As discussed above, SDCP has used the same Conforming Portfolio to achieve both its 30 MMT and 25 MMT Conforming Portfolios. SDCP intends to meet or exceed its 25 MMT GHG Benchmark and has selected the 25 MMT Conforming Portfolio as its Preferred Conforming Portfolio ("25 MMT PCP"). The following provides a description of this portfolio.

SDCP's 25 MMT PCP consists of a combination of:

- Gas
- Biomass
- Geothermal
- Wind
- Wind on New-Out-of-State Transmission
- Offshore Wind
- Utility-Scale Solar
- Battery Storage
- Pumped (Long-Duration) Storage

As stated above, in accordance with Section 454.51(b)(3), SDCP's governing board has determined that the resource mix in the 25 MMT PCP achieves "economic, reliability, environmental, security, and other benefits and performance characteristics that are consistent with the goals set forth in [Section] 454.51(a)(1)]." These benefits and characteristics are discussed as follows.

GHG Reduction Goals

SDCP's 25 MMT PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(A) goal of meeting the Commission's 25 MMT GHG reduction benchmark (30 MMT GHG by 2030).[27] The 2035 emissions from SDCP's 25 MMT PCP are equivalent to SDCP's load-proportional share of the 25 MMT by 2035 emissions target. SDCP's proportional share of the 25 MMT GHG target in 2030 is 1.052 MMT and in 2035 is 0.863. According to the Commission's emissions calculator, SDCP's 25 MMT PCP would account for 0.837 MMT in 2030 emissions and 0.631 MMT in 2035 emissions, which is substantially less than the GHG Benchmark requirements.

[27] See D.22-02-004 at 105; *Final Ruling*.

Renewable Energy

SDCP's 25 MMT PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(B) goal of ensuring that portfolios are composed of at least 60% eligible renewable resources. In 2035, SDCP's 25 MMT PCP portfolio would consist of 95% eligible renewable generation (net of modeled curtailments), which exceeds the 60% requirement and is consistent with SDCP's mission to provide its communities with clean energy and reduce GHG emissions.

Enable Each Electrical Corporation to Fulfill Its Obligation to Serve Customers at Just and Reasonable Rates

As a public not-for-profit agency, SDCP must set rates to recover costs associated with debt service, the purchase of power, and operational costs at a minimum. It is in the interest of SDCP and its customers for SDCP to design rates that meet SDCP's legally mandated revenue requirements as well as its targeted reserves, while maintaining rate competitiveness and stability. As detailed in Section III.e., below, SDCP is committed to serving its customers at reasonable rates. In addition to setting rates that are competitive with SDG&E, SDCP works to minimize rate volatility by constructing a balanced and conservatively hedged power supply portfolio and minimizing rate changes to once per year when possible.

Minimizing Bill Impact

SDCP's 25 MMT PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(D) goal of minimizing the impact of planned procurement on ratepayers' bills. SDCP's 25 MMT PCP portfolio consists primarily of renewable resources that have benefitted from increasing economies of scale over the past several years. While the Covid-19 pandemic caused supply chain disruptions to many renewable projects, SDCP expects that price projects post-pandemic for such projects will continue to drop for the foreseeable future.

SDCP's recent procurement and development experience indicates that lithium-ion battery storage is cost effective and commercially viable relative to other capacity products available in the market. While global pandemic and supply chain disruption have caused significant project development delays and price volatility in commodity and supply markets, SDCP is optimistic that these impacts will subside in the next couple of years as supply chains regain form and with the help of the incentives and tax credits available under the Inflation Reduction Act.[28]

SDCP prioritizes cost competitiveness, reliability, use of renewable energy, and local resource development. SDCP anticipates that bill impacts will be minimized during its planned portfolio transition as new hybrid solar generation and storage projects secured via long-term contract generally have lower net costs than prices paid in the short-term renewable energy markets. Coupling new solar with battery storage increases the capacity value of the projects, displacing the need to buy expensive resource adequacy products, and provides limited dispatchability for the solar generation, minimizing the risk of energy value degradation over time. Further, SDCP's 25 MMT PCP minimizes exposure to volatile natural gas prices as well as bill impacts that may result from periodic spikes in fossil fuel prices.

[28] Inflation Reduction Act of 2022, H.R.5376, 117th Cong.

Ensuring System and Local Reliability

SDCP's 25 MMT PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(E) goal of ensuring system and local reliability. The 25 MMT PCP meets system resource adequacy requirements as detailed in Section III.f. Additionally, SDCP's 25 MMT PCP will ensure local reliability by prioritizing procurement of local RA resources.

Ensure that at least 65% of RPS Procurement is From Long-Term Contracts

Consistent with Section 454.52(a)(1)(F), SDCP is on pace to meet the requirement that 65% of its RPS procurement must come from contracts of 10 years (long-term or more for each compliance period). For the current compliance period, SDCP has procured 93% from long-term contracts.

Strengthen the Diversity, Sustainability, and Resilience of the Bulk Transmission and Distribution Systems, and Local Communities

SDCP's 25 MMT PCP achieves results and performance characteristics that strengthen the diversity, sustainability and resilience of the bulk transmission and distribution systems, as well as local communities, meeting Section 454.52(a)(1)(G). SDCP's 25 MMT PCP relies on procurement from a variety of resource types as well as significant storage resources. SDCP carefully evaluates the long-term generation load-matching and congestion risks of new resources and weighs its options in the context of its existing supply and net demand on an hourly basis for the full duration of any contract period.

As described below, SDCP is actively pursuing the procurement of capacity to meet the sub-category requirements of D.21-06-035, which includes long-duration storage, clean-firm resources like geothermal, and resources to replace the Diablo Canyon Power Plant. Additionally, SDCP has recently procured demand response capacity resources, providing additional system diversity. Finally, SDCP's 25 MMT PCT plans for a significant portion of offshore wind to add more diversity to transmission and distribution systems.

Demand-Side Energy Management

SDCP's 25 MMT PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(H) goal of enhancing demand-side energy management. SDCP continues to explore and pursue demand-side management programs such as demand response, energy efficiency, and behind the meter energy storage solutions.

Minimizing Localized Air Pollutants with Emphasis on Disadvantaged Communities ("DACs")

SDCP's 25 MMT PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(l) goal of minimizing localized air pollutants and other GHG emissions with early priority on disadvantaged communities. SDCP's 25 MMT PCP relies primarily on renewable generation and hydroelectric generation, and this portfolio is expected to exhibit low GHGs and localized air pollution emissions. SDCP's 25 MMT PCP minimizes SDCP's reliance on unspecified system power, instead opting for renewable and hydroelectric generation procurement/development whenever feasible.

Results from the CSP tool indicate the following localized air pollutants associated with SDCP's 25 MMT PCP using the 25 MMT CSP for year 2035:

- NOx: 27 tonnes/year
- PM 2.5: 8 tonnes/year
- SO2: 1 tonnes/year

These emissions are expected to result from the planned use of system energy and biomass energy in the 25 MMT PCP, as well as emissions from Combined Heat and Power ("CHP") resources and system energy assigned to the SDCP portfolio by the CSP tool. In evaluating new biomass resources, SDCP will prioritize development of any resources with emissions outside of DACs to the greatest practical extent.

Operation of SDCP's 25 MMT PCP

The majority of SDCP's 25 MMT PCP consists of solar and hybrid solar/storage facilities. This helps the portfolio have emissions well below its assigned load-proportional share of the 25 MMT benchmark. Due to a large portion of the portfolio being hybrid projects with storage, these emission reductions do not come at the expense of reliability. Additionally, the added storage component allows for increased demand response and capacity which should help further help grid reliability.

c. GHG Emissions Results

SDCP used its load-based proportional share of the 30 and 25 MMT *GHG Benchmarks* to determine the emissions compliance for its 25 MMT PCP under both 30 MMT and 25 MMT emissions scenarios. SDCP's assigned load proportional share of the 30 MMT benchmark is 1.383 MMT in 2030 and 1.072 MMT in 2035. Based on the 30 MMT version of the CSP calculator, SDCP's 25 MMT PCP would result in total 2030 GHG emissions of 0.613 MMT and 2035 GHG emissions of 0.446 MMT, well below SDCP's assigned share of the 30 MMT GHG reduction benchmark.

SDCP's assigned load-proportional share of the 25 MMT benchmark is 1.052 MMT in 2030 and 0.863 MMT in 2035. Based on the 25 MMT version of the CSP calculator, SDCP's 25 MMT PCP would result in total 2030 GHG emissions of 0.837 MMT and 2035 GHG emissions of 0.631 MMT, which is well below its assigned load-proportional share of the 25 MMT benchmark.

d. Local Air Pollutant Minimization and Disadvantaged Communities

i. Local Air Pollutants

The 25 MMT version of the CSP calculator estimates the following emissions associated with SDCP's 25 MMT PCP:

Table 5: 25 MMT Portfolio Air Pollutants

	2024	2026	2030	2035
NOx	372	62	59	27
SOx	40	2	2	1
PM2.5	134	19	18	8

SDCP's contribution to air pollutants is exclusively a result of reliance on system power and an allocation of emissions from CHP resources imposed by the CSP tool. The tables below show the portion of load that is being served from system power each year for the respective analyses.

Table 6: 25 MMT Demand and Reliance on System Power

	2024	2026	2030	2035
Demand	7932	8023	8207	8477
Net System Power	3059	1964	1551	1228
% of Load Served by System Power	39%	24%	19%	14%

SDCP further discusses its plans to reduce reliance on system power in Sections III.b.i and IV.

ii. Focus on Disadvantaged Communities

SDCP's IRP is consistent with the goal of minimizing local air pollutants, with early priority on Disadvantaged Communities (DAC or DACs). As defined by the CalEPA's designation, a DAC includes four categories:

- Census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen ("CES") 4.0 (1,984 tracts).
- Census tracts lacking overall scores in CES 4.0 due to data gaps but receiving the highest 5 percent of CES 4.0 cumulative pollution burden scores (19 tracts).
- Census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their scores in CES 4.0 (307 tracts).
- Lands under the control of federally recognized Tribes.

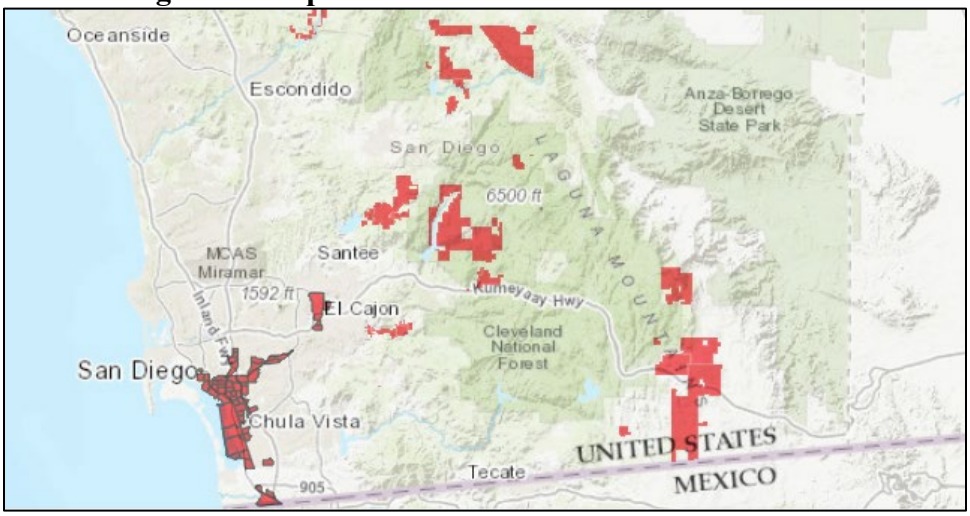
The table below shows the DACs within SDCP's service area per CES 4.0. It covers the three jurisdictions of San Diego, Chula Vista, and National City.

Table 7: Disadvantaged Communities under SDCP Jurisdiction

Census Tract	Nearby City (Approximate location only)	Zip	County	Population[29]
6073003601	San Diego	92113	San Diego	3,006
6073005000	San Diego	92113	San Diego	2,195
6073004900	San Diego	92113	San Diego	5,505
6073003902	San Diego	92113	San Diego	4,388
6073003901	San Diego	92113	San Diego	4,379
6073003404	San Diego	92102	San Diego	5,062
6073012501	Chula Vista	91910	San Diego	3,283
6073003403	San Diego	92102	San Diego	4,094
6073003603	San Diego	92113	San Diego	3,907
6073012502	Chula Vista	91910	San Diego	4,330
6073003501	San Diego	92113	San Diego	4,929
6073003301	San Diego	92113	San Diego	3,820
6073002712	San Diego	92105	San Diego	5,658
6073011700	National City	91950	San Diego	6,078
6073002502	San Diego	92105	San Diego	6,479
6073003502	San Diego	92113	San Diego	4,754
6073004800	San Diego	92102	San Diego	4,171
6073011601	National City	91950	San Diego	5,470
6073011801	National City	91950	San Diego	4,169
6073011602	National City	91950	San Diego	3,900
6073011802	National City	91950	San Diego	7,401
6073005100	San Diego	92113	San Diego	7,702
6073013205	Chula Vista	91911	San Diego	2,431
6073002402	San Diego	92105	San Diego	5,189
6073010013	San Diego	92173	San Diego	5,670
6073003303	San Diego	92113	San Diego	4,821
6073002501	San Diego	92105	San Diego	5,406
6073003602	San Diego	92113	San Diego	3,427
6073012402	Chula Vista	91910	San Diego	5,107
6073004000	San Diego	92102	San Diego	4,513
6073003001	San Diego	92114	San Diego	4,664
6073012600	Chula Vista	91910	San Diego	4,798
6073012102	National City	91950	San Diego	3,385
6073003305	San Diego	92113	San Diego	6,601
6073021900	National City	91950	San Diego	7,107
6073013307	Chula Vista	91911	San Diego	4,780
6073002202	San Diego	92105	San Diego	5,477
6073004700	San Diego	92102	San Diego	1,703
6073013103	Chula Vista	91911	San Diego	2,506
6073010111	San Diego	92173	San Diego	3,230
6073002711	San Diego	92105	San Diego	3,279
6073022000	National City	91950	San Diego	4,681
6073012700	Chula Vista	91910	San Diego	4,868
6073003304	San Diego	92102	San Diego	4,099

[29] Based on the 2019 U.S. Census Bureau's American Community Survey population estimates

Figure 2: Map of DACs within SDCP's Service Area



Within these DACs, SDCP estimates a population of approximately 202,422 (CES 4.0 census data). In May 2022, CalEPA updated the definition of DACs to include DACs in CES 3.0 that became ineligible under CES 4.0, as well as federally recognized tribal areas. SDCP is still analyzing this data and the additional customers to be served. Moreover, before serving federally recognized tribal areas, SDCP will need to engage with tribes on whether they want their generation to be served by SDCP or SDG&E.

Moving forward, SDCP is looking to add more census tracts beyond those identified by CES 4.0. CES is a useful tool for a statewide assessment, however a statewide assessment leaves out disadvantaged communities at a local or regional level. The City of San Diego, one of SDCP's members, has developed a citywide assessment of disadvantaged communities, or Communities of Concern. The City of Chula Vista, another member city, has also developed a similar assessment. SDCP identifies Communities of Concern as those highlighted by the cities of San Diego and Chula Vista, and defaults to the DAC definition in other jurisdictions where a citywide assessment has not been conducted.

In developing its IRP, SDCP carefully considered the impact of its resource procurement on DACs and Communities of Concern. SDCP conducts regular outreach with community-based organizations and through monthly public meetings with its Community Advisory Committee to solicit input on procurement policies and strategies that inform the IRP process. As detailed in SDCP's Action Plan in Section IV.b, SDCP has launched a CPP to develop a framework for community investment decisions informed by a community needs assessment and targeted community engagement.

Power Procurement in DACs

SDCP does not currently procure electricity directly from any natural gas or other fossil fuel power plants. Further, SDCP does not own any thermal generation facility adjacent to any identified DACs. However, SDCP recognizes the need to help mitigate the impacts of air

pollution in regions of the state where communities have been disproportionately impacted by the existing generating fleet and the need for economic development in areas with high unemployment and poverty. SDCP has to-date signed two long-term procurement contracts for hybrid solar/storage projects that are in or near DAC areas.

SDCP additionally evaluated its indirect impacts on disadvantaged communities throughout the state. SDCP's portfolio includes 39% system power in 2024, and this declines to only 11% in 2035. While SDCP strives to reduce its dependence on resources that emit GHGs and other local pollutants, SDCP must also balance that goal against reliability and affordability, which is what SDCP has strived to do in its Preferred Conforming Portfolio. Further, as noted in the previous section, SDCP's reliance on system power will decrease substantially over the planning period due to SDCP's aggressive GHG reduction goals.

SDCP also implements a feed-in tariff ("FIT") program to help facilitate the development of local qualifying, small-scale, distributed renewable generating and energy systems. With a program capacity of 6 MW, SDCP encourages developers to submit proposals that are new resources at less than 1 MW in size. To promote economic development in DACs, SDCP provides bonus pricing per MWh to projects that are sited within a Community of Concern. The program offers a bonus pricing incentive for the first five (5) years of the contract on top of the base price for projects sited within a Disadvantaged Community, as defined by the California Office of Environmental Health Hazard Assessment, or within a very low to low access census tract found in the City of San Diego's Climate Equity Index, or as the top 25% scoring areas within the City of Chula Vista's Climate Equity Index at the time of FIT application submittal. The geographical eligibility of Communities of Concern may expand as SDCP member cities enact their own Climate Equity Index or other related index to identify designated census tracts.

LSE Activities and Programs Impacting DACs

As a relatively new CCA, much of SDCP's activities and programs benefitting DACs are currently in the planning phase, as detailed in Section IV.b. However, many qualifying SDCP customers located in DACs have access to several affordable rate options and programs. While not specific to DACs, SDCP's customers still qualify and participate in the same electricity discount programs that they may already have participated in with SDG&E such as California Alternate Rates for Energy ("CARE") and Family Electric Rate Assistance ("FERA"), and the Low-Income Home Energy Assistance Program ("LIHEAP"). CARE customers save approximately 30-35% on their total bill.

SDCP customers with a qualifying medical condition or a need for certain medical devices may qualify for the medical baseline allowance program, which gives residential customers with qualified medical devices or conditions a higher usage baseline at the lowest rate available on their rate schedule.

SDCP customers on CARE or FERA with outstanding bills that are past due can also qualify for debt forgiveness through the Arrearage Management Plan ("AMP"). AMP is a 12-month payment plan that forgives 1/12 of your debt after each on-time payment of the current month's

bill and protects you from disconnections. After twelve on-time payments, a customer's debt will be fully forgiven up to a maximum of $8,000.

On September 29, 2021, SDCP filed its Tier 2 Advice Letter ("AL") with the Commission requesting a capacity transfer from SDG&E under the Disadvantaged Communities - Green Tariff ("DAC-GT") and Community Solar Green Tariff ("CSGT") based on the disadvantaged communities located within founding member agencies of SDCP. The Commission accepted and approved SDCP's capacity transfer request on October 29, 2021. SDCP submitted its implementation advice letter on October 12, 2022, seeking approval of the proposed programs and obtaining the status of a program administrator. As part of the implementation advice letter, SDCP is also seeking additional capacity transfer from disadvantaged communities located in National City, a new member city that was added to SDCP's joint powers authority ("JPA") after SDCP submitted AL 4-E.

The DAC-GT program allows customers who reside within a disadvantaged community and are eligible for the CARE/FERA programs to receive 100% solar energy at a 20% discount on the electricity and delivery portion of their otherwise applicable tariff. The CSGT program is similar but differs where at least one community sponsor is needed to represent the local generating resource, as it must be located in a disadvantaged community and within 5 miles of the disadvantaged community where subscribing customers reside. Moreover, the CSGT program requires the sponsor to promote workforce development for the new build project. Both programs incentivize the development of new, local generation and will require extensive community engagement to educate and subscribe customers.

e. Cost and Rate Analysis

SDCP's 25 MMT PCP is reasonable from a cost perspective. In selecting resources for its portfolios, SDCP carefully considered the cost implications of specific resource selections and procurement timing. This analysis was informed by SDCP's procurement experience and the standard assumptions and results of the Commission's RESOLVE/SERVM modeling.

In general, SDCP sought to balance the need to procure resources with enough lead time to meet SDCP's LSE-specific procurement targets and the Commission-identified overall system new resource requirements with the potential cost-saving benefits of waiting to procure renewable and storage resources with downward sloping cost projections. SDCP also recognizes that future resource costs are highly uncertain, and technological advancement can happen unexpectedly; SDCP's procurement cycle is designed to take advantage of technological and cost improvements by incrementally adding new resource commitments over time.

SDCP's PCPs takes advantage of the fact that, compared to the IOUs, CCAs significantly shorter generation project development timelines, in part due to the fact that CCAs do not require Commission approval of such projects. These shorter timelines result in significant direct savings and give SDCP more flexibility to time its procurement activities in a way that takes advantage of falling renewable generation prices or other cost-effective procurement opportunities that may arise over time.

f. System Reliability Analysis

SDCP's 25 MMT PCP is expected to be reliable and will contribute SDCP's fair share to system reliability needs under both the 30 MMT and 25 MMT analyses.

SDCP 30 MMT Analysis

The effective capacity of SDCP's 25 MMT PCP under the 30 MMT emission analysis is provided in the following "System Reliability Progress Tracking Table" from the 30 MMT Resource Data Template dashboard. The net qualifying capacity for the month of September is shown for each year in the following table:

Table 8: System Reliability Progress Tracking, September, 30 MMT PCP

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
LSE reliability need (MW)												
ELCC by contract status (effective MW)												
Online												
Development												
Review												
PlannedExisting												
PlannedNew												
BTM PV												
LSE total supply (effective MW)												
Net capacity position (+ve = excess, -ve = shortfall) (effective MW)												

Figure 3: LSE Capacity by Resource Type (30 MMT Analysis)

As demonstrated in Table 8, SDCP's 25 MMT PCP under the 30 MMT emissions scenario contributes 2,003 MW of peak monthly NQC in 2035. Of this total, 1,264 MW are related to new renewable and hybrid resources as well as new short- and long-duration storage resources. SDCP's 25 MMT PCP includes planned contracts with existing resources, which are expected to include resources within the existing natural gas generator fleet, for a total of 507 MW of NQC. This balanced portfolio of flexible capacity works to effectively and reliably integrate a renewables-heavy portfolio, thus exceeding SDCP's share of any system-wide renewable integration resource requirements.

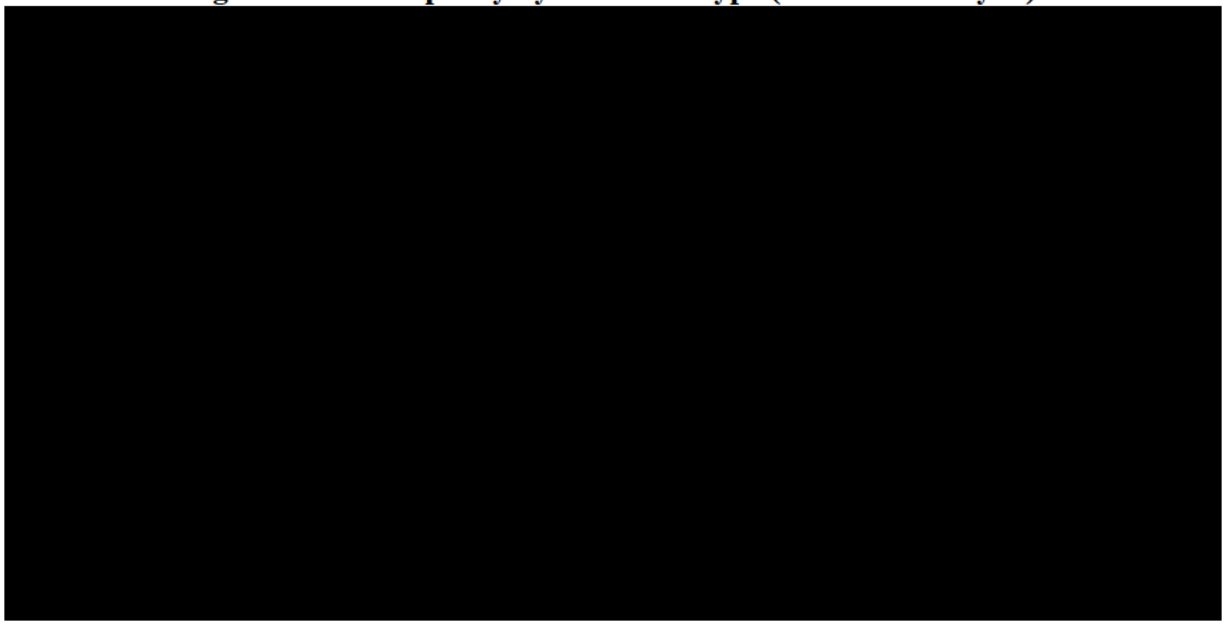
SDCP 25 MMT PCP

The effective capacity of SDCP's 25 MMT PCP is provided in the following "System Reliability Progress Tracking Table" from the 25 MMT Resource Data Template dashboard. The net qualifying capacity for the month of September is shown for each year in the following table:

Table 9: Load and Resource Table by Contract Status, 25 MMT PCP

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
LSE reliability need (MW)												
ELCC by contract status (effective MW)												
Online												
Development												
Review												
PlannedExisting												
PlannedNew												
BTM PV												
LSE total supply (effective MW)												
Net capacity position (+ve = excess, -ve = shortfall) (effective MW)												

Figure 4: LSE Capacity by Resource Type (25 MMT Analysis)



As demonstrated in Table 9, SDCP's 25 MMT PCP contributes 2,008 MW of peak monthly NQC in 2035. Of this total, 1,264 MW are related to new renewable and hybrid resources as well as new short- and long-duration storage resources. SDCP's 25 MMT PCP includes planned contracts with existing resources, which are expected to include resources within the existing natural gas generator fleet, for a total of 513 MW of NQC. This balanced portfolio of flexible capacity works to effectively and reliably integrate a renewables-heavy portfolio, thus exceeding SDCP's share of any system-wide renewable integration resource requirements.

g. High Electrification Planning

SDCP believes that its aggressive goals for renewables and carbon reduction have made it well placed for the challenges of a high electrification case as proposed in the TPP. SDCP shows a modest load growth over period from 2024 to 2035 under the High Electrification scenario.

Table 10: Managed Retail Sales Forecast

	Units	2024	2026	2030	2035
Managed Retail Sales Forecast (assigned to LSE)	*GWh*	0	0	305	1216
LSE marginal reliability need (MW)	*MW*	0	0	31	117

With this in mind, SDCP believes this need will be met through the procurement of in-state large hydro. To maintain SDCP's current emissions rate it will be important that any increase in load be met with carbon-free energy. The table below details the quantity of 2035 procurement necessary to meet the increased high electrification case.

Table 11: Quantity of 2035 Procurement to Meet Increased High Electrification Case

Resource Type	MWs	Annual GWh	2035 GHG target	Transmission Zone	Substation/ Bus	Alternative location	Note
Large Hydro	35	307	1.072	CAISO		Pacific Northwest	

In-state large hydro carries many risks which will be discussed further in Section I, but SDCP believes this resource offers the best fit for its 25 MMT PCP. To mitigate generation risk, SDCP would plan to procure energy in excess of the minimum required generation to mitigate deliverability risk.

h. Existing Resource Planning

During the 2020 IRP cycle, SDCP was just beginning startup operations with much uncertainty of the types and quantity of resources necessary to successfully meet its carbon reduction and reliability goals. During this current IRP cycle, SDCP is more confident in its development as a successful and reliable LSE. Further, SDCP has more experience with local developers and managing solicitations (RFPs, RFIs, and RFOs).

The proposed portfolio leverages knowledge gained through market participation and counterparty communications to propose sensible timelines for when new projects can/will be

available. With this being said, SDCP is keenly aware that flexibility is necessary when preparing for the future. The current market is extremely dynamic and there are broad market forces affecting the whole industry. SDCP expects there to be more stability in the market in the next two years.

For each solicitation now, and into the future, SDCP plans to balance its previously mentioned portfolio planning criteria of reliability, carbon reduction, and customer cost to traverse the resource landscape to create a robust and cost-efficient portfolio. With this in mind, SDCP has crafted a resource portfolio that balances the multiple needs of carbon reduction, system reliability, and cost to customers. Currently, SDCP has an open solicitation entitled Long-Term California RPS-Eligible Renewable Energy RFP.[30]

In the 2020 IRP 38 MMT scenario, SDCP relied upon 58% of existing resources to meet its 2030 energy demand. Here, the 25 MMT PCP relies upon 40% of existing resources to meet the 2030 energy demand and only 10% by 2035. This highlights SDCP's commitment to helping support and develop new resources.

i. Hydro Generation Risk Management

In developing its portfolios, SDCP took several steps to manage the risk of reduced hydro availability that may result from future in-state drought. First, SDCP has developed a network of Pacific Northwest-based hydroelectric power suppliers, including entities that have substantial carbon-free hydroelectric and Asset Controlling Supplier ("ACS") supply and are thus able to sell firm zero- or low-carbon supply to SDCP. SDCP's PCP includes hydroelectric resources located within California as well as imported hydroelectric power from the Pacific Northwest. Second, SDCP prioritizes hydroelectric contracts with marketers that provide firm delivery volumes, helping to reduce the planning uncertainty associated with drought and variable hydroelectric conditions within California. Under the 25 MMT PCP, SDCP has decreased its planned use of hydroelectricity in comparison to the 2020 IRP 38 MMT PCP scenario from 426 MW to 35 MW. This deceased reliance is related to the risk of hydroelectricity under certain drought conditions. Under a drought scenario or in the event that other factors restrict the availability of hydroelectricity and SDCP is unsuccessful in filling related shortfalls through short-term contracting opportunities, SDCP would plan to substitute with renewable energy resources to ensure it meets its assigned GHG benchmark.

Table 12: Hydro Generation Risk Management

Hydro Resource	30 and 25 MMT PSP MW	SDCP Proportionate Share	SDCP 30 MMT PCP MW	SDCP 25 MMT PCP
CAISO	0	0	35	35
Imports	0	0	0	0

[30] *Available at* https://sdcommunitypower.org/wp-content/uploads/2022/10/Final-2022-San-Diego-Community-Power_Long-Term-Renewable-RFP_10-3-2022-.pdf.

j. Long-Duration Storage Planning

The Commission's PSP included 1,000 MW of new long-duration storage to be operational by 2028, and SDCP includes 60 MW in its 25 MMT PCP. SDCP chose to include more long-duration storage to be at or above the PSP share since SDCP's PCP relies primarily on solar-hybrid projects in its PCP. This value also exceeds SDCP's long-duration storage requirement under D.21-06-035 since SDCP expects to contract with a diverse portfolio of long-duration technologies and developers to ensure successful development of this nascent resource type and to support substantial commitments to solar and shorter duration battery resources.

SDCP believes that long-duration storage will be a key piece of its carbon reduction strategy. This resource will allow for a fuller utilization of renewable resources and help to mitigate the pricing volatility caused by the CAISO's evening net ramp rate. SDCP plans to investigate long-term storage resources for installation in 2026. SDCP acknowledges this may be an aggressive timeline because this resource space is not fully mature, but SDCP believes that such technologies are important to their long-term goals.

k. Clean Firm Power Planning

SDCP includes 100 MW of clean firm power in its 25 MMT PCP. Despite a thin supply of projects and limited recent development investment in eligible resource types, both the result of little activity in this resource area of project development prior to D.21-06-035, SDCP has taken efforts to meet its D.21-06-035 clean-firm requirement. SDCP released a Clean Firm RFO entitled "Clean Firm Energy Resource" in July 2022 and has since been in negotiation with two parties who responded to that solicitation. SDCP has been active otherwise in the market to pursue additional bilateral opportunities and to promote development of a diverse portfolio of clean firm resources within its service territory and neighboring counties.

SDCP's experience procuring for D.21-06-035 has provided insights regarding the specific sub-category requirements required by that Decision. Specifically, D.21-06-035 required certain long lead time ("LLT") resources and resources to replace Diablo Canyon Power Plant. These resources only count if they meet relatively narrow attributes directed by that Decision. SDCP's experience has been that for some of these categories there are very few resource developers with the experience and ability to bring projects online, and even fewer with the ability to bring such projects online in the timeline directed by the Commission.

l. Out-of-State Wind Planning

The Commission's PSP calls for 4,636 MW of new out-of-state wind generation ("OOS Wind") to be developed and operational by 2035. SDCP's 25 MMT PCP includes 211 MW of OOS Wind, which is based on the expectation that new transmission will be constructed to access relatively low-cost wind resources in New Mexico. The share of new OOS Wind in SDCP's planned portfolio may increase and may also include Wyoming wind resources, depending upon the pace of transmission development. SDCP understands that the transmission projects needed to connect OOS Wind to the CAISO grid require significant lead-times; however, SDCP is currently contracting with OOS Wind developers that deliver necessary wind energy directly to

California. Additional transmission planning is required to deliver this OOS wind from Wyoming and New Mexico; those efforts are underway and, should they be approved, SDCP expects to pursue offtake from these regions in the interest of diversifying its energy supply portfolio with resources that complement what will otherwise be a very solar-heavy mix. Therefore, SDCP has reflected OOS Wind in both of its portfolios.

m. Offshore Wind Planning

The Commission's PSP calls for 4,707 MW of new offshore wind generation to be developed and operational by 2035. Since California has little experience with offshore wind development, SDCP conservatively planned procurement over the planning horizon for this category, with a focus on areas with existing transmission capacity in the Central Coast or current plans to develop capacity and infrastructure for offshore wind (e.g., in and around Humboldt County). Additionally, though expected to provide benefits in comparison to existing wind resources, it is unclear what exact resource and reliability benefits offshore wind may provide and at what cost. Therefore, SDCP has planned conservative offshore wind procurement in both of its portfolios.

SDCP chose to procure 300 MW of offshore wind in 2032 located in Morro Bay. The choice to procure offshore wind in Morro Bay revolved around the presence of existing transmission infrastructure and the proximity to SDCP's service territory. SDCP believes this resource will be a huge benefit to its portfolio because of its high ELCC value and hourly generation profile shape.

n. Transmission Planning

In identifying resource locations for all portfolios, SDCP was guided by the following considerations:

- SDCP has a general preference for resources located within its service area and the community it serves, but more generally, within Southern California.
- SDCP prefers projects located in areas that can utilize existing transmission infrastructure with minimal upgrade/modification costs.
- SDCP prefers low-impact renewable energy projects that provide economic benefit to DACs, subject to community interest in siting projects within such locations.

Unlike the IOUs, SDCP is not a transmission and distribution ("T&D") system operator. SDCP does not enjoy the benefits of a granular knowledge of SDG&E T&D system, and SDCP is not best positioned to identify optimal resource locations. In practice, SDCP relies on consultants and project developers to conduct the research and technical studies necessary for siting potential generation projects. SDCP evaluates projects offered by developers based on a variety of criteria, including transmission availability, nodal prices and potential for congestion, project viability, environmental, workforce, and other factors. As such, SDCP generally utilized the PSP selected candidate resources as a guide for likely resource locations in its 25 MMT PCP. These should be treated as general expectations based on the aforementioned considerations, not definitive selections – actual project locations will be selected during SDCP's future solicitation processes.

As discussed in prior sections, SDCP is very nimble in administering resource planning processes. More specifically, if SDCP's expected resource locations become infeasible due to various constraints, or if the Commission's modeling efforts happen to indicate that certain resource locations are no longer feasible/desirable, then SDCP would ultimately locate and contract for alternative resources that fall in preferred locations.

At this point in its development process, SDCP relies upon project developers, through its competitive RFP process, to plan the interconnection locations for specific projects. Projects that align with, or require minimal incremental augmentation to, existing or planned transmission upgrades are preferred.

As SDCP scopes and designs a portfolio of local renewable energy resources, staff will work with member agencies and local landowners to identify potential project sites that not only are consistent with local zoning regulations and climate action plans but also reduce the cost of necessary interconnection upgrades.

IV. Action Plan

a. Proposed Procurement Activities and Potential Barriers

SDCP has a well-established procurement process that it will use to steadily achieve its 25 MMT PCP between now and 2035. SDCP's procurement process includes the following key activities:

- Identification of planned resources by type, desired online date, and capacity.
- Planning for procurement activities in consideration of SDCP's risk management policy; resource acquisition lead times including, where applicable, development timelines; staff capacity; and financial considerations.
- Design and administration of resource solicitations. For new resources, these typically take the form of periodic RFP processes, while for existing resources, procurement activity is more frequent and routinized.
- Careful negotiation of contract terms to ensure positive outcomes for SDCP customers with appropriate risk mitigation.
- Ongoing contract management, including monitoring of development milestones and generator performance, as applicable.
- Conduct and participate in joint CCA solicitation processes in order to expand procurement opportunities available to SDCP.

With respect to procurement of the specific resources within its PCP, SDCP intends to:

- Periodically solicit offers for new renewable generation and storage projects. These resources are typically secured through long-term power purchase agreements. SDCP expects to secure power purchase agreements for new projects in multiple solicitations conducted over the next several years.

    - For example, SDCP currently has an open solicitation entitled Long-Term California RPS-Eligible Renewable Energy RFP[31] for resources coming online between January 1, 2023 and December 31, 2026.
- Conduct one or more competitive solicitation(s) specifically for long duration storage.
- Continue procurement of resources to meet any remaining assigned requirements from D.21-06-035, as well as the specific sub-categories from that decision.
- Solicit offers periodically throughout the year for short-term renewable energy, resource adequacy, system energy, and other products needed to balance the portfolio and adhere to position limits established through SDCP's risk management policy and practices. These solicitations may take the form of formal request for offers, bilateral discussions, and/or transactions arranged through broker markets.

i. Resources to meet D.19-11-016 procurement requirements

SDCP does not have any D.19-11-016 obligations as it was not in existence at the time of the Decision. However, consistent with CPUC Decision 22-05-015, which implemented the "Modified Cost Allocation Mechanism" or "MCAM," SDCP has contracted to purchase from SDG&E the share of Resource Adequacy attributes associated with its 2022 load share.

ii. Resources to meet D.21-06-035 procurement requirements, including:

a. 1,000 MW of firm zero-emitting resource requirements

Consistent with Ordering Paragraph 4 of D.21-06-035 and formalized via CPUC approval of SDG&E Advice Letter 3967-E, SDCP and SDG&E mutually agreed to reallocate resource requirements within D.21-06-035 to reflect load forecasts that were revised subsequent to those that were incorporated into the analysis supporting D.21-06-035. SDCP's resulting portion of firm zero-emitting resources to be procured is 39.7 MW.

SDCP is actively engaged with two suppliers that participated in its July 2022 Clean Firm RFO, which targeted eligible resources expected to achieve COD no later than 2028 and likely to be geothermal or bioenergy fueled. In order to ensure compliance with D.21-06-035 and to promote development of a diverse portfolio of clean firm resources within its service territory and neighboring counties, SDCP continues pursuit of additional bilateral opportunities to contract with eligible resources.

A potential barrier, also noted in Section III.k., is that there has been little development of new geothermal and commercially scalable bioenergy generation resources in recent years. SDCP is optimistic that D.21-06-035 will increase the number of potential projects and market participants involved in the development of eligible resources such that SDCP and all other LSEs can meet the very specific requirements of D.21-06-035.

[31] https://sdcommunitypower.org/wp-content/uploads/2022/10/Final-2022-San-Diego-Community-Power_Long-Term-Renewable-RFP_10-3-2022-.pdf

b. 1,000 MW of long-duration storage resource requirements

Consistent with Ordering Paragraph 4 of D.21-06-035 and formalized via CPUC approval of SDG&E Advice Letter 3967-E, SDCP and SDG&E mutually agreed to reallocate resource requirements within D.21-06-035 to reflect load forecasts that were revised subsequent to those that were incorporated into the analysis supporting D.21-06-035. SDCP's resulting portion of long-duration storage resources under D.21-06-035 is 39.7 MW.

SDCP has extensive market insight and experience contracting with energy storage resources from its 2020 Renewable Energy RFP and its 2021 Request for Information for Local Renewable Energy and Energy Storage Request for Information ("Local RFI")[32]. SDCP expects to launch a solicitation targeting short- and long-duration standalone energy storage projects upon conclusion of its currently open 2022 Renewable Energy RFP.

Current barriers to procurement of long-duration storage resources are the lack of diversity of commercially viable and scalable technologies beyond lithium-based battery storage facilities and the pandemic and supply chain disruptions currently impacting said lithium-based storage development capacity and timelines.

c. 2,500 MW of zero-emissions generation, generation paired with storage, or demand response resource requirements

Consistent with Ordering Paragraph 4 of D.21-06-035 and formalized via CPUC approval of SDG&E Advice Letter 3967-E, SDCP and SDG&E mutually agreed to reallocate resource requirements within D.21-06-035 to reflect load forecasts that were revised subsequent to those that were incorporated into the analysis supporting D.21-06-035. SDCP's resulting portion of zero-emissions generation, generation paired with storage, or demand response resources is 98.9 MW.

SDCP expects to meet its zero-emitting resource requirements predominantly via contracts with hybrid solar-and-storage resources. SDCP expects to exceed its share with resources under contract and, in order to ensure compliance in the event of project delays and to further support development of additional zero-emissions generation, SDCP continues pursuit of additional opportunities to contract with eligible resources, both via formal solicitation (e.g., 2022 Renewable Energy RFP and 2021 Local RFI) and via bilateral market outreach and discussions.

Current barriers to procurement are the pandemic and supply chain disruptions currently impacting the development capacity and timelines related both to solar and lithium storage technologies.

[32] https://sdcommunitypower.org/wp-content/uploads/2021/08/SDCP-2021-Local-RFI-Announcement.pdf

d. All other procurement requirements

Consistent with Ordering Paragraph 4 of D.21-06-035 and formalized via CPUC approval of SDG&E Advice Letter 3967-E, SDCP and SDG&E mutually agreed to reallocate resource requirements within D.21-06-035 to reflect load forecasts that were revised subsequent to those that were incorporated into the analysis supporting D.21-06-035. SDCP's overall D.21-06-035 requirements, including the previously discussed sub-category requirements, are 455.7 MW.

In D.21-06-035, the Commission identified mid-term reliability needs of at least 11,500 MW of additional net qualifying capacity to be procured by all the LSEs subject to the Commission's IRP authority. The capacity requirements are adopted annually, beginning with 2,000 MW by 2023, an additional 6,000 MW by 2024, an additional 1,500 MW by 2025, and an additional 2,000 MW by 2026.

Table 13: D.21-06-035 Obligation

	2023	2024	2025	2026 (LLT resources)	Minimum zero-emitting capacity by 2025	Total
SDCP	79.3	237.4	59.7	79.3	98.9	455.7

SDCP has identified the following market, regulatory, financial, or other barriers or risks that may impede SDCP's ability to acquire the resources identified in its PCP:

- Potential constraints in SDCP's ability to contract new build generation and storage projects at the scale and timeline anticipated in its plan.
- The inflexibility in long-term contracting requirements under the renewable portfolio standards program, which does not accommodate a gradual ramping of resource commitments that would be appropriate for newly forming CCAs.
- Factors that may restrict availability of resource adequacy capacity such as retirement of conventional resources, the potential re-rating of renewable resource or battery storage Effective Load Carrying Capacity, or SDG&E's retention of resources.
- Factors that may increase SDCP customer costs such as potential regulatory changes relating to the treatment of SDG&E generation costs and the share of costs allocated to SDCP customers through the PCIA.
- Technology availability and acceptance for long duration storage. The current generation of lithium-ion batteries has matured, but not to the degree needed for long duration.

SDCP plans to meet D.21-06-035 requirements through the use of existing technologies whenever possible. SDCP does not want to risk non-compliance by relying on a large technological advancement. Therefore, SDCP will build out its portfolio with solar-battery, wind, and 4-hour battery storage including and in excess of D.21-06-035. This will allow SDCP to not only meet its mandated carbon emissions requirements but also SDCP's own aggressive renewable and carbon-reduction goals.

SDCP has already solicited offers for resources to meet its D.21-06-035 resource needs via its 2020 Renewable Energy RFP, its 2021 Local RFI, the 2022 Clean Firm RFO, and its currently open 2022 Renewable Energy RFP. SDCP will continue procurement efforts toward these

mandates via an upcoming short- and long-duration energy storage solicitation, additional all-source or targeted Renewable Energy RFOs as appropriate, and ongoing bilateral market outreach and negotiations.

iii. Offshore wind

SDCP believes offshore wind will be a vital part of its portfolio in the future. This clean energy, high-ELCC factor resource has a forecasted shape that is highly desirable in that it will complement SDCP's hourly portfolio shape.

SDCP does have concerns about the ability for offshore wind to interconnect into the CAISO's existing transmission system. In CPUC's Modeling Assumptions for the 2022-2023 Transmission Planning Process staff report, it was noted that some of the Morro Bay substation constraints had to be relaxed or changed to the proposed Morro Bay 500kV substation which ties to the Diablo-Gates 500kV line to accommodate enough offshore wind deliverability. With Diablo Canyon being extended to at least 2030, there is concern whether enough interconnection capability is available for offshore wind at scale.

SDCP has an open solicitation at this time (Long-Term California RPS-Eligible Renewable Energy RFP) for resources coming online between January 1, 2023 and December 31, 2026. This solicitation includes offshore wind and, should any resources be projected to achieve COD before 2027, SDCP looks forward to evaluating and pursuing such opportunities in its review and negotiation phases.

With respect to its PCP, SDCP prioritized the selection of future resources to ensure that its overall portfolio of new resources is consistent with the PSP resource attribute/category mix, procurement timing, and SDCP's proportional share of planned new procurement. For the 25 MMT PCP, SDCP identified future contracts it expects to secure for new offshore wind. SDCP anticipates that additional procurement efforts beyond its current 2022 Renewable Energy RFP may be necessary. If so, SDCP will redouble efforts to secure energy supply from offshore wind resources via its own renewable solicitations, whether all-source or specifically targeted, and potentially by partnering with other CCAs or procurement entities as appropriate to support development of largescale offshore wind capacity.

iv. Out-of-state wind

SDCP values a diverse portfolio of renewable resources and currently utilizes out-of-state wind in its clean energy portfolio. As SDCP wishes to increase its total quantity of out-of-state resources under contract, several key obstacles appear to be present. First, is having the necessary import capability. Second is the risk that as the demand for renewable energy grows from California, so will the size of projects and the possible pushback from residents and political action groups. Third, SDCP understands that the transmission projects needed to connect OOS Wind to the CAISO grid require significant lead-times. Additional transmission planning is required to deliver this OOS wind from Wyoming and New Mexico.

SDCP prioritized the selection of future resources to ensure that SDCP's overall portfolio of new resources is consistent with the PSP resource attribute/category mix, procurement timing, and SDCP's proportional share of planned new procurement. For the 25 MMT PCP, SDCP identified future contracts it expects to secure for new out-of-state wind.

SDCP has an open solicitation at this time (Long-Term California RPS-Eligible Renewable Energy RFP) for resources coming online between January 1, 2023 and December 31, 2026. This solicitation includes out-of-state wind. If additional procurement efforts are required, then SDCP will periodically solicit competitive proposals for new out-of-state wind generation projects.

v. Other renewable energy not described above

The vast majority of SDCP's upcoming procurement efforts are described in Sections IV.a.i through IV.a.iv. In order to complement its robust portfolio of commercially viable, wholesale resources, most of which are outlined above, SDCP expects to support and pursue development of less mature resource technologies via pilot projects, targeted procurement programs, and design and development of an integrated network of distributed energy resources throughout SDCP's service territory and neighboring communities. SDCP is currently in the early stages of scoping these programs, which it intends to shape and begin to implement in the next six to twelve months. While these efforts will be less time- and cost-effective on a MWh-for-MWh basis that larger wholesale projects, they are wholly consistent with SDCP's mission to invest in local resources that provide immediate local benefits and reduce costs associated with construction of additional transmission lines while supporting innovative renewable and carbon-free resources.

vi. Other energy storage not described above

SDCP believes harnessing existing renewable generation through storage will be key to meeting the State's long-term carbon reduction goals and plan to continue to research and invest in energy storage technologies. As previously discussed, SDCP has a strong desire to use existing technologies to lessen the potential project cost and the likelihood of non-compliance. In June 2022, SDCP's Board of Directors adopted a goal for 15% of SDCP capacity to be sourced from new, distributed infill storage/solar plus storage resources within Member Agencies by 2035. SDCP plans to release a competitive solicitation in late 2022 specifically for new short- and long-duration energy storage projects, from which it should garner significant insight into the status of various energy storage technologies.

Current barriers to procurement of energy storage resources are the lack of diversity of commercially viable and scalable technologies beyond lithium-based battery storage facilities and the pandemic and supply chain disruptions currently impacting said lithium-based storage development capacity and timelines.

vii. Other demand response not described above

SDCP has already contracted with demand response ("DR") providers for short-term DR contracts and continues to explore innovative capacity and energy products, both short- and long-term, with DR providers.

Barriers to procurement of DR resources include i) relatively high customer high acquisition costs given the quantity in which they must be aggregated to provide material benefit to SDCP and the reliability of the CAISO grid more broadly; ii) the regulatory uncertainty regarding Resource Adequacy, specifically the capacity value that DR resources will provide and any limitations with respect to how much DR capacity any one LSE can include in its resource portfolio; iii) current data latency issues where CCAs have to wait until close of the billing cycle, usually within 28-30 days after power flow, to receive the interval data from SDG&E. CCAs would prefer to receive the interval data at T+2 (i.e. 2 days after power flow) to better inform Estimated Settlement Quality Meter Data processes to allow CCAs to better forecast their load and effectively offer useful demand response programs.

viii. Other energy efficiency not described above

SDCP plans to explore in the near future how it can promote and invest in energy efficient technologies and behaviors. SDCP is currently analyzing various funding mechanisms and opportunities to administer energy efficiency programs for its communities, which will be informed by SDCP's CPP, discussed in more detail in Section IV.b. In addition, SDCP coordinates closely with its member agencies to support the implementation of their respective climate action plans, which will guide future energy efficiency programs and initiatives, including potential updates to building energy codes.

ix. Other distributed generation not described above

SDCP's JPA includes a prioritization of distributed energy resources and as such SDCP plans to explore opportunities to utilize distributed generation. In addition, in June 2022, SDCP's Board of Directors adopted a goal for 15% of SDCP's energy to be sourced from new, distributed infill storage/solar plus storage resources within SDCP's member agencies by 2035. SDCP has an active RFI entitled "Local Renewable Energy and Energy Storage RFI"[33] with a rolling submission deadline. In addition, as described in Section IV.b., below, SDCP is implementing DAC-GT and CSGT programs, which will specifically target DAC and low-income communities and support distributed generation in DACs. SDCP also implements a FIT program to help facilitate the development of local qualifying, small-scale, distributed renewable generating and energy systems less than 1 MW in size. The main barrier to such projects is opposition from small groups of local interested citizens that want to stall or fully prevent new development in many regions of San Diego County, which impacts SDCP's mission to help developed new clean distributed energy resources. SDCP hopes that its mission and commitment to foster local

[33] *Available at* https://sdcommunitypower.org/wp-content/uploads/2021/08/SDCP-2021-Local-RFI-Announcement.pdf.

economic benefits such as job creation, local energy programs and local power development while prioritizing equity will help projects overcome these barriers.

x. Transportation electrification, including any investments above and beyond what is included in Integrated Energy Policy Report (IEPR)

SDCP plans to explore in the near future how SDCP can facilitate increased transportation electrification beyond what is included in the Integrated Energy Policy Report. SDCP coordinates closely with its member agencies to support the implementation of their respective climate action plans, which will guide future transportation electrification strategies and initiatives. Moreover, SDCP's CPP will inform programmatic investments in the community, including potential transportation electrification programs. It is too early in the planning process to fully understand the barriers to such investments for transportation electrification. Once the CPP is completed SDCP will have a better understanding of its community's needs. Such understanding will inform the opportunities, programs, and investments as they weigh against potential barriers to implementation.

xi. Building electrification, including any investments above and beyond what is included in Integrated Energy Policy Report (IEPR)

SDCP plans to explore in the near future how they can facilitate increased investment in building electrification beyond what is included in the Integrated Energy Policy Report. SDCP coordinates closely with its member agencies to support the implementation of their respective climate action plans, which will guide future building electrification strategies and initiatives. Moreover, SDCP's CPP will inform programmatic investments in the community, including potential building electrification programs. It is too early in the planning process to fully understand the barriers to such investments for building electrification. Once the CPP is completed SDCP will have a better understanding of its community's needs. Such understanding will inform the programs, opportunities, and investments as they weigh against potential barriers to implementation.

xii. Other

SDCP does not have any additional procurement to address.

b. Disadvantaged Communities

SDCP is deeply committed to promoting equity through the services and programs it provides, and as such, *Justice, Equity, Diversity & Inclusion* is one of SDCP's six core values. As noted in Section III.d.ii., while SDCP utilizes the statewide assessment tool, CES 4.0, to identify DACs within its service territory, SDCP also leverages the work of its member agencies in identifying additional Communities of Concern based on local and regional criteria. Communities of Concern have been defined as the top 25% scoring areas from CES, known as DACs, as well as the additional census tracts identified by the Cities of San Diego and Chula Vista through their Climate Equity Index ("CEI") reports. Specifically, the City of San Diego identified these census

tracts as areas with very low, low, and moderate access to opportunity, whereas the City of Chula Vista defined them as the top 25% scoring areas within its own analysis. If other member agencies were to identify additional census tracts as the cities of San Diego and Chula Vista have done, SDCP would recognize those designations under the umbrella of Communities of Concern.

In alignment with this mission to prioritize investment and benefits within Communities of Concern, SDCP is developing a strategic plan for customer energy programs, called the CPP. The CPP will provide a decision-making framework to guide SDCP's program strategy, selection and development of local programs based on community needs and gaps in program offerings for which SDCP could invest in as it matures as an agency. As part of the development of the CPP, SDCP is conducting a community needs assessment, partnering with local community-based organizations ("CBOs") to assist in community engagement. SDCP is utilizing multiple engagement methods, such as listening sessions, a survey instrument, interviews, attendance at community events, and workshops, to gather input from a large cross section of its customers.

SDCP issued an RFP in November 2021 looking for firms to conduct a community needs assessment and develop the CPP. Four proposals were received in December 2021. With the assistance of two representatives from SDCP's Community Advisory Committee ("CAC"), one firm with strong experience in community engagement and development of a similar plan for another CCA was selected.

As of September 2022, SDCP has completed several activities within the initial phase of the CPP project, the community needs assessment, including:

- Six listening sessions with nearly 200 community members with compensation to community-based organizations and participants
- Six pop-up events in partnership with several libraries in unincorporated San Diego County, engaging over 100 community members
- Focused conversations with stakeholders from six interest groups working with/serving community members
- Five listening workshops with over 40 participants from local businesses, key accounts, and the general public
- One-hour workshop with 13 CAC members
- Launched a community-wide needs assessment survey available in English, Spanish, and Filipino (Tagalog) and promoted with a paid social media campaign with multi-lingual ads targeting unincorporated San Diego County, National City, and SDCP's Communities of Concern

The CPP will include a market assessment of existing programs and program delivery mechanisms to understand the universe of programs available for implementation. The final CPP will illustrate the opportunities related to addressing the needs of customers with a focus on SDCP's Communities of Concern and will recommend an initial five-year program suite. Before

the CPP is considered for adoption by SDCP's Board of Directors, SDCP will solicit feedback and input from the community on the draft plan to ensure proper alignment.

Ultimately the CPP will allow SDCP to successfully deliver programs that, per it's JPA, are centered around equity, and best serve the needs of its local communities while supporting regional sustainability efforts.

As noted in Section III.d.ii., SDCP is making strides to minimize both direct and indirect impacts to DACs. First, SDCP is substantially reducing its reliance on system power over the planning period and is committed to aggressive GHG reductions. Additionally, SDCP is implementing its DAC-GT and CSGT programs, which will specifically target DAC and low-income communities and provide both renewable energy and discounted electric rates. Finally, SDCP's FIT program promotes economic development in DACs by offering bonus pricing per MWh to projects that are sited within a Community of Concern.

c. Commission Direction of Actions

SDCP encourages the Commission to adopt durable rules and processes to bring greater stability to the regulatory framework within which SDCP and other suppliers must plan and operate. Frequent rule changes disrupt SDCP's ability to execute long-term planning activities and adopted planning elements while minimizing customer costs. Such regulatory changes can also result in disproportionately high costs and administrative burdens, which would prompt related customer rate increases – certain regulatory changes may necessitate duplicative procurement efforts and/or stranded investments that are expected to impact a larger portion of SDCP's portfolio.

For example, the Commission is currently considering a programmatic approach to the IRP and a Slice of Day reform of the RA Program. Each of these changes on their own represent significant regulatory uncertainty, which leads to market uncertainty. These changes together represent a complex, wholesale change to the regulatory landscape, which LSEs cannot reasonably account for in planning. The Commission should be cognizant that the scope of these reforms and how they may have broad, and somewhat unpredictable, impacts to the market. These market changes will likely alter planned procurement over the long term and may reduce the accuracy of LSE's IRP plans. With this in mind, SDCP encourages the Commission to develop a transition process for such changes that provides specific guidance, achievable timetables, and limited penalties to reduce market uncertainties and limit negative impacts on LSEs acting in good faith.

In addition, SDCP recommends the Commission consider the implications of load departure from IOUs within all of these processes and provide additional guidance. Relying on bilateral negotiations between IOUs and CCAs when CCAs expand service has resulted in situations in which the IOUs have too much discretion over the outcomes when there is anticipated load growth that is not included in existing methodologies.

V. Lessons Learned

SDCP recognizes the improvements made to the data templates relative to the 2020 planning cycle, including consolidation of the new and baseline templates and enhancements to better capture the full range of resources in LSE existing and planned portfolios. SDCP believes that additional improvements in the data templates can be made, and SDCP looks forward to further discussions with Energy Division staff in this regard. SDCP's experience completing the Resource Data Template and the Clean System Power tools leads to the following observations and suggestions:

There is considerable time required/spent to complete necessary templates, and this remains a concern of SDCP and other LSEs. SDCP requests that Energy Division staff consider whether all requested data is necessary/critically important to the IRP process, and if not, SDCP respectfully requests that any/all non-critical data requirements be eliminated from future processes. SDCP also found that the directions and guidance provided by the Commission and staff for this IRP cycle seemed to lack clarity and consistency in certain key respects. Again, SDCP recognizes that the IRP process is evolving, but there is room for improvement in providing clear and consistent instructions in a timely manner.

Finally, SDCP's experience procuring for D.21-06-035 has provided insights regarding the specific sub-category requirements required by that Decision. Specifically, D.21-06-035 required certain LLT resources and resources to replace Diablo Canyon Power Plant. These resources only count if they meet relatively narrow attributes directed by that Decision. SDCP's experience has been that for some of these categories there are very few resource developers with the experience and ability to bring projects online, and even fewer with the ability to bring such projects online in the timeline directed by the Commission. SDCP encourages the Commission to avoid prescriptive resource procurement requirements in future procurement orders, in favor of other methods of incentivizing load serving entities to bring needed resources to the grid.

Glossary of Terms

Alternative Portfolio: *LSEs are permitted to submit "Alternative Portfolios" developed from scenarios using different assumptions from those used in the Preferred System Plan with updates. Any deviations from the "Conforming Portfolio" must be explained and justified.*

Approve (Plan)*: the CPUC's obligation to approve an LSE's integrated resource plan derives from Public Utilities Code Section 454.52(b)(2) and the procurement planning process described in Public Utilities Code Section 454.5, in addition to the CPUC obligation to ensure safe and reliable service at just and reasonable rates under Public Utilities Code Section 451.*

Balancing Authority Area (CAISO): *the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.*

Baseline resources: *Those resources assumed to be fixed as a capacity expansion model input, as opposed to Candidate resources, which are selected by the model and are incremental to the Baseline. Baseline resources are existing (already online) or owned or contracted to come online within the planning horizon. Existing resources with announced retirements are excluded from the Baseline for the applicable years. Being "contracted" refers to a resource holding signed contract/s with an LSE/s for much of its energy and capacity, as applicable, for a significant portion of its useful life. The contracts refer to those approved by the CPUC and/or the LSE's governing board, as applicable. These criteria indicate the resource is relatively certain to come online. Baseline resources that are not online at the time of modeling may have a failure rate applied to their nameplate capacity to allow for the risk of them failing to come online.*

Candidate resource: *those resources, such as renewables, energy storage, natural gas generation, and demand response, available for selection in IRP capacity expansion modeling, incremental to the Baseline resources.*

Capacity Expansion Model: *a capacity expansion model is a computer model that simulates generation and transmission investment to meet forecast electric load over many years, usually with the objective of minimizing the total cost of owning and operating the electrical system. Capacity expansion models can also be configured to only allow solutions that meet specific requirements, such as providing a minimum amount of capacity to ensure the reliability of the system or maintaining greenhouse gas emissions below an established level.*

Certify (a Community Choice Aggregator Plan)*: Public Utilities Code 454.52(b)(3) requires the CPUC to certify the integrated resource plans of CCAs. "Certify" requires a formal act of the Commission to determine that the CCA's Plan complies with the requirements of the statute and the process established via Public Utilities Code 454.51(a). In addition, the Commission must review the CCA Plans to determine any potential impacts on public utility bundled customers under Public Utilities Code Sections 451 and 454, among others.*

Clean System Power (CSP) methodology*: the methodology used to estimate GHG and criteria pollutant emissions associated with an LSE's Portfolio based on how the LSE will expect to rely on system power on an hourly basis.*

Community Choice Aggregator*: a governmental entity formed by a city or county to procure electricity for its residents, businesses, and municipal facilities.*

Conforming Portfolio*: the LSE portfolio that conforms to IRP Planning Standards, the 2030 LSE-specific GHG Emissions Benchmark, use of the LSE's assigned load forecast, use of inputs and assumptions matching those used in developing the Reference System Portfolio, as well as other IRP requirements including the filing of a complete Narrative Template, a Resource Data Template and Clean System Power Calculator*.

Effective Load Carrying Capacity*: a percentage that expresses how well a resource is able avoid loss-of-load events (considering availability and use limitations). The percentage is relative to a reference resource, for example a resource that is always available with no use limitations. It is calculated via probabilistic reliability modeling, and yields a single percentage value for a given resource or grouping of resources.*

Effective Megawatts (MW): *perfect capacity equivalent MW, such as the MW calculated by applying an ELCC % multiplier to nameplate MW.*

Electric Service Provider*: an entity that offers electric service to a retail or end-use customer, but which does not fall within the definition of an electrical corporation under Public Utilities Code Section 218.*

Filing Entity*: an entity required by statute to file an integrated resource plan with CPUC.*

Future*: a set of assumptions about future conditions, such as load or gas prices.*

GHG Benchmark (or LSE-specific 2030 GHG Benchmark)*: the mass-based GHG emission planning targets calculated by staff for each LSE based on the methodology established by the California Air Resources Board and required for use in LSE Portfolio development in IRP.*

GHG Planning Price: *the systemwide marginal GHG abatement cost associated with achieving a specific electric sector 2030 GHG planning target.*

Integrated Resources Planning Standards (Planning Standards)*: the set of CPUC IRP rules, guidelines, formulas and metrics that LSEs must include in their LSE Plans.*

Integrated Resource Planning (IRP) process*: integrated resource planning process; the repeating cycle through which integrated resource plans are prepared, submitted, and reviewed by the CPUC*

Long term*: more than 5 years unless otherwise specified.*

Load Serving Entity*: an electrical corporation, electric service provider, community choice aggregator, or electric cooperative.*

Load Serving Entity (LSE) Plan*: an LSE's integrated resource plan; the full set of documents and information submitted by an LSE to the CPUC as part of the IRP process.*

Load Serving Entity (LSE) Portfolio*: a set of supply- and/or demand-side resources with certain attributes that together serve the LSE's assigned load over the IRP planning horizon.*

Loss of Load Expectation (LOLE): *a metric that quantifies the expected frequency of loss-of-load events per year. Loss-of-load is any instance where available generating capacity is insufficient to serve electric demand. If one or more instances of loss-of-load occurring within the same day regardless of duration*

are counted as one loss-of-load event, then the LOLE metric can be compared to a reference point such as the industry probabilistic reliability standard of "one expected day in 10 years," i.e. an LOLE of 0.1.

Maximum Import Capability: a California ISO metric that represents a quantity in MWs of imports determined by the CAISO to be simultaneously deliverable to the aggregate of load in the ISO's Balancing Authority (BAA) Area and thus eligible for use in the Resource Adequacy process. The California ISO assess a MIC MW value for each intertie into the ISO's BAA and allocated yearly to the LSEs. A LSE's RA import showings are limited to its share of the MIC at each intertie.

Net Qualifying Capacity (NQC): *Qualifying Capacity reduced, as applicable, based on: (1) testing and verification; (2) application of performance criteria; and (3) deliverability restrictions. The Net Qualifying Capacity determination shall be made by the California ISO pursuant to the provisions of this California ISO Tariff and the applicable Business Practice Manual.*

Non-modeled costs*: embedded fixed costs in today's energy system (e.g., existing distribution revenue requirement, existing transmission revenue requirement, and energy efficiency program cost).*

Nonstandard LSE Plan*: type of integrated resource plan that an LSE may be eligible to file if it serves load outside the CAISO balancing authority area.*

Optimization*: an exercise undertaken in the CPUC's Integrated Resource Planning (IRP) process using a capacity expansion model to identify a least-cost portfolio of electricity resources for meeting specific policy constraints, such as GHG reduction or RPS targets, while maintaining reliability given a set of assumptions about the future. Optimization in IRP considers resources assumed to be online over the planning horizon (baseline resources), some of which the model may choose not to retain, and additional resources (candidate resources) that the model is able to select to meet future grid needs.*

Planned resource: *any resource included in an LSE portfolio, whether already online or not, that is yet to be procured. Relating this to capacity expansion modeling terms, planned resources can be baseline resources (needing contract renewal, or currently owned/contracted by another LSE), candidate resources, or possibly resources that were not considered by the modeling, e.g., due to the passage of time between the modeling taking place and LSEs developing their plans. Planned resources can be specific (e.g., with a CAISO ID) or generic, with only the type, size and some geographic information identified.*

Qualifying capacity*: the maximum amount of Resource Adequacy Benefits a generating facility could provide before an assessment of its net qualifying capacity.*

Preferred Conforming Portfolio*: the conforming portfolio preferred by an LSE as the most suitable to its own needs; submitted to CPUC for review as one element of the LSE's overall IRP plan.*

Preferred System Plan: *the Commission's integrated resource plan composed of both the aggregation of LSE portfolios (i.e., Preferred System Portfolio) and the set of actions necessary to implement that portfolio (i.e., Preferred System Action Plan).*

Preferred System Portfolio: *the combined portfolios of individual LSEs within the CAISO, aggregated, reviewed and possibly modified by Commission staff as a proposal to the Commission, and adopted by the Commission as most responsive to statutory requirements per Pub. Util. Code 454.51; part of the Preferred System Plan.*

Short term*: 1 to 3 years (unless otherwise specified).*

***Staff**: CPUC Energy Division staff (unless otherwise specified).*

***Standard LSE Plan**: type of integrated resource plan that an LSE is required to file if it serves load within the CAISO balancing authority area (unless the LSE demonstrates exemption from the IRP process).*

***Transmission Planning Process (TPP)**: annual process conducted by the California Independent System Operator (CAISO) to identify potential transmission system limitations and areas that need reinforcements over a 10-year horizon.*