Senate Bill 350 (Clean Energy and Pollution Reduction Act) Accomplishment Tracking

Since Senate Bill 350 became effective in 2015, the California Public Utilities Commission (CPUC) has taken many steps to implement the bill's requirements.¹ Key CPUC highlights include:

- Establishing a two-year Integrated Resource Planning cycle to adopt the optimal portfolio of energy resources that minimizes costs, maintains reliability, and reduces greenhouse gas (GHG) emissions, and setting a 61 percent reduction target in GHG emissions from 1990 levels for the electricity sector in the latest Integrated Resource Plans.
- Continuing to identify all achievable cost-effective electricity and natural gas efficiency savings by updating the "Energy Efficiency Potential and Goals Study" regularly, which has resulted in the authorization of a total of \$6.5 billion in energy efficiency and low-income energy efficiency programs since Senate Bill 350 became law, including \$250 million to pilot new types of market transformation programs.
- Increasing the Renewables Portfolio Standard targets for the quantity of renewable power purchases required by each load-serving entity in each compliance period.
- Approving over \$800 million for transportation electrification infrastructure statewide including infrastructure to support medium and heavy-duty vehicles.
- Establishing the Disadvantaged Communities Advisory Group with the California Energy Commission and creating three new programs to increase access to distributed energy generation such as solar panels in disadvantaged communities.
- Finalized a Memorandum of Understanding with the California Workforce Development Board to promote the creation of high-guality jobs from CPUC initiatives.

Senete Bill 250 Ceel			CPUC Progress and Activities				
Senate Bill 550 Goal Achievements Completed		2016-2019	2020	Future/Planned			
Identify a cost-effective, diverse, and balanced portfolio that ensures a reliable electricity supply and provides optimal integration of renewable energy	Adopted an electricity resource planning process that optimizes potential resource solutions across all applicable load-serving entities to achieve GHG emission reductions at least cost. Through 2019, the CPUC conducted 18 webinars and 8 workshops on the Integrated Resource Planning process.	V	 Established a two-year Integrated Resource Planning cycle for the adoption of an optimal portfolio of resources that meets multiple objectives including minimizing costs, maintaining reliability, and reducing greenhouse gas emissions. This portfolio helps guide load-serving entities in development of their individual Integrated Resource Plans. Established a cyclical approach to Integrated Resource Planning that enables frequent updating to incorporate new information. 2019 The 2017-18 Integrated Resource Planning cycle culminated in D.19-04-040, which 	 Set latest greenhouse gas emission target for the electric sector at 46 MMT (million metric tons), a 50 percent reduction in electric sector greenhouse gas emissions from 2015 levels and a 61 percent reduction from 1990 levels. Adopted an optimal portfolio of resources, the "Reference System Portfolio", to guide load-serving entities in procurement of clean new resources through 2030. The "Reference System Portfolio" demonstrates that the procurement of 8.9 GW of new battery storage capacity is likely the most cost-effective outcome for optimizing reliability and GHG goals. 	 The CPUC will issue a decision ordering the procurement of new reliability-based resources in the mid-decade timeframe to respond to more extreme weather events and replace electricity generation from more than 3,700 MW of retiring natural gas plants and 2,200 MW from the Diablo Canyon Nuclear Power Plant. The CPUC will adopt a Preferred System Plan that establishes the optimal set of resources that should guide State planning over the next ten or more years and informs the California Independent System Operator's (CAISO's) evaluation of new transmission needs over that timeframe. 		

A. Integrated Resource Planning (IRP)

¹ 400(f) of Senate Bill 350 requires that the California Public Utilities Commission establish a publicly available tracking system for Senate Bill 350 requirements. This document is intended to fulfill that requirement. ² A row is marked as 'Completed' if the CPUC has put in place all procedural and other resources needed to fulfill the requirement, even if the requirement is ongoing. For example, if the requirement is for an annual filing, the requirement would be marked as 'Completed' if the CPUC has issued a decision on how the filings are to be submitted and staff is in place to review the filings.

Songto Bill 250 Gogl	Achievements	Completed	CPUC Progress and Activities				
Senute Bin 330 Gour		Completed	2016-2019	2020	Future/Planned		
			adopted the Preferred System Plan for the first Integrated Resource Planning cycle. In 2019, the proposed reference system portfolio for the 2019-2020 Integrated Resource Planning cycle was issued in R.16-02-007.	 A third-party evaluation of the Integrated Resource Planning process was released in September 2020. It made important recommendations about the timing and structure of Integrated Resource Planning processes to allow for broader and more meaningful stakeholder engagement. CPUC held six publicly-noticed workshops and webinars about Integrated Resource Planning processes and work products. 	 The Integrated Resource Planning proceeding will seek to implement third party evaluation recommendations for improving Integrated Resource Planning processes. 		
Adopt a regular process for load-serving entities to file an Integrated Resource Plan and periodic updates demonstrating they will meet California Air Resources Board emissions goals, renewable energy goals, and local reliability goals at just and reasonable rates	Established the two-year Integrated Resource Planning Process for load- serving entities to ensure a path to meeting State targets.		 Established a two-year planning process. In the first year, staff evaluates the appropriate greenhouse gas emission planning target for the electric sector and load-serving entities and identifies the optimal mix of electricity resources to meet State greenhouse gas emissions and reliability goals. The second year considers the portfolios submitted by each load-serving entity for meeting these goals and aggregates portfolios into a single system-wide portfolio, to consider whether further action is needed to meet State goals. 2017 Released first-of-its-kind Proposed Reference System Plan, model, and documentation for California's electric sector. 2018 <u>D.18-02-018</u> outlined requirements for Load Serving Entities for the first Integrated Resource Plan cycle. All Load Serving Entities filed Integrated Resource Plans to demonstrate how their plan contributes to reductions of greenhouse gas emissions and air 	 <u>D.20-03-028</u> set guidance for the current Integrated Resource Planning cycle. Load Serving Entities used the guidance provided in the CPUC's decision to develop individual Integrated Resource Plans, which they filed with the CPUC on September 1, 2020. 	 The Integrated Resource Planning process will continue to operate on a regular cycle, per the structure adopted in <u>D.18-02-018</u>, with necessary refinements as needed. 		

Sonato Bill 250 Coal	Achievements	Completed	CPUC Progress and Activities		
Senate Bill 350 Goal			2016-2019	2020	
			 pollutants as well as how disadvantaged communities are considered. The CPUC modified and adopted these plans. Resource portfolios were shared with the California Independent System Operator (CAISO) for their Transmission Planning Process. 2019 D.19-04-040 adopted the Preferred System Plan. The decision also approved the portfolios of many load-serving entities and asked for additional information on criteria pollutants from others, following staff evaluation. 		
Direct electric utilities to include a strategy for least-cost best-fit resources in their procurement plans			 2018 <u>D.18-02-018</u> directed load-serving entities to indicate their resource strategy by submitting Integrated Resource Planning proposals containing existing and planned energy and capacity contracts, greenhouse gas and criteria pollutant emissions and their activities to minimize criteria air pollutants with priority on disadvantaged communities, and the cost and rate analysis of their plan. <u>D.19-11-016</u> orders the procurement of 3,300 MW needed for reliability by 2023. 	 <u>D.20-03-028</u> requires load-serving entities to submit their individual resource plans with their strategy of hor to procure appropriate resources and requires generating resources that collectively reduce greenhouse gas emissions to at least a 46 million metric ton (MMT) level – on track to meet the State's goal to use renewable, zero- carbon resources for 100 percent of ret electricity usage by 2045. The decision also signals the CPUC's intent to examin the steps needed to support the development of out-of-state wind and long-duration storage. 	

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Sanata Bill 250 Goal	Achiovomonts	Completed	CPUC Progress and Activities					
Senute Bin 550 Gour	Achievements	completed	2016-2019	2020	Future/Planned			
Include environmental costs and benefits, including air quality, and incorporate emissions costs from regulated air pollutants in cost effectiveness calculations	Produced air quality analyses for the 2017-18 and 2019-20 Integrated Resource Planning cycles that focus on the effects of electricity resources on certain types of emissions. Developed a Clean System Power calculator tool for use in estimating GHG and criteria pollutant emissions of energy portfolios. The calculator and documentation are available on the Integrated Resource Planning Materials website <u>here</u> . <u>Air quality analysis</u> and an examination of impacts on disadvantaged communities were part of the 2017-18 Integrated Resource Planning cycle. An update to this work was produced for the 2019-20 Integrated Resource Planning cycle.		 Modeled NO_x and PM2.5 emissions from power plants and analyzed their relationship to disadvantaged communities. During the 2017-18 Integrated Resource Planning cycle, CPUC staff also modeled potential air quality benefits to disadvantaged communities as a result of increased adoption of electric vehicles. Clean System Power calculator developed and used by load-serving entities for first time in the Integrated Resource Planning process. 2019 Updated and refined the analysis of NO_x and PM2.5 emissions from power plants as part of the 2019-20 Integrated Resource Planning Reference System Plan development, including a broader array of generation resources, separating out impacts by air basin, and including SO₂ emission impacts. 	 Two versions of the Clean System Power calculator tool were developed for use by Load Serving Entities to complete and file with CPUC by September 1, 2020 to show planning compliance with two different 2030 targets for greenhouse gas emissions reductions. Clean System Power Calculator (46 MMT GHG) available to match target set in the Reference System Plan adopted by the CPUC in D.20-03-028. 	 D.19-05-019 ordered the Integrated Resource Planning proceeding to use the "Societal Cost Test" framework during the 2019-2020 cycle. This analysis captured the health impacts of criteria pollutant emissions on the dispatch and buildout of the electricity resource portfolio. The analysis is complete and will be released to the public. 			
Allocate costs appropriately between bundled and departing load customers	Held workshops considering cost- allocation, particularly for procurement based on reliability needs.		 <u>D.19-04-040</u> established the "Procurement Track" of Integrated Resource Planning process to link long- term planning to procurement. 	 <u>D.20-12-044</u> established that the details of the cost allocation of any backstop procurement, whereby investor-owned utilities must procure ordered procurement amounts on behalf of certain load-serving entities who have either opted out of or failed in achieving their procurement requirements, will be addressed in a subsequent decision. 	 A subsequent decision will establish the rules of backstop procurement cost allocation. 			

Sonato Bill 250 Coal	Achiovomonto	Completed	CPUC Progress and Activities				
Senate Bill 350 Goal	Achievements	Completed	2016-2019	2020	Future/Planned		
<text></text>	 D.18-02-018 and D.20-03- 028 include guidance and a set of templates for development of Integrated Resource Plans. D.19-04-040 established the procurement track to facilitate Community Choice Aggregators (CCAs) and other Load Serving Entities' procurement to meet system needs, particularly reliability, greenhouse gas, and renewable integration. 		 Community Choice Aggregators (CCAs) participate in the Integrated Resource Planning process as CPUC-jurisdictional load-serving entities. Like other load-serving entities, CCAs submit their individual Integrated Resource Plans, including information regarding renewable integration needs. 2018 <u>D.18-02-018</u> requires load-serving entities, including CCAs, to submit their individual resource plans and identify their proposals for renewables integration. 2019 <u>D.19-04-040</u> adopted load-serving entity plans, including CCA proposals for renewable resource procurement. <u>D.19-04-040</u> also established the procurement track to facilitate CCA and other Load Serving Entities' procurement to meet system needs, particularly reliability and renewable integration. <u>D.19-11-016</u> ordered procurement in the Integrated Resource Planning proceeding. It requires 3,300 MW of system resource adequacy capacity by 2023. CCAs were able to contribute their share of the procurement need or opt-out under this decision. 	 <u>D.20-03-028</u> permits flexibility for CCAs to submit a portfolio of resources that would contribute to deeper greenhouse gas emission reductions than required by the CPUC. Work is on-going to propose a framework for procurement under the Integrated Resource Planning procurement track. This proposal will seek stakeholder feedback on how to determine future procurement needs in Integrated Resource Planning and how to fairly allocate responsibilities and costs to Load Serving Entities and their customers. 	 Community Choice Aggregators (CCAs) will continue to submit proposals, per the structure adopted in <u>D.18-02-018</u> and <u>D.19-04-040</u>, with necessary refinements as needed. 		
Increase energy storage to provide grid reliability from low-carbon energy sources	Approved procurement of more than 1,746 MW of new storage capacity.		 2017 D.17-04-039 required the large investor- owned utilities (IOUs) to adopt 167 MW of distributed energy storage into Assembly Bill 2514 plans. Previously, D.13-10-040 had established an energy storage procurement target for the three large California investor-owned utilities. 2019 D.19-11-016 required the California load serving entities including investor-owned 	 The "Reference System Portfolio" demonstrates that the procurement of 8.9 GW of new battery storage capacity is likely the most cost-effective outcome for optimizing reliability and greenhouse has goals. The CPUC approved 1,207 MW of new energy storage contracts, the highest amount of storage approved in a single year to date. 	 By 2022, CPUC will complete an evaluation of energy storage procurement and operational performance measuring achievement of energy storage policy goals and identifying changes that can improve the future operation and procurement of energy storage. This study is required under CPUC <u>D.13-10-040</u>. 		

Sanata Bill 250 Goal	Achievements	Completed	CPUC Progress and Activities		
Senate Bin 350 Goui	Achievements	completed	2016-2019	2020	
			 utilities and CCAs to procure 3,300 MW of electric system reliability procurement to be on-line in the 2021-2023 timeframe. This procurement is all expected to be energy storage. D.19-12-055 approved an additional 100 MW of front-of-the-meter storage for Southern California Edison as well as approved additional requests for proposals for additional storage to meet local reliability requirements. Approved Southern California Edison's application for 195 MW of energy storage resources for long-term local capacity requirements and also addressed operational limitations resulting from the partial shutdown of the Aliso Canyon natural gas storage facility. Approved PG&E's proposed Assembly Bill 2868 procurement plan for up to 5 MW of behind-the-meter thermal storage. Approved a distribution deferral project for PG&E consisting of 2.8 MW of energy storage. 		
Regional Integration of CAISO	The Revised Proposal for a Regional Independent System Operator (ISO) was		 2016 The California Energy Commission, the California Air Resources Board, and CPUC 		
(California Independent System	issued by the California	$\overline{\checkmark}$	jointly hosted a workshop to consider		
Operator)	Independent System		revisions to the draft governance		
	Operator (CAISO) in 2016		proposal and the results of recent		
	with CPUC input.		regional market expansion studies.		

Future/Planned

- Monitor compliance with Assembly Bill 2514 procurement targets to make sure contracted storage becomes operational.
 CPUC will conduct a need determination for reliability procurement in the middecade timeframe and evaluate the need for a procurement order, which would be expected to lead the development of significant amounts of new energy
 - storage.

B. Energy E	fficiency
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Senate Bill 350 Goal	Achievements	Completed		CPUC Progress and Activities
			2016-2019	2020
Coordination & Goal Setting				
Consult on the California Energy Commission's triennial report on achievable and cost-effective electricity and natural gas efficiency savings Consult with the California Energy Commission on establishing annual targets to double statewide energy efficiency savings by 2030	Investor-owned utility (IOU) Additional Achievable Energy Efficiency scenarios delivered to California Energy Commission in Fall 2018 and 2019.		 2017 Delivered Additional Achievable Energy Efficiency scenarios to the California Energy Commission based on the 2018 Energy Efficiency Potential and Goals Study and the CPUC-adopted goals for 2018 and beyond. 2019 Delivered updated Additional Achievable Energy Efficiency scenarios to the California Energy Commission. 	 Worked with California Energy Commission to host four stakeholder sessions through the Demand Analysi Working Group (DAWG) to solicit stakeholder feedback on updates to CPUC's Energy Efficiency Potential and Goals Study forecasts. Solicited formal and informal comment from stakeholders and California Ener Commission on energy efficiency goalsetting policy. 2021: Completed the Energy Efficiency Potential and Goals Study. Adopted revised energy efficiency goalsetting Efficiency (AAEE) scenarios to California Energy Commission.

	Future/Planned
ts ŞY	 Will continue to deliver Additional Achievable Energy Efficiency data to the California Energy Commission every two years (next: Fall 2023). Conduct next Goalsetting cycle (to be completed in 2023. Adopt new Energy Efficiency portfolio guidance and goals metrics (2023).
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Sonato Bill 250 Goal		Achievements	Completed		CPUC Progress and Activities	
	Senate Bill 350 Goul	Achievements	completed	2016-2019	2020	
	Programs					
	Propose programs that provide financial incentives, rebates, technical assistance, and support to increase energy efficiency			 2016 <u>D.16-03-029</u> details how Energy Upgrade California will contribute to doubling building efficiency. <u>D.16-08-019</u> provides guidance and deadlines on how investor-owned utility program administrators will restructure their portfolios to third-party design and implementation to support greater innovation and energy efficiency. 2017 Energy efficiency program administrators file business plan applications, providing high-level sector-based programmatic information that describe how financial incentives, rebates, technical assistance and support will drive energy efficiency savings for 2018-2025. 2018 <u>D.18-05-041</u> approves program administrator business plans and annual energy efficiency funding through 2025. 2019 Per <u>D.16-08-019</u>, the investor-owned utilities continued work on their respective third-party solicitations with the goal of restructuring their portfolios in support of greater innovation and energy efficiency savings. 	 By the end of 2020, investor-owned utility program administrators had bid out approximately 40 percent of their respective energy efficiency portfolios third parties, in support of greater innovation and energy efficiency saving Launched a new Clean Energy Financin Proceeding (R.20-08-022) focused on leveraging a suite of existing and new financing mechanisms to promote the adoption of energy efficiency and clear energy technologies. 	
	Authorize market transformation programs, pay- for-performance programs, operational, behavioral, and retrocommissioning activities		Ø	 2017 Issued <u>Resolution E-4820</u> to implement Assembly Bill 793, which requires the investor-owned utilities to support the adoption of energy management technologies (such as smart thermostats) by launching pay-for-performance pilots and rebates for home area networks. 2018 Launched pilots for pay-for-performance approaches to energy savings, on-bill 	 Adopted updated rulebook for program and projects using Normalized Metered Energy Consumption (NMEC), including Pay-for-Performance NMEC requirements. 	

	Future/Planned
to	 By the end of 2022, 60 percent of investor-owned utility portfolios will be designed and implemented entirely by third parties.
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ns 1	 Conducted a solicitation for a statewide Market Transformation Administrator, expected to be under contract and launching activities in early 2022.
	 Starr will be working with program administrators and stakeholders to consider further updates to the Normalized Metered Energy Consumption Rulebook.

Sanata Bill 250 Goal	Achievements	Completed	CPUC Progress and Activities		
			2016-2019	2020	
			 finance, and unsecured finance pilots for customers who do not have home or business equity. Authorized use of existing condition baselines for behavioral and operational programs. Took steps to integrate energy efficiency with demand response programs to shift peak load and optimize savings. 2019 <u>D.19-12-021</u> adopts a market transformation framework and authorizes \$250 million over five years to develop a portfolio of market transformation programs. Issued ruling adopting initial rules for site-level normalized metered energy consumption (NMEC). Convened stakeholder working group to develop guidance on population-level Normalized Metered Energy Consumption rules. 		
Administer cost-effective energy efficiency programs Review and update policies governing energy efficiency programs to meet 2030 target			 2016 <u>D.16-08-019</u> provided initial guidance on how and by what date investor-owned utility program administrators will restructure their respective portfolios to primarily third-party design and implementation, in support of greater innovation and energy efficiency savings. 2017 <u>Resolution E-4818</u> completed the implementation of a new energy efficiency baseline policy. Directed the investor-owned utilities to have 60 percent of their energy efficiency programs implemented by third parties via competitive solicitations. Began shift toward statewide leads for energy efficiency programs, rather than separate utility implementers, with a goal 	 In response to the COVID-19 pandemic and also in response to continuing challenges to energy-efficiency portfolio cost-effectiveness, directed all energy efficiency program administrators (investor-owned and non-investor owned utilities), to file new energy efficiency business plans in 2022. 	

		Future/Planned
	•	Will launch additional programs, including from third-party implementers, using the Normalized Metered Energy Consumption / Pay-for-Performance model.
ic , ned	•	Program administrators will continue to oversee their respective portfolios and deliver innovative and cost-effective (investor-owned utility and CCA) energy efficiency savings in support of the State's broader climate goals.

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Senate Bill 350 Goal	Achievements	Completed	2016-2019	2020	
			of reduced costs, greater consistency,		
			and greater savings.		
			2018		
			• <u>D.18-05-041</u> directs program		
			administrators to transition their		
			respective portfolios to greater cost-		
			effectiveness during the "ramp years" of		
			2018-2022. All investor-owned utility and		
			CCA Program Administrator annual		
			portfolio forecasts (excluding those for		
			Regional Energy Networks) must be cost-		
			effective, meet energy savings goals, and		
			be within an authorized budget cap.		
			2019		
			• The program administrators (investor-		
			owned utility and CCA) continued to		
			transition their respective portfolios to		
			improve cost-effectiveness. Investor-		
			owned utilities were on track to bid out		
			25 percent and 40 percent of their		
			respective portfolios by the middle and		
			end of 2020, respectively, with 60		
			percent of the portfolios bid out by the		
			end of 2022.		
			• <u>D.19-08-009</u> revised and updated the		
			CPUC's "three-prong test" in support the		
			State's increased focused on the potential		
			for fuel substitution to address		
			greenhouse gas (GHG) emissions		
			reduction goals. The revised test: (1)		
			applies at the individual measure level;		
			(2) sets the baseline for a fuel		
			substitution measure as those typically		
			used for other energy efficiency		
			measures; and (3) no longer requires an		
			individual fuel substitution measure to be		
			cost-effective.		

 Future/Planned							

Sanata Bill 250 Goal	Achievements	Completed	CPUC Progress and Activities					
Senate Bin 550 Goai			2016-2019	2020	Future/Planned			
Solicit feedback on program portfolio design and encourage service providers to participate			 2015 D.15-10-028 directed Energy Division staff, the program administrators, and stakeholders to develop an energy efficiency stakeholder coordinating committee. 2016 The California Energy Efficiency Coordinating Committee (CAEECC) launched in January 2016. CAEECC serves as the stakeholder input forum for the development of program administrator energy efficiency business plans (filed with the CPUC in January 2017). Program administrator annual forecasts for 2017 were submitted for stakeholder review and comment. 2017 Program administrator annual forecasts for 2018 were submitted for stakeholder review and comment. 2018 Program administrator annual forecasts for 2019 were submitted for stakeholder review and comment. 2018 Program administrator annual forecasts for 2019 were submitted for stakeholder review and comment. 2019 Program administrator annual forecasts for 2020 were submitted for stakeholder review and comment. 2019 Program administrator annual forecasts for 2020 were submitted for stakeholder review and comment. Established Energy Efficiency Peer Review Groups to allow CPUC staff, stakeholders, and independent evaluators to provide timely and consistent feedback on and support for the investor-owned utilities' third-party solicitation process. Beyond business plans, the California Energy Efficiency Coordinating Committee (CAEECC) continues to be the forum for stakeholders to provide input for ongoing issues. 	 Program administrator annual forecasts for 2021 were submitted for stakeholder review and comment. The California Energy Efficiency Coordinating Committee (CAEECC) continues to be active in supporting development of EE stakeholder recommendations on topics including: EE portfolio reform proposals for requirements and filings and portfolio structure; equity and market support metrics; and market transformation. 	 Will continue to provide review and comment on program administrator annual forecasts. A bi-annual EE program administrator forecast will be submitted in November 2021 reflecting budgets and savings expected in 2022 and 2023. A new eight year plan will be submitted for review and comment by EE program administrators in February of 2022. These eight year "business plans" will offer high-level strategies and budget/savings forecasts for 2024 – 2031. Will continue to engage with CAEECC in instituting the portfolio reforms adopted in D.21-05-031. 			

Senate Bill 350 Goal	Achievements	Completed	d CPUC Progress and Act	
Senate Bill 350 Goul	Achievements	completed	2016-2019	2020
Reporting & Review				
Identify all achievable cost- effective electricity and natural gas efficiency savings and establish targets Electrical and natural gas corporations report progress every four years	2021 Energy Efficiency Potential and Goals Website.		 2015-2017 Issued ruling on High-Opportunity Programs and Projects to create pilot programs and move quickly to determine optimal innovative ways to achieve the greatest short-term energy savings. Encouraged increased use of randomized control trials, metered data, and other innovative methods to identify savings potential of new technologies. Published Updated Energy Efficiency Potential and Goals Study, adopted updated Goals for 2018 and beyond in D.17-09-025. 2019 Published Updated Energy Efficiency Potential and Goals Study, adopted updated Goals for 2020 and beyond in D.19-08-034. 	 Launched and completed the 2021 Energy Efficiency Potential and Goals development process. Goals adopted for 2022-3 using energy savings metrics, and for 2024-32 using Total System Benefit (\$). Released updated Energy Efficiency Programs Implementation Plan Template Guidance Version 2.1 in May 2020. Replaces the Implementation Plan template to reflect subsequent CPUC decisions and direction, including those related to energy efficiency third-party program requirements.
Comprehensively review feasibility, costs, barriers, and benefits of achieving a cumulative doubling of energy efficiency savings and demand reduction If needed, revise targets to the level that maximizes efficiency savings and demand reduction and update policies to remove barriers			 2016 CPUC carried out extensive evaluation, measurement, and verification studies to assess the results of the State's energy efficiency programs and budgets. D.16-06-007 adopts several updates to the Avoided Cost Calculator. 2017 D.17-08-022 adopted an interim greenhouse gas adder value to enable the CPUC to assess and adopt updated energy efficiency goals. Commenced a study of potential energy efficiency gains under various scenarios regarding cost-effectiveness. 	 A March 2020 ruling solicited feedback regarding policy changes the CPUC shou consider for energy efficiency goals starting in 2022. Released 2019 Results and 2020 Look Ahead report documenting 2019 total energy efficiency expenditures of \$639 million across residential, commercial, public, industrial, and agricultural portfolios. The 2021 Energy Efficiency Potential and Goals Study identifies all cost-effective achievable energy efficiency in investor- owned utility territories through 2032.

		Future/Planned
ce	•	Refine Total System Benefit metric for use starting in 2024 as required by recent decisions (and informational use starting in 2022). Total System Benefit incorporates the daily timing of savings as well as the persistence of the savings. Update Cost Effectiveness tool. Updates will allow for evaluation of fuel substitution measures, incorporate custom impact profiles for Normalized Meter Energy Consumption (NMEC) projects, and update the code to Python to correct errors, improve documentation, and make calculations more transparent to users. Adopt energy efficiency portfolio policy changes for how different types of energy efficiency programs are assessed (resource programs, market support, equity). Adopt new Total System Benefit goals metric to replace existing metrics (informational through 2023, required starting in 2024).
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Senate Bill 350 Goal	Achievements		2016-2019	2020	
			 <u>D.17-08-022</u> adopts energy efficiency goals for the investor-owned utility territories through 2030. 2019 <u>D.19-08-034</u> adopted updated energy efficiency goals for the investor-owned utility territories through 2030. 		
Report to the Legislature every four years on the progress toward achieving energy- efficiency targets	Legislative Report covering 2013-2016 delivered July 2019 available <u>here.</u>	M	 2018 Issued Legislative Report covering 2013- 2015 in May 2018. 2019 Issued Legislative Report covering 2013- 2016 in July 2019. 	 2021 Legislative report covering 2017-2019 submitted in 2021. 	
Consumer Protection					
With the California Energy Commission, establish consumer protection guidelines for energy efficiency products and services			 2019 The Environmental and Social Justice Action Plan includes the goal of enhancing enforcement to ensure safety and consumer protection for environmental and social justice communities including protections against fraud and unfair business practices. 	 Continue to support existing customer protections, in alignment with the Environmental and Social Justice Actior Plan, as they apply to current energy efficiency programs. Expand and apply these existing protections within the new Clean Energy Financing proceeding, (R.20-08-022) to ensure all customers, including low- to moderate-income customers as well as hard-to-reach and disadvantaged communities, can participate in energy efficiency and clean energy financing programs at no- to low-risk. Invited stakeholders and experts in consumer protection in financing to present in a large workshop as part of the new financing proceeding. 	

	Future/Planned
ı ŞY	 CPUC will support, if needed, any consumer protection related tasks outlined in the California Energy Commission's 2019 California Energy Efficiency Action Plan.
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Senate Bill 350 Goal	Achievements	Completed	2016-2019	2020	Future/Planned		
Goal Setting							
Increase the Renewables Portfolio Standard requirements for the quantity of renewable power to be purchased each compliance period	Increased the renewables portfolio standard (RPS).		 2016 Issued ruling seeking comments on implementing elements of Senate Bill 350 relating to California's Renewable Portfolio Standard. D.16-12-040 implemented new compliance periods and procurement quantity requirements for the California Renewables Portfolio Standard program. 2017 D.17-06-026 changed the renewables procurement quantity to 50% per Senate Bill 350. 2018 D.18-05-026 updated policies on program penalties and waivers for Renewables Portfolio Standard requirements. 2019 D.19-06-023 implemented new compliance periods and procurement quantity requirement quantity requirements for the California Renewables Portfolio Standard requirements. 	 CPUC reviewed annual compliance reports from load-serving entities. Issue letters to retail sellers at risk of not meeting their RPS procurement requirements for the current compliance period. 	 CPUC will continue to perform ongoing annual compliance review of reports from load-serving entities. Issue letters to retail sellers at risk of not meeting their RPS procurement requirements for the current compliance period. 		
Ensure long-term Renewables Portfolio Standard contracts (10+ years) account for 65 percent of procurement for each compliance period	Implemented 65 percent long-term contracting requirement	Ø	 <u>D.17-06-026</u> revised the compliance requirements for the California Renewables Portfolio Standard and set a target of 65 percent of procurement from long-term contracts. 	 Review Renewables Portfolio Standard Compliance Report filings to ensure retail sellers are on track to meet 65 percent long-term contracting requirements. Issue letters to retail sellers at risk of not meeting their long-term contracting requirements. 	 2021 through 2024 Review Renewables Portfolio Standard Compliance Report filings to ensure retail sellers are on track to meet 65 percent long-term contracting requirements. 		
Adopt a minimum margin of excess procurement to mitigate the risk that renewable projects planned or under contract are delayed or canceled		V	 <u>D.17-06-026</u> set excess procurement rules. 	 CPUC reviewed the minimum margin of excess procurement (MMOP) in annual Renewables Portfolio Standard Plans. 	 CPUC will continue to review the minimum margin of excess procurement (MMOP) in annual Renewables Portfolio Standard Plans. 		

C. Renewables Portfolio Standard (RPS)

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	Achievements	Completed	2016-2019	2020	Future/Planned			
Reporting								
Annual report from retail sellers detailing current procurement progress, the status of permits or applications, transmission upgrade progress, and recommendations to remove impediments			 2016 D.16-12-044 approves draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement or sales of Renewables Portfolio Standard generation. 2017 D.17-12-007 approves draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement or sales of Renewables Portfolio Standard generation. 2018 D.19-02-007 approves draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement or sales of Renewables Portfolio Standard generation. 2018 D.19-02-007 approves draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement or sales of Renewables Portfolio Standard generation. 2019 D.19-12-042 approves draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement Plans authorizing procurement Plans authorizing procurement and/or sales of Renewables Portfolio Standard generation. 	 2020 California Renewables Portfolio Standard Annual Report issued November 2020 in compliance with Senate Bill (SB) 1222 (Hertzberg, 2016). This report describes the progress of the State's electricity retail sellers in complying with the Renewables Portfolio Standard program. Demonstrated that most of the retail sellers procured at or above the 31 percent Renewables Portfolio Standard annual target for 2019. 	Annually each November 1: • Annual Renewables Portfolio Standard Procurement Plans, authorizing procurement and/or sales of Renewables Portfolio Standard generation, will be reviewed and approved.			
The commission shall direct each retail seller to prepare and submit an annual compliance report		Ø	 2016/2017 <u>D.16-12-040</u> and <u>D.17-06-026</u> implemented new compliance periods, procurement quantity requirements, and reporting for the California Renewables Portfolio Standard program. 	 Reviewed compliance reports for 2017- 2020 compliance period. 	 Annually submitted each August 1 Continue review of compliance reports for each subsequent compliance period. 			
Costs								
Adopt a process that provides criteria for the rank ordering and selection of least-cost and best-fit eligible renewable energy resources on a total cost and best-fit basis		Ø	 <u>D.14-11-042</u> adopted an interim renewable integration cost adder and revisited the renewable auction mechanism. 	 CPUC reviewed investor-owned utility studies for Effective Load Carrying Capability (ELCC) valuations in RPS procurement solicitations, including resources paired with energy storage. 	 CPUC will review investor-owned utility studies for Effective Load Carrying Capability (ELCC), including energy storage. 			

Senate Bill 250 Goal	Achievements	Completed	CPUC Progress and Activities	
		completed	2016-2019	2020
			 2019 <u>D.19-02-007</u> adopts time of delivery rules for least-cost best-fit methodology and contracts. <u>D.19-09-043</u> adopts modeling requirements for the Effective Load Carrying Capability (ELCC) values, which feed into an investor-owned utilities least-cost best-fit methodology. The values are used for the Renewables Portfolio Standard (RPS) program bid ranking and selection. 	
Ensure rates remain just and reasonable while meeting RPS goals			 2016 D.16-12-044 approves draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement and/or sales of Renewables Portfolio Standard generation. 2017 D.17-12-007 approves draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement and/or sales of RPS generation. 2018 D.19-02-007 approves draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement and/or sales of Renewables Portfolio Standard Procurement Plans authorizing procurement and/or sales of Renewables Portfolio Standard generation. 2019 D.19-12-042 approves draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement Plans authorizing procurement Plans authorizing procurement and/or sales of Renewables Portfolio Standard Procurement Plans authorizing procurement and/or sales of Renewables Portfolio Standard 	 2020 Padilla Report (Public Utilities Cod section 913.3) published May 2020: "Co and Cost Savings for the Renewables Portfolio Standard Program." This repor documents to the Legislature the aggregated costs and cost savings of renewable energy expenditures and contracts for the previous year.
Cost Expenditure Limit				

	Future/Planned
e ost rt	 Annual Renewables Portfolio Standard Procurement Plans: Approve draft annual Renewables Portfolio Standard Procurement Plans authorizing procurement and/or sales of Renewables Portfolio Standard generation. Approve 2020 Renewables Portfolio Standard procurement plans. The Padilla Report is an annual filing and has already been published in May 2021.
	 Coordinating with Integrated Resource Planning on the cost expenditure limit. Cost Expenditure Limit will be addressed in an upcoming IRP proceeding.

Sanata Bill 250 Caal	Achievemente	Completed	CPUC Progress and Activities					
Senate Bill 350 Goal	Achievements	completed	2016-2019	2020	Future/Planned			
Terms & Conditions								
Adopt rules permitting retail sellers to accumulate excess procurement in one compliance period to be applied to any subsequent compliance period or use renewable energy credits to fulfill compliance obligations		Ø	 <u>D.17-06-026</u> implemented Senate Bill 350's excess procurement rules. 					
Adopt standard terms and conditions for contracting eligible renewable energy resources, including performance requirements	Established standard terms and conditions for contracts.	Ø	 2004 & 2008 Standard terms and conditions established in 2004 and recompiled in 2008. These items did not need updating to meet the requirements of Senate Bill 350. 					

D. Transportation Electrification

Sonato Bill 250 Goal	Achievements	Completed	CPUC Progress and Activities				
Senate Bill 550 Goal		completed	2016-2019	2020	Future/Planned		
Investor-owned utilities develop programs and make investments to accelerate widespread transportation electrification	Transportation Electrification webpage. All six electric investor- owned utilities filed applications, which the CPUC approved, outlining their plans to achieve this goal. Transportation Electrification Framework Staff Proposal here.		 2016 Coordinated with California Air Resources Board and California Energy Commission Staff, held public workshops. Issued guidance on applications to IOUs. 2017 SDG&E, SCE, PG&E, Pacific Power, Liberty Utilities, and Bear Valley Electric Service Company each filed transportation electrification applications. CPUC hosted workshops and community meetings to receive stakeholder feedback, including feedback from disadvantaged communities. 2018 Developed the Senate Bill 350 Transportation Electrification webpage to communicate with stakeholders. CPUC approved Pacific Power, Bear Valley Electric Service, and Liberty Utilities to spend up to \$7.3 million on eight transportation electrification programs and create/test an electric vehicle rate. CPUC approved SDG&E, SCE, and PG&E transportation guthorization to spend up to \$738 million for medium/heavy duty, residential, and off-road infrastructure upgrades, public DC fast charging stations, and shuttle/taxi electrification. Utilities began implementing projects as they were approved, and the CPUC will oversee implementation and receive relevant data. 	 Energy Division staff released a draft Transportation Electrification Framework staff proposal. See staff proposal here. CPUC approved Southern California Edison to spend up to \$436 million for Charge Ready 2 to install Electric Vehicle charging infrastructure at workplaces, multi-unit dwellings, and disadvantaged communities, on top of funding for Direct Current Fast Charging (DCFC) New Construction rebates, and marketing, education, and outreach (ME&O). See <u>D.20-08-045</u>. CPUC approved elements of the Transportation Electrification Framework staff proposal regarding guidance for utility utilization of Low Carbon Fuel Standard program credits. See <u>D.20-12-027</u>. Complying with obligations established through Senate Bill 676 (Bradford, 2019),CPUC approved strategies and metrics to further the integration of electric vehicles as an electric grid resource, approved \$35 million for PG&E, SCE, and SDG&E vehicle-grid integration pilots, and \$2 million for PG&E, SCE, and SDG&E studies to further vehicle-grid integration. See <u>D.20-12-029</u>. Utilities begin implementation programs and pilots approved in 2019, with CPUC overseeing implementation programs and pilots approved in 2019, with CPUC 	 CPUC approved up to \$43.5 million for the Power Your Drive Extension to install light-duty charging infrastructure at workplaces, multi-unit dwellings, and underserved communities. SDG&E will also use shareholder funds to pay for an audit of the Power Your Drive Pilot cost overspend. See <u>D.21-04-014</u>. CPUC will review advice letter filings for PG&E's, SCE's, and SDG&E's vehicle-grid pilot proposals pursuant to <u>D.20-12-029</u>. CPUC will review PG&E's, SCE's, SDG&E's, Liberty Utilities', Bear Valley Electric Service Company's, and Pacific Power's advice letter filing proposals for low carbon fuel standard program funds pursuant to <u>D.20-12-027</u>. Energy Division staff will release at least one decision approving recommendations within the Transportation Electrification Framework staff proposal. Utilities will begin implementing programs and pilots approved by the CPUC in 2020 and early 2021. 		

Conota Dill 250 Cool	A shi susan sata	Completed		CPUC Progress and Activities
Senate Bill 350 Goal	Achievements	Completed	2016-2019	2020
			 Approved 15 priority pilot projects for PG&E, SCE, and SDG&E. 2019 Approved SDG&E transportation electrification applications to spend up to \$107 million for a medium/heavy duty charging infrastructure program and a vehicle-to-grid school bus pilot. CPUC approved PG&E transportation electrification application to spend up to \$4 million for electric vehicle charging infrastructure rebates for low/moderate income residential customers. CPUC authorized PG&E to implement a commercial electric vehicle subscription rate. CPUC authorized PG&E, SCE, SDG&E, and Liberty Utilities' transportation electrification applications to spend up to \$54.3 million for electric vehicle charging infrastructure at schools and parks (Assembly Bill 1082 and Assembly Bill 1083). Approved nine light duty transportation electrification infrastructure programs. Approved one medium/heavy duty transportation electrification infrastructure program. Approved one vehicle-to-grid pilot program. 	

Future/Planned

Sanata Bill 250 Caal	Achievemente	Completed	CPUC Progress and Activities		
Senate Bill 550 Goal	Achievements Completed		2016-2019	2020	
Review data concerning current and future electric transportation adoption and charging infrastructure	Developed data collection standards and templates for Senate Bill 350 projects.		 2016 Launched the Vehicle-to-Grid Integration Communications Protocols Working Group. 2018 Established utility data collection and reporting requirements for the investor- owned utilities' Senate Bill 350 transportation electrification programs. Approved over \$300,000 for evaluation of Pacific Power, Bear Valley Electric Service, and Liberty Utilities approved projects and \$29.5 million for evaluation of PG&E, SCE, and SDG&E projects. 2019 Hosted a workshop on current data collection and reporting efforts and potential strategies to improve the IOUs' transportation electrification program evaluation plans to ensure the ratepayer-funded investments are supporting the State's Senate Bill 350 goal. 	 Finalized Senate Bill 350 Transportation Electrification data collection template data collection of Senate Bill 350 transportation electrification programs. 	
Provide reasonable showing that investment in charging infrastructure would not result in stranded costs				 Proposed a process in the Transportation Electrification Framework staff proposation explore a test for stranded costs throug the development of a scorecard and metrics process. 	

		Future/Planned
on e for	 Rec rep Pro 	ceive and review final evaluation ort for Senate Bill 350 Priority Review ograms.
15.	• Rec Dri	ceive and review SDG&E's Power Your ve Pilot final report.
tion sal to ugh	 Cor me bas Tra sta 	ntinue to develop a final scorecard and trics process to test for stranded costs and on framework proposed in nsportation Electrification Framework ff proposal and party comments.

E. Disadvantaged Communities (DACs)

Sonato Pill 250 Coal	Achievements		CPUC Progress and Activities				
Senate Bin 350 Goar	Achievements	completed	2016-2019	2020	Future/Planned		
Account for the benefits of distributed generation to disadvantaged communities	Created three new programs to increase distributed energy generation in disadvantaged communities. Directed funding to energy storage projects in disadvantaged communities.		 2017 D.17-10-004 ordered that 25 percent of storage funding available through the Self-Generation Incentive Program (SGIP) fund be reserved for the Equity Budget. D.17-012-022 creates the SOMAH (Solar on Multifamily Affordable Housing) program as directed by Assembly Bill 693. D.18-06-027 created three programs to increase the availability and affordability of solar energy in disadvantaged communities (DACs): DAC-Green Tariff, Community Solar Green Tariff, and DAC-Single-Family Solar Homes (DAC-SASH). Resolution E-4999 approves PG&E's, SCE's, and SDG&E's DAC-Green Tariff and Community Solar Green Tariff programs. 	 <u>D.20-04-012</u> extended the SOMAH (Solar on Multifamily Affordable Housing) program through 2026. The CPUC issued <u>Resolution E-5102</u> that approved Clean Power Alliance's tariffs to Implement the Disadvantaged Communities Green Tariff and Community Solar Green Tariff Programs in SCE service territory. 	 DAC-Green Tariff and Community Solar Green Tariff programs will continue to launch in various CCA service territories. 		
Determine how technology programs can benefit disadvantaged communities			 2017 Hosted a workshop to discuss the Electric Program Investment Charge (EPIC) including benefits and investments in disadvantaged communities. 2019 In January 2019, CPUC and California Energy Commission staff provided an overview of the Electric Program Investment Charge Research and Development programs to the Disadvantaged Communities Advisory Group, which advises the two Commissions on clean energy policy. In August 2019, issued a resolution approving the California Energy Commission to continue implementing 	• The Electric Program Investment Charge (EPIC) program launched the Policy + Innovation Coordination Group (PICG) facilitating dialogue among researchers, administrators, regulators and stakeholders. Policy + Innovation Coordination Group (PICG) launched four workstreams – Wildfire Mitigation, Public Safety Power Shutoffs, Transportation Electrification and Equity. The equity workstream held three 90-minute meetings in October and December 2020 exploring how the voices of all communities can be incorporated into the establishment and execution of research priorities.	 The PICG held a forum in March 2021 presenting workstream highlights including from the Equity workstream. The Policy + Innovation Coordination Group (PICG) completed the tasks stated in the Scope of Work described in D.18-10-052, and no further tasks have been outlined. The CPUC and California Energy Commission will continue identifying ways to gather and incorporate feedback from disadvantaged communities when designing and implementing research and development projects to ensure projects benefit these communities. 		

Sonato Bill 250 Coal	Achievements		CPUC Progress and Activitie		
Senate Bill 350 Goal	Achievements	Completed	2016-2019	2020	
			the CPUC's Natural Gas Research & Development Program. It directed the California Energy Commission to enhance outreach and engagement with disadvantaged communities when developing future research & development investment plans.		
Establish an advisory group	Disadvantaged Community Advisory Group established, meets regularly. Disadvantaged Community Advisory Group website here.		 2017 CPUC and the California Energy Commission released a joint proposal for comment from stakeholders on the purpose, roles, and responsibilities of the Advisory Group. CPUC <u>Resolution E-4893</u> established the Disadvantaged Community Advisory Group and Charter. 2018 The Disadvantage Community Advisory Group released their first Annual Report. The Disadvantaged Community Advisory Group provided input to CPUC's Environmental and Social Justice Action Plan. The Disadvantaged Community Advisory Group developed an Equity Framework to guide their activities. 2019 Disadvantaged Community Advisory Group held 10 public meetings. Disadvantaged Community Advisory Group identified 11 priority topics for providing input to the CPUC. 	 Disadvantaged Community Advisory Gro Charter updated March 2020. Disadvantaged Community Advisory Gro identified 14 priority topics for providing input to the CPUC. 	

	Future/Planned
Group	 CPUC will continue to coordinate with the California Energy Commission to support the Disadvantaged Community Advisory Group including at monthly public meetings

Sanata Pill 250 Goal	Achiovomonto	Completed	CPUC Progress and Activities			
Senate Bill 350 Goal	Achievements	completed	2016-2019	2020	Future/Planned	
Develop California's clean energy and pollution reduction technology manufacturing and workforce capacity	CPUC has executed an memorandum of understanding with the California Workforce Development Board. CPUC and California Workforce Development Board staff work collaboratively to promote the creation of high-quality jobs from CPUC initiatives.		 2019 Adopted the Environmental and Social Justice (ESJ) Action Plan, which includes an action item to "Promote economic and workforce development opportunities in Environmental and Social Justice communities." Began development of a Memorandum of Understanding with the California Workforce Development Board. 	 Finalized a Memorandum of Understanding with the California Workforce Development Board. CWDB and CPUC staff leads hosted initial meetings with program staff in Transportation Electrification, Vegetation Management, and Energy Efficiency to provide education on "high road" career paths. CWDB and CPUC staff leads provided recommendations on workforce provisions within the following proceedings and initiatives: Self Generation Incentive Program (SGIP), CARE/ESA, and Transportation Electrification. 	CPUC staff will continue to collaborate with the California Workforce Development Board to provide specific recommendations for proceedings and programs to promote "high road" career opportunities for Environmental and Social Justice communities.	