

**Anaheim Public Utilities
Estimated Cost Impacts of Legislation Impacting Electric Operations**

Climate Change / Greenhouse Gas (GHG) Emissions Reduction		Estimated Cost of Implementation	Estimated Rate Impact	Penalties / Other Potential Cost Impacts	APU Legislative Representative Vote
	<p>2030 Cap & Trade Program / AB 398 (2017): Authorizes the Air Resources Board (CARB) to extend the Cap & Trade Program through 2030; however, the law will require Program changes (to be developed later by CARB) that may impact future compliance costs.</p> <p>2030 Greenhouse Gas Emissions Reductions / SB 32 & AB 197 (2016): Require CARB's regulations to reduce greenhouse gas (GHG) emissions from current requirement of 1990 levels by 2020 to 40% below 1990 levels by December 2030. These regulations must now consider "social costs" of GHG emissions, prioritize direct emissions reductions from stationary and mobile sources, among other things.</p> <p>APU will comply with CARB's Cap & Trade Program to help achieve the required 2030 GHG emissions reductions. However, AB 197 and/or AB 398 could result in additional Program measures or compliance costs that would impact APU and its customers.</p>	<p>Annual costs for compliance with the Cap & Trade Program from 2021 to 2030: \$7 to \$10 million (Assumes the Cap & Trade Program continues without major modifications).</p> <p>Potential additional costs/impacts will depend on new State regulations to be developed for AB 197 and AB 398.</p>	<p>2% to 2.8% increase for Cap & Trade Program compliance</p>	<p>For the Cap & Trade Program, a penalty of four times the GHG allowance shortfall per day of non-compliance.</p>	<p>AB 398 Assembly Yes: Daly No: Choi, Quirk-Silva</p> <p>Senate Yes: Newman No: Moorlach, Nguyen</p> <hr/> <p>SB 32 & AB 197 Assembly No: Kim, Wagner No vote: Daly</p> <p>Senate No: Huff, Moorlach, Nguyen</p>

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	<p>California Global Warming Solutions Act / AB 32 (2006): Establishes a statewide goal of reducing greenhouse gas emissions to 1990 levels by 2020 through various measures.</p>	<p>Annual cost of implementation for annual reporting and annual administrative fee to California Air Resources Board: \$500,000.</p> <p>Annual cost for Cap & Trade program through 2020: \$3 million to \$5 million.</p> <p>----</p> <p>(For related programs, see "RPS", "Energy Efficiency", "Sulfur Hexafluoride" for additional actions required under AB 32.</p>	<p>2% increase</p> <p>-----</p> <p>For estimated rate impacts of other related programs, see: "RPS"; "Energy Efficiency"; and "Sulfur Hexafluoride"</p>	<p>For the Cap & Trade Program, a penalty of four times the GHG allowance shortfall per day of non-compliance.</p>	<p>Assembly Yes: Umberg No: Daucher, Huff, Spitzer, Tran</p> <p>Senate Yes: Dunn No: Ackermann, Margett</p>
	<p>GHG Reductions - Waste Heat / AB 1613 (2007): Requires development of a program to allow any customer to utilize combined heat and power systems, and provides for the purchase of excess electricity that they may generate.</p>	<p>Annual costs for tracking and administration, may have additional financial implications depending upon program development and participation levels: \$100,000.</p>	<p>0.03% increase</p>	<p>Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)</p>	<p>Assembly Yes: Huff, Silva, Solorio, Spitzer, Tran No vote: Duvall Senate Yes: Ackermann, Correa, Margett</p>
	<p>Sulfur Hexafluoride (SF6) / AB 32 (2006): Requires reductions of emissions of a gas used in electric system equipment.</p>	<p>Monitoring and documentation of SF6 usage and annual reporting to California Air Resources Board beginning in 2012: \$100,000.</p>	<p>0.03% increase</p>	<p>Penalties of up to \$250,000/day of violation and/or imprisonment. Potential additional financial penalty equivalent to the amount of any economic gain.</p>	<p>Assembly Yes: Umberg No: Daucher, Huff, Spitzer, Tran Senate Yes: Ackermann, Correa, Margett</p>
	<p>Long-Term Contract Restrictions for Generation / SB 1368 (2006): Prohibits utilities from entering into contracts for longer than 5 years for generation unless emissions levels are substantially reduced.</p>	<p>Annual costs to monitor, verify compliance, and meet reporting requirements, as necessary: \$100,000. Costs do not include those related to the inability to extend participation in coal based generating resources.</p>	<p>0.03% increase</p>	<p>Financial penalties not specified. Energy Commission may investigate and enforce provisions for failure to meet target.</p>	<p>Assembly Yes: Umberg No: Daucher, Huff, Spitzer, Tran Senate Yes: Dunn No: Ackermann, Margett</p>

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Renewable Portfolio Standard (RPS) / Carbon-Free Energy	<p>100% Clean Energy Act / SB 100 (2018): Would establish a Renewable Portfolio Standard targets of 50% by 2026 and 60% RPS by 2030; and a State planning policy of <u>supplying 100%</u> of the State's energy consumption with renewable and carbon-free resources by 2045.</p> <p>Clean Energy and Pollution Reduction Act / SB 350 (2015): This law is intended to implement the Governor's Climate Change Goals for 2030. Among other things, this law will increase the Renewable Portfolio Standard to 50% by December 2030 for all electric utilities. [For additional SB 350 impacts, see "Energy Efficiency" and "IRP" sections]</p> <p>Renewable Portfolio Standard (RPS) / SB1X 2 (2011): This law requires that California utilities meet 33% of their customer's energy needs with renewable energy by the year 2020. The renewable energy requirements began in 2011 and require that specific increasing targets for the purchase of renewable energy be met by 2030. -</p>	<p>Annual average cost to achieve 50% RPS by 2026, and 60% RPS by 2030: \$25 million.</p> <p>Cost to achieve 100% renewables and carbon-free by 2045 is unknown, as it will depend on future State policies.</p>	<p>3% to 4% increase for 60% RPS by 2030</p>	<p>Financial penalties not specified; however, the current CPUC minimum penalty for non-compliance is \$50 per MWh. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)</p>	<p>SB 100 Assembly No: Choi, Daly, Quirk-Silva Senate No: Chang, Moorlach, Nguyen</p> <p>SB 350 Assembly Yes: Daly / No: Kim, Wagner Senate No: Huff, Moorlach, Nguyen</p> <p>SB1X 2 Assembly Yes: Solorio, Miller No: Hagman, Norby, Silva, Mansoor Senate No: Correa, Walters, Huff</p> <p>SB 107 Assembly Yes: Umberg / No: Daucher, Huff, Spitzer, Tran Senate Yes: Dunn / No: Ackermann, Margett</p> <p>SB 1078 Assembly Yes: Campbell, Correa, Maddox No: Daucher, Harman, Pacheco Senate Yes: Dunn / No: Ackermann, Margett</p>
	<p>Annual average cost to add additional renewable resources to meet a 50% RPS by 2030: \$51 million.</p>	<p>10% to 14% increase from 2021 to 2030</p>			
	<p>Annual average cost to procure renewable resources to meet a target of 33% RPS by 2020: \$50 million.</p>	<p>7% to 12% increase from 2013 through 2020 (12% to 17% overall increase from 2002 to 2020)</p>			

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Renewable Portfolio Standard (RPS) / Carbon-Free Energy	Bioenergy Procurement / SB 859 (2016): This law mandates that electric utilities collectively procure 125 MW of energy from bioenergy projects that use dead/dying trees as fuel stock, for a five-year period. Anaheim estimates that it must procure approximately 1 MW from bioenergy projects annually.	Cost of bioenergy generation for a five-year period: \$4.2 million (or approximately \$830,000 annually).	0.25% increase	Financial penalties not specified at this time. Potential for civil suit for non-compliance	Assembly No: Kim, Wagner No Vote: Daly Senate No: Huff, Moorlach, Nguyen
	Carbon Intensity / AB 1110 (2016): Requires reporting of greenhouse gas intensity of generation resource in the Power Content Label, starting in 2020. Power Content Label / SB 1305 (1997): Requires an annual report to customers and the California Energy Commission on the source and percentage of each type of generation resource that a utility uses.	Annual costs for the collection of data, development and submittal of an annual report to customers and the California Energy Commission: \$150,000.	0.05% increase	Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)	AB 1110 Assembly Yes: Daly No: Kim, Wagner Senate No: Huff, Moorlach, Nguyen SB 1305 Assembly Yes: Ackerman, Baugh, Campbell, Miller, Morrissey, Pringle Senate Yes: Hurtt, Lewis, Mountjoy

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Energy Efficiency Programs	Clean Energy and Pollution Reduction Act / SB 350 (2015): <i>This law is intended to implement the Governor’s Climate Change Goals for 2030. Among other things, this law directs the Energy Commission to establish annual targets to achieve a <u>doubling</u> of statewide energy efficiency (EE) savings in electricity and natural gas retail end uses by January 1, 2030. [For additional SB 350 impacts, see “RPS” and “IRP” sections]</i>	<i>Unknown at this time, statewide EE targets to be determined. However, annual average cost to effectively double APU’s EE program efforts will be at least \$8.8 million.</i>	1.5% to 2.5% increase	Financial penalties not specified. California Energy Commission is authorized to review program and targets, and provide recommendations for possible improvements.	Assembly Yes: Daly No: Kim, Wagner Senate No: Huff, Moorlach, Nguyen
	Energy Consumption Benchmarking / AB 802 (2015): <i>Directs the California Energy Commission to adopt regulations for the disclosure and benchmarking of energy use data for commercial, industrial, and large residential buildings. Beginning 2017, the law will require utilities to provide this information at the request of building owners and customers. This law replaced the AB 1103 Program.</i>	<i>Annual cost to maintain and provide energy use and benchmarking data: \$200,000 if applies also to buildings less than 10,000ft²; \$100,000 if applies only to buildings 10,000 ft² and above.</i>	0.03% to 0.06% increase	Civil penalties of at least \$500 but no more \$2,000 for each category of data not provided, and for each day the violation has existed.	Assembly Yes: Daly, Kim, Wagner Senate Yes: Moorlach No: Nguyen
	Energy Efficiency Programs / AB 758 (2009): Requires development of a comprehensive program to achieve greater energy savings in existing residential and nonresidential building stock. Energy Efficiency Programs / AB 2021 (2006): Requires annual targets to be set for energy efficiency saving and demand reductions for the 10-year period <u>between 2007 and 2016</u> . Requires annual reporting to customers and the California Energy Commission. Generating Resource Loading Order / SB 1037 (2005): Requires utilities to utilize cost-effective, feasible and reliable energy efficiency and demand reduction resources <u>before</u> procuring fossil fueled resources.	<i>Cost to accelerate energy efficiency / demand reduction by 1% a year, to reach the 10% goal required <u>over a 10-year time horizon</u>: \$60 million (2007-2016) or approximately \$5.2 million annually.</i>	1.6% increase	Financial penalties not specified. California Energy Commission is authorized to review program and targets, and provide recommendations for possible improvements.	AB 758 Assembly Yes: Solorio / No: Hagman, Miller, Silva, Tran Senate No: Huff, Walters AB 2021 Assembly Yes: Daucher, Tran, Umberg No: Huff, Spitzer Senate Yes: Ackermann, Margett SB 1037 Assembly Yes: Umberg / No: Daucher, Harman, Huff, Spitzer, Tran Senate Yes: Dunn / No: Ackermann, Margett

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Solar Energy / Net Metering / Feed-in Tariffs	<p>Net Metering Load Aggregation / SB 594 (2012): Allows renewable energy generators to aggregate the energy loads of facilities on adjacent properties, if utility determines that cost shifts to customers <u>would not result</u> by the generator avoiding payment of their share of transmission, distribution, reliability and other costs.</p>	<p>Annual revenue reductions: \$5 million, if certain generators were allowed to avoid costs.</p>	<p>0.5% to 1% increase, if certain generators were allowed to avoid costs.</p>	<p>Potential criminal penalties of up to \$50,000 per offense under the Public Utilities Act.</p>	<p>Assembly Yes: Norby No: Hagman, Miller, Mansoor Senate No: Correa, Walters</p>
	<p>Feed-in Tariff Avoided Costs / SB 1332 (2012): Requires utilities to take into <u>consideration</u> the avoided costs (transmission and distribution upgrades) and current and anticipated environmental / greenhouse gas compliance costs when developing its feed-in tariff rate. This has been implemented as part of the FIT Program (SB 32 below).</p> <p>Distributed Renewable Generation / SB 32 (2009): Requires utilities to purchase electricity from a retail customer's renewable facility up to 3 megawatts in capacity. This is known as the Feed-in Tariff (FIT) Program.</p>	<p>Annual costs for monitoring and administration: \$100,000.</p> <p>Additional costs related to the purchase of renewable energy included in SB 1078 cost estimates above.</p>	<p>0.03% to 0.3% increase</p>	<p>Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)</p>	<p>SB 1332 Senate Yes: Correa / No: Huff, Walters Assembly Yes: Solorio No: Hagman, Miller, Mansoor, Norby, Silva</p> <p>SB 32 Assembly Yes: Solorio / No: Hagman, Miller, Silva, Tran Senate Yes: Correa, Huff, Walters</p>
	<p>Increased Net Metering / AB 510 (2010): Requires utilities to increase amount of allowable net metering from solar and wind projects from 2.5% to 5% of a utility's aggregate peak demand. Net metering projects reduce utility sales to customers.</p>	<p>Annual cost associated with potential loss of sales revenue: \$2.5 million.</p>	<p>~1% increase</p>	<p>Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)</p>	<p>Assembly Yes: Silva, Solorio, Tran No: Hagman, Miller, Norby Senate Yes: Correa No: Walters No vote: Huff</p>
	<p>Solar Incentives & Net Metering / SB 1 (2006): Adoption of a Solar Incentive Program offering a minimum incentive of \$2.80 watt beginning in 01/01/08 and declining by 7% each year thereafter to offset the cost of solar generation projects.</p>	<p>Required to spend a total of \$35 million in incentives through the year 2016, equates to approximately \$3.8 million annually.</p>	<p>1% to 1.5% increase</p>	<p>Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)</p>	<p>Assembly Yes: Daucher, Tran, Umberg No: Huff, Spitzer Senate Yes: Dunn, Margett No: Ackerman</p>

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Reliability	Wildfire Mitigation Plans / SB 901 (2018): <i>Requires publicly owned utilities to annually prepare a plan on maintaining and operating their electrical facilities to minimize risk of catastrophic wildfires.</i>	<i>Cost to underground facilities in priority wildfire areas to further minimize wildfire risk is approx. \$3 to 4 million.</i>	~0.1% increase	Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)	Assembly Yes: Choi, Daly No: Quirk-Silva Senate Yes: Moorlach No: Chang, Nguyen
	Energy Storage Targets / AB 2514 (2010): <i>Requires publicly owned utilities to determine if energy storage resources are appropriate. Energy storage resources include certain technologies and/or applications. If these resources are determined to be appropriate, specific targets for their implementation must be set by 10/1/14 and achieved by 12/1/16.</i>	<i>Evaluate implementation of energy storage technology: \$100,000. Hearing on energy storage technology/targets: \$75,000. Report to Energy Commission: \$50,000.</i>	0.07% increase	Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)	Assembly No: Hagman, Miller, Norby, Silva, Tran No vote: Solorio Senate No: Correa, Huff, Walters
	Smart Grid Deployment / SB 17 (2009): <i>Requires utilities to develop Smart Grid Deployment plans.</i>	<i>Cost of development and maintenance of Smart Grid 5-year plan: \$5.9 million over a three year period.</i>	~1% increase	Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)	Assembly Yes: Hagman, Miller, Solorio, Silva, Tran Senate Yes: Correa, Huff, Walters
	Resource Adequacy / AB 380 (2005): <i>Requires utilities to meet minimum regional electricity planning reserve and reliability requirements by procuring a specified amount of generating capacity within the local area.</i>	<i>Annual costs for purchase of local generating capacity to meet requirements: \$11 million initially, decreased to \$3 million with the completion of the Canyon Power Plant, and further decreased to \$1.5 million annually with completion of the Brea Landfill project.</i>	3% increase	Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)	Assembly Yes: Daucher, Harman, Huff, Spitzer, Tran, Umberg Senate Yes: Dunn, Ackermann, Margett
	Reliability Requirements / Energy Policy Act of 2005: <i>Establishes federal mandatory electric reliability standards.</i>	<i>Development of the Department's Internal Compliance Program: \$350,000. Annual costs for implementation and bi-annual filings (January and July): \$150,000.</i>	0.05% increase	Civil penalties under the Energy Policy Act of 2005 of up to \$1 million per day per requirement.	House No: Sanchez, Royce, Miller Senate Yes: Boxer, Feinstein

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Electric Industry Restructuring	The Electric Utility Industry Restructuring Act / AB 1890 (1996): Establishes Public Benefit Fund (PBF) program for funding of public interest programs.	<i>Public Benefits Funds (PBF) include funds for renewable resources, low-income assistance, research and development and energy efficiency. PBF are equal to 2.85% of net operating revenue or approximately \$7.5 million annually. No PBF is allowed to support Renewable Portfolio Standard Activities (SB 1078 and SB 107) or Solar Incentives (SB1).</i>	2.85% increase	Financial penalties not specified. Potential for civil suit for non-compliance. (Potentially could result in cost to implement and any damages attributed to noncompliance.)	Assembly Yes: Ackerman, Baugh, Conroy, Miller, Morrissey, Pringle Senate Yes: Hurtt, Lewis, Mountjoy
	Prohibition of Market Manipulation / Energy Policy Act of 2005: Establishes prohibitions against electric energy market manipulation.	<i>Annual cost for training: \$75,000.</i>	0.02% increase	Civil penalties under the Energy Policy Act of 2005 of up to \$1 million per day per violation.	House No: Sanchez, Royce, Miller Senate Yes: Boxer, Feinstein
Market Participation	Financial Market Reform/Dodd-Frank Act of 2010: This law was passed in response to the financial crisis of 2010, it establishes reforms to the federal regulation of certain financial transactions. A previous concern shared by the whole electric utility industry is the regulation of utility-related transactions made to serve customers. The final regulations generally exempt these transactions but there are recordkeeping requirements needed in order to support the exemption of these transactions. Both publicly owned utilities and investor owned utilities worked to ensure that these regulations address the original concern related to the financial markets, and minimally impact electric utilities and their customers who played no part in the financial meltdown.	<i>Potential annual cost of reporting & recordkeeping: \$25,000 to \$100,000. Potential costs of additional requirements on electric transactions.</i>	0.5% to 4% increase	Penalties under the Commodities Exchange Act of up to \$1 million and/or imprisonment per violation.	House Yes: Sanchez No: Miller, Royce Senate Yes: Boxer, Feinstein

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Integrated Resource Plan (IRP)	<p><i>Clean Energy and Pollution Reduction Act / SB 350 (2015):</i> This law is intended to implement the Governor’s Climate Change Goals for 2030. However, this law also requires the governing board of a publicly-owned utility to adopt, before January 2019, an Integrated Resource Plan (IRP) that ensures the utility’s resource procurement is achieving targets for greenhouse gas reduction, renewable energy procurement, and other elements. The IRPs must also be updated every five years. [For additional impacts from SB 350, see “RPS” and “Energy Efficiency” sections]</p>	<p>Cost to prepare initial IRP: \$250,000</p> <p>Costs to update IRP every five years: \$50,000</p>	<p>0.07% increase</p>	<p>Financial penalties not specified. California Energy Commission authorized to review IRPs and provide recommendations to correct deficiencies.</p>	<p><i>Assembly</i> Yes: Daly No: Kim, Wagner</p> <p><i>Senate</i> No: Huff, Moorlach, Nguyen</p>

Total estimated rate impact over the next 10 years for those programs not already included in the rate base is between a 5% to 10% increase, provided that there are no significant changes in the assumptions.

Does not include estimates of costs of any pending legislation, or one time cost impacts.

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