#	Docket No./ Proceeding Name	Category	Relationship to EV OIR	Issues Under Consideration	Relevant Dates: Hearings and Projected Dates for Proposed Decisions
				Common IOU Proceedings	
1	<u>A.14-02-006</u> Energy Storage OIR	Proceeding	EV as Battery Storage	 In Feb 2014, the IOUs filed seperate applications for approval of their 2014 energy storage procurement plans A workshop was held on June 2 to discuss, amongst other topics, potential refinements to the definition of eligible energy storage systems The Commission has not made it clear which types of PEV programs can count towards the storage procurement targets. D.13-10-040 states that PEV programs "could count" but the Commission should be more explicit on what qualifies. For example, V2G programs appear to count, but it remains unclear whether any smart charging (i.e., V1G) programs qualify 	- Scoping ruling released at the end of May 2014 - PD expected at the end of August 2014
2	<u>R.12-06-013</u> Residential Rate Reform OIR - <u>Phase I</u>	Proceeding	EV Rate Design	 The scope of this phase of the OIR will include a number of issues, including: fixed charge vs. minimum bill; baseline reductions; reductions in the number of rate tiers and tier differentials; opt-in tariffs and experimental programs; customer outreach; and default TOU. EV customers living in single-family residences will be impacted by the outcomes to the extent that tiers and tier differentials are modified. 	 Public participation hearings will be held tentatively August - October in each utility's service area. Evidentiary hearings will be held on November 3-21 A draft decision targeted for March 2015 with rates implemented by summer 2015.
3	<u>R.11-03-012</u> Greenhouse Gas OIR, Track 2	Proceeding	GHG-Related Revenues	 On May 15 the CPUC adopted a decision that authorizes electric and gas utilities to sell LCFS credits subject to established criteria and reporting requirements A second decision is expected that will adopt policies for the return of LCFS revenue to the PEV customers that generated the credits Parties proposed various uses of the LCFS revenues, including for bill or rate credits, PEV equipment rebates, PEV dealer incentives, and marketing, outreach, and education expenses 	- Draft decision regarding LCFS revenue allocation proposals is expected in third quarter of 2014
4	AB327 Distribution Resources Plan	Compliance Activity	EV Grid Planning	The Issues under consideration have not been finalized by the CPUC yet. Issues from the legislation include the following -Identify optimal locations for distributed energy resources (which includes electric vehicles) -Evaluate locations benefits and costs -Propose or Identify standard tariffs, contracts, or other mechanisms for deployment of DR -Identify additional utility spending needed to integrate cost-effective distributed energy resources into distribution planning	- Each IOU shall submit a distribution resources plan by July 1, 2015
5	<u>R.09-08-009</u> Alternative-Fueled Vehicle OIR	Compliance Activity	EV Grid Planning	- D.13-06-014 extended the interim policy adopted in D. 11-07-029 to allow PEV charging costs in excess of the Electric Tariff Rules 15 and 16 allowances to be treated as common facility costs, referred to as Common Treatment for Excess plug-in electric vehicle Charging Costs, until June 30, 2016.	 - Reporting Requirements/Compliance Obligations: Annual load research compliance report required for two additional years
6	<u>R. 09-08-009</u> <u>Plug-in Electric Vehicle</u> Submetering Protocol Pilot	Compliance Activity	EV Grid Planning	- A two phase pilot to test the viability of 3 rd party owned submeters providing electric vehicle usage data to the utility to be bifurcated for other premise load for the purposes of billing the EV under a special rate. - The goals of the submetering pilots are to 1) evaluate customer demand under different submetering scenarios,2) evaluate billing integration and communication costs under different submetering scenarios,3) evaluate the customer experience to determine customer benefits, and 4) evaluate the potential impacts submetering can have on supporting the State's ZEV goals.	Current Estimated Completion Date: October 31,2016 (Latest possible date Phase 2 pilot could end). EV Submetering Protocol, currently due Feb 1, 2016. Reporting Requirements/Compliance Obligations: On 1/21/2014, the Utilities filed an Advice Letter seeking approval of the pilot requirements, forms, and budgets. A Commission Final Resolution addressingthe disposition of the AL has not yet been issued. Utilities have filed an extension request to comply with the April 1 and May 1, 2014 milestones in D.13-11- 002. The new dates are 15 and 45 days respectively after the Commission has approved the joint utility submetering AL. The Utilities are working to submitanother extension request to comply with the remaining milestones in D.13-11-002. Resolution approving Submetering Pilot expected June 26.

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#	Docket No./ Proceeding Name	Category	Relationship to EV OIR	Issues Under Consideration	Relevant Dates: Hearings and Projected Dates for Proposed Decisions
7	<u>R.11-10-003</u> EPIC [Electric Program Investment Plans) Rulemaking	Proceeding	EV Grid Planning	- Electric Program Investment Plans filed by the utilities and the California Energy Commission as directed in the Phase 2 Decison of the Public Goods Charge OIR These include research and development programs that relate to vehicle to grid activities - Annual reports are filed with the CPUC	- Proposed Decision for the 2015 - 2017 program: (Anticipated) November 2014
8	<u>A.11-06-029</u> <u>A.11-06-006</u> <u>A.11-07-001</u> <u>Smart Grid Deployment Plan</u>	Compliance Activity	EV Grid Planning	-Smart Grid Deployment Plans required by Senate Bill (SB) 17 enacted in 2009. The plans filed by the utilities share their vision for the Smart Grid and a broad plan for modernizing its electric grid infrastructure, including vehicle to grid activities, to deliver a host of energy and cost savings to customers.	- Final Decision (D.13-07-024) issued on August 2, 2013. The utilities are required to file annual Smart Grid reports by October 1 of each year.
9	<u>R.11-09-011</u> Distibution Interconnection <u>OIR</u>	Proceeding	EV Grid Planning	 - Rule 21 describes the interconnection, operating, and metering requirements for customers' generating facilities to be connected to a utility's grid over which the CPUC has jurisdiction. Interconnection issues related to VGI could be reviewed within Rule 21's existing review and study process. -Discuss the potential development of additional screens and form amendments that would address the unique characteristics of VGI -Leverage existing discussionswithin the Rule 21 Working Group regarding the integration of emerging technologies under the Rule 21 tariff framework 	- June 9th - All tariff revisions are due to Commission via Tier 2 AL to incorporate April Decision - July 18th - Tariff Revisions and Proposals due for Smart Inverter Functionality - July 18th - Commission expected to issue additional guidance on storage priorities and procedurally as to how these matters will be addressed
10	<u>R.13-09-011</u> Demand Response OIR	Proceeding	EV as Grid Resource	 Since PEVs (particularlyV1G technology) are controllable loads, there are DR programs that could allow PEVs to participate without significant changes. Additional DR programs can also be developed as part of the DR OIR and the IOUs' next DR funding applications, that leverage some of the unique aspects of VGI. 	- Hearings June 9 - June 13 - PD at the end of 2014
11	R.11-10-023 Resource Adequacy OIR	Proceeding	EV as Grid Resource	 RA proceeding will determine how storage and demand responsemay provide RA, which could help guide how electric vehicles could potentially count towards local, system and/or flexible RA capacity requirements. 	- ALJ's Proposed Decision: May 27, 2014 - CPUC Decision by July 1, 2014 - JRP OIR 14.02-001: PD on Multi-year RA Q1 2015 (estimated)
12	New Proceeding Pending Net Energy Metering Successor Tariff	Proceeding	EV Grid Planning	 Existing rates and tariffs assume that PEV is only charging, not discharging to the grid. Since NEM credits are only applied to energy generated from an eligible renewable facility, proper metering and crediting methodologies must be in place if a customer plans to both charge and discharge the PEV to the grid and export renewable generation under the provisions of NEM to the grid (since many PEV customers are also NEM customers). Consider how PEV discharging (with or without a stationary battery) combined with NEM can be accurately measured so that only the qualifying renewable energy receives the applicable NEM credit. 	- Proceeding to begin in the Summer of 2014 - NEM Successor Tariff rules established by December 31, 2015
13	<u>R.07-01-041</u> Demand Response OIR (Rule <u>24)</u>	Proceeding	EV as Grid Resource	- Rule 24 allows retail customers and Demand Response Providers (DRPs) under Rule 24 to bid their loads directly into the California Independent System Operator (CAISO) for purposes of demand response.	- Decision 12-11-025 issued December 4, 2012. IOU Cost Recovery Applications to implement Rule 24 filed in Jun 2, 2014.
14	<u>R.12-11-005</u> Distributed Generation OIR	Proceeding	EV Grid Planning	- This proceeding looked at Net Energy Metering (NEM) Interconnection eligibility for storage devices, such as batteries, paired with NEM generation facilitiesCPUC issued D.14-05-033 clarifying existing policy that storage devices that are 1) paired with NEM-eligible generation facilities, and 2) meet the Renewable Portfolio Standards (RPS) Guidebook requirements, to be considered an "addition or enhancement" to NEM-eligible systems are exempt from interconnection application fees, supplemental review fees, costs for distribution upgrades, and standby charges when interconnecting under the current NEM tariffs. This Decision places certain limitations on storage system sizing and implements metering requirements. In addition, the Commission shall require the electric utilities to gather data to determine the impact of interconnected storage on the distribution system.	- D.14-05-033 issued on May 23, 2014. The Commission will be issuing a separate ruling in this proceeding, describing the process for finalizing the presumed generation profile based estimation methodology for eligible Net Energy Metering (NEM) generators to be incorporated into a revised NEM tariff for NEM-eligible generating facilities with NEM paired storage devices sized at 10 kilowatts alternating current or less.

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#	Docket No./ Proceeding Name	Category	Relationship to EV OIR	Issues Under Consideration	Relevant Dates: Hearings and Projected Dates for Proposed Decisions			
	SDG&E Proceedings							
1	<u>A.14-01-027</u> <u>Rate Design Window</u>	Proceeding	EV Rate Design	- Scoping ruling issued on May 15 - SDC&E's proposed revisions to its TOU periods are included within the scope - Regarding compliance with EV rate determinations in D.11-07-029, SDG&E has been instructed to prepare a new exhibit explaining how it has complied with the decision, or how it proposes to comply. This new exhibit is due by June 16.	- Evidentiary hearings will be held January 6-8 - A final decision is targeted for second quarter 2015			
2	<u>R.11-10-003</u> EPIC (Electric Program Investment Plans) Rulemaking	Proceeding	EV Grid Planning	 SDG&E approved budget is \$2.6 million per year for programs that demonstrate smart grid system integration solutions (smart distibution circuit, grid support functions of DER, smart grid distribution control, smart grid architecture, and visualization and situational awareness). SDG&E did not include funding for submetering for electric vehicles in its EPIC investment plan. SDG&E is not required but encouraged to support the submeter pilot ordered in R.09-08-009 (in D.13-11-002) with EPIC funds. In January 2014 SDG&E filed a Petition for Modfication to add the submetering pilot to SDG&E's EPIC Investment Plan giving SDG&E the authority to execute the project. 	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled. - Decision on SDG&E PFM pending.			
3	<u>A.14-04-014</u> Vehicle-Grid Integration Pilot	Pilot	EV Rate Design/ EV as Grid Resource	 SDG&E filed an application with the CPUC seeking approval of a pilot program to implement a dynamic electric vehicle charging rate that is priced on an hourly basis, incorporating CAISO day-ahead hourly prices for commodity and a Critical Peak Pricing (CPP) component to reflect system capacity conditions. Rate will be implemented with enabling electric vehicle charging stations at workplace and multi-unit dwelling sites constructed to utility specifications, with the installation rollout progressively building up to a total of 550 sites after four years. Charging behavior will be assessed via a methodology developed by Energy and Environmental Economics (E3). The pilot program will also assess customer preference and opinion and lay out a roadmap for further steps to be taken in the vehicle-grid charging market based on the program's results. SDG&E is also seeking a two-way balancing account to recover program costs, which will be recovered from all ratepayers. 	- Awaiting prehearing conference date and scoping memo - Targeting proposed decision by November			
4	A.11-03-002, Demand Response Programs for 2012- 2014	Proceeding	EV as Grid Resource	- A variety of electric vehicle supply equipment (EVSE), communication and transaction processing technologies will be tested. The EVSE equipment will enable control of electric vehicle (EV) charging equipment and facilitate service pricing plan options: start/stop load control and rate-of -charge commands (240V and 120V). Observe user behavior in terms of charging equipment choices as influenced by relative ease-of-use and pricing plans that reflect the cost of each type of EV charging option.	 Approved by D.12-04-045 issued April 30, 2012. Semi-annual reports required on March 31 and September 20 of each year These report shall summarize the project, the potential benefits of the technology or technique, the activities undertaken as part of the project, and provide any available data and results. 			

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#	Docket No./ Proceeding Name	Category	Relationship to EV OIR	Issues Under Consideration	Relevant Dates: Hearings and Projected Dates for Proposed Decisions
				SCE Proceedings	
1	<u>A.13-12-015</u> SCE Rate Design Window	Proceeding	EV Rate Design	SCE requests approval to make the following changes to these rate schedules: - Schedule TOU-EV-1: (a) Add a new monthly meter charge and (b) change the summer season - Schedule TOU-D-TEV: Close this schedule and migrate customers to Schedule TOU-D. The new Schedule TOU-D will have an "Option A," designed for lower usage customers, and an "Option B" designed for higher usage customers.	- Evidentiary Hearings August 11-15, 2014 - ALJ Draft decision filed and served October 31, 2014 - Final decision December 4, 2014
2	Resolution E-4595 DoD Vehicle-to-Grid Pilot	Pilot	EV as Grid Resource	- The goal of this pilot is to facilitate a demand response (DR) pilot in which two retail customers - the Los Angeles Air Force Base (LAAFB) and the Naval Air Weapons Station at China Lake (China Lake) - may directly participate in the CAISO's wholesale markets. LAAFB and China Lake seek to provide energy, regulation, and other ancillary services to the CAISO market using batteries from PEVs on the two military bases.	Estimated Go-live Date: December 2014 Estimated Completion Date: December 2015 Reporting Requirements/Compliance Obligations: No later than 6 months after the Start of the Pilot, SCE must file a report on their findings related to the implementation of the V2G Pilot. No later than 9 months after the Start of the Pilot, SCE must file a tariff that allows the Customer to continue to access the CAISO markets as a Tier 2 Advice Letter and a report on the initial operations and costs to the customer related to Rates Provision 3. No later than 24 months after the Start of the Pilot SCE must file a report on their findings and results in collaboration with the DoD and its contractors, and the CAISO.
:	<u>D.12-04-045</u> <u>Workplace Charging Pilot</u>	Pilot	EV as Grid Resource	 The goal of the Workplace Charging Pilot is to better understanding demand response (DR) technologies, impacts of EV charging on the distribution system and building loads, and consumer behaviors related to EV charging using different charging options, pricing, and DR strategies in a workplace environment. Approximately \$1.2M was approved for SCE to deploy up to 183 PEV charging stations at SCE facility parking lots and execute a pilot to test, monitor and analyze the impacts of Plug-In Electric Vehicle (PEV) workplace charging on power systems, and evaluate consumer preferences with respect to DR and pricing. 	Estimated Completion Date: December 2015 Reporting requirements/Compliance Obligations: Reports to Spring and Fall DRMEC Meetings beginning in 2014 and continuing through the pilot duration.
4	D.12-04-045 Smart Charging Plug-In EV Pilot	Pilot	EV as Grid Resource	- The goal of this pilot is to better understand the related issues and impact of PEV charging with DR and test the related charging equipment, its ability to provide DR, as well as customer behavior. While testing and evaluating both EV Supply Equipment and PEVs in a controlled environment, SCE proposes to investigate the compatibility of the communication between smart meters and or utility Wide Area Networks or WANs. SCE anticipates deploying smart charging equipment at both controlled and non-controlled locations to determine the most appropriate technology needed for success. SCE will use the information garnered from this pilot to refine the Plug-In EV Smart Charging Program design as well as its related processes and systems. SCE argues that this pilot is different from other utility pilots on Plug-In EVs in that no other pilot involves residential, public and fleet charging scenarios.	Estimated Completion Date: December 2014 Reporting requirements/Compliance Obligations: Reports to Spring and Fall DRMEC Meetings beginning in 2014 and continuing through the pilot duration.

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#	Docket No./ Proceeding Name	Category	Relationship to EV OIR	Issues Under Consideration	Relevant Dates: Hearings and Projected Dates for Proposed Decisions			
	PG&E Proceedings							
1	A.12-11-003, EPIC 2012-2014 Program Vehicle-to-grid Operational Integration	Pilot	EV as Grid Resource	 Demonstrate whether electric vehicles can be used as a resource that could provide the capability to connect to the distribution grid to improve power quality, reduce the length of customer planned or unplanned outages, reduce feeder congestion, and manage costs associated with increased demand and reliability. A demonstration would include using PG&E's electric vehicle fleet to supply power to individual customers during distribution system repairs 	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled.			
2	A.12-11-003, EPIC 2012-2014 Program Direct Current Fast Charging Mapping	Pilot	EV Grid Planning	 Attempt to develop, pilot, and validate approaches that help determine the optimal location of direct current (DC) fast chargers based on traffic patterns and distribution grid infrastructure. 	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled.			
3	A.12-11-003, EPIC 2012-2014 Program DSM for T&D Cost Reduction	Pilot	EV as Grid Resource	 Assess how to best utilize DSM resources to create a "surgical" customer- and location-specific approach to assist with distribution capacity constraints. Acquire data and develop the tools, methodology and framework to target, value, acquire and make use of high impact customer load reductions at the distribution feeder level. 	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled.			
4	A.12-11-003, EPIC 2012-2014 Program Energy Storage for Market Operations	Pilot	EV as Grid Resource	- Develop strategies for optimized bidding and scheduling of Energy Storage Technologies (EST) in California ISO markets and demonstrate those strategies using PG&E's existing Sodium Sulfur Battery Energy Storage Systems (NaS BESS).	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled.			
5	A.12-11-003, EPIC 2012-2014 Program Energy Storage for Distribution Operations	Pilot	EV as Grid Resource	 Determine the situations on PG&E's distribution grid that Energy Storage Technologies (EST) are well-suited to solve and demonstrate ESTs performing those functions. 	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled.			
6	A.12-11-003, EPIC 2012-2014 Program Mobile and Stationary Energy Storage Synergies	Pilot	EV as Battery Storage	- The project aims to reduce existing barriers to deployment of battery energy storage systems by demonstrating whether post-electric vehicle (EV) second life batteries can cost-effectively perform electric distribution services. The project will attempt to demonstrate the potential for reduced energy storage system costs via: a) the development of an integration platform for deploying such batteries (Phase I); and b) the use of lower cost second life batteries in the integrated platform (Phase II).	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled.			
7	A.12-11-003, EPIC 2012-2014 Program Distribution System Safety and Reliability Through New Data Analytics Techniques	Pilot	EV Grid Planning	 Project objective has been redirected from original proposed objective. The broader defined "Distribution system safety and reliability through new data analytics techniques" has narrowed the objective to developing and testing a System Tool for Asset Risk (STAR). STAR plans to utilize data analytics advances in an attempt to improve grid safety and reliability. 	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled.			
8	A.12-11-003, EPIC 2012-2014 Program Grid Operations Situational Intelligence	Pilot	EV Grid Planning	- The objective of this pilot is to attempt to develop and pilot a real-time data visualization software platform for use by Electric Distribution Operations end users. If viable, data will be integrated from various data sources and displayed on Distribution Control Center video walls and individual desktop computers, with potential for future scalability to handheld devices.	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled.			

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#	Docket No./ Proceeding Name	Category	Relationship to EV OIR	Issues Under Consideration	Relevant Dates: Hearings and Projected Dates for Proposed Decisions
9	A.12-11-003, EPIC 2012-2014 Program EV Submetering	Pilot	EV Rate Design	 EV submetering pilot to test subtractive metering process and Electric Vehicle Service Providers (EVSP) business models. EV submetering pilot will entail EVSPs delivering submeter data to IOU for subtractionfrom customer's primary meter to create an EV and a house bill. Customer will be responsiblefor both bills. In Phase 2, EVSP will be responsiblefor bill. 	- Final Decision (D.13-11-025) issued on November 19, 2013. No hearings currently scheduled.
10	A.14-05-003, EPIC 2015-2017 Program Intelligent Universal Transformer (IUT)	Pilot	EV Grid Planning	- This project seeks to develop and demonstrate a solid-state transformer field prototype Medium Voltage Fast Charger (MVFC) system, as an application use case of solid-state transformers for DC fast charging of plug-in electric vehicles (PEV), featuring intelligent controls and multiple fast charging of PEVs.	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.
11	A.14-05-003, EPIC 2015-2017 Program Mobile Meter Applications	Pilot	EV as Grid Resource	 This project seeks to develop new mobile meter technologies that can be used to monitor plug-in electric vehicles (PEVs), mobile distributed generation, and mobile storage. 	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.
12	A.14-05-003, EPIC 2015-2017 <u>Program</u> <u>Evaluate Storage on the</u> <u>Distribution Grid</u>	Pilot	EV as Battery Storage	 This project seeks to identify and evaluate whether system needs can be cost-effectively addressed with energy storage, including identifying a range of storage deployment locations and grid interconnection requirements on a granular level. 	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.
13	A.14-05-003, EPIC 2015-2017 Program Pilot Distributed Energy Management Systems (DERMS)	Pilot	EV as Grid Resource	- Distributed energy resources can provide benefits to the grid if there is sufficient visibility and control of the resources. This project will seek to demonstrate a DERMS pilot system to coordinate the control of various types of distributed energy resources, which could include demand response, Distributed Generation (DG), Electric Vehicles (EV), energy storage, and microgrids.	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.
14	A.14-05-003, EPIC 2015-2017 Program DG Monitoring & Voltage Tracking	Pilot	EV Grid Planning	 This project aims to utilize the voltage measurement capabilities of smart meters to monitor DG output and evaluate voltage fluctuations on high DG penetrated feeders caused by the intermittent nature of distributed renewable resources. 	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.
15	A.14-05-003, EPIC 2015-2017 Program Inertia Response Emulation for DG Impact Improvement	Pilot	EV as Battery Storage	- Inertia traditionally refers to the stored rotating energy in an electrical system that is proportional to frequency and provided mostly by synchronous generators.	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.
16	A.14-05-003, EPIC 2015-2017 Program Enable Distributed Demand- Side Strategies & Technologies	Pilot	EV as Grid Resource	 This project will demonstrate various options to utilize distributed demand-side technologies and approaches to address local and flexible resource needs by testing through small scale deployment. 	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.
17	A.14-05-003, EPIC 2015-2017 Program Real-time Energy Usage Feedback to Customers	Pilot	EV as Grid Resource	- The project intends to evaluate innovative feedback technologies to provide near real-time energy usage information to customers and to drive greater customer performance during DR events.	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.
18	A.14-05-003, EPIC 2015-2017 Program Demand Reduction Through Targeted Data Analytics	Pilot	EV as Grid Resource	- This project will use load, interval and other sources of data to develop a new analytical tool which will identify strategic customers and target demand reduction in local areas by combining and integrating multiple DSM technologies (e.g., EE, DR, Distributed Energy Storage, Consumer-oriented Energy Tools).	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.

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#	Docket No./ Proceeding Name	Category	Relationship to EV OIR	Issues Under Consideration	Relevant Dates: Hearings and Projected Dates for Proposed Decisions
19	A.14-05-003, EPIC 2015-2017 Program Integrate Demand Side Approaches Into Utility Planning	Pilot	EV Grid Planning	- This project will develop a new analytical tool to help evaluate various DSM solutions, for integration into utility investment planning.	- Application filed in May 2014. Final decision expected at end of 2014 or beginning of 2015.
20	D.12-04-045 (2012-2014) D.14.05.021 (2015-2016) PG&E Demand Response Pilots	Pilot	EV as Grid Resource	- PG&E filed a DR-PEV pilot program, with the intent of holding solicitations with automakers to provide grid services from EV batteries inside and outside of the vehicle.	- DR-PEV RFP issued April 2014. The project completion date is currenly unknown. The only compliance requirement is an annual report.
21	<u>D.12-04-045 (2012-2014)</u> <u>D.14.05.021 (2015-2016)</u> <u>PG&E Demand Response</u> <u>Pilots</u>	Pilot	EV as Grid Resource	 PG&E filed a DR pilot program, Intermittent Resource Management Pilot 2 (IRM2), as part of the 2012 - 2014 DR Portfolio. The IRM2 is a pilot that is demonstrating how best to integrate retail DR resources into the CAISO wholesale energy market. -Department of Defense (DoD) expressed interest in joining IRM2 and asked to construct a joint proposal with PG&E and Lawrence Berkeley National Labratory (LBNL) requesting California Energy Commission funds to enable Moffett Field 63rd Army Reserve with electric vehicles (up to 15 vehicles w/charging stations) and building enablement to showcase vehicle+building integration to grid. The intent is to showcase how to best integrate electric vehicles and building resources into CAISO energy market in the most optimal and efficient way. 	- Awaiting fund from California Energy Commission (AB 118 program) to start installation - Expected Decision for funds: July 2014 - Participation by Moffett 63rd Army Reserve in IRM2 (CAISO energy markets) is expected to commence Q4 2014
22	<u>A.12-11-009</u> PG&E GRC Phase 1 - EV Service Planning	Proceeding	EV Grid Planning	-PG&E 2014 GRC Phase 1 includes three separate requests pertaining to EV charging : (1) Load Checks (MAT EVB) -\$1.9M forecasted in 2014 based upon EV sales projections and average cost to process a load check. (2) Infrastructure Upgrades associated with EV Load Checks (MAT 161 & 162) - \$8.0M forecasted in 2014 based upon EV sales projections, ratio of load check to infrastructure upgrades, and average upgrade costs. (3) Infrastructure Upgrades associated with EV voltage issues (MWC 06) - \$0.9M forecasted in 2014 where EV's are installed without a load check and the resultant installation causes voltage issues and infrastructure work.	- PD is expected shortly.
23	<u>A.12-11-009</u> P <u>G&E GRC Phase 1 - EV Fleet</u>	Proceeding	EV Grid Planning	- GRC Phase 1 includes a request of approximately \$7.8 million for 2014-2016 for EV infrastructure to install EV charges to support PG&E's existing and future fleet of electric work trucks. The infrastructure may include some workplace charging equipment. PG&E plans to replace plug-in vehicles as follows: EPACT (fed) targets light duty sedans & pickups <8500 gvw (826 plug in units); CARB municipal fleet & on road diesel rules target medium & heavy duty work trucks (198 medium duty & 139 hvy duty plug in trucks).	- PD is expected shortly.
24	<u>A.11-11-017</u> Smart Grid Pilot Deployment <u>Plan</u>	Pilot	EV Grid Planning	 Smart Grid Line Sensors – Pilot project to install line sensors to evaluate their impact on reducing outage response time and accuracy, and the ability to provide line loading information at the installed locations. Voltage and Reactive Power (Volt/VAR) Optimization – Pilot project to test voltage and reactive power (VAR) optimization algorithms and control systems on up to 12 distribution feeders to control different voltage and reactive power regulating devices on PG&E's distribution system. Detect and Locate Distribution Line Outages and Faulted Circuit Conditions – Pilot project to test decision analysis tools to more precisely locate outages and faulted circuit conditions caused by damaged equipment using input from a variety of sensors. Short-Term Demand Forecasting – Pilot to evaluate the benefits associated with using more granular sources of data to forecast PG&E's bundled customer demand for use in the California Independent System Operator (CAISO) markets. 	- Final Decision (D.13-03-032) issued March 27, 2013. Pilots currently being implemented, scheduled to be completed by end of 2016. Each pilot is required to file a Tier 2 Advice Letter within 14 days of completion of each phase to report on status of the completed phase and to provide a recommendation for proceeding to the next phase.

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