Application No.:	A.14-10-014
Exhibit No.:	SCE-02
Witnesses:	David Gunn Paul Hunt Edward Kjaer Jessica Lim Megan Mao

SOUTHERN CALIFORNIA EDISON®

An *EDISON INTERNATIONAL*® Company

(U 338-E)

SOUTHERN CALIFORNIA EDISON COMPANY'S CHARGE READY APPLICATION

REBUTTAL TESTIMONY

Before the

Public Utilities Commission of the State of California

Rosemead, California
June 5, 2015

Southern California Edison Company's Charge Ready Application Rebuttal Testimony

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I.

Introduction

Pursuant to the March 6, 2015 Joint Assigned Commissioner and Administrative Law Judge's Scoping Ruling ("Scoping Ruling"), SCE hereby submits its rebuttal testimony to the May 15, 2015 opening testimony of ChargePoint Inc. ("ChargePoint"), Environmental Defense Fund ("EDF"), the Green Power Institute ("GPI"), the Natural Resources Defense Council ("NRDC"), the Office of Ratepayer Advocates ("ORA"), and the Utility Reform Network ("TURN") on the Application of Southern California Edison Company ("SCE") for Approval of its Charge Ready and Market Education Programs ("Charge Ready Application").[1]

While parties' opening testimony recommends modifications on certain issues, as discussed in detail below, parties generally support SCE's Charge Ready Pilot.[2] With the exception of TURN, the parties that filed opening testimony agree that a pilot program should move forward expeditiously. Despite TURN's reservations, even it "generally supports SCE's phased approach" because it reduces risk to ratepayers.[3] Thus, SCE urges the Commission to move forward approving SCE's Charge Ready Pilot as soon as possible.

II.

The Commission Should Approve the Charging Station Rebate As Proposed by SCE

ORA and TURN recommend that the Commission reduce or eliminate the rebate proposed by SCE, even though ORA agrees that "the cost of EV charging stations may be a barrier to customers' interest in the Charge Ready program."[4] SCE urges the Commission to approve SCE's proposed rebate

1 A.14-10-014.

2 *See* Testimony of Max Baumhefner for NRDC, p. 16; Testimony of Colleen C. Quinn for ChargePoint, p. 6; Testimony of Anand Durvasula for TURN, p. 1; Testimony of Gregory Morris for GPI, p. 3; Testimony of James Fine for EDF, p. 32.

3 Testimony of Eric Borden for TURN, p. 1, lines 17-22.

4 Testimony of Rajan Mutialu for ORA, p. 3-2, lines 4-5.

structure, which would mitigate that barrier by providing a rebate to cover the base cost of EV charging stations.

The lack of charging infrastructure, except in single family residences, is due in part to cost and complexity barriers that the proposed Charge Ready Pilot and Phase 2 (collectively, "Program") aim to reduce. SCE proposed a turn-key approach to design an attractive program, in which the rebate plays an important part to reduce barriers to site hosts deploying charging facilities at their sites. Without a rebate, Customer Participants would have to pay a significant upfront cost out of their own pockets, which would likely limit participation in the Program and impact SCE's ability to improve the current lack of charging infrastructure.

Providing a rebate, however, does not absolve Customer Participants from all financial commitment. SCE agrees with both ORA and TURN that Customer Participants should have "some skin in the game." The Pilot, as proposed, will require financial participation from Customers Participants in a number of areas:

- The rebate is only expected to cover the base cost (i.e., the cost of critical functionalities and installation of the charging station, as determined by SCE through market research), so Customer Participants selecting additional functionalities or units more expensive than the base cost will have to pay for the difference.
- Customer Participants must pay all charging station operating costs, including energy, maintenance and repair, and, for Level 2 charging stations, subscription to an EV charging network for ten years.
- Customer Participants will be responsible for expanding their own EV charging installations if demand for EV charging at the site grows.

The Pilot strikes a reasonable balance between the competing objectives of addressing the cost and complexity barrier while requiring financial contribution by the Customer Participant. The Pilot offers a turn-key experience and maximizes choice for Customer Participants.

In addition, the Pilot was also designed to mitigate over-deployment and underutilization of charging stations as eligible customers must "[p]rovide evidence and/or appropriate validation that EVs

already exist at the location, as well as indications of near-term potential growth."[5] SCE will use a combination of site user surveys and registration data to determine a reasonable number of stations per site (with a maximum of 4% of parking spaces per site unless a Customer Participant can demonstrate greater anticipated demand for EV charging). TURN's statement that "the price of 'free' allows any site, regardless of interest level, to benefit from the ratepayer-subsidized program"[6] does not recognize key protections built into SCE's Pilot.

SCE urges the Commission to approve the rebate structure proposed by SCE, a critical and sensible feature to attract reasonable customer participation in the proposed Pilot.

III.

The Charging Station Rebate Should be Capitalized Consistent with the Treatment of Other Utility Regulatory Assets

A. Ratebasing the Charge Station Rebate Results in Equitable Ratemaking

Depreciation accounting is the process of systematically and rationally allocating the costs of an asset over its useful life. This treatment ensures that ratepayers who receive the benefits of an asset's service bear an equitable portion of its costs. In its testimony, TURN argues that rebate costs should be treated as expense, regardless of the 10-year service life of the asset.[7] TURN's proposal to expense the cost of the rebates would result in customers today being burdened by the cost of developing a market whose benefits will accrue to future customers. Treating charging station rebates as a regulatory asset and depreciating them over a 10-year life allocates their cost equitably to both current and future customers.

TURN questions the appropriateness of capitalizing the costs of the rebate under Generally Accepted Accounting Principles (GAAP). TURN asserts that SCE is obligated to follow GAAP rules

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5 SCE Opening Testimony, SCE-01, Vol. 02, p. 6, lines 6-7.
6 Testimony of Eric Borden for TURN, p. 19, lines 23-25.
7 Testimony of Garrick Jones for TURN, p. 2, lines 15-17.

requiring the expensing of such costs as incurred, citing SCE's concession to expensing similar costs.[8] As SCE explains in the following section, TURN's assertion is incorrect.

1. Regulatory Asset Treatment is Consistent with GAAP

TURN challenges SCE's application of Generally Accepted Accounting Principles (GAAP) related to capitalization of the rebate costs. TURN asserts that SCE is obligated to expense the costs as incurred, citing SCE's concession to expensing similar costs.[9]

TURN's representation of GAAP accounting is incomplete. The Financial Accounting Standards Board (FASB) recognizes that cost flows that may otherwise be expensed according to GAAP can become assets or liabilities as the result of a Commission decision. The FASB addresses this fact specifically:

> **Rate actions of a regulator can provide reasonable assurance of the existence of an asset**. An entity shall capitalize all or part of an incurred cost that would otherwise be charged to expense if both of the following criteria are met:
>
> a. It is probable (as defined in Topic 450) that future revenue in an amount at least equal to the capitalized cost will result from inclusion of that cost in allowable costs for rate-making purposes.
>
> b. Based on available evidence, the future revenue will be provided to permit recovery of the previously incurred cost rather than to provide for expected levels of similar future costs. If the revenue will be provided through an automatic rate-adjustment clause, this criterion requires that the regulator's intent clearly be to permit recovery of the previously incurred cost.[10]

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8 Testimony of Garrick Jones for TURN pp. 3-4.

9 *Ibid*.

10 Accounting Standards Codification (ASC), Section 980, "Regulated Operations," paragraph ASC 980-340-25-1 (emphasis added), *available at* ftp://law.resource.org/pub/us/code/bean/fasb.html/fasb.980.2011.html [as of June 5, 2015].

Should the Commission decide that the rebate cost be allocated to customers over the charging stations' useful life, ASC 980 requires the costs to be capitalized. TURN's argument to expense the cost of the rebate ignores the Commission's ability to approve the charging station rebates as regulatory assets.

2. Commission Precedent in Mobile Home Park Order Instituting Rulemaking (MHP OIR) Supports Regulatory Asset Treatment

TURN asserts that the Commission's decision in the MHP OIR is not precedential to the treatment of the rebate costs in SCE's proposed Charge Ready program for several reasons, including:

- The Commission was primarily addressing issues preventing agreement between park owners and utilities in the MHP OIR;[11]
- The MHP OIR dealt with ensuring delivery of basic electric service;[12] and
- The class of customers being served by the program is different.[13]

D.14-03-021, however, acknowledges the Commission's authority to allow cost recovery of "behind-the-meter" assets not owned by the utility, particularly when this furthers goals and objectives of the state of California. As identified in SCE's testimony,[14] the rebate is a crucial component of the turnkey system that will help reduce barriers to achieving California's ambitious goals of expanding the adoption of electric vehicles in order to meet the state's climate goals and air quality requirements.

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[11] Testimony of Garrick Jones for TURN, p. 5, lines 12-16.
[12] *Id.* at 6, lines 14-19.
[13] *Id.* at 8, lines 3-12.
[14] *See* SCE Opening Testimony, SCE-01, Vol. 03, p. 2, line 13 – p. 5, line 7.

B. The Commission Should Reject TURN's Confiscatory Proposal to Reduce the Authorized Rate of Return for the Charging Station Rebates

TURN proposes that the Commission should reduce SCE's authorized rate of return on the regulatory asset for charging rebates to only equal SCE's authorized cost of debt, in the case that SCE recovers the incentive over the ten-year life of the asset.[15] This proposal is confiscatory and the Commission should reject it.

TURN makes a fundamental error when it claims that SCE is not making an investment. SCE's investment is advancing money to third parties that will not be recovered through rates for as long as ten years after the money is advanced. From a cash flow perspective, this is not different than the situation where SCE spends money on a long-lived piece of equipment with a service life (for accounting purposes) of ten years.

TURN claims that this investment somehow has lower risk because the money is being advanced to third parties. TURN, however, does not support this argument with any concrete evidence, and SCE disagrees with the assertion. Even if TURN is correct that this investment has lower risk, it will not be financed by any special financial liability, but instead financed by SCE's capital structure of common equity, preferred equity, and long-term debt. The cost of capital authorized by the Commission is based on an evaluation of the average risk across all of SCE's assets: some specific assets will have higher-than-average risks associated with them and some will have lower-than-average risks associated with them. However, it would be unreasonable and unworkable to assign separate authorized costs of capital to different classes of SCE's assets. The Commission does not normally assign such separate costs of capital so there is no reason or justification why the Commission should do so here.

Indeed, SCE is required by the Commission's Holding Company Decision[16] to finance this investment with the Commission's authorized capital structure of common equity, preferred equity, and long-term debt. If TURN's proposal is adopted and only a debt return is allowed, SCE's common equity

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[15] Testimony of Garrick Jones for TURN, p. 9, lines 2-4.
[16] D.88-01-063, Ordering Paragraph 1, Condition 9.

shareholders will be financing this investment at a significant cost in their earned return because they will only be paid a debt return and will have to pay the excess of the cost of preferred equity over the debt return, because the preferred equity return will still have to be paid even though it is not fully recovered in rates.[17] The resulting earned return on common equity will be 5.44%, which is below SCE's authorized cost of debt. Requiring SCE's common equity shareholders to finance the Charge Ready rebate regulatory asset in this way is confiscatory and illegal. The Commission should reject TURN's proposal.

C. Rewards-Based Recovery is Out of Scope of the Proceeding

EDF proposes a rewards-based recovery mechanism in which SCE would recover its investment by measurably advancing state goals through the program.[18] SCE is properly incentivized using Commission-approved capital recovery standards. Changing established utility ratemaking standards is not within the scope of this proceeding.

IV.

The Charge Ready Pilot Will Provide Data to Evaluate SCE's Phase 2 Proposal

In its testimony, TURN critiques SCE's cost-effectiveness analysis of the Charge Ready Program.[19] However, there is no agreed-upon method for evaluating transportation electrification programs, which is why SCE used five different methodologies to evaluate the potential costs and benefits that of the Program. Each of these methods shows benefits from SCE's proposed Program. Further, the objective of the Pilot phase of the Charge Ready Program is to validate cost assumptions, document usage, and evaluate benefits to inform Phase 2 of SCE's Charge Ready Program. As GPI acknowledges, a cost-effectiveness evaluation is not required to approve SCE's proposed Pilot because

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[17] Financing the charge ready regulatory asset with only debt would not be a solution because the debt would have to be offset with additional preferred equity and common equity financing other SCE assets and SCE's authorized cost of capital would not be increased on those assets to recover the increased financing cost.

[18] Testimony of James Fine for EDF, p. 32, lines 3-12.

[19] Testimony of Eric Borden for TURN, p. 9, line 12 – p. 14, line 24.

the very nature of pilots is to collect information.[20] SCE welcomes future workshops in the Alternative-Fueled Vehicle OIR (R.13-11-007) to develop appropriate methods to evaluate the costs and benefits of utility transportation programs as more data become available.

V.

Availability of Charging Stations is an Important Factor in Increasing EV Adoption

TURN singles out one source cited by SCE – an Energy Policy article[21] – to reject the idea that availability of charging infrastructure stimulates demand for EVs.[22] However, TURN's testimony did not correctly describe the conclusions of the article or consider any other studies referenced by SCE's policy testimony.[23]

The Energy Policy study discussed by TURN acknowledges that financial incentives and charging infrastructure are not the only variables that impact adoption, but shows that a robust network of "charging infrastructure was the best predictor of a country's EV market share" and provides a

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[20] Testimony of Gregory Morris for GPI, p. 15, lines 20-24.

[21] *See* SCE Opening Testimony, SCE-01, Vol. 01, p. 15, fn. 22, citing William Sierzchula, et al., "The influence of financial incentives and other socioeconomic factors on electric vehicle adoption," *Energy Policy*, vol. 68, May 2014, pp. 183-194, abstract *available at* http://www.sciencedirect.com/science/article/pii/S0301421514000822 [as of June 5, 2015].

[22] Testimony of Eric Borden for TURN, p. 4, line 28 – p. 6, line 2.

[23] *See* SCE Opening Testimony, SCE-01, Vol. 01, p. 15, fn. 23 (citing ChargePoint, "The Ratepayer Benefits of Electric Vehicle Charging," *available at* http://www.chargepoint.com/pdf/ratepayer_benefits [as of June 5, 2015]); p. 20, fn. 34 (citing U.S. Department of Energy, "EV Everywhere Grand Challenge: Road to Success," January 2014, at p. 11, *available at* http://energy.gov/sites/prod/files/2014/02/f8/eveverywhere_road_to_success.pdf [as of June 5, 2015]: "Charging stations at the workplace can serve as a 'second showroom' in which employees can learn about PEVs informally from their colleagues"); *see also* additional text from fn. 34: "Automakers like Nissan are trying to capitalize on the connection between adoption and public charging infrastructure, premising that customers need to have reliable and convenient charging at two of three locations (home, work, public) to increase EV adoption (citing Brandon White for Nissan, presentation for Breakout Session A2: *Taking the "Work" Out of Workplace Charging*, Plug-in 2014, San Jose, CA, July 29, 2014; and "Best Practices for Workplace Charging: Employer EV Initiative, Supporting Solutions for Workplace Charging," CALSTART, September 2013, p. 2, *available at* http://www.calstart.org/Libraries/Publications/Best_Practices_for_Workplace_Charging.sflb.ashx [as of June 5, 2015]).

"tentative endorsement of financial incentives and charging infrastructure as a way to encourage EV adoption."[24]

Further, TURN's testimony does not acknowledge other studies, such as the ChargePoint study that shows a strong trend of increased charging station availability at workplaces resulting in increased adoption.[25] The ChargePoint study states: "as charging stations are added to workplace locations there is an immediate rise in EV adoption and charger utilization."[26] Additionally, published reports and conference presentations by the Department of Energy, large automakers, and adopters of workplace charging also support ChargePoint's data.[27] The combination of these data points supports the premise that the availability of accessible and convenient charging is an important factor in increasing EV adoption.

VI.

Consistent With the Current Regulatory Environment for EV Service Providers, the Charge Ready Pilot Does Not Require a New Rate Structure

EDF and GPI call for SCE to include a dynamic rate[28] or a vehicle-grid-integration ("VGI") rate[29] applicable to end-users of the charging stations deployed through the Pilot. SCE's proposal, however, already requires Customer Participants to take service under a time-of-use (TOU) rate plan. The rate design of these plans provides Customer Participants strong financial incentives to encourage off-peak EV charging and discourage on-peak EV charging by end-users. Additionally, all Customer

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[24] Sierzchula et al., p. 191: "We found that financial incentives, the number of charging stations (corrected for population), and the presence of a local EV manufacturing facility were positive and significant in predicting EV adoption rates for the countries in our study. Of those variables, charging infrastructure was the best predictor of a country's EV market share. However, descriptive analyses indicated how country-specific factors such as government procurement plans or the target recipient of subsidies could dramatically affect a nation's adoption rate. On the whole this analysis provides tentative endorsement of financial incentives and charging infrastructure as a way to encourage EV adoption."

[25] *See* ChargePoint, "The Ratepayer Benefits of Electric Vehicle Charging," *supra*.

[26] *Ibid.*

[27] *See* fn. 23, *supra*.

[28] *See* Testimony of James Fine for EDF, p. 3, lines 17-18, p. 7, lines 12-13, & p. 15, line 17 – p. 17, line 3.

[29] *See* Testimony of Gregory Morris for GPI, p. 16, line 24 – p. 17, line 27.

Participants with Level 2 charging stations must agree to participate in future demand response programs.

SCE's Charge Ready Program was designed in accordance with several guiding principles, including supporting the acceleration of a competitive EV charging market and maintaining customer choice. As a result, SCE proposed that Customer Participants own and operate the charging stations at their discretion, as any other customer would under current regulatory rules. Pursuant to D.10-07-044, neither the Commission nor the utilities' tariffs have the authority to mandate pricing charged by EV service providers to charging station end-users; SCE can only send price signals to its customers. In turn, those customers may provide charging services on commercial terms of their choosing. For the Charge Ready Program, SCE is proposing to send pricing signals consistent with the Commission's regulatory requirements.

Requiring Customer Participants to apply a defined rate to charging station end-users would deviate from guiding principles used to design the Program, including the market-neutral approach followed by SCE, and could jeopardize key features of the Program:

a. Many charging stations available in today's market may not have the functionality required for a dynamic rate (or even for a TOU rate) to be passed through to the EV end-user, which would limit the choice of stations available through the Program.
b. Requiring payment from end-users would likely increase upfront costs, whether borne by SCE or Customer Participants, as payment capabilities would be required for most charging stations. This may also require additional back-office capabilities that SCE did not include in estimating the costs of the Pilot.
c. Mandating how Customer Participants operate stations would impose a substantial restriction compared to other charging station owners that do not participate in the Program.
d. A new Charge Ready program-specific rate would require new rate-making efforts, which would delay significantly the launch of the Pilot.

If the Commission approves the EV charging programs proposed by PG&E, SDG&E, and SCE, each IOU will have the opportunity to evaluate a different approach to pricing charging station transactions. SCE agrees with NRDC's position that "only real world empirical data can settle the open question as to whether or not providing site-hosts with price signals and layering on demand response programs will prove sufficient to manage PEV load and to ensure that PEV drivers realize fuel cost savings relative to gasoline."[30] The proposed Charge Ready Pilot will generate critical data for each in-scope long dwell-time segment (workplaces, multi-unit dwellings, destination centers, fleets), as all charging stations deployed under the Pilot will be metered separately from the main facility. In addition, SCE plans to collect transactional-level data for all Level 2 charging stations, including fees paid by end-users, if any. SCE has proposed to report such data to the Commission and stakeholders. Accordingly, SCE urges the Commission to approve the Pilot as proposed.

VII.

SCE Will Report on a Comprehensive Set of Metrics

Both ORA and TURN have proposed metrics to evaluate the Pilot, including quantitative metrics, such as kilowatt hours (kWh) per charging station, qualitative metrics (requiring surveying Customer Participants or end-users), such as customer interest, and a report on best practices and lessons learned.

In general, SCE agrees with most of these recommendations and believes they are consistent with the reporting proposed in its testimony. SCE also agrees with TURN's proposal to conduct a public workshop to evaluate potential data collection and analysis, as long as the workshop does not delay the review of the proposed Pilot. SCE has designed the Pilot to evaluate the current proposed design for the Charge Ready Program and these metrics[31] should inform execution of Phase 2 of the

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[30] Testimony of Max Baumhefner for NRDC, p. 16, lines 3-6.

[31] Consistent with its market-neutral approach, SCE plans to require transactional-level data from Level 2 charging stations, only. In observing the current supply of Level 1 stations, SCE has noted that most models did not have any network-capability (required to report transactions).

Program, namely how to deploy charging stations in long-dwell time locations. As stated in SCE's testimony, "the objective of the Phase 1 Pilot is to inform and refine the design and cost estimates and to develop success measures for Phase 2 of the Charge Ready program."[32]

In light of the foregoing, SCE objects to using any EV adoption metric to evaluate the Pilot. While the availability of infrastructure is considered a critical adoption driver by many experts, including the National Research Council,[33] many other adoption drivers, including upfront and operating costs, available vehicles and their features, and customer awareness of EV benefits, play a part in EV adoption. As appropriately stated by TURN, "market uncertainties include many variables that cannot be addressed by charging infrastructure. These range from consumer preferences, including the relative cost-effectiveness of EVs, to broader economic trends."[34]

Unfortunately, TURN did not apply this analysis in the rest of its testimony and emphasized instead the importance of measuring EV adoption to evaluate this Program. TURN's statement that "utility charging infrastructure programs are entirely built around the claim that they help spur EV adoption"[35] mischaracterizes SCE's Charge Ready Program. Any attempt to demonstrate a direct correlation between the Program and EV adoption would be flawed from the outset, even more so with the limited scale of the proposed Pilot.

VIII.

SCE Must Manage Targeted and Local Marketing, Education, & Outreach (ME&O)

GPI recommends that a third party complete most or at least a large fraction of SCE's proposed ME&O efforts related to the program.[36] While SCE believes its ME&O should be consistent and

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32 SCE Opening Testimony, SCE-01, Vol. 02, p. 3, lines 12-13.

33 For the National Research Council, developing charging infrastructure in MUDs and at workplaces will be critical to "encourage PEV adoption and increase the fraction of miles that are fueled by electricity." *See* National Research Council of the National Academies of Sciences, *Overcoming Barriers to Deployment of Plug-in Electric Vehicles*, the National Academies Press, 2015, p. 119, available at http://www.nap.edu/openbook.php?record_id=21725&page=R1 [as of June 5, 2015].

34 Testimony of Eric Borden for TURN, p. 8, lines 4-6.

35 Testimony of Eric Borden for TURN, p. 18, lines 26-27.

36 *See* Testimony of Gregory Morris for GPI, p. 11, line 5 – p. 15, line 5.

coordinated with other similar IOU efforts to drive overall statewide EV adoption, any targeted or local ME&O for both SCE's proposed market education efforts and TE Advisory Services should be done by SCE. In-house customer data and historical knowledge of its own marketing landscape allows it to best optimize, modify, and unify its mix of broad and targeted channels, thus ensuring both SCE customer awareness and program cost-effectiveness.

IX.

The Commission Should Approve SCE's Charge Ready Pilot and Evaluate Phase 2 as Proposed in SCE's Charge Ready Application

The Commission should issue a proposed decision on the Charge Ready Pilot pursuant to the schedule established in the Scoping Ruling,[37] and begin evaluation of Phase 2 of SCE's Charge Ready Application by scheduling a prehearing conference to discuss the scope and schedule for Phase 2. SCE's application proposes a regulatory process that would allow the Charge Ready Program, consisting of the Pilot and Phase 2, to continue uninterrupted unless the Commission decides that the Program is not successful. Several parties recommend that the Commission either extend SCE's Pilot or delay evaluating Phase 2 until after the Pilot has been completed and assessed.[38] One of the key objectives of the Pilot is to inform and refine the design and cost estimates and develop success measures for Phase 2. SCE has proposed to provide quarterly reports, with a more detailed nine-month report, to inform the interested stakeholders of the Pilot's progress and lessons learned.[39] SCE's proposed process will allow stakeholders to learn from the Pilot and evaluate Phase 2 while avoiding the negative effects of a gap between the Pilot and Phase 2.

A gap between the Pilot and Phase 2 would likely cause customer confusion. For example, SCE would need to explain to interested customers that the Pilot has ended, but it may or may not be

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[37] Scoping Ruling, p. 7.

[38] *See* Testimony of Rajan Mutialu for ORA, p. 2-1; Testimony of Eric Borden for TURN, p. 3, lines 3-7; Testimony of Gregory Morris for GPI, p. 10, line 7 – p. 11, line 3.

[39] SCE Opening Testimony, SCE-01, Vol. 02, p. 19, line 23 – p. 20, line 3.

continued, in a similar or different manner, for four additional years, pending a Commission decision. This could contribute to a poor customer experience and negatively impact the Program. Further, a gap between the Pilot and Phase 2 would likely increase overall Program costs because SCE could have to ramp down during the gap, and then ramp back up after Phase 2 approval. It would not be efficient to hire and train the necessary staff to support the Pilot, then idle or lay off that staff while the Commission and stakeholders evaluate the results from the Pilot and litigate Phase 2.

Finally, a gap between the Pilot and Phase 2 would likely have a chilling impact on the EV charging market. In that case, Customers would not know if they can rely on continuation of the Program or if they should procure EV charging outside of the Program.

To the extent that SCE, in consultation with Commission staff and stakeholders, believes that the Phase 2 record would be better informed by additional data after nine months, SCE proposes to inform the Commission of this recommendation in its nine-month report. SCE proposes to file an advice letter requesting approval and funding to extend the Pilot for a specific period of time to gather additional data and allow the Commission and stakeholders sufficient time to evaluate the Pilot data and issue a decision on Phase 2. This process would enable a seamless transition between the Pilot and Phase 2, while addressing stakeholders' concerns that the Pilot may not be long enough to generate sufficient data or allow sufficient time to evaluate that data.

Appendix A

Witness Qualifications

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF EDWARD T. KJAER

Q. Please state your name and business address for the record.

A. My name is Edward Kjaer, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Director of the Transportation Electrification Division within Energy and Environmental Policy section of SCE's Regulatory Affairs operating unit. I am responsible for the division's efforts to perform cross-functional planning and coordination of Transportation Electrification activities for SCE (including light/medium/heavy duty PEVs, SCE's fleet electrification, electrified ports, forklifts, transit and other goods movement).

Q. Briefly describe your educational and professional background.

A. I attended Massey University in New Zealand, where my studies focused in the areas of marketing and business economics. Between 1980 and 1985, I held a number of advertising positions in New Zealand culminating in the position of Account Director in charge of the Nissan and Sanyo advertising accounts. After emigrating to the U.S. in 1985, I worked on the launch of the Acura Division (1985-1988) for American Honda's Advertising Agency, rising to the position of Vice President. From 1988 through 1995, I worked for Mazda Motor of America, rising to the position of Corporate Marketing Manager. Beginning in 1996 and to the present, I have held several positions in the Edison family of companies including: Director of Sales and Marketing, Edison EV; Director, Automotive Division, Edison EV; and at Southern California Edison- Director of ET Division; Director PEV Readiness and finally today, I am the Director of the Transportation Electrification Division.

Q. What is the purpose of your testimony in this proceeding?

A. In addition to sponsoring portions of Volumes 1, 2, & 3 of SCE's opening testimony, entitled *Prepared Testimony in Support of SCE's Charge Ready Application*, preliminarily identified as

Exhibit SCE-01, the purpose of my testimony in this proceeding is to sponsor the portions of *SCE's Charge Ready Application Rebuttal Testimony*, preliminarily identified as Exhibit SCE-02, as identified in the Tables of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF DAVID C. GUNN

Q. Please state your name and business address for the record.

A. My name is David C. Gunn, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am currently a Financial Analyst in SCE's Capital Asset Analytics Department. As such, I am responsible modeling for forecast rate base and depreciation expense, depreciation studies, and providing support for testimony and workpapers in SCE's filings with the CPUC and FERC

Q. Briefly describe your educational and professional background.

A. I have a Bachelor's of Science degree in Business Administration, with an emphasis in Accounting from California State University, Los Angeles. In addition, I am a 2015 Level II CFA Candidate and have passed the exam for qualification as a Certified Depreciation Professional from the Society of Depreciation Professionals. Prior to my current role I worked in the Plant Accounting organization and my primary responsibility was designing metrics and modeling tools supporting SCE's goals of timely and accurate work order accounting. I started in my current position as a Financial Analyst at SCE in September of 2012. I have not previously testified before the California Public Utilities Commission

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of *SCE's Charge Ready Application Rebuttal Testimony*, preliminarily identified as Exhibit SCE-02, as identified in the Tables of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF PAUL T. HUNT, JR.

Q. Please state your name and business address for the record.

A. My name is Paul T. Hunt, Jr., and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am the Director of Regulatory Finance, Economics, and Risk Operations, supervising the Regulatory Finance Division of the Treasurer's Department. My present responsibility is to apply economic, financial, and statistical analysis to regulatory issues and for internal corporate purposes.

Q. Briefly describe your educational and professional background.

A. I received a Bachelor of Arts degree in Economics from Pomona College in 1975, a Master of Arts degree in Economics from Stanford University in 1976, and a Doctor of Philosophy degree from Stanford University in 1981. I joined the Southern California Edison Company as an Associate Economist in the Treasurer's Department in July 1980. I was promoted to Economist in 1982 and Senior Economist in 1984. In 1989, I transferred to the Regulatory Policy and Affairs Department as a Regulatory Economics Consultant. I returned to the Treasurer's Department in 1996 as a Senior Economist. In 1997, I was promoted to Project Manager. In 2000, I was promoted to Manager of Regulatory Finance and Economics. I was promoted to my present position in 2010.

I have previously testified before the California Public Utilities Commission and the Federal Energy Regulatory Commission

In late 2009, I was invited to write, with a co-author, a book chapter on cost of capital in regulated industries. The book chapter is titled "Cost of Capital in Regulated Industries," and it appears in *Cost of Capital in Litigation: Applications and Examples*, published by John Wiley & Sons, Inc., in November 2010. (ISBN: 978-0-470-88094-4.) A revised version of that book chapter appears in *The Lawyer's Guide to Cost of Capital: Understanding Risk and Return for Valuing Businesses and Other Investments*, published by ABA (American Bar Association) Publishing in July 2014. (ISBN: 978-1-62722-723-0.)

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of *SCE's Charge Ready Application Rebuttal Testimony*, preliminarily identified as Exhibit SCE-02, as identified in the Tables of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF MEGAN MAO

Q. Please state your name and business address for the record.

A. My name is Megan Mao and my business address is 1515 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am the Principal Manager of Electric Vehicle Program Management Office in SCE's Customer Programs & Services group (CP&S). My responsibility includes establishing operations such as process/systems development, vendor readiness, and identifying/exploring potential customer concerns to ensure we can deliver a simple, low-effort experience to customers of EV charging program.

Q. Briefly describe your educational and professional background.

A. I hold a Bachelor of Arts degree in Economics from Yale University and a Master of Business Administration degree from the University of California – Los Angeles Anderson School of Business. I first joined SCE in 2003, and prior to joining the CP&S group, I held various roles within SCE in Regulatory Affairs, Power Procurement, and Transmission and Distribution.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor the portions of *SCE's Charge Ready Application Rebuttal Testimony*, preliminarily identified as Exhibit SCE-02, as identified in the Tables of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY

QUALIFICATIONS AND PREPARED TESTIMONY

OF JESSICA LIM

Q. Please state your name and business address for the record.

A. My name is name is Jessica Lim, and my business address is 1515 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am the Manager of Offer Management and Marketing in the Customer Programs and Services division of SCE's Customer Service operating unit. In this role, I am responsible for SCE's marketing and communications associated with Customer Service programs, rates and services.

Q. Briefly describe your educational and professional background.

A. I received my Masters of Science in Leadership and Management, with a concentration in Organizational Development, from the University of La Verne in 2013, and my Bachelor's degree in Administrative Studies, with an emphasis in business administration and marketing, from U.C. Riverside in 1992. I have worked at SCE for approximately nine years in Customer Service. Prior to my current function which I described above, I was the Manager of Planning, Performance, and Integration in the Customer Service Operating Division for approximately two years. Prior to that position, I was the Manager of Customer Strategy in Customer Experience and Management for approximately five years. Prior to SCE, I have over 10 years of experience in business working in disciplines such as advertising, marketing, and e-commerce for a variety of profit and not for profit organizations and clients.

Q. What is the purpose of your testimony in this proceeding?

A. In addition to sponsoring portions of Volumes 1, 2, & 4 of SCE's opening testimony, entitled *Prepared Testimony in Support of SCE's Charge Ready Application*, preliminarily identified as Exhibit SCE-01, the purpose of my testimony in this proceeding is to sponsor the portions of *SCE's Charge Ready Application Rebuttal Testimony*, preliminarily identified as Exhibit SCE-02, as identified in the Tables of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Does this conclude your qualifications and prepared testimony?

A. Yes, it does.