

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

Item No: 5 (Rev .1)
Agenda ID: 19766
RESOLUTION E-5167
October 7, 2021

R E S O L U T I O N

Resolution E-5167 Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric request approval to establish new Electric Vehicle (EV) Infrastructure Rules and associated Memorandum Accounts, pursuant to Assembly Bill 841.

PROPOSED OUTCOME:

- This Resolution finds that the proposals from Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) to establish new EV Infrastructure Rules and associated Memorandum Accounts are reasonable with modifications and are in compliance with Assembly Bill 841.

SAFETY CONSIDERATIONS:

- There is no direct impact on safety. The safety considerations associated with this Resolution are similar to the safety considerations associated with existing utility responsibilities associated with building new service and electrical distribution infrastructure. The utilities must continue to comply with existing utility and CPUC policy on safety requirements and standards, as well as the Transportation Electrification Safety Requirements checklist adopted in 2018 via Decision (D.)18-05-040.

ESTIMATED COST:

- The new Rules this Resolution establishes are expected to lead to increased ratepayer costs over time, as they will cover the utility-side costs associated with new EV charging. We are unable to estimate the total cost impact, since it is difficult to estimate the rate of EV charger deployment and the number of customers that will take service under the EV Infrastructure Rules.

By Advice Letter 6102-E filed on February 26, 2021, and 6102-E-A filed on March 17, 2021, Advice Letter 4429-E filed on February 26, 2021, and Advice Letter 3705-E filed on February 26, 2021.

SUMMARY

This Resolution approves, with modifications, the requests from Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) to establish new Electric Vehicle (EV) Infrastructure Rules and associated Memorandum Accounts, pursuant to Assembly Bill (AB) 841 (Ting, 2020).

On February 26, 2021, SCE filed Advice Letter (AL) 4429-E, SDG&E filed AL 3705-E, and PG&E filed AL 6102-E that was later replaced by AL 6102-E-A filed on March 17, 2021. The ALs request the establishment of new Rules—Electric Rule 45 for SDG&E and Electric Rules 29 for SCE and PG&E—known as the EV Infrastructure Rules (Rules) and request associated Memorandum Accounts (Memo Accounts) to track the costs associated with offering these new Rules.

These ALs were filed pursuant to Assembly Bill (AB) 841 (Ting 2020), which directed the investor-owned utilities (IOUs) to file ALs no later than February 28, 2021 to establish a new tariff or Rule that authorizes each IOU to design and deploy all electrical distribution infrastructure on the utility side of the customer's meter for all customers, or applicants, installing separately metered infrastructure to support charging stations, other than those in single-family residences.¹

¹ Public Utilities Code Section 740.19(c)

This Resolution approves, with modifications, PG&E's, SCE's and SDG&E's proposed Rules and associated Memo Accounts. Under the proposed Rules, ratepayers cover the costs of service line extensions and electrical distribution infrastructure—or EV Service Extensions—for separately metered EV charging for customers other than those in single-family residences. Per the direction of Public Utilities Code (PU Code) Section 740.19, these costs related to utility-side distribution infrastructure that support EV charging will be recovered through the IOUs' GRCs. As a result, IOUs will no longer request approval for utility-side costs associated with separately metered EV charging in an application or AL proposing a new TE program. In the past, the IOUs tracked these costs in Balancing Accounts associated with individual TE programs, whereas with the approval of this Resolution the IOUs will, moving forward, track these costs within a Memo Account and seek approval of those costs within a GRC.

For separately metered EV charging installed outside of TE programs, this approval will allow customers, other than those in single-family residences, to take service under the new EV Infrastructure Rules rather than Rule 16. Under Rule 16, ratepayers cover costs up to an allowance, but the customer is responsible for other costs (e.g., civic construction, trenching, etc.). Rule 16 covers less of the costs associated with utility-side service line extension and electrical distribution infrastructure than the new Rules. The new Rules cover nearly the full portion of the make-ready infrastructure² on the utility-side of the meter. EV charging that is metered with other load will not be eligible for the EV Infrastructure Rules.

This Resolution requires modifications to the proposed EV Infrastructure Rules to create consistency in policy across the IOU service territories, increase transparency for customers, and ensure additional protections for ratepayers. This Resolution requires the IOUs to each file a Tier 1 AL prior to implementation to make the modifications that this Resolution orders and to address the outstanding implementation details related to the EV Infrastructure Rules. The IOUs must file these Tier 1 ALs within 60 days of the adoption of this Resolution.

Approval of this Resolution permits PG&E, SCE, and SDG&E to offer these optional Rules to any customer, other than those in single-family residences, installing separately

² D.18-05-040 defined Make-Ready as the "[s]ervice connection and supply infrastructure to support EV charging comprised of the electrical infrastructure from the distribution circuit to the stub of the Electric Vehicle Supply Equipment (EVSE). It can include equipment on the utility-side (e.g., transformer) and customer-side (e.g., electrical panel, conduit, wiring) or the meter."

metered EV charging from no later than six months after the approval of this Resolution. Pursuant to PU Code Section 740.19(c), the CPUC and stakeholders will begin an evaluation of the effectiveness of these Rules in accelerating TE and protecting the interest of ratepayers beginning in 2025. However, any potential modifications to the Rules resulting from this evaluation would go into effect after the IOUs' following GRC cycle. This Resolution requires the IOUs to track costs on a site-by-site basis, among other requirements, within their proposed Memorandum Accounts, and additionally requires the IOUs to report data via the annual Joint IOU Electric Vehicle Load Research and Charging Infrastructure Cost Report to enable analysis and evaluation of the EV Infrastructure Rules.

BACKGROUND

This Resolution addresses ALs from PG&E, SCE, and SDG&E which were filed pursuant to AB 841. This legislation requires the CPUC and IOUs to take numerous actions related to TE, including establishing a new Rule or tariff to account for utility-side distribution costs associated with EV charging deployment.

On January 15, 2021, Commissioner Rechtschaffen issued an Assigned Commissioner Ruling (ACR) within the DRIVE Rulemaking³ to seek feedback from parties on how to implement and interpret certain aspects of AB 841.⁴ Several of the AB 841 provisions and the topics raised in the ACR are not relevant to this Resolution—e.g., underserved communities requirement,⁵ directive to issue Decisions on TE program applications,⁶ Common Treatment for Excess PEV Charging policy,⁷ Electric Vehicle Infrastructure Training Program (EVITP) certification requirements⁸—and will be addressed outside of this Resolution process. Instead, this Resolution focuses on the requirements outlined in AB 841 regarding utility-side distribution costs, as described in Table 1 below, and policy issues related to the implementation of new Rules discussed in the ACR and party comments in response to the ACR.

Table 1: AB 841 Utility-Side Distribution Cost Requirements

Requirement	Reference
-------------	-----------

³ R.18-12-006

⁴ The ACR can be found here: <https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=360524015>

⁵ 740.12(a)(1)(B)

⁶ 740.18(a) and 740.18(b)

⁷ 740.19(d)(2) and (3)

⁸ 740.20(a), (b), (e), and (g)

Change the CPUC practice of authorizing utility-side electrical distribution infrastructure needed to charge electric vehicles (EVs) on a case-by-case basis through individual program applications to authorization of that infrastructure and associated design, engineering, and construction costs on an ongoing basis in an IOU's general rate case (GRC).	740.19(a)
Continue to require each IOU to provide an accurate and full accounting of all expenses related to utility-side electrical distribution infrastructure.	740.19(a)
Apply appropriate penalties to the extent an IOU is not accurately tracking all expenses.	740.19(a)
Defines "electrical distribution infrastructure" as including poles, vaults, service drops, transformers, mounting pads, trenching, conduit, wire, cable, meters, other equipment as necessary, and associated engineering and civil construction work.	740.19(b)
IOUs must file an AL by February 28, 2021 and the CPUC must approve a new tariff or rule by June 30, 2021 that authorizes each IOU to design and deploy all utility-side electrical distribution infrastructure for customers installing separately metered EV charging, excluding charging in single family homes.	740.19(c)
Costs incurred by the IOUs between January 1, 2021 and the implementation date of rates approved in the next GRC Decision for that IOU shall be tracked in a Memorandum Account and recovered, subject to reasonableness review in the Decision adopting the next GRC revenue requirement.	740.19(c)
Costs shall be treated like those costs incurred for other necessary distribution infrastructure.	740.19(c)
The new tariff shall replace the line extension rules currently used ⁹ and any customer allowances established shall be based on the full useful life of the electrical distribution infrastructure.	740.19(c)

⁹ As of July 1, 2020.

The CPUC can revise this policy after the completion of the GRC cycle following the one during which the AL was filed if a determination is made that a change in the policy is necessary to ensure just and reasonable rates.	740.19(c)
--	-----------

On February 5, 2021, parties¹⁰ filed Opening Comments responding to questions posed in the ACR, with Reply Comments filed on February 19, 2021. Party responses to the ACR questions regarding utility-side distribution costs and the associated memorandum accounts are considered within this Resolution.

According to the ACR, “[party] comments will be utilized by the Commission in executing its mandate under AB 841 and may be used in future Commission decisions, resolutions, or dispositions of advice letters by the Commission’s Energy Division.” As such, the outstanding issues raised in the ACR and comments related to the establishment of the new EV Infrastructure Rules will be addressed through this Resolution.

On February 26, 2021, SCE filed AL 4429-E, SDG&E filed AL 3705-E, and PG&E filed AL 6102-E. PG&E filed AL 6102-E-A on March 17, 2021, to supplement its original filing and to remove the provision for the Applicant Design Option to design that portion of the new Service Extension. In the ALs, each IOU proposes to be responsible for planning, designing, and engineering its EV Service Extensions using the IOU’s standards for design, materials, and construction. Each IOU proposes to design and deploy all electrical distribution infrastructure necessary on the utility-side of the meter to support separately metered Electric Vehicle Supply Equipment (EVSE) for all

¹⁰ Advance Energy Economy (AEE), California Association of Small and Multi-Jurisdictional Utilities (CASMU), ChargePoint, Joint Comments by Environmental Defense Fund (EDF), Siemens, Enel X North America, Inc., Natural Resources Defense Council, Greenlots, EVBox Inc., The Coalition of California Utility Employees (CUE), National Diversity Coalition (NDC), Pacific Gas and Electric (PG&E), Peninsula Clean Energy (PCE), Public Advocates Office at the California Public Utilities Commission (Cal Advocates), San Diego Gas & Electric (SDG&E), Sierra Club, Union of Concerned Scientists, East Yard Communities for Environmental Justice, Center for Community Action and Environmental Justice (Joint Commenters), Small Business Utility Advocates (SBUA), Southern California Edison (SCE), Tesla, The Utility Reform Network (TURN), Utility Consumer’s Action Network (UCAN), Vehicle-Grid Integration Council (VGIC)

customers other than those in single-family homes. In addition to supporting new EVSE load, the IOUs have each proposed to allow minor auxiliary loads associated with the EVSE, such as lighting or payment systems, to be supported by the EV Service Extension. The Rules would only be applicable for projects that include EV load on a dedicated meter separate from non-EV load.

NOTICE

Notice of PG&E's AL 6102-E/6102-E-A, SDG&E's AL 3705-E, and SCE's AL 4429-E were made by publication in the CPUC's Daily Calendar. PG&E, SCE and SDG&E state that a copy of the AL was mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS

PG&E's AL 6102-E/6102-E-A, SCE's AL 4429-E, and SDG&E's AL 3705-E all received protests.

Joint CCAs¹¹ and TURN each separately submitted a protest that addresses concerns with all three IOU ALs jointly. The Joint CCAs raise concerns around some of the conditions and limitations within the proposed Rules, including the proposed requirement on the type and quantity of EVSE the customer deploys, the number of charging stations installed per project, and PG&E's proposed length limitation of the EV Service Extension. The Joint CCAs also request that the CPUC require the IOUs to offer load management solutions to customers taking service under the new Rules. Lastly, the Joint CCAs state they do not find a Tier 2 AL to be the proper procedural venue for these proposals.

TURN argues that the CPUC should either reject certain aspects of the proposed Rules—including the lack of customer contributions and allowances, cost containment measures, applicant payment for underground EV Service Extensions, cost reporting, and a provision for the potential revision of the EV Infrastructure Rules after the

¹¹ Joint CCAs consist of Peninsula Clean Energy (PCE), San Diego Community Power, East Bay Community Energy, Redwood Coast Energy Authority, Sonoma Clean Power Authority, San Jose Clean Energy, MCE, and Central Coast Community Energy.

completion of the GRC cycles—or suspend the ALs pending a Decision from the CPUC regarding the proper implementation of AB 841 pursuant to the ACR.

Four parties submitted protests to SDG&E's AL 3705-E—NRDC et al.,¹² ChargePoint, Public Advocates Office (Cal Advocates), and VGIC. NRDC et al., ChargePoint, Cal Advocates, and VGIC also submitted protests to SCE AL 4429-E and to PG&E AL 6102-E. The comments across all IOUs' ALs were generally the same, with some slight differences.

NRDC et al. share their support for the IOUs' proposals and recommend that the CPUC approve the proposals without significant modification. NRDC et al. also encourage the CPUC to ensure each IOUs are appropriately resourced to implement the tariffs in a reasonable timeframe.

ChargePoint offers support for SDG&E's proposal to allow for future proofing of distribution infrastructure to exceed capacity of installed chargers and encourages the CPUC to include future proofing in all the IOU tariffs. ChargePoint offers critiques of all three IOU proposals to require proof of commitment to purchase and install EVSE, and instead recommends requiring the applicants to make an Evidence of Permit submittal within 60 calendar days of the request for service. ChargePoint also pushes back on the proposed requirement to take service on a time varying rate and raises concerns about the proposal to attribute environmental studies and issue mitigation costs to the applicant. Lastly, ChargePoint recommends additional language to clarify that the proposed Rules' treatment does not affect any additional incentives on the customer-side of the meter.¹³

Cal Advocates argues that Energy Division should suspend each AL and should not lift the AL suspension until the CPUC issues a Decision on how the IOUs must implement the Rules. Cal Advocates is concerned that many issues remain outstanding, like

¹² "NRDC et al." includes the Natural Resources Defense Council (NRDC), the Coalition of California Utility Employees (CUE), Environmental Defense Fund (EDF), Plug in America, Siemens, Greenlots, Enel X North America Inc., EVBox Inc., Veloce, and Advanced Energy Economy (AEE).

¹³ ChargePoint recommends adding the following language: "**No Effect On Other TE Programs** Infrastructure provided pursuant to this Rule 45 does not alter or diminish the Commission's authority under Public Utilities Code section 740.12(b) (or any other similar statute) to direct electrical corporations to file applications for transportation electrification programs and investments, or to approve or modify the terms and conditions of such programs and investments."

whether to approve or deny Cal Advocates' recommendation within comments on the ACR pertaining to customer allowances.

Although VGIC voices support for approving the proposed Rules without delay, it notes that the Rules may not be fully compliant with D.20-12-029 Ordering Paragraph 5 related to automated load management (ALM). VGIC argues that the IOUs neither identify within the proposed Rules how they will deploy behind-the-meter ALM where appropriate, nor include a description of a standard evaluation criteria. VGIC recommends that the EV Infrastructure Rules be updated in the future to incorporate opportunities to encourage or incentivize ALM solutions that can potentially reduce distribution system upgrade costs. VGIC further states that the development of ALM strategies and standard evaluation criteria should be discussed further with a broad set of stakeholders to work through key remaining issues before implementation, and that these strategies could be included in a revised version of the Rule as an option for customers who choose to pursue ALM (but should not be a requirement).

Coalition of California Utility Employees (CUE) submitted a protest only to PG&E AL 6102-E. CUE recommends the CPUC approve PG&E's proposed Rule as modified by 6102-E-A as it no longer includes an allowance for applicants using the Applicant Design Option provisions in Rule 15 to design that portion of the new Service Extension normally designed by PG&E. ChargePoint also submitted a protest to PG&E's supplemental AL, 6102-E-A.

Each of the IOUs submitted responses to the AL protests, including an additional reply from PG&E on ChargePoint's protest to AL 6102-E-A.

DISCUSSION

This section of the Resolution identifies how the CPUC will dispose of the issues associated with the establishment of the IOUs' EV Infrastructure Rules. We will dispose of these issues based on consistency with AB 841, using comments parties submitted in response to the January 2021 ACR, and using comments and protests parties filed in response to the ALs. The Rules are approved with modifications, as discussed in this section. The IOUs must file a Tier 1 AL to update the Rules based on the modifications discussed within this section, a Tier 2 AL to address outstanding implementation details that the Tier 1 compliance filing does not cover, and another Tier 2 AL to propose a target for service energization timing.

1. Assignment of Costs

The proposed costs assigned to the applicant and ratepayers within PG&E's, SCE's, and SDG&E's proposed EV Infrastructure Rules are largely consistent, reasonable, and in compliance with AB 841.

All three IOUs propose to establish new Rules that would serve as an alternative to Rule 16 in the instance that new electrical service and distribution system upgrades are required if a customer installs separately metered EV charging equipment. Where Rule 16 requires some costs of new electrical service to be paid for by the customer receiving the service, the new EV Infrastructure Rules require assign more of the costs of service line extensions and electrical distribution infrastructure to all ratepayers rather than the individual customer receiving service.

The IOUs refer to the service line extensions and electrical distribution infrastructure that they propose to cover under the new Rules as EV Service Extensions. These Rules are distinct from the treatment customers receive under Rule 16, as the EV Infrastructure Rules will require ratepayers rather than individual customers to pay for more of their infrastructure costs than under Rule 16 (e.g., trenching, civic construction, etc.), as Section 740.19(b) creates a different definition of distribution infrastructure. The proposed Rules are largely consistent across IOUs with how the IOUs propose to assign costs to either ratepayers or individual applicants, with some minor variations in language. These proposals are consistent with PU Code Section 740.19(b), which states: “ ‘electrical distribution infrastructure’ shall include poles, vaults, service drops, transformers, mounting pads, trenching, conduit, wire, cable, meters, other equipment as necessary, and associated engineering and civil construction work.”

Although the proposals seem to have the same rules for which costs the IOUs and applicants pay for, the IOUs used slightly different language and categorization, as shown in Table 2 below.

Table 2: IOU Proposals for Assignment of Costs

	Proposed IOU Assigned Costs	Proposed Applicant Assigned Costs

SCE	<p>Planning, design, and engineering</p> <p>Electrical Distribution Infrastructure costs, including:</p> <ul style="list-style-type: none"> (a) Conduit and Substructures (b) Protective Structures (c) Underground Service¹⁴ (d) Riser Materials (e) Overhead Service¹⁵ (f) Metering (g) Transformer <p>Materials</p> <p>Trenching and excavation</p> <p>Utility-side permitting, rights checks, and easements</p> <p>Civil work</p>	<p>Environmental studies and issue mitigation¹⁶</p> <p>Underground installations, where it is not otherwise required and when the applicant requests it</p> <p>Relocations and rearrangements of existing facilities</p> <p>Behind-the-meter costs/applicant facility design and operations, including:¹⁷</p> <ul style="list-style-type: none"> (a) Available service delivery voltages and the technical requirements and conditions to qualify for them (b) Customer utilization voltages (c) Load balancing requirements (d) Requirements for installing electrical protective devices, (e) Loads that may cause service interference to others, and (f) Motor starting limitations (g) Transformer installation on applicant's property <p>Required service equipment (all facilities on applicant's premises that are not SCE's responsibility)</p> <p>Building Code Requirements</p> <p>Reasonable Care</p>
-----	--	---

¹⁴ A set of service conductors to supply permanent service from the Distribution Line source to the Service Delivery Point approved by SCE.

¹⁵ A set of overhead service conductors and support poles to supply permanent service from a Distribution Line source to a suitable support at the Service Delivery Point approved by SCE.

¹⁶ Environmental studies or issue mitigation may be required by SCE to install the Electrical Distribution Infrastructure and EV Service Extension, the cost of which will be borne by the Applicant.

¹⁷ Responsible for facilities and equipment beyond the Service Delivery Point.

		Corrective Action
SDG&E	<p>Planning, design, and engineering</p> <p>Installation of all electrical distribution infrastructure and protective structures, including:</p> <ul style="list-style-type: none"> (a) Conduit and substructures (b) Protective Structures (c) Underground Service (d) Riser Materials (e) Overhead Service (f) Metering (g) Transformer (h) All other required EV Electric Distribution Infrastructure, including but not limited to materials, between the Distribution Line source and Service Delivery Point. <p>Materials</p> <p>Trenching and excavation</p> <p>Government inspection, permitting, rights check, and easements</p> <p>Civil work</p>	<p>Environmental studies and issue mitigation</p> <p>Facility relocations and rearrangements, unless determined by SDG&E to be necessary to provide new service</p> <p>Overhead to underground conversions, unless required or otherwise the most cost-effective design</p> <p>All behind-the-meter costs, including:</p> <ul style="list-style-type: none"> (a) EVSE (b) Meter panel <p>Building Code Requirements</p> <p>Reasonable Care</p>
PG&E	<p>Planning, designing, and engineering</p> <p>Installation of all electrical distribution infrastructure and protective structures</p> <ul style="list-style-type: none"> (a) primary or secondary underground or overhead service conductors, 	<p>Environmental studies and issue mitigation²⁵</p> <p>Service Lateral Facilities (providing or paying for a route on private property that is clear of obstructions)</p>

²⁵ Environmental studies or issue mitigation may be required.

	<p>(b) poles to support overhead service conductors,</p> <p>(c) service transformers,</p> <p>(d) vaults, pads, and conduits,</p> <p>(e) trenching,</p> <p>(f) PG&E-owned metering equipment, and</p> <p>(g) other PG&E-owned service-related equipment:</p> <ul style="list-style-type: none"> • Excavation¹⁸ • Conduit and Substructures¹⁹ • Protective Structures • Underground Electrical Distribution Infrastructure Service Extension²⁰ • Riser materials²¹ • Overhead Electrical Distribution Infrastructure Service Extension²² • Metering • Transformer²³ 	<p>Overhead to underground conversion,²⁶ unless required or otherwise the most cost-effective design</p> <p>Land rights</p> <p>Excess Service²⁷</p> <p>All behind-the-meter costs/applicant facility design and operation (responsible for facilities and equipment beyond the Service Delivery Point),²⁸ including:</p> <ul style="list-style-type: none"> (a) Available service delivery voltages and the technical requirements and conditions to qualify for them (b) Customer utilization voltages (c) Load balancing requirements (d) Requirements for installing electrical protective devices
--	---	--

¹⁸ All necessary trenching, backfilling, and other digging as required including permit fees.

¹⁹ Furnishing, installing, owning, and maintaining all Conduits (including pull wires) and Substructures as necessary to install the EV Service Extension.

²⁰ Set of service conductors to supply permanent service from the Distribution Line source to the EV Service Delivery Point.

²¹ Any necessary pole riser material for connecting underground service to an overhead Distribution Line.

²² Set of overhead service conductors and support poles to supply service from a Distribution Line source to a suitable support at the Service Delivery Point.

²³ The transformer where required, including any necessary switches, capacitors, electrical protective equipment, etc. When either a padmounted or overhead transformer is installed on the applicant's premises, the EV Service Extension shall include the primary conductors from the connection point at the distribution supply line to the transformer and the secondary conductors, if any, from the transformer to the Service Delivery Point.

²⁶ Unless it is otherwise required or is the most cost-effective design.

²⁷ Cost of the service extension that are the result of the length of the service being in excess of 300 feet.

²⁸ Except for PG&E-owned metering facilities.

	<ul style="list-style-type: none"> • Padmounted Equipment²⁴ <p>Materials</p> <p>Trenching and excavation</p> <p>Government inspection, permitting and land rights, and easements administration</p>	<p>(e) Loads that may cause service interference to others, and</p> <p>(f) Motor starting limitations</p> <p>(g) Required service equipment</p> <ol style="list-style-type: none"> EVSE All facilities on applicant's premises that are not PG&E's responsibility, but required for applicant to receive service²⁹ <p>(h) Facility Tampering³⁰</p> <p>(i) Transformer Installation on Applicant's Property</p> <ol style="list-style-type: none"> Space for transformer Transformer lifting requirements³¹ Overhead transformers³² <p>Building Code Requirements</p> <p>Reasonable Care³³</p>
--	---	---

Each IOU proposes to be responsible for planning, designing, and engineering its EV Service Extensions using the IOU's standards for design, materials, and construction. Each IOU proposes to design and deploy all electrical distribution infrastructure

²⁴ Furnishing, installing, owning, and maintain Substructures and any required Protective Structures for the proper installation of the transformer, switches, capacitors, etc.

²⁹ This includes but is not limited to overhead to underground termination equipment, conduits located under or within structures, service entrance conductors from the Service Delivery Point to metering facilities, connectors, meter sockets, meter and instrument transformer housing, service switches, circuit breakers, fuses, relays, wireways, metered conductors, machinery and apparatus of any kind or character.

³⁰ Applicant needs to place its seals on meter rings and covers of service enclosures and instrument transformer enclosures.

³¹ PG&E will not install transformers at locations where PG&E cannot use its standard transformer lifting equipment.

³² Where it is not practical to install a transformer on a pad, in a room or vault, PG&E may furnish a pole-type structure for an installation not exceeding 500 kVa.

³³ Applicant shall exercise reasonable care to prevent PG&E facilities from being damaged.

necessary on the utility-side of the meter to support separately metered EVSE for all customers other than those in single-family homes. None of the IOUs propose to require any customer contributions and have limited the applicant's responsibility to the cost associated with any necessary Environmental Studies or issue mitigation, all behind-the-meter costs, and voluntary overhead to underground conversion.

In response to each IOU's proposal, ChargePoint submitted protests that critiqued the IOUs' assignment of environmental studies and issue mitigation to the applicants. ChargePoint states that deploying the distribution infrastructure on the utility-side of the meter may require environmental studies, and requiring the applicant to bear all costs of the studies would run counter to the intent of AB 841. Further, ChargePoint argues that the term "issue mitigation" is vague and overly broad, and could subject an applicant to unreasonable risk. ChargePoint recommends modifying each IOU's proposed Rule to remove the term "issue mitigation" and to specify that the applicant shall not bear the costs of environmental studies. ChargePoint also reiterates these concerns within its reply protest to PG&E's AL 6102-E-A.

In response to ChargePoint's protest, SCE asserts that ChargePoint fails to consider that AB 841 specifies the types of costs that are included under the term "electrical distribution infrastructure," which does not mention environmental studies or associated mitigation. Any environmental studies or remediation would add costs to the project, impacting ratepayers.

TURN, in its AL protest, argues that PG&E and SDG&E's Rules should be clarified to require underground EV Service Extensions installed at the request of the applicant be paid for by the applicant. TURN notes that while the language on optional underground installations is similar for all three IOUs, SCE includes a caveat that "the cost of which will be paid for by the Applicant." TURN suggests that PG&E and SDG&E also include this provision.

In reviewing the IOUs' proposals, we find that the cost allocations are consistent with statute, and that the IOUs correctly assign the costs and responsibility to own and maintain all electrical distribution infrastructure as defined in Section 740.19(b). We agree with SCE's reply and the three IOUs' ALs that the environmental studies and issue mitigation costs should be assigned to the applicant. As SCE mentions in its reply, the statute does not direct the IOUs to cover the cost of environmental studies. We do not find it to be in the interest of ratepayers to require them to cover additional costs

related to these Rules, especially since these Rules will already shift costs from individual applicants to ratepayers as compared to the current treatment under Rule 16.

Regarding ChargePoint's comments on "issue mitigation," we agree that this term is vague. Each of the IOUs should modify their proposed Rules to include a definition of "issue mitigation," to ensure greater transparency for applicants. These definitions should be consistent across the IOUs. However, these costs should still be assigned to the applicant.

We additionally agree with TURN that SDG&E and PG&E could increase clarity of their Rules by adding the above cited language from SCE's proposal that the cost of underground EV Service Extensions that the applicant requests be paid for by the applicant.

As described above, the IOUs must submit two ALs—one Tier 1 within 60 days addressing simple updates to the Rules, and one Tier 2 within 60 days addressing more complex issues. The IOUs should include the description of the term "issue mitigation" within the Tier 2 AL filing, and the modification for SDG&E and PG&E regarding underground service must be included in the Tier 1 filing. These ALs will cover other outstanding issues related to implementation that this Resolution discusses.

Additionally, as the EV Infrastructure Rules are intended to provide an alternative for the existing Rule 16, it is important that an applicant has information to be able to compare the benefits and costs of taking service through the different Rules. Thus, we direct each IOU within their Tier 1 AL to provide a clear comparison of the costs and responsibilities that are assigned to the IOU and the applicant for their existing Rules 15, 16, and the new EV Infrastructure Rules.

2. Exclusion of Participants of Previously Approved TE Programs

It is reasonable to exclude participants of previously approved TE programs from the new EV Infrastructure Rules applicability, and additional language is needed to clarify this point.

The ACR proposed that the new Rules should not impact previously approved programs or programs currently under consideration as of the date of the ACR. Most parties responding to this—CASMU, PG&E, Cal Advocates, SCE, SDG&E, TURN, NRDC et al., SBUA, and ChargePoint—agree with the proposal. The only party to

disagree with this proposal was PCE, who suggests that this approach would be inconsistent with AB 841, which has an effective date of January 1, 2021.

In their ALs, SCE and SDG&E address this issue, but PG&E does not. SCE proposes language within the Preliminary Statement that “[costs] that are eligible for recovery as part of the ratemaking approved in SCE’s current Transportation Electrification Programs, such as Charge Ready Transport and Charge Ready 2 Programs, do not apply to this account.” SCE also proposes language in the Applicability section of its proposed Rule 29 that “[this] Rule is not applicable to Applicants who intend to participate in any of SCE’s current Charge Ready Programs, such as Charge Ready Transport Program and Charge Ready 2, authorized by the [CPUC] prior to the effective date of this Rule.”

SDG&E within the Applicability section of its proposed Rule 45 states that “[t]his rule is not applicable to Charging Stations installed through the San Diego Gas & Electric Power Your Drive, Power Your Drive for Fleets, Power Your Drive for Parks, or Power Your Drive for Schools programs.”

PG&E does not include any language within its AL or its proposed Rule 29 to exclude applicability to participants of its existing programs.

ChargePoint requests that the proposed Rules provide more clarity that they do not affect any additional TE incentives on the customer-side of the meter provided through IOU TE programs. ChargePoint suggests adding the following language to each IOU’s proposed Rule:

“No Effect On Other TE Programs Infrastructure provided pursuant to this Rule [#] does not alter or diminish the Commission’s authority under Public Utilities Code section 740.12(b) (or any other similar statute) to direct electrical corporations to file applications for transportation electrification programs and investments, or to approve or modify the terms and conditions of such programs and investments.”

This language, however, is not necessary as it does not alter the CPUC’s existing authority. Further, the Rules do not pose any threat to future or existing customer-side incentives.

Within the Tier 1 AL discussed above, each IOU must add language to further clarify the limitations of the applicability of their Rules. The CPUC has already reviewed and

approved of the budgets, of the existing TE programs, including the utility-side costs, within proceedings. We agree with the party comments on the ACR that participants of these programs who are taking advantage of these budgets should not be applicable to take service under the EV Infrastructure Rules.

Since SDG&E submitted its AL prior to the recent approval of its Power Your Drive Extension program,³⁴ SDG&E does not explicitly mention this program. SDG&E should add language within its proposed Rule to clarify that EVSE installed through SDG&E's Power Your Drive, Power Your Drive 2, Power Your Drive for Fleets, Power Your Drive for Parks, VGI School Bus Pilot, or Power Your Drive for Schools programs are not applicable under Rule 45.

Since PG&E does not propose any language within its Rule to limit applicability, it must modify its proposed Rule 29 to clarify that it will not be applicable to any EVSE installed through EV Charge Network, EV Fleet, EV Fast Charge, EV Empower, EV Charge Schools, or EV Charge Parks.

Also, while it seems to be SCE's intention that no EVSE installed under an existing program would be eligible, its language around this could be clearer. SCE should add language to make clear that in addition to EVSE installed under Charge Ready Transport and Charge Ready 2, EVSE installed under its Charge Ready Schools and Charge Ready Parks programs are also not eligible to take service under its Rule 29.

3. EVSE Operational and Installation Requirements

While it is reasonable that the IOUs require proof of commitment to install EVSE and a requirement to maintain the EVSE for five years, IOUs should provide additional transparency on the safety qualifications they will require for all installed EVSE and the process for approving the number of EVSE the applicant must deploy.

Each IOU proposes the same applicant eligibility language for taking service under their Rules. As proposed, the Rules would be open to all customers, excluding single-family residences, that install separately metered infrastructure for the exclusive use to support EV charging stations and incidental load. As the IOUs propose the Rules, the applicants would need to demonstrate proof of commitment to install "qualified EVSE"

³⁴ D.21-04-014

at a quantity approved by the IOU, in the IOU's sole discretion, and would be required to maintain and operate the EVSE for a minimum of five years.

In a combined protest to all three ALs, the Joint CCAs oppose the limitations on charging station type or quantities, stating that each proposed rule adds language regarding EVSE type and quantity that narrows the applicability of the Rule. To be eligible for the proposed Rule, Joint CCAs recommend that the CPUC supplement the proposed vague definition of EVSE with a requirement for the EVSE to comply with the relevant safety requirements developed in connection with D.18-01-024 and D.18-05-040.

Joint CCAs and ChargePoint also disagree that the IOUs should be able to determine the number of EVSE approved for installation. The Joint CCAs argue that this allows the IOUs too much discretion, and that while it would be reasonable to impose a universal minimum quantity of EVSE to ensure ratepayer funds are not spent inefficiently, there is not a compelling rationale for imposing a maximum quantity. They argue that this would lead to regulatory uncertainty for customers. Rather than relying on limitations of the quantity of EVSE deployed as a means to reduce costs, Joint CCAs recommend the CPUC rely on a per port cost cap. ChargePoint expresses concern that the term "proof of commitment to purchase and install" EVSE is vague and undefined. ChargePoint in its reply to PG&E's AL 6102-E-A notes that the proposed tariff language does not provide information as to what qualifications are required in order to be deemed qualified. Further, ChargePoint argues that AB 841 does not provide a basis for such a requirement. ChargePoint does note that PG&E addresses this concern in its initial reply, but reiterates that the clarification is not reflected in revisions to the Applicability section of Rule 29.

In its reply to protests, PG&E responds to Joint CCAs and ChargePoint. PG&E clarifies that the requirement for qualified stations is related to safety qualifications, such as an Underwriters Laboratory (UL) safety certification, and is not intended to apply to non-safety related qualifications and criteria. Regarding the concern around the approved quantity of EVSE PG&E clarifies that it is merely seeking to ensure that applicants install the same quantity of EVSE for which the EV Service Extension was designed.

In SDG&E's reply it states that it is open to working with customers to refine participation requirements to balance the need to avoid stranded assets with clarity and accessibility.

SCE, SDG&E, and PG&E all address ChargePoint's concern that the term "proof of commitment to purchase and install" is vague and undefined. PG&E clarifies that a proof of commitment is any documentation of clear intent to procure and deploy EVSE (e.g., budget approval, grant agreement, request for proposal results, governance-body mandated procurement and deployment, etc.). SDG&E states that ChargePoint's suggestion that the EV Infrastructure Rule use similar requirements to the California Energy Commission California EV Infrastructure Project (CALeVIP) program seems reasonable. In its response to Joint CCAs, SDG&E also states its intent is only to support safety. SCE agrees that these conditions are not designed to complicate or limit deployment of EVSE, but are necessary to mitigate stranded assets installed under the new Rule and to ensure any EVSE meets the minimum safety and technical requirements.

We find the IOUs' clarification that qualified EVSE requirements would only apply to safety qualifications to be reasonable. However, as written, the IOUs' proposed Rules are not clear. Each IOU should update its proposed Rule within the Tier 1 AL compliance filing to align with safety requirements included in their Rules 15 and 16, and to reflect the specific safety qualifications to which it is referring. If these safety qualifications go beyond, in any way, the requirements within the TE Safety Checklist related to utility-side infrastructure, the IOUs should include those qualifications as a Tier 2 AL, separate from the Tier 1 compliance advice letter required by this Resolution.

We also find the IOUs' clarification on the term "proof of commitment to purchase" to be reasonable, however the IOUs should each update its proposed Rule within the Tier 2 AL compliance filing to reflect how an applicant can provide proof of commitment to purchase and install, including all the eligible documents. This can improve transparency in the process for applicants.

Regarding the proposed requirement for applicants to maintain EVSE for at least five years when installed by taking service under the EV Infrastructure Rules, we find this to be reasonable. This ensures some protection against stranded assets. In previously authorized ratepayer funded TE programs, the CPUC has required the IOUs to ensure the installed EVSE is maintained and operational for at least eight to ten years, depending on the individual program. While ratepayers will not pay for customer-side infrastructure through these Rules, they will still bear responsibility for the costs of the utility-side distribution infrastructure to support the customer-side infrastructure. This

necessitates the applicant to maintain the customer-side infrastructure for a minimum time-period to reduce the risk of stranded or underutilized ratepayer funded assets.

As no ratepayer funding will go towards the purchase and maintenance of customer-side infrastructure, and because the applicant will be responsible for procuring the customer-side infrastructure, we find the IOUs' proposed five-year requirement to be reasonable. This requirement ensures some protection against stranded assets and will allow customers additional flexibility beyond the eight- to ten-year EVSE maintenance requirement for TE program participants. However, the IOUs do not include any discussion within their ALs as to how they plan to enforce this requirement. Within the Tier 2 AL that this Resolution directs the IOUs to file, the IOUs should describe how they will confirm customers will install and continue to maintain the EVSE for at least five years.

4. Line Extension Length Limitations and Caps

PG&E's proposal for a length limitation to the service line extension should be removed, and the IOUs should align their language on the preferred route of the infrastructure provided.

In response to the ACR, several parties speak out against limitations and length caps. ChargePoint urges the CPUC to avoid imposing arbitrary caps that could limit or delay investments. SCE is concerned about requiring arbitrary or prescriptive measures, as each site is unique, and some may not be able to practically or safely meet pre-established requirements. VGIC and Joint Commenters argue against overly prescriptive limitations as they do not believe they were consistent with AB 841. NRDC et al. agree in reply comments. No party advocates in favor of costs caps or length limitation.

Nevertheless, PG&E proposes a length limitation to the service line extension over which the applicant would have to cover any incremental costs. Its proposed Rule 29 states that the IOU shall install utility-side EV Service Extensions of up to, "1) 300 feet, as measured from the connection to the Distribution Line to the Service Delivery Point, or; 2) a mutually agreed upon location of indeterminant length. In cases where a longer EV Service Extension is required or is requested by the Applicant, the Applicant will be responsible for all costs of the service that are a result of the length of the service being in excess of 300 feet..."

PG&E is the only IOU to propose a length limitation. In contrast, SDG&E states that on private property the EV Service Extension shall extend along the shortest, most practical and available route (clear of obstructions) as necessary to reach a Service Delivery Point designated by the IOU.

SCE's proposes "[t]he length and normal route of the Electrical Distribution Infrastructure and EV Service Extension will be determined by SCE according to its planning, designing, and engineering standards and considered as the distance along the shortest, most practical, available and acceptable route."

We agree with the many parties that submitted comments on the ACR in opposition to the concept of length limitations, in particular SCE's argument that any cap on the length of service line extensions is arbitrary. While we understand that PG&E likely intends to establish some reasonable cost limitations with its proposal for the 300-foot limitation, PG&E did not justify why 300 feet would be the limit. However, it is also in the ratepayer interest to ensure that EV Service Extensions are deployed in an efficient manner, reducing costs to ratepayers where feasible. We thus direct PG&E to remove the proposed length limitation from the language of its Rule 29, and instead direct PG&E to add language that the EV Service Extension shall extend along the shortest or most practical and available route as necessary to reach a Service Delivery Point via mutual agreement between the IOU and applicant. While SCE's and SDG&E's language is similar to this, we direct them to also update their language to be the same as PG&E's.

Additionally, the IOUs should maintain final discretion to turn away a proposed project to avoid unreasonably high-cost projects. The IOUs should make these modifications to their Rules within the Tier 1 AL compliance filing.

5. Upsizing the Capacity of EV Service Extensions

Allowing the IOUs to plan for future EVSE load at a site that takes service under one of the new Rules can reduce future costs, but applicants should also be required to install EVSE in a prescribed timeframe.

SDG&E is the only IOU to explicitly propose allowing an applicant to request the IOU build out additional capacity beyond what is necessary to serve the planned number of EVSE installed in the near term to help avoid upgrades in the future. On page three of its AL, SDG&E states that the electrical distribution infrastructure may, at SDG&E's

discretion, exceed the capacity of the installed charging stations if the applicant anticipates installing higher-power charging stations in the future. SDG&E states that upsizing the EV Service Extension initially will avoid the need for costly upgrades in the future.

In its reply to SCE and PG&E's ALs, ChargePoint suggests that the IOUs' proposed Rules also examine current and future EV charging needs. ChargePoint states that SDG&E's proposal to allow for distribution infrastructure to exceed the capacity of the installed charging stations if the applicant anticipates installing higher power charging stations in the future would allow for future proofing. ChargePoint recommends the CPUC authorize SCE and PG&E to take the same approach.

In PG&E's reply to ChargePoint's protest, it clarifies that it would size facilities based on reasonable demand, taking into consideration near-term as well as future charging needs.

In its reply comments on the ACR, ChargePoint in its ACR comments argues that the CPUC should not simply focus on short-term costs but recommends the tariffs allow for site hosts to future proof make-ready infrastructure allowing for more efficient and cost-effective deployment of make-ready infrastructure. ChargePoint further recommends that the IOUs include an assessment of future charging needs to determine the design and capacity of make-ready infrastructure under the new tariff. ChargePoint also recommends that it could be useful to have a workshop to discuss future proofing.

Both TURN and NDC express some concern about the IOUs' incentive to spend ratepayer dollars. TURN notes that efforts to future proof sites by providing more infrastructure for future ports must be balanced with ensuring costs are reasonable and that the risk of stranded costs is mitigated. NDC argues that the new Rules will in effect be like perpetually approved TE programs and that the IOUs have a strong financial motivation to incur as much capital expenditures as they can.

We agree with SDG&E and ChargePoint that upsizing the capacity of the EV Service Extension initially can avoid the need for costly upgrades in the future and allow for applicants to incrementally grow their EV charging as they are able to afford additional EVSE. However, we also agree with TURN that we must balance this with ensuring that costs are reasonable and stranded assets are avoided. Further, the IOUs also have a financial incentive to build more capacity than is necessary, as they can rate base the investments and earn a rate of return. While we want to ensure the IOUs are

considering future growth in EV charging and the associated capacity, we also want to ensure there are proper checks and balances in place to prevent the IOUs from overbuilding.

As proposed, the decision to upsize the infrastructure is solely within SDG&E's discretion. For the above stated reasons, there are downsides to giving this discretion to the IOU. To address this concern, we direct all the IOUs to offer future proofing and buildout of additional capacity beyond the capacity needed for the EVSE the applicant plans to install at the time of taking service under the EV Infrastructure Rule. However, we require that each IOU gets a signed commitment from applicants that they will install additional EVSE in the future and the approximate number of EVSE they plan to install. Each applicant must provide the IOU with its timeline for the installation.

Within the Tier 2 AL filing discussed above, each IOU must describe its plan for future proofing. This should include a description of how the IOU will confirm that the applicant fulfilled its commitment to install the additional EVSE.

Additionally, given the State and CPUC have many energy policy objectives—behind-the-meter storage, solar, building electrification, transportation electrification, etc.—it is critical that the IOUs coordinate their efforts to implement the EV Infrastructure Rules with these other policy areas. We must understand any potential impacts to other energy policy objectives, including cost shifting or load impacts that may result from providing higher subsidies to transportation electrification.

Within the Tier 2 AL, the IOUs should additionally identify areas of coordination across energy programs, and describe how the IOUs will align all future electrification upgrades to streamline the process for customers, support multiple clean energy objectives, and reduce costs for both customers and ratepayers.

6. Definition of EV

The IOUs should align the definition of EV included in their EV Infrastructure Rules with the definition adopted in D.20-09-025.

The three IOUs propose similar but slightly different EV definitions within their proposed Rules. Their proposed definitions are copied in Table 3 below.

Table 3: IOUs' proposed definitions of EV

PG&E	SCE	SDG&E
An electric vehicle includes light-duty, medium-duty, and heavy-duty battery electric vehicles and plug-in hybrid electric vehicles, as well as off-road electric vehicles and off-road electric equipment.	An electric vehicle is any vehicle that utilizes electricity from external sources of electrical power, including the grid, for all or part of vehicles, vessels, trains, boats, or other equipment (e.g., aircraft, forklift, port equipment) that are mobile sources of air pollution and greenhouse gases. Types of electric vehicles include, but are not limited to, plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs), electric golf carts, or neighborhood electric vehicles (NEV), transit buses, drayage, vocation, short-haul fleets, port applications, ground equipment supporting goods movement, ground support equipment at airports, and long-haul truck stop applications to minimize the idling of diesel engines.	An electric vehicle is any vehicle that utilizes electricity from external sources of electrical power, including the grid, for all or part of vehicles, vessels, trains, boats, or other equipment (e.g., aircraft, forklifts, port equipment) that are mobile sources of air pollution and greenhouse gases.

The ACR proposed that reference to “electric vehicles” in Section 740.19 should align with the definition in D.20-09-025, which includes light-, medium-, and heavy-duty EVs, off-road EVs, and off-road electric equipment. On page 20 of D.20-09-025, the CPUC concludes that PU Code sections 740.2, 740.3, and 740.12 referencing EVs in fact

“applies to light-, medium- and heavy-duty electric vehicle charging services, and off-road electric vehicle or off-road electric equipment charging services.” No party opposes the ACR’s proposal to adopt this definition. Six parties—SCE, SDG&E, NRDC et al., TURN, Joint Comments, and PG&E—all express support for using this definition.

Accordingly, we direct each IOU to include within its Tier 1 AL compliance filing a modification of its Rule to include the referenced definition of EVs from D.20-09-025.

7. Implementation Timing of New EV Infrastructure Rules

It is reasonable to set an implementation date for the new EV Infrastructure Rules to be available to customers.

None of the IOUs propose specific dates for establishing the new EV Infrastructure Rules and allowing applicants to take service through their proposed Rules. SDG&E states that it “plans to begin implementing the EV Infrastructure Rule six months after receiving Commission approval.” SCE also requests to launch and make Rule 29 available to customers at least six months after the CPUC approval of the AL. SCE cites that the six-month implementation period is necessary for SCE to train, update, or establish new internal processes and modify existing accounting systems. PG&E does not include an estimation or request of when its Rule 29 would be available.

In comments on the ACR, many parties urge the CPUC to swiftly approve the IOU proposals to allow for a quick implementation of these new Rules. Many party comments center around avoiding significant delay of implementing AB 841.

Additionally, in protests to the ALs VGIC recommends the proposals be adopted without delay.

Given the desire to avoid implementation delays, we direct the IOUs to begin offering service under the new EV Infrastructure Rules no later than six months, or more specifically 180 days, after the adoption of this Resolution. The IOUs should each notice the DRIVE service list once the new Rule is available. If the IOU is unable to implement the new Rule within the 180-day period, pursuant to Rules of Practice and Procedure 16.6, the IOU may request an extension of time to comply with this requirement along with justification, but must also notify the service list, and provide an update on the new expected launch time.

8. Waiver of Customer Contribution Requirements

It is reasonable to waive any customer contribution requirements for customers taking service under the new EV Infrastructure Rules at this time.

PU Code Section 740.19(c) states that “[t]he new tariff shall replace the line extension rules currently used (as of July 1, 2020) and any customer allowances established shall be based on the full useful life of the electrical distribution infrastructure.” In response to this portion of AB 841, the ACR proposed that the new Rules or tariffs addressing utility-side distribution infrastructure related to EV charging should no longer include an allowance structure that would require a contribution by customers if project costs exceed the set allowance amount. However, the ACR sought party comment on this interpretation.

Four parties disagree with the ACR’s proposal to not require customer contributions—UCAN, TURN, SBUA, and Cal Advocates—arguing that the statute allows for customer contributions and that customer contributions would benefit the new policy. UCAN expresses concern that, based on data SDG&E submitted in response to the ACR, ratepayer subsidies would increase by 135 percent for a two port DCFC (\$40,000 under the new Rule vs. \$17,000 under Rule 16) and 378 percent for a 12-port Level 2 site (\$43,000 under new Rule and \$9,000 under Rule 16), resulting in more than double and quadruple the current utility contribution if an allowance structure is not adopted. UCAN argues that allowances can still be part of the new Rules as long as the CPUC determines they are reasonable and based on the full useful life of the infrastructure. UCAN also recommends the CPUC create a robust record to determine reasonable line and service extension allowances. SBUA argues that the ACR misinterprets the statute based on the language that the infrastructure “should be treated like those costs incurred for other necessary distribution infrastructure.”

Cal Advocates and TURN each propose separate allowance and customer contribution structures. Cal Advocates proposes that within one year, the IOUs should file an AL to establish allowances based on kW categories. Under this proposal, sites would be categorized based on their kW capacity and each category would be assigned an allowance based on the typical site costs for that kW capacity range to cover all utility-side costs. Due to a lack of current information to determine the necessary allowance amounts, Cal Advocates agrees that the IOUs should initially cover all TE related utility-side costs. However, Cal Advocates suggests that after a year its proposal for kW site categories and allowances would be established to cover all utility-side costs for a 50th percentile-cost site of that kW capacity, excluding sites that do not require upgrades

and allowing underserved community sites to be based on the 75th percentile. TURN proposes adopting the customer allowance methodology from Rules 15 and 16, but expanding the distribution infrastructure covered by the allowance to conform with Section 740.19(b).

Ten parties—AEE, PG&E, SCE, VGIC, SG&E, Joint Commenters, NRDC et al., ChargePoint, Tesla, and Electrify America—argue in favor of the ACR’s proposal that the IOUs should not require customer contributions under the new Rules.

AEE, SDG&E, and NRDC et al. argue that customers will still have an incentive to manage costs as they will still be responsible for the behind-the-meter make-ready investments. SDG&E states that the existing allowance typically covers five to ten percent of the total cost of an EV charging site, that the new Rule should increase the IOU’s contribution to roughly 25 percent, and that the high customer contribution required behind-the-meter will provide ample “skin in the game.”

PG&E, SCE, Tesla, and ChargePoint argue that a requirement for customer contributions does not align with the intent of AB 841. SCE argues that while AB 841 does not preclude the establishment of customer allowance, SCE does not believe it was the intent of the Legislature.

Joint Commenters acknowledge that the statute allows, but does not require, customer contributions and that the CPUC can revisit the policy later if it is deemed necessary. If the CPUC determines that the practice of no customer contribution is no longer reasonable before it completes the next GRC cycle, the CPUC could direct IOUs to revise the Rules they adopt.

In reply comments on the ACR, several of these parties speak about the proposals for customer contributions from TURN and Cal Advocates. In response to Cal Advocates’ proposal, AEE argues that its proposed methodology is imprecise and arbitrary and that even Cal Advocates notes that there is not currently enough cost data. PG&E argues the proposal is unnecessary, premature, and contrary to AB 841, as a component of AB 841 is simplifying the process for applicants and creating transparency. Joint Commenters caution against Cal Advocates’ proposal to establish allowances because it would be inappropriate for the CPUC to act on the basis of data that is yet to be collected. NRDC et al. argues that the proposal would mean roughly half of all sites would not have their full costs of installation covered, which would risk unintentional consequences for furthering equity goals.

In response to TURN's proposal, AEE asserts that TURN misinterprets the statute, as it only sets conditions for allowances should the CPUC decide to require them. It does not direct or obligate the CPUC to establish allowances. NRDC et al. argues a similar point that while AB 841 contemplates the establishment of allowances it would be wrong to say it directs the establishment of allowances and that it is unclear where TURN derives such a reading. ChargePoint states that an interpretation that would simply change the definition of covered infrastructure while keeping the Rule 15 and 16 customer contribution requirements, as is TURN's proposal for customer contributions, does not square with the language or intent of AB 841.

SCE states that if the CPUC determines that allowances are appropriate, the CPUC should allow time for additional comment and assessment to better understand the potential benefits and impacts of any new requirement. SCE also expresses concern that a complex allowance process may be confusing for applicants and administratively burdensome.

Within their ALs and proposed Rules, none of the IOUs propose customer contributions. In its protest on the ALs, TURN again advocates for the incorporation of customer allowance, and argues that if no allowance is adopted, a cost containment measure like those proposed within the ACR are necessary. Cal Advocates also addresses the outstanding issue of customer allowances within its protest to each of the ALs.

It is clear that PU Code Section 740.19 gives the CPUC the option to implement or not implement customer contributions. We agree with SCE's point that additional comment and assessment would be necessary to adopt any allowance structure, as well as concerns AEE and Joint Commenters express that there is currently insufficient data to support Cal Advocates proposal. While we elect not to modify the IOUs' proposals to include customer contributions in this Resolution, we agree with Cal Advocates, TURN, UCAN, and SBUA that customer contributions are allowable under the statute.

- As UCAN argues, allowances can still be part of the new Rules as long as they are reasonable and based on the full useful life of the infrastructure. However, a robust record to determine the reasonable line and service extension allowances is still necessary. As such, we do not adopt customer allowances under the new Rules as additional data is needed to **inform the development of an allowance structure. The CPUC may incorporate one**

in the future after evaluating the Rules, if necessary. We find it reasonable to direct the IOUs to collect data from the implementation of the Rules to inform any future potential allowance structure. Consistent with Section 740.19(c), any future allowance structure would not occur until after the completion of the IOUs' next GRC cycle. For any allowance structure that these EV Infrastructure Rules may incorporate in the future, the IOUs should consider the following criteria in a proposal: Per 740.19(c), the allowances must be based on the full useful life of the infrastructure.

- Rules 15 and 16 already have a vetted allowance structure that may, in part, be useful in the development of the EV Infrastructure Rules' allowances.
- Limitations that the Rules 15 and 16 allowances have for the EV Infrastructure Rule use case; in particular, Rules 15 and 16 calculate allowances based on expected load, and the initial expected load from new EVSE may be lower in early years; additionally, Rules 15 and 16 primarily address service line extensions whereas service line upgrades and extensions are considered here.
- How load management, including automated load management (ALM), may impact the allowance value and the total expected grid impact and/or revenue resulting from the installation of EVSE.
- Facilities in underserved communities may require higher levels of ratepayer support.
- The IOUs should coordinate with EVSPs, ratepayer advocates, and environmental justice/community organizations.
- The IOUs should consider how they may treat participants of TE programs differently than customers installing EV charging outside of TE programs.

9. Timeline for Evaluation of EV Infrastructure Rules

It is reasonable to authorize the IOUs to implement the new EV Infrastructure Rules for a limited timeframe, consistent with AB 841.

PU Code Section 740.19(c) established the timeframe that the CPUC should follow to evaluate the IOUs' proposed Rules, states "[t]he commission may revise the policy described in subdivision (a) and this subdivision after the completion of the general rate case cycle of the electrical corporation following the one during which the advice letter was filed if a determination is made that a change in the policy is necessary to ensure just and reasonable rates for ratepayers."

In response to a question within the ACR asking whether the IOUs' policies should continue indefinitely until the CPUC revises them, TURN, citing the potential for unnecessary risk to ratepayers, recommends that the CPUC should evaluate the impacts of the IOUs' policies at the end of each IOU's GRC cycle to determine if a policy change is necessary.

To the question of interpreting the statute's language of "the general rate case cycle of the electrical corporation following the one during which the advice letter was filed," the status is as follows:

- PG&E's next GRC cycle will end in 2026
- SDG&E's next GRC cycle will end in 2027
- SCE's next GRC cycle will end in 2028

While the timing for a modification of the Rules, per statute, would not occur until after 2026, 2027, and 2028 respectively, it is critical that we begin evaluating these policies earlier. The expected EV load growth over the next several years and the unknowns around the impact to ratepayers justifies us to begin evaluating the programs sooner. The CPUC may begin evaluating the EV Infrastructure Rules all at once in 2025 after the completion of SCE's current GRC cycle in 2024, or may choose to evaluate the programs individually after the completion of each of the IOUs' current GRC cycles.³⁵ Any modifications to the Rules resulting from these evaluations would go into effect after the following GRC cycle, per statute.

Evaluating the three IOU policies together has the benefit of reducing demand on staff and stakeholders and provides the benefit of allowing us to compare the costs and effectiveness of each policy. However, we understand there may be a need to evaluate these policies one-by-one. Thus, it is reasonable for the CPUC to begin the evaluation of the EV Infrastructure Rules by January 2025.

³⁵ PG&E's current GRC cycle ends in 2022, SDG&E's ends in 2023, and SCE's ends in 2024.

In addition, TURN within its combined protest to the three ALs recommends that a timeframe clause be added to the Applicability section of the Rules. TURN states that none of the IOUs include a provision regarding the fact that the new Rule may be revised “after the completion of the [GRC] cycle of the electrical corporation following the one during which the AL was filed.” TURN recommends this timeframe clause be added to the applicability section of the rules.

We find TURN’s recommendation both reasonable and aligned with AB 841 and Section 740.19(c). The statute allows for modification of this policy at the end of the GRC cycle, yet none of the IOUs include a provision to acknowledge that the CPUC may revise the new Rules after the completion of each IOU’s GRC cycle, following the cycle in which they filed the AL. It is appropriate to include language that reflects PU Code 740.19(c)’s provision for revising the Rules. As such, we direct each IOU to add a timeframe clause into the applicability section of their Rules to inform customers that the CPUC may begin an evaluation of the Rule no later than 2025, and may make modifications to the Rules that would go into effect after the completion of the IOU’s GRC cycle, following the one during which the AL was filed. The IOUs should make this modification within their Tier 1 AL compliance filings.

10. Tracking and Reporting Cost Data for GRC Review

It is reasonable for IOUs to report costs within their Memorandum Accounts in a granular manner to allow for reasonableness review of costs within the IOUs’ GRCs.

The ACR posited that Section 740.19(b) and 740.19(c) require IOUs to track and report cost data in a new manner, as the statute expands the definition of electrical distribution infrastructure for the purpose of EV charging compared to utility-side distribution costs covered under Rule 16.

There are two distinct but related issues related to collecting costs associated with the new Rules: (1) data to evaluate the reasonableness of IOU spending in order to authorize cost recovery within the next GRC, and (2) data collection to evaluate the effectiveness of these Rules in meeting state TE goals. The second issue will be addressed in the following section of this Resolution.

The ACR discussed the nature of revised cost tracking within the new Rules, and proposed a set of minimum data collection requirements, which are as follows:

1. Common methodology for isolating costs associated with EV charging that may not previously have been isolated (e.g., how to allocate trenching costs to EV charging for a site that was making multiple upgrades and how to allocate design and permitting costs for projects).
2. Common cost category definitions for poles, vaults, service drops, transformers, mounting pads, trenching, conduit, wire, cable, meters, other equipment used, and associated engineering and civil construction work, as described in statute.
3. Common cost categories for anything else the IOUs propose to track, avoiding duplicative categories.
4. Reporting on the cost of each upgrade made under the new policy.
5. Any cost reduction options offered to each customer (e.g., vehicle-grid integration strategies).
6. How much charging and which power level(s) was installed per site installation.
7. Total new EV charging within the IOU's territory as a result of the AB 841 expenditures and reporting of any publicly available charging to the relevant public databases.
8. Whether charging at the site receiving the expenditure is public or private.
9. Average amount of cost to ratepayers resulting from the new AB 841 Rule, on a per customer basis, if assuming that customer contributions to the utility-side expenditures are eliminated.
10. Whether the customer's site is located in a DAC, in another designation underserved community, or neither.

Several parties' comments focus on the ACR's minimum data collection proposal in terms of how the data will help the CPUC and stakeholders determine the reasonableness of IOU spending in a GRC.

In its response to the ACR's question, TURN urges the CPUC to not be swayed by the IOUs' assertions that data tracking is unnecessary or too challenging. TURN continues that the IOUs should track costs closely to make a reasonable forecast in the GRCs. TURN further argues that the CPUC has long held that IOUs have the burden to establish the reasonableness of all aspects of their requests for rate recovery and the cost tracking recommended in the ACR and proposed by parties is consistent with this requirement and will likely help the IOUs establish more realistic forecasts in the future.

Several parties argue for cost reporting to ensure reasonable expenditures. ChargePoint argues that AB 841 reporting should only include items relevant to the reasonableness

review and other reporting should occur in the Transportation Electrification Framework (TEF) process. NDC agrees that there is a need for more accurate cost tracking to ensure that IOU expenditures are reasonable and minimized. NDC supports the minimum data tracking requirements provided in the ACR.

Several parties support a more granular approach to cost reporting and data collection—SBUA, UCAN, Electrify America, TURN, PCE, NDC, and Cal Advocates—and several also propose additional clarification or additional data categories. Electrify America generally agrees with the ACR’s proposed data categories since the shift to reviewing costs in a GRC raises concerns that the ability to track EV charging activities will be subsumed in a GRC. Electrify America argues that the importance of tracking and identifying EV costs assumes greater importance in this new scenario. Cal Advocates agrees with the proposed data collection requirements, and argues that contrary to SCE’s allegations, tracking data on a site-by-site basis is necessary for the CPUC to evaluate whether to consider future revisions to the Rules. SCE’s confidentiality concerns can be addressed through submission of material under a claim of confidentiality. PCE agrees with the need for transparency and increased granularity of data reporting.

TURN, while supportive of the ACR’s data proposal suggests several modifications. TURN recommends that the metric “how much charging and which power level(s) was installed per site installation” should be modified to specify that the number of ports to be installed at the site must be reported, including the type of charger for each port and the max power level for each charging level. TURN is highly supportive of the need for site level data.

NDC argues that despite the arguments from some parties that the CPUC does not have authority to require cost tracking, the CPUC has a clear responsibility to regulate and restrain IOU expenditures for the public benefit, and broad authority to interpret and enforce statutory mandates to affect this purpose. NDC argues that the new authorization will in effect be like perpetually approved TE programs and that the IOUs have a strong financial motivation to incur as much capital expenditures as they can. NDC argues that the CPUC and ratepayer advocates must have detailed and accurate information on these expenditures in order to effectively evaluate whether costs have been reasonable and minimized. In particular, NDC supports the following recommended data requirements--(1) IOUs must report on any cost reduction options offered to each applicant (e.g., VGI strategies); (2) IOUs must report on whether

charging at the site receiving the expenditure is public or private; (3) IOUs must report on whether the applicant's site is located in an underserved community, and which AB 841 criteria applies.

Several parties are opposed to granular cost tracking. PG&E argues that EV infrastructure costs must be treated no differently than any other distribution costs—recovery of forecasted costs through a GRC without additional reasonableness review. SCE argues that it is reasonable to conclude AB 841 requires IOUs to track and report additional costs specific to the expanded definition of utility distribution infrastructure, but it does not require the IOUs to provide granular tracking and reporting that identifies individual material, equipment, and civil and other costs identifies as electrical distribution infrastructure. SDG&E argues that the CPUC should not require the IOUs to report costs at a site-specific level, as many anticipated utility labor and material costs are incurred on an ongoing basis and are not readily attributable to a specific project or site. Joint Commenters argue that the ACR's proposed data collection requirements include items that do not appear relevant to the reasonableness review the CPUC will conduct under AB 841, and that the CPUC should only require reporting relevant to its reasonableness review and other reporting requirements should be in the TEF process.

In its combined protest to all three ALs, TURN again poses that the IOU cost reporting proposals are insufficient. TURN notes that SDG&E and SCE propose to report costs by cost category on an aggregated and not site-specific basis, which is inconsistent with the minimum data collection and reporting requirements the ACR proposes. Further, TURN states that site level cost tracking is necessary to evaluate the costs and benefits of the Rules, and that the CPUC should direct the IOUs to track site level data, including the site level characteristics TURN includes in its opening comments on the ACR—number and type of charging port supported, type of site, and anonymized utilization data if requested.

We have heard the many party concerns around how a robust data collection process could delay implementation of this AL and concerns that data should focus on information that can support determination of a reasonableness review, which is why we are addressing the two components of data collection—reasonableness and information for future TE evaluation—separately. In terms of defining reasonableness of these costs, the reasonableness shall be determined in relation to ensuring the reported costs are appropriately aligned with Section 740.19(b) and this Resolution, as

well as ensuring that the costs do not exceed an appropriate level of spending for each cost category. Further, in order to evaluate and determine reasonableness of costs, we see value in directing the IOUs to take a granular approach to cost data reporting within their Memo Accounts.

We do not agree with the IOUs' and Joint Commenters' assertion that this does not require granular tracking on a site-specific level. We disagree with SDG&E's statement that many anticipated utility labor and material costs are incurred on an ongoing basis and are not readily attributable to a specific project or site. This is unacceptable. It is imperative that SDG&E, and all the IOUs, must attribute all labor and material costs to individual sites as these costs are treated differently under the EV Infrastructure Rules than under other Electric Rules. The IOUs' Memo Accounts must attribute all labor and material costs to individual sites. Further, understanding the individual site-by-site expenditures is imperative to understanding the reasonableness of the expenditures. There can be vast variance on cost from site to site, and the CPUC staff and stakeholders reviewing the Memo Account costs within the GRC proceeding must be able to understand why some sites might have an exceptionally high cost compared to others.

While some of the ACR's proposed data requirements are more relevant to the data related to evaluating the policy's impacts and will be discussed in the next section, several of the proposed requirements are adopted here. The IOUs' Memo Accounts that this Resolution approves must include, but is not limited to, the following required cost categories:

- (1) Total labor and material costs on a per site basis;
- (2) Site specific costs for each of the following spending categories broken out: poles, vaults, service drops, transformers, mounting pads, trenching, conduit, wire, cable, meters, associated engineering and civil construction work, and other equipment that the IOUs will cover under their new EV Infrastructure Rules;
- (3) Site-specific costs for anything else the IOU covers under the new EV Infrastructure Rules;
- (4) The total number of charging ports and supporting cabinet power level deployed at each site as included in the customer's application;
- (5) The total capacity (kW) at the time of installation for each site;
- (6) How much, if any, additional capacity (kW) was installed for future EVSE deployment.
- (7) Total construction and overhead costs for each site.

The IOUs must use these cost categories to uniformly track costs associated with the new EV Infrastructure Rules within their Memo Accounts. The IOUs must not have any variation between their definitions of cost categories. The IOUs shall additionally (1) submit proposed common cost category definitions for poles, vaults, service drops, transformers, mounting pads, trenching, conduit, wire, cable, meters, associated engineering and civil construction work, and other equipment and labor that the IOUs will cover under their new Rules, and (2) submit common cost categories for anything else the IOUs propose to cover under the Rules. The IOUs will use these cost categories to uniformly track costs associated with the new Rules within their Memorandum Accounts. There should not be variation between the IOUs' cost categories.

While the statute defines electrical distribution infrastructure in these terms,³⁶ the IOUs may use different terminology in practice. The IOUs should work with Energy Division staff on creating a single, statewide definition of each of these terms to ensure consistency across IOUs as well as accurate and efficient tracking of costs. The IOUs shall submit these proposed cost category definitions within their Tier 1 ALs.

The Tier 1 ALs should additionally include the updated Preliminary Statements for the new Memo Accounts. Review of these Memo Accounts will take place in a future GRC proceeding.

11. Tracking and Reporting Cost Data for Programmatic Evaluation

Additional cost reporting through the EV Charging Infrastructure Cost and Load Report, or any successor report, will provide useful data to track the effectiveness and affordability of the EV Infrastructure Rules in accelerating TE.

In addition to determining what costs the IOUs must report within their Memo Accounts, which is discussed above, we must address what additional data collection is necessary for the CPUC and stakeholders to evaluate the effectiveness of the EV Infrastructure Rules in meeting State TE goals, accelerating the speed at which the State deploys EV charging infrastructure, and evaluating the impact to ratepayers.

Within comments on the ACR, several parties suggest that the CPUC address additional data requirements within the DRIVE proceeding to streamline TE data collection. ChargePoint, PCE, and VGIC are generally supportive of collecting additional cost data and the ACR's proposal for a common data collection framework. PCE agrees that

³⁶ See definition of electrical distribution infrastructure in Section 740.19(b).

transparency is needed on infrastructure upgrade costs and agrees with the concept of a common framework for data collection on costs. PCE further supports utilizing the Joint IOU EV Charging Infrastructure Cost and Load Report.

TURN and UCAN both agree that while Section 740.19(c) mandates reasonableness review of the costs incurred during the current GRC cycles, the annual reporting and tracking of these costs should occur in the DRIVE rulemaking. TURN further suggests, and UCAN agrees, that these annual reports include a reference to which chapter of the GRC testimony the IOU will address the reasonableness of the costs.

Parties provide suggestions for refining the proposed data collection metrics and suggest additional data for the IOUs to collect. AEE suggests that data on cost reduction options that the IOUs offer, like VGI solutions, and EV charger power levels could help stakeholders better understand the relationship between make-ready costs and technologies deployed. UCAN is especially supportive of tracking incremental costs above those that IOUs normally pay for under Rule 16. Electrify America recommends that the CPUC clarify that the data collection does not require the collection of confidential or proprietary business information from vendors and also requests that the CPUC provide clarity in defining the scope of “the average amount of cost to ratepayers resulting from the new Rule,” on a per customer basis. The question remains whether the average amount of cost to ratepayers should be tracked within specific customer classes or across all ratepayers. Cal Advocates agrees with the ACR’s proposed data collection requirements, and recommends (1) on the metric “average amount of cost to ratepayers resulting from the AB 841 rule, on a per customer basis,” the CPUC should clarify that data will be required on a per customer site basis rather than per customer. NDC additionally recommends requiring the following reporting details recommended by TURN: type of site (workplace, fleet, MUD, etc.); number of low-income (CARE eligible) customers served by the infrastructure; source and amount of public funds used to support the project, if any; amount of customer contribution to distribution infrastructure costs in excess of line extension allowance, if any; total cost of installation; utilization data upon request by parties for each site (anonymized).

Several parties, including NRDC et al., AEE and PCE also state that any data collection requirements should not delay the implementation of the EV Infrastructure Rules. NRDC et al. suggests that the IOUs submit a common framework for data collection that takes effect when each IOU files its next GRC given there is insufficient time to develop a common proposal for data collection.

The IOUs are generally critical of additional data requirements. PG&E states that data should be discussed collaboratively among staff, stakeholders, and IOUs and not required as a condition of approval of this Rule. SCE asks that if new cost tracking is necessary, that the CPUC clarify that the IOUs be allowed to aggregate information and not provide site specific data and should direct the IOUs to collaborate on a common framework. Several parties, including PCE, push back on the IOUs' assertion that site-level cost data is unnecessary. PCE in particular argues that the current IOU Infrastructure Cost and Load Report does not provide the level of detail needed to evaluate the reasonableness of IOU distribution infrastructure upgrade costs, and that detailed data is already a requirement under the CEC's CALeVIP program and it has not posed a barrier to participation.

None of the IOUs within their ALs propose data collection metrics or a plan to submit a common proposal.

Parties raise valid concerns about streamlining data collection and reporting through the DRIVE proceeding, both to improve the data we receive and to reduce the burden on IOUs and stakeholders in reviewing too many data reports. That said, we also agree that developing a data collection template could delay the IOUs implementation of the EV Infrastructure Rules. We disagree strongly with the IOUs' assertions that data collection and reporting associated with these Rules are not necessary. It is critical that we measure our progress in meeting AB 841, SB 350, and Executive Orders that make TE a top priority for California to address climate change. Data can provide us a clearer picture of what strategies and investments are working to meet our TE and climate goals in a cost-effective manner, and which strategies and investments are less effective.

Given these concerns and the fact that the IOUs did not submit a common proposal for data collection on their own, this Resolutions directs Energy Division staff, in consultation with the IOUs and other stakeholders as necessary, to finalize a data collection template for the EV Infrastructure Rules and based on the ACR's proposed minimum data collection requirements and party comments. Further, Energy Division staff should strive to align the data reporting requirements with the CEC's CALeVIP program, to the extent feasible and practical. This can help ensure better coordination and transparency of cost data across agencies. These data requirements will be incorporated into the EV Charging Infrastructure Cost and Load Reports, or any successor report, which the IOUs must comply with beginning with their 2022 report submitted in the Spring of 2023. When finalized, Energy Division staff will notify the

DRIVE service list and include a link to the template on the CPUC website. Energy Division staff will finalize this template prior to the IOUs beginning to offer service under the EV Infrastructure Rules. Energy Division staff will determine if updates to the data template are necessary annually.

This data collection template will include, but is not limited to:

- Total number of sites that received service under the EV Infrastructure Rules annually.
- Total cost associated with the EV Infrastructure Rules annually.
- Total amount of new charging (number of charge ports and number of sites) that the EV Infrastructure Rules annually, including an aggregation of which power levels of EVSE were deployed, and confirmation of reporting of any publicly available charging to the relevant public databases.
- Total per site cost for every upgrade made under the EV Infrastructure Rules.
- Dollar per additional kilowatt of capacity installed on a per site basis.
- The type of site that received service (workplace, fleet, MUD, etc.) as listed on the customer's application.
- Per site cost data broken down by poles, vaults, service drops, transformers, mounting pads, trenching, conduit, wire, cable, meters, other equipment used, and associated engineering and civil construction work, as described in statute, as well as any other costs the IOUs cover, excluding labor, reported on a per-site basis.
- Per-site data on sites that choose to install additional capacity, the number of EVSE they plan to install in the future, the total kW capacity of the upgrade, all as listed on the customer's application, and follow up customer survey data on how many EVSE were installed later and how long after the initial installation.
- Aggregated annual costs associated with the EV Infrastructure Rules, and also broken down by the per site cost categories defined in statute, with the exception of labor which may be reported on an aggregated per site basis.
- Per site costs for the total utility-side investments made under the EV Infrastructure Rules that the IOU/ratepayers cover and that the applicant covers.

- Whether the charging at each site is publicly accessible, shared, or private, as listed on the customer's application.
 - Per site, the number of charge ports and which power levels were installed per installation, including the max power level for each EVSE as listed on the customer's application.
 - On a per site basis, the average amount of ratepayer costs on the utility-side of the meter.
 - Estimated annual customer bill impact resulting from the EV Infrastructure Rules.
 - On an aggregated basis, the total additional costs the IOU/ratepayers cover as compared to treatment under existing Rule 16.
-
- Load management options, including ALM, on which the IOU educates the applicant and which the applicant also chooses to implement at initial construction.
 - For each site, whether it is located in a DAC, another designated underserved community location (if so, which), or neither.
 - On a per site basis, identify whether the customer is participating in another IOU TE infrastructure program or receiving other IOU-associated incentives behind-the-meter, including an IOU-administered Low Carbon Fuel Standard funded program as listed on the customer's application.
 - Aggregated and anonymized utilization data at a meter level, not an EVSE level (should be available upon request)
 - On a per site basis, whether the installation is at a garage, a surface (lot) installation, or other (must explain "other").
 - Whether the site will primarily service light, medium- or heavy-duty or off-road EVs, or a mix, as stated on the customer's application.
-
- Number of applications that did not result in viable utility-side make-ready deployments and why (description of why does not need to be per application, but a list of all the reasons why in a given year).
 - Identification of any constraints to infrastructure deployment including, but not limited to, materials, staffing, permitting, etc.
 - On a per site basis, the number of business days between a customer's service request and when the facility is energized, including description of

the days in which the IOU is waiting for the authority having jurisdiction (AHJ), customer, or other non-utility responsibility..

Lastly, we adopt TURN's suggestion that the IOUs include a reference within their annual cost report with which chapter of the GRC testimony the IOU will address the reasonableness of the costs reported. This can support parties to the DRIVE proceeding, or any successor proceeding, to clearly understand how the costs will be addressed within the GRC.

12. Utilizing Existing Electrical Service Connections

It is reasonable to require IOUs under the new EV Infrastructure Rules to utilize existing service, where feasible.

Within comments on the ACR, a few parties mention the value of the IOUs using existing service rather than building a new service line for both limiting ratepayer costs and enabling vehicle-grid integration (VGI) use cases, including when vehicle charging is optimized with multiple charging ports at one site or other customer load. SBUA recommends the CPUC consider whether to extend the treatment under the new Rules beyond new service lines to also support upgrades of existing service lines. SBUA argues that some customers may prefer to accommodate EV charging on an existing meter and that the CPUC should also consider service line cost upgrades on the same basis as new service lines. VGIC argues that the CPUC should consider requiring the IOUs to utilize existing service connections to support VGI. PCE states that the CPUC should encourage utilization of existing utility service to enable greater VGI deployment, and agrees with VGIC that VGI use cases often require EV load to be comingled on the same service line with other loads.

We agree that deploying all infrastructure under the EV Infrastructure Rules with separate service poses a challenge to our VGI and TE resiliency goals. In particular, this poses challenges to any vehicle-to-building use cases that a customer may want to implement in the future. We agree that using existing service is preferable for supporting VGI and, depending on the site, for reducing cost. While the statute requires these Rules to apply to separately metered EV charging, there is no requirement to install new service in all cases. It is possible to separately meter EVSE load on a facility's existing service line by installing a utility-grade meter as a submeter. This configuration both meets the statutory requirement for separately metered EVSE and can help to facilitate future VGI use cases. We also understand there may be other configurations

that meet the requirements of separately metering while using existing service lines to enable future vehicle-to-building and vehicle-to-grid scenarios. The main objective the IOUs must strive for is to reduce any barriers to using these installations for VGI purposes in the future.

However, we understand that in some cases new service is necessary and may be the most efficient path forward in terms of site design or cost. In particular, this will be the case for sites where no existing service is available and for sites in which the existing service cannot be upgraded. We thus direct the IOUs to update their proposed EV Infrastructure Rules through the Tier 1 Implementation AL to default to utilizing existing service where technically feasible and cost efficient, targeting the lowest lifetime costs for ratepayers including maintenance and eventual provisions for VGI use cases. Additionally, the IOUs must include a provision within the Rules that they will discuss with each applicant the importance to the applicant of enabling VGI use cases at their facility, and whether the IOU and applicant should consider additional site design specifications to support VGI use cases.

The CPUC is currently considering the adoption of a Submetering Protocol. If a Submetering Protocol is adopted, the CPUC may direct the IOUs to incorporate additional submeters beyond utility-grade metering within their Rules.

13. Offering of Load Management Tools

The IOUs' proposals to not include load management as a condition of taking advantage of the new EV Infrastructure Rules is reasonable at this time. However, IOUs shall offer and discuss with each applicant available IOU and third-party load management solutions.

The ACR asked parties several questions related to load management solutions and AB 841—(1) whether the CPUC should require IOUs to offer load management solutions to applicants requesting service under the new Rule, and what those solutions should be; (2) how the ALM language within D.20-12-029³⁷ should be implemented in relation to

³⁷ [D.20-12-029](#) at page 28: "... any future tariff or rule filed by a large electrical corporation for service line and/or distribution line upgrades to support transportation electrification shall provide an option for customer-side ALM where beneficial to ratepayers while meeting TE charging needs. The large electrical corporations shall develop standard evaluation criteria to determine host sites where ALM would benefit ratepayers by reducing costs while meeting host site needs for EV charging."

AB 841; and (3) whether the new Rules have the potential for adverse impacts to load management, VGI, and/or future submetering policy.

The IOUs comments on the ACR argue that the CPUC should not require any load management provisions for the new Rules. PG&E argues that load management should be addressed via existing or new IOU programs, rates, and pilots, not via additions or conditions on the EV Infrastructure Rules. SCE argues that the IOU should not be required to impose non-rate related load management solutions, but that the CPUC should encourage IOUs to offer relevant load management solutions to customers taking service on the new Rule. SDG&E states that it is premature to require IOUs to offer load management solutions to customers taking service on the new rule and that any requirement as a pre-requisite to taking service should not be adopted until criteria, definitions, and requirements have been fully vetted and adopted by the CPUC.

VGIC, Joint Commenters, ChargePoint, AEE, NRDC et al. and NDC state that IOUs should offer and educate applicants on load management solutions, but not require it since doing so could deter customer participation. Tesla argues that load management solutions should be opt-in. The CASMU argue that the small IOUs do not have the technology or staff to offer load management solutions.

Similarly, parties--including Electrify America, Tesla, SCE, SDG&E, Cal Advocates, Joint Commenters, ChargePoint, TURN, VGIC, and NRDC et al.--generally advocate against any ALM requirement or condition within the EV Infrastructure Rules at this time. Electrify America notes that ALM is not suited to all use cases (in particular DCFC), could impact EV adoption, and may undermine equity goals. SDG&E argues that since it will not own or subsidize the behind-the-meter infrastructure, it cannot require customers to purchase any specific capabilities for the EVSE. SCE and Cal Advocates raise concerns that there is little data available to evaluate the costs and benefits of TE ALM, and that the CPUC should not mandate the use of ALM until the market has been investigated and costs and benefits quantified through studies and pilots. Further, Cal Advocates argues ALM should be a site-specific consideration, and that the CPUC should not restrict the types of eligible load management solutions from which customers can choose.

NRDC et al. argues that given the CPUC does not have a definition, deployment criteria, or performance requirements for ALM and that these questions will not be resolved prior to statutory deadline, the CPUC should continue to evaluate ALM

solutions outside of AB 841. NRDC et al. does however support having the IOUs and EV service providers (EVSPs) educate and work with applicants to better understand whether and how load management solutions may be appropriate for their sites.

VGIC and Tesla argue that the individual customer should decide whether to implement ALM. Tesla argues that a requirement for ALM would be detrimental because requiring a relatively new technology against the will of individual customers would cause confusion, open the door to unknown technical issues, and could lead to lower charger reliability and the slowdown of EV charging deployment. VGIC argues that customers should not be forced to accept smaller than nameplate connect, nor should any use cases automatically be considered appropriate/inappropriate for ALM. As an alternative to requiring ALM, VGIC suggests the IOUs could develop a new shared savings incentive mechanisms as an option for applicants that is designed to encourage, but not require site hosts to incorporate ALM. VGIC proposes the incentive for this model as a combination of an upfront payment and a bill credit. Several parties critiqued this approach, including TURN who argues that any costs for ALM should be borne by applicants not ratepayers and PCE who argues that the proposal still has many outstanding questions.

TURN suggests, and Joint Commenters agree, that the IOUs be required to revise their distribution planning rules for EV charging to incorporate actual expected EV charging usage since the new Rules highlight the need to incentivize EV charging at grid friendly times to mitigate the need for some distribution system upgrades and the need to model peak EV load for distribution planning purposes. Cal Advocates suggests that the CPUC require the IOUs to coordinate with EVSPs to educate applicants about load management solutions, and to encourage applicants to consider adopting load management solutions early in their EVSE installation process.

PCE and UCAN, however, do recommend conditioning taking service under the new Rules on load management strategies. UCAN suggests that all new meters be networked smart meters, and any applicable EV rates should apply to these customers. PCE recommends that the CPUC require that for MUDs utilizing Level 2 charging with at least four or more Level 2 ports ALM should be a requirement, but that the requirement should be evaluated periodically. PCE argues that in its own implementation of this approach it minimized project costs, and that the MUD use case is appropriate for ALM. For all other sites, PCE suggests the IOU be required to initiate a collaborative process to ensure that it is offering a well-tailored solution to that site.

Within their ALs, the IOUs did not include any provisions regarding load management.

We agree with the many parties' concerns that load management requirements for customers taking service under the new EV Infrastructure Rules is a site-specific consideration. We agree that the Rules should not have overly complex conditions for taking service, and that there are other more appropriate venues to address load management at this time within programs, rates, and pilots. While TE programs have in the past included certain load management requirements (e.g., customer load management plans, DR participation, etc.), those programs also provided incentives behind-the-meter. As SDG&E points out, through the EV Infrastructure Rules the IOUs will not own nor will they subsidize any of the behind-the-meter infrastructure. We agree with SDG&E that it would thus be inappropriate to require customers to purchase any specific capabilities for the EVSEs for which the customer alone is responsible.

We also agree with the majority of parties who oppose including any requirement for ALM within these Rules, citing to the lack of a CPUC approved definition(s) and criteria for how to implement ALM, outstanding implementation questions around costs and benefits and concerns around customer choice. Additional input from stakeholders, additional data to answer critical questions around ALM, and additional CPUC guidance is necessary before any ALM deployment requirement can move forward. As the process for developing the needed definitions, criteria, data, and guidance on ALM develops through the CPUC's implementation of D.20-12-029, the CPUC may revisit the topic of ALM, load management, and the EV Infrastructure Rules.

Further, we agree with the many parties that state the IOUs should offer and educate applicants on load management solutions, without creating a requirement for applicants taking service under the new Rules. We direct the IOUs to educate and offer each applicant taking service under the new Rules about available IOU and third-party load management solutions. In accordance with D.20-12-029, this offering should, at minimum, include education and an option for the customer to install customer-side ALM. The IOUs within their Tier 2 AL should outline which load management solutions they will offer applicants and how they plan to update this list over time.

14. Enrollment in a Time-Variant Rate

SDG&E's proposal to require applicants to be enrolled on a TOU rate is reasonable and should be applied to all of the IOUs' EV Infrastructure Rules.

SDG&E proposes to require participants to take service on an applicable time-varying rate, which is intended to reduce peak loads and promote the use of renewable resources. ChargePoint objects to SDG&E's proposed requirement and suggests it be rejected "because it is outside the scope of AB 841." ChargePoint notes that while most customers will likely be on a time-varying rate, exceptions are possible, and it would be inappropriate to condition eligibility of Rule 45 on the applicant's enrollment on a specific rate. ChargePoint notes that there are other methods to effectively manage EV charging that do not require applicants to react to a time-varying rate (e.g., managing power levels and charging times, coordinating with on-site generation). SDG&E clarifies that under its proposal the site host would be required to take service on a time-varying rate, but there is no requirement that the site host pass the signals along to drivers if they prefer to adopt alternative load management methods.

Promotion of time-varying rates is a key component of the CPUC's strategy for load management and integration of renewables. All IOU commercial customers are defaulted onto a time-varying rate to communicate price signals to encourage customers to use electricity at times that are beneficial for the grid. It is one of the critical strategies for TE in managing the overall impact to the grid as well. We disagree with ChargePoint's protest that this is outside the scope of AB 841. Nothing within AB 841 precludes requirements for taking service on a time-varying rate. While we do agree with ChargePoint that there are other strategies for managing load, none of these strategies are included as requirements within the EV Infrastructure Rules, and parties have loudly decried any additional load management conditions within these Rules. As such, requiring customer participating in the EV Infrastructure Rules to take service on a time-varying rate is reasonable.

We direct the IOUs to each update their proposed EV Infrastructure Rules within the Tier 1 AL to reflect that as a default, participants will be enrolled on the commercial time-variant EV rate that each IOU offers, but that applicants may choose to change to another time-variant rate. We thus direct each IOU to modify their Rules to state the following:

"All applicants taking service through Rule [#] will automatically be enrolled onto an applicable EV time-of-use rate. After discussing their EV charging needs with [the IOU], the applicant may opt-out of the EV time-of-use rate for another appropriate time variant rate."

It is reasonable to default customers onto an applicable time-variant rate because it is the most efficient way to ensure customers are enrolled on a rate plan that encourages beneficial electric consumption habits without imposing significant disruption.

15. Penalty for Failure to Provide Accurate and Full Accounting

The CPUC's Enforcement Policy describes the CPUC's broad enforcement authority.

PU Code Section 740.19(a) directs the CPUC to require each IOU to provide an accurate and full accounting of all expenses related to electrical distribution infrastructure and apply appropriate penalties to the extent an IOU is not accurately tracking all expenses.³⁸ The ACR proposed that the CPUC levy a \$500 per day penalty following a reporting deadline in which an IOU fails to submit a report, submits inaccurate information, or submits an incomplete report.

UCAN, TURN, and CASMU are generally supportive of the penalty proposal, with some stipulations. UCAN states it was open to other solutions, and TURN notes that the IOUs should recover penalty costs from shareholders rather than ratepayers. CASMU suggest the proposal be revised to provide IOUs with a cure period for inaccurate or incomplete reports—10 days from the date they are notified.

PG&E and SCE oppose the penalty proposal. PG&E states that the statute does not require new or different penalties, and SCE states that the CPUC already has a mechanism to hold the IOUs accountable for tracking expenses. They argue that the ACR fails to consider factors like mitigating circumstances, harm to customers, or due process, and the ACR does not reflect the CPUC's newly approved Enforcement Policy.

PG&E and SCE are correct that we do not have to adopt a penalty in this Resolution to enforce the new EV Infrastructure Rules reporting requirements. The CPUC's Enforcement Policy describes the CPUC's broad enforcement authority, as well as the various enforcement tools available to staff, including citation programs.³⁹ While we elect not to adopt a specific penalty amount here, we authorize staff to develop a citation program, or use other enforcement tools as necessary to ensure compliance with the accurate reporting requirements of this Resolution. The information and data collected for the new EV Infrastructure Rules have significant public policy importance

³⁸ Section 740.19(a)

³⁹ See Resolution M-4846

and the IOUs should make every effort to meet the letter and the spirit of the reporting requirements set forth in Section 740.19(c), this Resolution, and any further guidance.

16. Service Energization Timing Expectation

It is reasonable for the CPUC to establish service request timing expectations for the EV Infrastructure Rules.

In comments provided on the ACR, Tesla suggests that the CPUC establish timelines for the IOUs to respond to EV charging installation service requests and have specific goals for construction and approval items (e.g., days from service request to utility service, days from construction to complete energization). Tesla cites the most important metric is total days from service request to energization. ChargePoint agrees with this point and suggests that the CPUC provide guidance to enable staffing, training, and equipment procurement expansion, and establish expectations for reasonable, nondiscriminatory management of new service requests. ChargePoint further suggests that guidelines could include reasonable timeframes for reviewing, responding to, and processing customer requests, and for completing design tasks, permitting, and construction.

The draft Transportation Electrification Framework (TEF) also contained recommendations that the IOUs provide transparent and streamlined processes for interconnection, and included a question on whether the CPUC should direct the IOUs to meet specific connection deadlines or establish clearer timeframes for the EVSE interconnection process. In response to this question, several parties submitted comments expressing support for establishing such timelines. Included within these parties, EVgo suggested a 90-day timeline from assessment to energization, citing that Dominion Energy routinely provides cost estimates and specifications within three weeks that California IOUs provide within two to four months. Electrify America notes that California IOUs takes an average of 36 weeks for energization, which is nearly 20 percent longer than the average time it takes in the rest of the U.S. ChargePoint notes that while some milestones, like permitting, are outside of IOU control, the IOU still has an obligation to provide a reasonable timeline for each project. Each of the IOUs oppose setting specific deadlines for interconnection.

We find Tesla and ChargePoint's comments to be reasonable, especially in light of the party support for a similar suggestion within the TEF. In particular Tesla's suggestion to establish a metric for the total days from service request to energization could provide important targets for the IOUs in improving their service and transparency. This timing concern that Tesla and ChargePoint have raised is critical as delays in energization slow down construction timelines, increase costs for developers, and hinder the pace of accelerating TE.

However, we also understand that different sites may have different timing demands, and thus an average number of days would be most appropriate. This would allow for some projects to necessarily exceed the timeline while others could move quicker than the expected timeline. Additionally, we recognize that delays may arise that are outside of the IOUs' control, and which will impact the IOUs' ability to meet an average energization timeline. Examples of these delays include the AHJ issuing permits for customer-side equipment, executing easements, customer-side panel inspections, and timing for a customer to sign contracts.

We adopt an average service timing expectation in this Resolution, but acknowledge that additional data is necessary to implement this expectation. Thus, we direct the IOUs to propose an average timeline between a customer submitting a service request to when the facility is energized. We expect this timeline to be between an average of 90 and 160 days. To inform this proposal we direct the IOUs to host a public workshop within 180 days of approval of this Resolution to discuss the barriers to the timely energization of EV charging infrastructure. At minimum, the workshop must address 1) the IOUs' processes and internal timeline for timely installing and energizing electrical distribution infrastructure to support EV charging, 2) the barriers within the IOUs' control that impact the IOUs' ability to meet a timely service energization average, 3) the barriers outside of the IOUs' control that impact the IOUs' ability to meet a faster service energization average, 4) the direct perspective of EVSPs and other industry representatives, 5) how the IOUs can collaborate and coordinate with EVSPs and other market actors (e.g., AHJ) to accelerate service energization timing, and 6) potential solutions to overcome the identified barriers. The IOUs must ensure the EVSPs are provided sufficient time to discuss their concerns and suggestions.

Within 60 days of holding the workshop, the IOUs' must file a joint Tier 2 AL, separate from the Tier 2 AL that this Resolution previously references, to propose a service energization timeline, that, at minimum, 1) proposes a numerical timeline (i.e., number

of business days) for average energization timing between when a customer submits an application and when their site is energized, and reflects efforts to accelerate the current average service energization timeline (90 to 160 days); 2) identifies the processes that are within the IOUs' direct and indirect control; 3) identifies the processes that are not within the IOUs' control (e.g., within the control of the customer, AHJ, EVSP, etc.); 4) a process for how the IOUs can improve the service energization timing for items that are within their direct and indirect control; 5) description of how the IOUs can contribute towards improving the timing for other responsibilities, if any; and 6) a proposal this reflective of the discussions and feedback from the workshop, including the feedback of industry representatives.

Additionally, as discussed earlier in this Resolution, the IOUs are required to report the actual service timing for each site within the EV Cost and Load Report. This will allow the CPUC to evaluate the IOUs' efficacy in meeting this service timing expectation and provide data for the CPUC to issue additional enforcement in the future if necessary.

17. Rate Impact

The IOUs should submit a rate impact estimate.

None of the IOUs included within their ALs an estimate of the total expected revenue requirement nor the estimated rate impact of the EV Infrastructure Rules. Within their Tier 1 AL compliance filings, the IOUs should each submit the expected revenue requirement and rate impact resulting from these EV Infrastructure Rules through the end of 2024 when the CPUC will begin its evaluation of the Rules.

Safety Considerations

This Resolution approves, with modifications, PG&E's and SCE's proposed Rules 29 and SDG&E's proposed Rule 45. These new Rules will serve as an alternative to Rule 16 for service extensions related to separately metered EV charging, excluding that installed at single-family homes. The safety considerations are similar to those associated with existing utility responsibilities associated with building new service. The utilities must continue to comply with existing utility policy on safety requirements and standards, as well as the Transportation Electrification Safety Requirements checklist adopted in 2018 via D.18-05-040 where applicable. Thus, no incremental safety implications associated with approval of this Resolution are expected.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review. Please note that comments are due 20 days from the mailing date of this Resolution. Section 311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day review and 20-day comment period for the draft of this Resolution was neither waived nor reduced. Accordingly, this draft Resolution was mailed to parties for comments, and will be placed on the CPUC's agenda no earlier than 30 days from today.

On August 25, 2021, Advance Energy Economy (AEE), the Alliance for Automotive Innovation (Auto Innovators), ChargePoint, Electrify America, joint comments filed by Natural Resources Defense Council, the Coalition of California Utility Employees, Plug-in America, the Alliance for Automotive Innovation, Greenlots, and FLO (NRDC *et al.*) Pacific Gas & Electric (PG&E), joint comments filed by Peninsula Clean Energy and Sonoma Clean Power (PCE/SCP), San Diego Gas & Electric (SDG&E), Small Business Utility Advocates (SBUA), Southern California Edison (SCE), Tesla, the Utility Reform Network (TURN), and Vehicle-Grid Integration Council (VGIC) filed comments on this Resolution.

AEE opposes the draft Resolution's determination that customer allowances be adopted and slowly implemented once data to inform the allowance design is collected. They instead recommend the Resolution adopts the ACR's interpretation to mean that the new Rules should no longer require a customer contribution for utility-side distribution infrastructure work to support EV charging, as required in Rule 15 and Rule 16. AEE raises other concerns with the Resolution's exclusion of incentives for IOUs to first consider ALM, managed charging, or EV load reduction measures, and recommends that any future allowance, if adopted, should include load management options beyond TOU rates to reduce or eliminate the customer's obligations to provide any potential contributions for make-ready infrastructure. AEE supports the draft Resolution's inclusion of a 90-day service energization timing, and recommends a workshop to discuss how to streamline soft cost barriers to EVSE deployment.

Auto Innovators support the Resolution's determination that the IOUs adhere to a 90-day average from receiving a service request to when a facility is energized.

ChargePoint's comments oppose the inclusion and implementation timing of a customer allowance. ChargePoint recommends the CPUC postpone requiring a customer allowance until the CPUC conducts its evaluation of the Rules. ChargePoint also does not support the requirement that all customers taking service through the Rules be defaulted onto an EV TOU rate. ChargePoint recommends modifying this requirement to allow a customer to opt-in to a rate that works best for them. Finally, ChargePoint supports the Resolutions determination that load management should be addressed separately from this Resolution.

Electrify America supports the draft Resolution's acknowledgement that ALM should not be a universal requirement as part of implementation of AB 841. They further request modifications to language concerning the requirement that IOUs interconnect the distribution infrastructure on the shortest, most practical, and available route, and instead recommend this be changed to the "shortest or most practical available route."

NRDC *et al.* generally support the draft Resolution but recommends the CPUC eliminate any allowance requirement and delay the evaluation of potential allowance structure until after the IOUs' next GRC cycle, following the ones in which the ALs were filed. They also recommend revising the evaluation of the EV Infrastructure Rules until after the conclusion of the IOUs' next GRC cycle.

PG&E recommends a number of modifications to the Resolution. First, they comment that the evaluation timing contains legal errors by claiming that the CPUC can evaluate the Rules during the IOUs' next GRC cycles. PG&E asserts the evaluations can only be conducted after the completion of the GRC cycle after the one the IOUs' are currently in. Regarding a customer allowance, PG&E requests any future allowance be deferred until after the Commission begins the evaluation of the Rules and that any allowance needs to consider the impacts it will have on future TE programs, specifically, Near-Term TE Priority programs. PG&E opposes the draft Resolution's service energization timing requirements, and caution that there are significant delays on the customer-side of the meter which will make it difficult for the IOUs' to achieve the proposed timing requirements. While supportive of the requirement that the IOUs educate and offer customer's of utility-side load management options, PG&E opposes the requirement

that this also include customer-side load management options. PG&E also opposes the proposed penalty for inaccurate or incomplete data.

PCE/SCP recommend the Resolution be modified to require ALM for projects with a projected cost in excess of 20 percent of the average utility-side distribution upgrade costs under the EV Infrastructure Rules, and where the average dwell time is longer than four hours. They further recommend requiring additional data collection on ALM related cost and use metrics.

SBUA's comments reflect general support for the Resolution, specifically the proposed language for the IOUs to meet a 90-day average for service energization. SBUA also expresses their support for the proposed customer allowance process and offers recommendations on how the IOUs should inform the allowance design. Finally, SBUA requests clarification for how the IOUs are to define an Electric Vehicle so that it does not exclude non-wheeled modes of transportation.

SCE generally supports the Resolution, and proposes some modifications. SCE recommends the final Resolution align the penalty for inaccurate or incomplete data with the 2020 CPUC Enforcement Policy update. They also raise concerns with the service energization timing, and recommend the final Resolution adopt a timeline that is limited to tasks within the IOUs' control, in addition to encouraging a CPUC led workshop to identify opportunities to establish a streamlined service energization timeline. SCE also recommends a number of edits to the data collection requirements for the memo accounts and EV Load and Cost reporting. Finally, SCE requests the final Resolution delay the workshop to develop a customer allowance structure until 2027.

SDG&E voices their support for the draft resolution, but suggests a few modifications. SDG&E comments that the draft Resolution errs by requiring the an evaluation of the Rules in 2025, which they state should be no sooner than 2027, as required by statute. SDG&E further recommends the customer allowance should be phased in after the evaluation of the Rules in January 2025, rather than within two-years. SDG&E also provides comments on the data reporting requirements. SDG&E voices concern with the proposed service energization timeline requirements, stating that significant steps that impact meeting this timing requirement are outside of the IOUs' direct control. Finally, SDG&E requests clarifications that the penalty for missed reporting applies only to EV Infrastructure Rules reporting required by this Resolution.

Tesla also voices their general support for the Resolution. Tesla's supports modifications to the proposed language regarding the use of the Safety Requirement Checklists to ensure the use of the checklist does not prevent a customer from installing any specific EVSE. Tesla also requests clarification on two areas of the data collection requirements. Finally, Tesla expresses support for the proposed 90-day average for service energization, and requested a workshop to discuss current timelines and opportunities for further collaboration between the IOUs and EV charging providers.

TURN recommends the IOUs be required to determine the least-cost location and other deployment characteristics at a site to deploy the distribution infrastructure to support EV charging, rather than the draft Resolution's language, which directs the IOUs to install the service extension along the shortest, most practical, and available route. TURN further recommends the final Resolution adopt a narrow timeline for when a customer who installs excess capacity for future EVSE installations can install the future equipment. TURN also expresses their support for the draft Resolution's directives regarding the evaluation timing for the EV Infrastructure Rules, cost reporting requirements, and the directive that the IOUs provide an estimate revenue requirement and rate impact as a result of the Rules.

VGIC recommends a number of measures to further the installation of ALM solutions. First, the recommend the Resolution establishes a new method for incentivizing customers to pursue ALM where it makes sense. They then urge that the CPUC include a robust follow up process to develop and implement an approach to encourage ALM and advance the ALM intentions adopted in D.20-12-029.

In response to these comments on the draft Resolution, modifications were made in this Resolution to address comments including regarding the inclusion of an allowance, energization timing, and data collection requirements. We note that despite modifications to the inclusion of an allowance structure at this time, we do not agree with all party comments requesting this change. In particular, Section 740.19(c) only prohibits the overall policy of treating utility-side electric vehicle infrastructure like any other necessary distribution infrastructure. It does not prohibit the CPUC from making any other substantive changes that do not alter that overall policy. The CPUC has broad authority over the IOUs pursuant to Section 740.19(c) and is authorized to regulate them in any way it sees fit.

FINDINGS

1. On February 26, 2021, Southern California Edison Company filed advice letter 4429-E, San Diego Gas & Electric Company filed advice letter 3705-E, and Pacific Gas and Electric Company filed advice letter 6102-E which was later replaced by advice letter 6102-E-A filed on March 17, 2021. The advice letters request the establishment of new Electric Rules—Electric Rule 45 for San Diego Gas & Electric Company and Electric Rules 29 for Southern California Edison Company and Pacific Gas and Electric Company—known as the EV Infrastructure Rules (Rules), and associated Memorandum Accounts (Memo Accounts) to track the costs associated with offering these new Rules.
2. Assembly Bill 841 (Ting, 2020) directed the investor-owned utilities to file advice letters no later than February 28, 2021, to establish a new tariff or Rule that authorizes each investor-owned utility to design and deploy all electrical distribution infrastructure on the utility side of the customer’s meter for all applicants installing separately metered infrastructure to support electric vehicle charging stations.
3. On January 15, 2021, Commissioner Rechtschaffen issued an Assigned Commissioner Ruling within the DRIVE Rulemaking—Rulemaking (R.) 18-12-006—to seek party feedback on how the CPUC should implement and interpret certain aspects of Assembly Bill 841 (Ting, 2020). Outstanding issues raised in the Assigned Commissioner Ruling and comments on the Assigned Commissioner Ruling related to the establishment of the new Electric Vehicle Infrastructure rules are addressed through this Resolution.
4. In response to each investor-owned utility’s advice letter, ChargePoint submitted protests that critiqued the investor-owned utilities’ proposal to assign the costs of environmental studies and issue mitigation to the applicants.
5. In their advice letters, Southern California Edison Company and San Diego Gas & Electric Company did address the concern of applicability of the proposed Electric Vehicle Infrastructure Rules to previously approved programs, however Pacific Gas and Electric Company does not.
6. ChargePoint submitted protests to each investor-owned utility’s advice letter, in which it requests the inclusion of additional language in the Electric Vehicle Infrastructure Rules to provide clarity that the Electric Rules do not affect any

additional customer incentive provided through investor-owned utility Transportation Electrification programs.

7. The investor-owned utilities propose within their advice letters to require Applicants to demonstrate proof of commitment to install Electric Vehicle Supply Equipment and would require Applicants to maintain and operate the Electric Vehicle Supply Equipment for a minimum of five years.
8. In response to all three investor-owned utilities' advice letter, Joint CCAs express concern around the conditions and limitations included in the advice letters.
9. Pacific Gas and Electric Company is the only investor-owned utility to propose a length limitation to the service line extension over which the Applicant would have to cover any incremental costs.
10. San Diego Gas & Electric Company is the only investor-owned utility to explicitly propose building additional capacity beyond what is necessary to serve the planned number of Electric Vehicle Supply Equipment installed in the near-term to help avoid upgrades in the future.
11. The investor-owned utilities propose similar, but slightly different definitions of electric vehicles within their proposed Electric Vehicle Infrastructure Rules.
12. None of the investor-owned utilities propose concrete timelines for establishing the new Electric Vehicle Infrastructure Rules.
13. In comments on the Assigned Commissioner Ruling, many parties urge the California Public Utilities Commission to swiftly approve the investor-owned utility proposals to allow for a quick implementation of the new Electric Rules.
14. TURN within its combined protest to the three advice letters recommends that a timeframe clause should be added to the Applicability section of the Rules. TURN stated that none of the IOUs include a provision regarding the fact that the new Rule may be revised "after the completion of the [GRC] cycle of the electrical corporation following the one during which the AL was filed." TURN recommends this timeframe clause be added to the applicability section of the rules.
15. Public Utilities Code Section 740.19(c) allows for the modification of the Electric Vehicle Infrastructure Policy at the end of the investor-owned utilities' General Rate Case cycle, after the General Rate Case cycle which they filed their advice letter.
16. Public Utilities code Section 740.19(a) directs the California Public Utilities Commission and investor-owned utilities to treat distribution costs associated with electric vehicle charging "the same as other distribution infrastructure authorized on an ongoing basis in the [investor-owned utility's] General Rate Case."

17. The Assigned Commissioner Ruling posed a question on the nature of revised cost tracking, and proposed a set of minimum data collection requirements.
18. Additional cost reporting through the Electric Vehicle Charging Infrastructure Cost and Load Report is necessary to track the effectiveness of the Electric Vehicle Infrastructure Rules in accelerating Transportation Electrification and measuring the affordability of the policy to ratepayers.
19. TURN and UCAN in response to the Assigned Commissioner Ruling both agree that while Public Utilities Code Section 740,19(c) mandates reasonableness review of the costs associated with the Electric Vehicle Infrastructure Rules through the General Rate Cases, the annual reporting and tracking of these costs should occur in the DRIVE rulemaking—Rulemaking (R.) 18-12-006.
20. Within comments on the Assigned Commissioner Ruling, a few parties mention the value of using existing service for electric vehicle charging buildout. SBUA argues that some applicants may prefer to accommodate Electric Vehicle charging on an existing meter and that the CPUC should also consider service line cost upgrades on the same basis as new service lines. VGIC argues that the CPUC should consider utilization of existing service connections to support VGI. PCE states that the CPUC should encourage interconnection under existing utility service to enable greater VGI deployment, and agrees with VGIC that CGI use cases often require EV load to be comingled with other loads. VGIC recommends that the CPUC consider utilization of existing service connections to support VGI.
21. Additional input from stakeholders, additional data to answer critical questions, and additional California Public Utilities Commission guidance is necessary before any deployment requirement around Automated Load Management technology can be implemented.
22. Within its proposed Electric Vehicle Infrastructure Rule, San Diego Gas & Electric Company proposes to require participants to take service on an applicable time-varying rate, which is intended to reduce peak loads and promote the use of renewable resources.
23. Energy Division staff may develop a citation program, or use other enforcement tools as necessary to ensure compliance with the accurate reporting requirements of this Resolution in the future.
24. Within comments on the Assigned Commissioner Ruling, Tesla suggests that the California Public Utilities Commission establish timelines for the investor-owned

utilities to respond to electric vehicle charging installation service requests and have specific goals for stage gate items (e.g., days from service request to utility service, days from construction to complete energization). Tesla cites the most important metric to be total days from service request to energization.

25. Public Utilities Code Section 740.19(c) allows for customer allowances to be established for the Electric Vehicle V Infrastructure Rules as long as the allowances are based on the full useful life of the electrical distribution infrastructure.
26. Based on data that San Diego Gas & Electric Company submitted within comments to the January Assigned Commissioner Ruling, the Electric Vehicle Infrastructure Rules could result in ratepayer subsidy increases between 135 percent for a two-port direct current fast charger deployment and 378 percent for a 12-port Level 2 charger deployment.
27. A robust record is necessary to determine and establish a reasonable line and service extension allowance structures for the Electric Vehicle Infrastructure Rules.
28. Public Utilities Code Section 740.19(c) only prohibits revising the overall policy of treating utility-side electric vehicle infrastructure like any other necessary distribution infrastructure. It does not prohibit the CPUC from making any other substantive changes that do not alter that overall policy.
29. The CPUC has broad authority over the IOUs pursuant to Section 740.19(c) and is authorized to regulate them in any way it sees fit.
30. None of the investor-owned utilities included a rate impact estimate within their advice letters.

THEREFORE IT IS ORDERED THAT:

1. This Resolution approves with modifications Pacific Gas and Electric Company's Advice Letters 6102-E and 6102-E-A, Southern California Edison Company's Advice Letter 4429-E and San Diego Gas & Electric Company's Advice Letter 3705-E.
2. This Resolution directs Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to each establish their new Electric Vehicle Infrastructure Rules—the new Electric Rule 29 for Pacific Gas and Electric Company and Southern California Edison Company, and the new Rule 45 for San Diego Gas & Electric Company.

3. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each submit a Tier 1 advice letter within 60 days of the adoption of this Resolution. This advice letter will be a compliance filing for the Electric Vehicle Infrastructure Rules and associated Memorandum Accounts. The Tier 1 advice letter must at minimum address the following modifications, as described within the discussion section of this Resolution:
- a. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must provide a clear comparison of the costs and responsibilities that are assigned to the IOUs and the customer for their existing Electric Rule 15, Electric Rule 16, and Electric Vehicle Infrastructure Rules.
 - b. Pacific Gas and Electric Company and San Diego Gas & Electric Company must update their proposed Electric Vehicle Infrastructure Rules to clarify that the cost of underground Electric Vehicle Service Extensions that the applicant requests be paid for by the applicant.
 - c. Each investor-owned utility must add language to further clarify the limitations to applicability of their Rules. San Diego Gas & Electric Company must add language to clarify that Electric Vehicle Supply Equipment installed through its Power Your Drive, Power Your Drive 2, Power Your Drive for Fleets, Power Your Drive for Parks, Vehicle-Grid Integration School Bus Pilot, or Power Your Drive for Schools programs are not applicable under its new Rule 45. Pacific Gas and Electric Company must add language to clarify that Electric Vehicle Supply Equipment installed through its Electric Vehicle Charge Network, Electric Vehicle Fleet, Electric Vehicle Fast Charge, Electric Vehicle Empower, Electric Vehicle Charge Schools, or Electric Vehicle Charge Parks are not applicable under its new Rule 29. Southern California Edison Company must add language to clarify that Electric Vehicle Supply Equipment installed through its Charge Ready Transport, Charge Ready 2, Charge Ready Schools, and Charge Ready Parks programs are not applicable under its new Rule 29.
 - d. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must update its proposed Rules to reflect the specific safety qualifications for Electric Vehicle Supply Equipment, if those qualifications are limited to the requirements of the Transportation

- Electrification Safety Checklist related to utility-side infrastructure adopted via Decision (D.)18-05-040.
- e. Pacific Gas and Electric Company must remove the 300-foot length limitation requirement within its proposed Electric Vehicle Infrastructure Rule and add language that the Electric Vehicle Service Extension shall extend along the shortest or most practical and available route as necessary to reach a Service Delivery Point identified via mutual agreement between the investor-owned utility and the applicant.
 - f. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each modify the definition of electric vehicle within the Electric Vehicle Infrastructure Rules to include the same referenced definition of electric vehicles from Decision (D.) 20-09-025.
 - g. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each add a timeframe clause into the Applicability section of each of their Electric Vehicle Infrastructure Rules to stipulate that the Rule may be revised after the completion of the investor-owned utility's General Rate Case cycle, following the one during which the advice letter was filed.
 - h. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each update their Electric Vehicle Infrastructure Rules to default to utilizing existing service where technically feasible and cost efficient, as described within the discussion section of this Resolution.
 - i. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each update their Electric Vehicle Infrastructure Rules to reflect that as a default, participants will be enrolled on the commercial time-variant electric vehicle rate that each investor-owned utility offers, but that applicants may choose to change to another time-variant rate.
 - j. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each submit their expected revenue requirement and rate impact resulting from the EV Infrastructure Rules through the end of 2024.
 - k. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must submit a common proposal to

- define the cost categories of poles, vaults, service drops, transformers, mounting pads, trenching, conduit, wire, cable, meters, associated engineering and civil construction work, and other equipment that the IOUs will cover under the Electric Vehicle Infrastructure Rules.
4. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each submit a Tier 2 advice letter within 60 days of the adoption of this Resolution. This advice letter will address outstanding implementation details related to the establishment of the Electric Vehicle Infrastructure Rules and associated Memorandum Accounts beyond what the Tier 1 advice letter addresses. The Tier 2 advice letter must at minimum address the following modifications, as described within the discussion section of this Resolution:
- a. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company should each modify their proposed Electric Vehicle Infrastructure Rules to include a definition of “issue mitigation,” for which the associated costs will be assigned to the applicant.
 - b. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must update their Electric Vehicle Infrastructure Rules to reflect the specific safety qualifications that it will require of Electric Vehicle Supply Equipment installed in order for the equipment to be qualified under the Electric Vehicle Infrastructure Rules if these qualifications go beyond the requirements for utility-side infrastructure within the Transportation Electrification Safety Checklist adopted via Decision (D.)18-05-040.
 - c. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must include clarifying language within their Electric Vehicle Infrastructure Rule as to how applicants may provide proof of commitment to purchase and install Electric Vehicle Supply Equipment under the Electric Vehicle Infrastructure Rule, including all the eligible documents an applicant may use.
 - d. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must propose a common plan for how they will confirm that customers taking service under the Electric Vehicle Infrastructure Rules install and maintain the Electric Vehicle Supply Equipment for a minimum of five years.

- e. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must update their Electric Vehicle Infrastructure Rules to offer future proofing and buildout of additional capacity beyond the capacity needed to support the Electric Vehicle Supply Equipment the applicant plans to install at the time of taking service under the Rule. They must additionally submit a plan for its future proofing that includes a requirement that the investor-owned utility to obtain a signed commitment from the applicants that they will install the additional planned Electric Vehicle Supply Equipment in the future, the approximate number of Electric Vehicle Supply Equipment they plan to install, and the expected timeframe for the installation. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must also include a description of how they will confirm the applicant fulfilled its commitment to install the additional Electric Vehicle Supply Equipment.
 - f. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must also describe how they will align all future electrification upgrades to streamline the process for customers, support multiple clean energy objectives, and reduce costs for both customers and ratepayers.
 - g. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must outline which investor-owned utility and third-party load management solutions they will offer customers taking service under their Electric Vehicle Infrastructure Rules, and how they plan to update this list over time. This must at minimum include education and an option for the customer to install customer-side automated load management (ALM).
 - h.
5. Within the Memorandum Accounts that this Resolution approves, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must, at minimum, record all costs described within the discussion section of this Resolution. All costs described within the discussion section must be captured within the Memorandum accounts, and must be consistent across Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each also

submit common cost categories, as described in the discussion section of this Resolution, and must include the updated Preliminary Statement for the Memorandum Account within the Tier 1 advice letter.

6. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must begin to offer service under the new Electric Vehicle Infrastructure Rules no later than six months after the adoption of this Resolution. The investor-owned utilities must each notice the DRIVE service list—Rulemaking (R.) 18-12-006—once the new Electric Vehicle Infrastructure Rule is available. If the investor-owned utility is unable to implement the new Electric Vehicle Infrastructure Rule within the six-month period, pursuant to Rules of Practice and Procedure 16.6 it may request an extension of time to comply with this requirement along with justification, but must also notify the service list and provide an update on the new expected launch time.
7. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must notify the DRIVE service list—Rulemaking (R.) 18-12-006—or any successor service list, six months prior to any modification to the Electric Vehicle Infrastructure Rules taking effect.
8. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company (IOUs) must host a public workshop within 180 days of approval of this Resolution to discuss the barriers to the timely energization of electric vehicle charging infrastructure. The workshop should, at minimum, address 1) the IOUs' processes and internal timeline for timely installing and energizing electrical distribution infrastructure to support EV charging, 2) the barriers within the IOUs' control that impact the IOUs' ability to meet a timely service energization average, 3) the barriers outside of the IOUs' control that impact the IOUs' ability to meet a faster service energization average, 4) the direct perspective of Electric Vehicle Service Providers (EVSPs) and other industry representatives, 5) how the IOUs can collaborate and coordinate with EVSPs and other market actors (e.g., authority having jurisdiction) to accelerate service energization timing, and 6) potential solutions to overcome the identified barriers. The IOUs must ensure the EVSPs are provided sufficient time to discuss their concerns and suggestions.
 - a. Within 60 days of holding this public workshop, the IOUs must file a joint Tier 2 advice letter to propose a service energization timeline, that, at minimum, 1) proposes a numerical target (i.e., number of business days) for average energization timing between when a customer submits an

- application and when their site is energized that reflects efforts to accelerate the current average service energization timeline (the proposed target should be between an average of 90 and 160 days), 2) identifies the processes that are within the IOUs' direct and indirect control, 3) identifies the processes that are not within the IOUs' control (e.g., within the control of the customer, AHJ, EVSP, etc.), 4) proposes a process for how the IOU can improve the service energization timing for items that are within their direct and indirect control, 5) includes a description of how the IOU can contribute towards improving the timing for other responsibilities, if any, and 6) ensures the proposal is reflective of the discussions and feedback from the workshop, including the feedback of industry representatives.
9. Energy Division staff, in consultation with Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company and other stakeholders as necessary, shall finalize a data collection template related to the Electric Vehicle Infrastructure Rules and based on the Assigned Commissioner Ruling's proposed minimum data collection requirements and party comments. Energy Division staff shall strive to align the data reporting requirements with the CEC's CALeVIP program, to the extent feasible and practical. These data requirements will be incorporated into the Electric Vehicle Charging Infrastructure Cost and Load Reports, or any successor report, which the IOUs must comply with beginning with their 2022 report submitted in the Spring of 2023. When finalized, Energy Division staff will upload this template to the CPUC website and will notify the DRIVE service list—Rulemaking (R)18-12-006—or any successor service list. At minimum, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must report all the data fields described within the discussion section of this Resolution.
 10. Within their annual reporting of costs within the Electric Vehicle Charging Infrastructure Cost and Load Reports, the investor-owned utilities must include a reference to which chapter of the General Rate Case testimony the investor-owned utility will address the reasonableness of the costs cited.

This Resolution is effective today.

I certify that the foregoing Resolution was duly introduced, passed, and adopted at a conference of the Public Utilities Commission of the State of California held on October 7, 2021, the following Commissioners voting favorably thereon:

Rachel Peterson
Executive Director