Public Workshop:
EV Infrastructure Rule Service Energization

California Public Utilities Commission, Energy Division

Emmanuelle Truax, Senior Transportation Electrification Analyst

September 29, 2023

California Public
Utilities Commission

EVACUATION PROCEDURES

During an evacuation, immediately leave the building by the nearest exit or as advised. The evacuation location is **Roosevelt Park, 1615 9th Street**, on the southeast corner of 9th and P Streets.

DO NOT USE THE ELEVATORS

- During the evacuation, employees should WALK down the stairs/out of the building. If necessary, remove high heels and grasp handrails. Remain QUIET and follow all other emergency instructions.
  - Stairwells located on the East and West sides of the building (towards 9th street and the alley)
- Employees will assemble and remain at the evacuation location unless otherwise instructed. STAFF MUST ADHERE TO TRAFFIC LAWS.
- After the evacuation is complete, the Building Security Team are instructed to prevent premature re-entry into the building until the emergency is over.
- Security and the Building Emergency Coordinator, upon direction from Police, Fire Department, or other Public Safety Officers, will advise employees to return to the building.

Ground Rules and Workshop Logistics

Ground Rules:

- Hold all questions until the end of each panel
- Identify yourself and your organization before speaking
- Do not repeat what another person has already said
- Stay on topic

Remote Participants:

- **Zoom**:
  - Use the "raise hand" feature
- **Telephone:**
  - Dial *9 to raise your hand
  - *6 to mute/unmute your phone line. You may also use the mute feature on your phone.
- **Zoom/phone participants, when called upon:**
  - Your microphone will be opened
  - Unmute your line
  - Spell your name and affiliation for the record, begin comments

Morning Agenda

Topic	Presenter(s)	Time
Welcome, Introductions, and Safety	Em Truax, Energy Division	10:00-10:05
Opening Remarks	President Alice Reynolds, CPUC	10:05-10:20
Service Energization Background Discussion	Em Truax, Energy Division	10:20-10:30
IOU Discussion on EVSE Service Energization Timing Data	Napallo Gomez (PG&E), Kevin Bense (SCE), and Matt Bartels (SDG&E)	11:30 – 11:20
Break		11:20-11:30
Panel 1: Steps to Support a Customer's Site Inquiry	Matt Bartels (SDG&E) and Hannah Kassabian (Electrify America)	11:30-12:00

Afternoon Agenda

Topic	Presenter(s)	Time
Panel 2: Steps to Complete Non-Construction Energization Steps	Kevin Bense (SCE), Jia Liu (Tesla), and Heather Hickerson (GOBiz)	1:00-1:40
Panel 3 – Steps to Complete Construction Energization Steps	Napallo Gomez (PG&E) and Ferdinand Changco (EVgo)	1:40-2:10
Break		2:10-2:20
Panel 4 – General Discussion on Efforts to Accelerate Energization	Eric Martinot (ED's Interconnection Section) and Adria Tinnin (TURN)	2:20-3:00
General Discussion – Recommended Efforts to Address Outstanding Barriers	Open Discussion	3:00-3:30
Wrap Up and Next Steps	Em Truax, Energy Division	3:30 – 3:40

Opening Remarks

President Alice Reynolds, California Public Utilities Commission

EV Service Energization Background

Em Truax, Senior Analysts CPUC's Energy Division

Definitions

- **Service Energization**: the process to connect new load to the distribution system
- **Interconnection**: the process to connect new generation facilities to the distribution system
- **Rule 15**: standard energization tariff that cover distribution line extensions (from the substation to the transformer); only covers up to 60kV, or new distribution facilities that are a continuation of, or branch off, the nearest available distribution line.
- **Rule 16**: standard energization tariffs that cover service line extensions (from the transformer to the service drop)
- **EV Infrastructure Rules (Rule 29/45):** optional alternative to Rule 16 for customers that require a service line extension to support the energization of an EV charging project
- **Service Energization Timeline**: adopted via Resolution E-5247, requires the IOUs to complete all IOU-responsible steps in an EV Service Energization Request submitted through the EV Infrastructure Rules within an average of 125 business days – timeline excludes projects going through Rule 15, +2MW, and those that trigger larger grid upgrades (i.e., substations)

Service Energization Delays vs. Distribution Extension and Capacity Delays

	Service Energization	Distribution Extension and Capacity Projects
Time-frame	<2 years	3-10 years
Scope of Issue	- Limited to an individual customer / single service point - Limited to service line extension going through IOUs' EV Infrastructure Rule - Upgrade is identified when customer requests service from IOU	- Required to serve multiple customers - Includes distribution line extensions via Rule 15, new and upgraded circuits, feeders, and substations, and other sub-transmission infrastructure. - Upgrade is generally identified in IOUs' forecasting efforts
Impact of Delay	- Project specific delays	- Causes delays to downstream projects (i.e., Rule 16/29/45)

This workshop focuses only on service energization

Background of the CPUC's Efforts to Address Service Energization Timing Concerns

- **February 2020**: Transportation Electrification Framework sited the uncertain timing and application process for completing a utility service upgrade as a potential source of slow downs or discouraging EV adoption.
  - TEF asked if the CPUC should direct the IOUs to meet specific deadlines or establish clear timeframes for the energization process.
- **October 2021**: Resolution E-5167 and E-5168 directed the IOUs to host a public workshop to discuss the barriers to the timely energization of EV charging infrastructure, and to propose an average EV service energization timeline that reflects efforts to accelerate the energization process; proposed timeline was required to be between an average of 90-160 business days.
  - Proposal was to identify the steps of the energization process that are within and outside the IOUs' control, and how the IOUs are making continued efforts to improve the energization process.
- **March 2022**: IOUs submitted Joint proposals requesting an average energization timeline of 160 business days.
- **December 2022**: CPUC approved Resolution E-5247, which adopted a modified interim service energization target of 125-business days; timing only covers steps within the IOUs' control and excludes projects going through Rule 15, +2MW, and those that trigger larger grid upgrades (i.e., substations).
  - IOUs' were required to submit an updated proposal within 12 months that was informed by their efforts to meet the 125-business day target.

Service Energization Steps for EV Infrastructure Rule Projects

Step	Included in Target	Description
Customer submits site inquiry	*No*	*Customer expresses interest in installing EV charging infrastructure.*
IOU preforms site assessment / engineering study	*No*	*IOU performs a study to determine the site's new load hosting capacity.*
Customer reviews assessment / study, submits all required info.	*No*	*Customer decides to submit application for service, performs all necessary site studies as required by the IOU under Rule 2*
IOU executes preliminary design	Yes	IOU performs a high-level site-design to illustrate preferred location of IOU and customer-side infrastructure.
Customer approved / declines design	*No*	*Customer reviews IOU's initial site-design and decides to move forward or cancel application.*
IOU executes final design and delivers contract to customer	Yes	IOU designs the final site design and sends contract language to customer.
IOU creates and submits easement and AHJ permit request	Yes	IOU sends customer easement language, if needed, and permit(s) documents.
Customer / IOU complete preconstruction field meeting	Yes	IOU and customer walk through final site design and construction plans.
Customer delivers signed contract and easement to IOU; AHJ issues permit	Yes, up to 25- or 50-business days	Customer sends IOU all outstanding signed contracts, and AHJ approved permit(s).
Customer completes all customer-side construction and inspection	*No*	*Customer completes all customer-side construction to prepare for IOU.*
IOU schedules and completes civil and electrical work	Yes	IOU completes all construction and energizes site.

Objectives of Today's Workshop

1) Establish common expectations for the timing needed to complete a service line energization requests and define the scope of each step when talking about EV service energization efforts.
2) Present data reflecting the IOUs' efforts to meet the 125-business day service energization average timeline and discuss if this data aligns with EVSP experiences.
3) Discuss the IOUs' data collection efforts, what the data collection categories are able to show and what information is not being reflected, and how the data collection efforts can be improved.
4) Identify ongoing barriers within the IOUs' direct control that are impacting their ability to complete a service energization request within the 125-business day average and propose solutions to overcome these barriers.
5) Identify the barriers outside of the IOUs' control and who the responsible entity is, that are delaying the time needed to complete a service energization request, and how to pursue solutions with them.
6) Discuss the potential alternatives for accelerating the service energization process.
7) Initiate the process of considering how the CPUC should adopt a service energization timing requirement for projects currently excluded from the 125-business day service energization timeline.

Quick Note

- The CPUC is not yet ready to discuss recently passed legislation that focuses on service energization timing.
- Further information and the next steps to implement the bill(s) will be provide if, and when they are signed by Governor Newsom.
- While the bill(s), if signed, will impact how the CPUC broadly addresses stakeholder concern with the energization processes, please keep today's discussion focused on current efforts to meet the interim service energization timing target.

IOU Discussion on EVSE Service Energization Timing Data

- Napallo Gomez, PG&E
- Kevin Bense, SCE
- Matt Bartels, SDG&E

PG&E: EV Rules Infrastructure Workshop

Year to Date Performance

Design

Design Status	YTD Volume	YTD % of Vol	Avg CT
Design Met	212	79%	22
Design DNM	58	21%	60
Total	**270**	**100%**	**30**

Dependency

Dependency Status	YTD Volume	YTD % of Vol	Avg CT
Dependency Met	6	8%	25
Dependency DNM	67	92%	139
Total	**73**	**100%**	**130**

Construction

Construction Status	YTD Volume	YTD % of Vol	Avg CT
Construction Met	4	19%	21
Construction DNM	17	81%	84
Total	**21**	**100%**	**72**

End-to-End

End-to-End Status	YTD Volume	YTD % of Vol	Avg CT
End-to-End Met	5	24%	101
End-to-End DNM	16	76%	228
Total	**21**	**100%**	**198**

Dependency Cycle Time*

Permit	Land	Contract
Intake 68 days	Intake 9 days	Intake 13 days
Execution 23 days	Execution 101 days	Execution 35 days

*Average Business Days

PG&E: EV Rules Infrastructure Workshop

Common reasons projects may take longer are…

- Delayed response from customers on contract execution (35 BD CT AVG).
- AHJ Permitting CT-- agencies may have staffing challenges resulting in back-and-forth information requests.
- Land Rights-- easement negotiations between customers/landlord/PG&E can result in significant delays
- AHJ permitting requirements force changes to original proposed civil construction (CX) methods and schedule:
  - Open trenching vs cross-boring CX method.
  - Work pushed outside of normal business hours, creates more complexity and difficulty to schedule the job.
  - Excavation moratoriums during Summer and Q4 in high-traffic commercial areas.
  - Variability of traffic-control plans, inconsistent submittal requirements and back-and-forth with AHJ's.

Service Energization Process – Rule 29

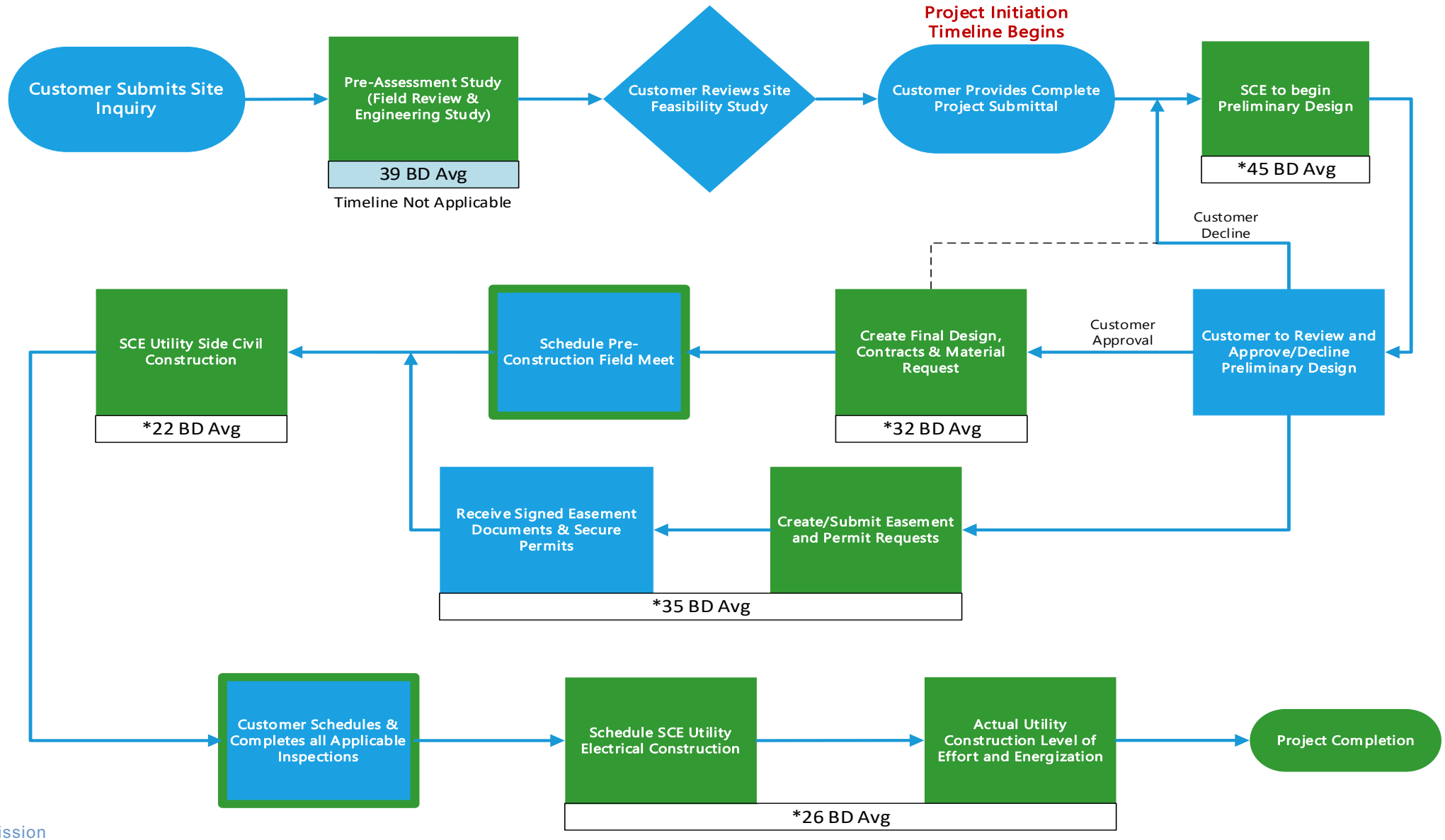
SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Customer Responsibilities:

- Complete Submittal
- Rule 29 Contract
- Rule 15 Contract (if Req'd)
- Approve Preliminary Design
- Secure Easements
- Schedule Inspections
- Pre-Con w/ SCE Civil Inspector (Panel Loc.)
- Switchgear Pad
- All Related BTM Work
- Rule 15 Civil Installation (if Req'd)
- Invoice Payment (Assoc R15 only)
- TOUEV Application for Service
- City Panel Release
- Address Verification and Placard

SCE Responsibilities:

- Pre-Assessment Study
- Project Submittal Verification
- Preliminary Design
- Final Design and Contracts
- Send Easement and Permit Requests
- SCE Civil Inspections
- Install R29 Civil Infrastructure
- Install SCE Electrical Cable & Equipment
- Energize Panel



Customer Responsibility

SCE Responsibility

California Public Utilities Commission

*Average cycle times are based on 5 completed Rule 29 only projects with no associated work orders

Service Energization Process – Rule 29

Timeline Delays and Improvement Efforts

Timeline Delays	• Inaccurate/Incomplete Customer submittals • Grid Capacity unavailable within timely manner • Customers requesting design changes or re-designs • Easement signature/execution delays • Permitting delays • Delays in receiving unique address from cities and counties

Improvement Efforts	• Dedicated utility design and project management
	  - Automated submittal intake
	  - Communicate need for permits/easements earlier in the lifecycle
	  - Additional focus on material management
	• Improve public communication of IOU timeline and requirements
	  - Factsheet available on SCE website & working on a welcome package
	  - Bi-Monthly Auto CAD Workshops
	• Opportunities to expedite the easement process
	• Streamline IOU engineering review requirements
	  - Smaller projects can potentially skip detailed review
	• Piloting concurrent scheduling with one Region

Service Energization Workshop

Commercial EV & Rule 45

9/29/23

Delays

- Critical Material Shortfalls
- Permitting & Easements
- Construction
- Design Delays

Corrective Actions

- Process Refinement
- Early Design Implementation
- Education (Internal/External)
- Customer Engagement

Portfolio Overview		
Projects to Date	**Project Timelines**	**Project Status**
121	**Completed**	**Completed**
	~165 Days	***9**
		On-Track
	In-Progress	**84**
	~140 Days	**Delayed**
		28

The 125-Day AFS to Energization timeline is a zero-defect goal. It's achievable without delays to design, permitting, pre-construction requirements, material availability, construction, and weather.

10 Minute Break

Panel 1: Steps to Support a Customer's Site Inquiry

- Matt Bartels, SDG&E
- Hannah Kassabian, Electrify America

Service Energization Workshop

Commercial EV & Rule 45

9/29/23

Panel 1 – Steps to Support a Customer's Site Inquiry

- **Energization Steps 1-2:**
  1. Customer Submits Site Inquiry
  2. IOU Performs Preassessment/Engineering Study
- **SDG&E Actions:**
  - SDG&E New Customer Outreach
  - Direct Engagement from Program Manager
  - Customer Applies for R45 via 'Builder's Portal'
  - Customer assigned a Project Manager
  - Customer Receives an EV Welcome Package
    - ►Terms & Conditions Signed
  - Feasibility Study Performed (2-3 weeks)

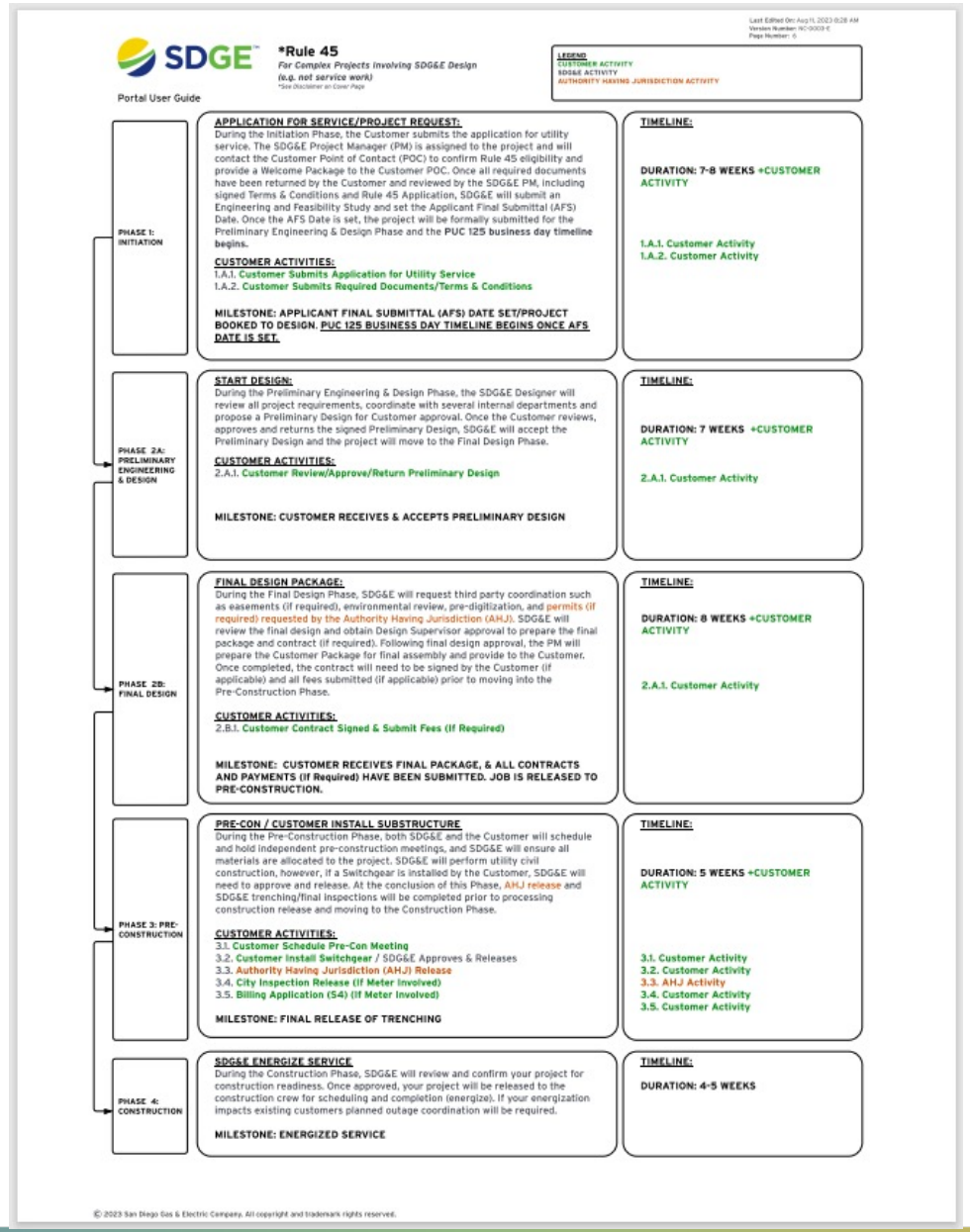
Tenants to Success:

Consistent Communication

Transparency

Joint Forecasting

Customer-Facing R45 Steps to Energization



SDGE

*Rule 45

For Complex Projects involving SDG&E Design (e.g. not service work)

*See Disclaimer on Cover Page

Portal User Guide

LEGEND
CUSTOMER ACTIVITY
SDG&E ACTIVITY
AUTHORITY HAVING JURISDICTION ACTIVITY

PHASE 1: INITIATION

APPLICATION FOR SERVICE/PROJECT REQUEST:
During the Initiation Phase, the Customer submits the application for utility service. The SDG&E Project Manager (PM) is assigned to the project and will contact the Customer Point of Contact (POC) to confirm Rule 45 eligibility and provide a Welcome Package to the Customer POC. Once all required documents have been returned by the Customer and reviewed by the SDG&E PM, including signed Terms & Conditions and Rule 45 Application, SDG&E will submit an Engineering and Feasibility Study and set the Applicant Final Submittal (AFS) Date. Once the AFS Date is set, the project will be formally submitted for the Preliminary Engineering & Design Phase and the **PUC 125 business day timeline begins.**

CUSTOMER ACTIVITIES:
1.A.1. **Customer Submits Application for Utility Service**
1.A.2. **Customer Submits Required Documents/Terms & Conditions**

MILESTONE: APPLICANT FINAL SUBMITTAL (AFS) DATE SET/PROJECT BOOKED TO DESIGN. PUC 125 BUSINESS DAY TIMELINE BEGINS ONCE AFS DATE IS SET.

TIMELINE:

DURATION: 7-8 WEEKS +CUSTOMER ACTIVITY

1.A.1. Customer Activity
1.A.2. Customer Activity

PHASE 2A: PRELIMINARY ENGINEERING & DESIGN

START DESIGN:
During the Preliminary Engineering & Design Phase, the SDG&E Designer will review all project requirements, coordinate with several internal departments and propose a Preliminary Design for Customer approval. Once the Customer reviews, approves and returns the signed Preliminary Design, SDG&E will accept the Preliminary Design and the project will move to the Final Design Phase.

CUSTOMER ACTIVITIES:
2.A.1. **Customer Review/Approve/Return Preliminary Design**

MILESTONE: CUSTOMER RECEIVES & ACCEPTS PRELIMINARY DESIGN

TIMELINE:

DURATION: 7 WEEKS +CUSTOMER ACTIVITY

2.A.1. Customer Activity

PHASE 2B: FINAL DESIGN

FINAL DESIGN PACKAGE:
During the Final Design Phase, SDG&E will request third party coordination such as easements (if required), environmental review, pre-digitization, and permits (if required) requested by the Authority Having Jurisdiction (AHJ). SDG&E will review the final design and obtain Design Supervisor approval to prepare the final package and contract (if required). Following final design approval, the PM will prepare the Customer Package for final assembly and provide to the Customer. Once completed, the contract will need to be signed by the Customer (if applicable) and all fees submitted (if applicable) prior to moving into the Pre-Construction Phase.

CUSTOMER ACTIVITIES:
2.B.1. **Customer Contract Signed & Submit Fees (If Required)**

MILESTONE: CUSTOMER RECEIVES FINAL PACKAGE, & ALL CONTRACTS AND PAYMENTS (If Required) HAVE BEEN SUBMITTED. JOB IS RELEASED TO PRE-CONSTRUCTION.

TIMELINE:

DURATION: 8 WEEKS +CUSTOMER ACTIVITY

2.A.1. Customer Activity

PHASE 3: PRE-CONSTRUCTION

PRE-CON / CUSTOMER INSTALL SUBSTRUCTURE
During the Pre-Construction Phase, both SDG&E and the Customer will schedule and hold independent pre-construction meetings, and SDG&E will ensure all materials are allocated to the project. SDG&E will perform utility civil construction, however, if a Switchgear is installed by the Customer, SDG&E will need to approve and release. At the conclusion of this Phase, AHJ release and SDG&E trenching/final inspections will be completed prior to processing construction release and moving to the Construction Phase.

CUSTOMER ACTIVITIES:
3.1. **Customer Schedule Pre-Con Meeting**
3.2. **Customer Install Switchgear** / SDG&E Approves & Releases
3.3. **Authority Having Jurisdiction (AHJ) Release**
3.4. **City Inspection Release (If Meter Involved)**
3.5. **Billing Application (S4) (If Meter Involved)**

MILESTONE: FINAL RELEASE OF TRENCHING

TIMELINE:

DURATION: 5 WEEKS +CUSTOMER ACTIVITY

3.1. Customer Activity
3.2. Customer Activity
3.3. AHJ Activity
3.4. Customer Activity
3.5. Customer Activity

PHASE 4: CONSTRUCTION

SDG&E ENERGIZE SERVICE
During the Construction Phase, SDG&E will review and confirm your project for construction readiness. Once approved, your project will be released to the construction crew for scheduling and completion (energize). If your energization impacts existing customers planned outage coordination will be required.

MILESTONE: ENERGIZED SERVICE

TIMELINE:

DURATION: 4-5 WEEKS

SDGE™

Discussion.

EV Service Energization Workshop

Steps to Support a Customer's Inquiry

Hannah Kassabian
Utility Planning & Operations Manager

Electrify America operates the largest open ultra-fast only* network in North America

*Electrify America's network does not include DC fast chargers below 150kW

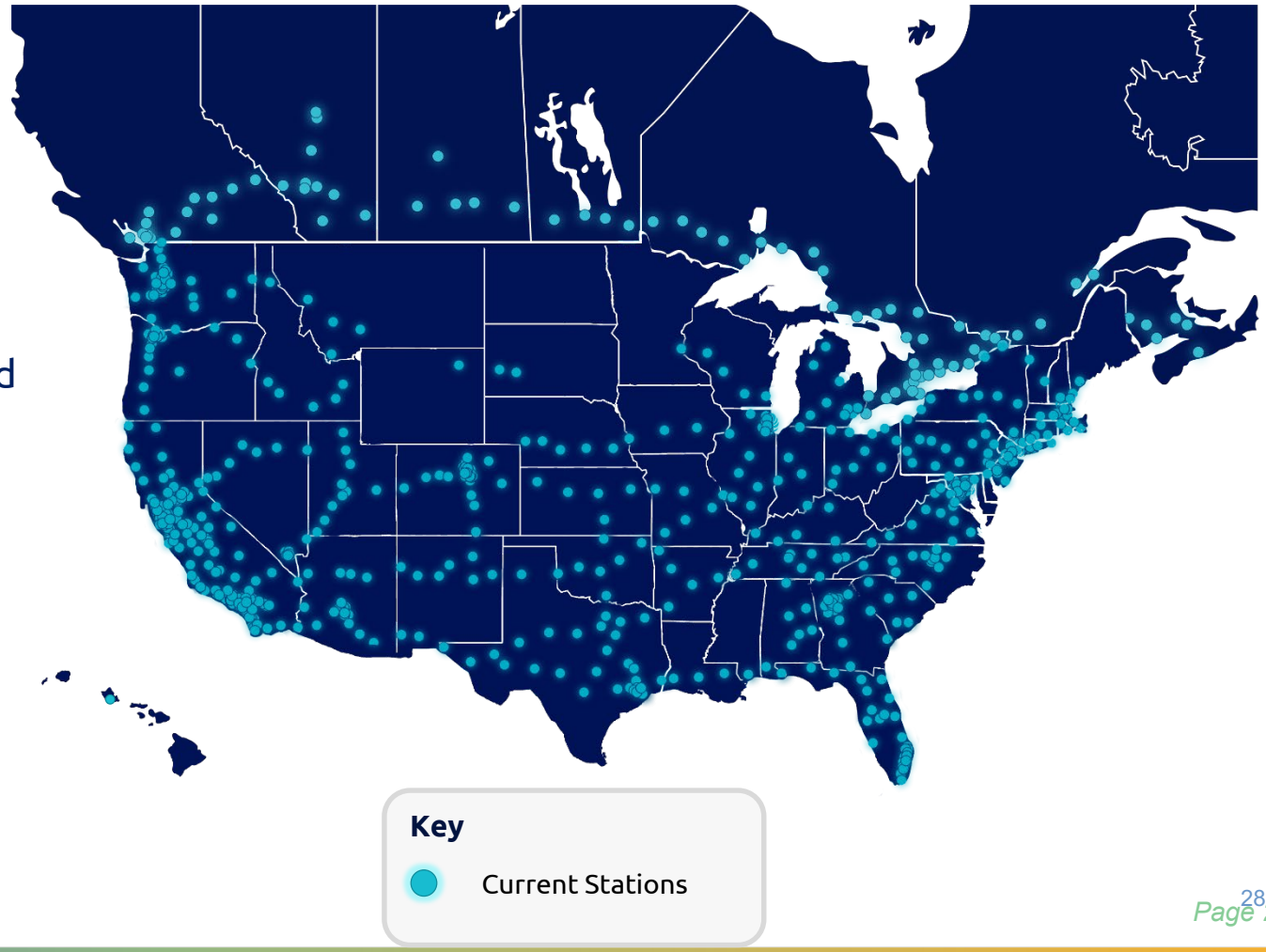
3,500+
individual fast chargers across 840+ charging sites

46 U.S. States, D.C. & Canada
open fast charging network that spans across North America

Average of 70 miles between each site and 5 chargers per site

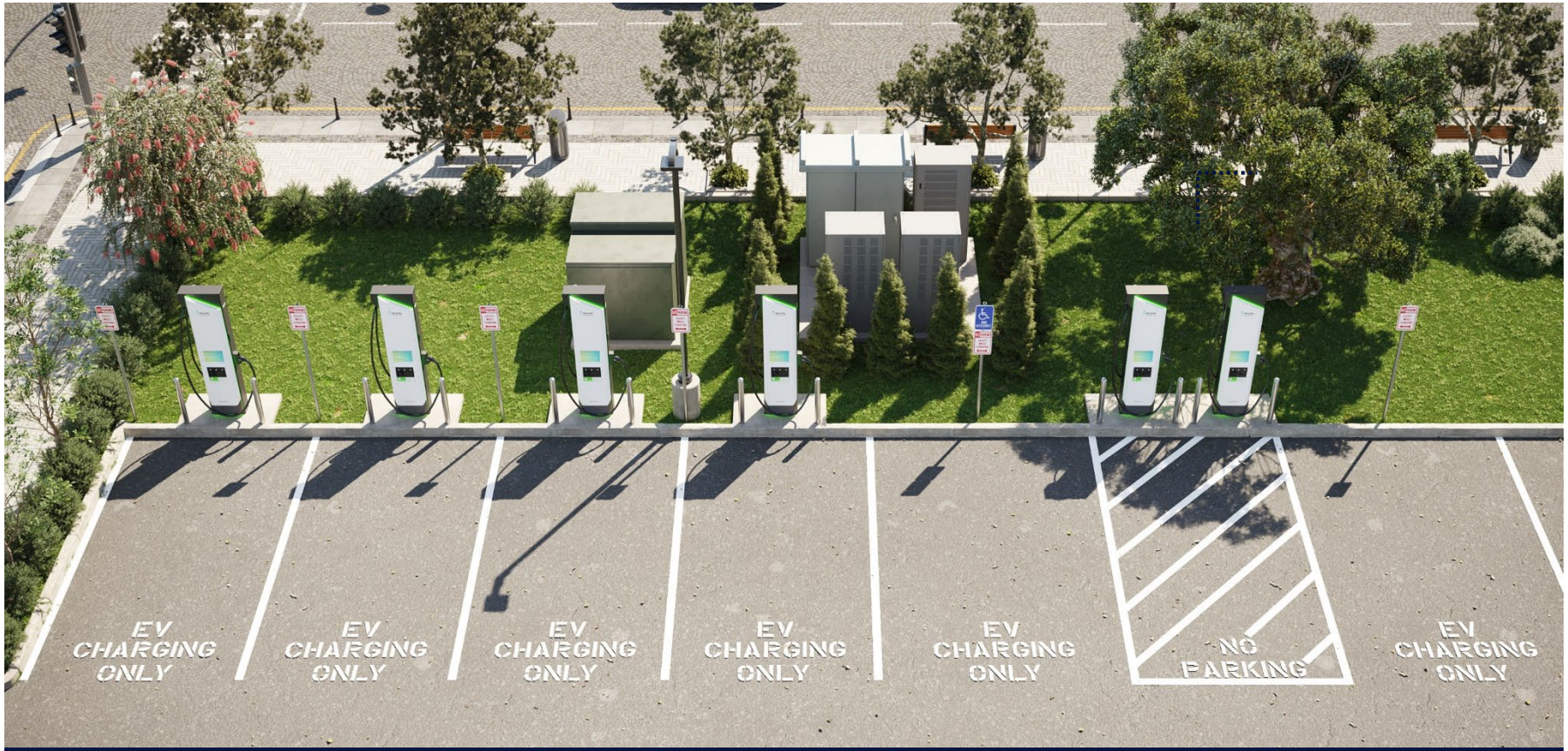
20 miles per minute
ultra-fast chargers can charge capable vehicles at up to 20 miles per minute

2023 Electrify America & Electrify Canada Network



Experienced Installation with Industry Leading Technology

Electrify America Standard Site Design



End-Zone Site Layout

- Site designs to provide easy customer access
- Fastest Charging Technology
- Next-Gen Exclusive Charger with charge power up to 350+ kW & dual connect CCS
- First Plug & Charge Capable Network in North America
- Integrated Battery Energy Storage Charging Solutions

EVSP Process for Determining Site Feasibility

Locate Site

- Identify target zones to enable long distance travel
- Identify markets based off of population, mobility, & amenities
- Consider utility demand rates

EVSP Initial Site Review

- Use utility GIS mapping tools
- Site Visit
- Preliminary discussion with utility
- Draft site plan & load requirements

Utility New Service Request Submission

- Site Plan
- Load Information
- Single Line Diagram
- SWG specs
- Additional utility requested docs/ requirements

Site Feasibility Study Results

- Review utility power requirements
- Confirm available power capacity
- Confirm point of interconnection
- Confirm utility line extension requirements

EVSP & Utility Review

- Verify design submittal requirements
- Review power capacity constraints
- Review point of interconnection
- Discuss potential delays

Average Utility
Timeline 2-8 weeks

BEST PRACTICES BETWEEN EVSPs & UTILITIES

EVSP

- Contact utility early
- Provide utility with potential site forecasting
- Provide realistic load information & energization date for new sites
- Verify field conditions match design plan

EVSP & UTILITY

- Re-occurring update calls with established POCs
- Field visits to discuss site builds during feasibility stage
- Clear understanding of project process & requirements
- Discuss any potential delays (equipment, labor, etc.)

UTILITY

- Improve tools available to customers
- Transparency on capacity upgrades for customers
- Proactively upgrading infrastructure
- Designated EV design group

COMMUNICATION IS KEY


THANK YOU
electrify america
electrify america

Lunch – Please Return by 1:00

Panel 2: Steps to Complete Non-Construction Energization Steps

- Kevin Bense, SCE
- Jia Liu, Tesla
- Heather Hickerson, GOBiz

Non-Construction Energization Steps

	Phase 2 – Preliminary Design	Phase 3 – Final Design	Phase 4 – Contingencies
Objective	**Upon Complete Customer Project Submittal, provide preliminary drawing/design of the utility side infrastructure for customer review and approval**	**Provide customer with Final Design to initiate ordering of material and allow for customer to begin responsibilities**	**Secure necessary permits, easements, environmental clearances, and necessary final inspection release prior to construction.**
Customer Activities & Deliverables	**Provide complete submittal package**; (signed R29 contract, CAD File w/ Survey, Detailed Load Sched, SG drawings, AHJ assigned address, etc.) During survey, identify street moratoriums, city preferences (OH VS. UG), etc. Upon receiving switchgear approval from the SCE planner, order ASAP (supply chain).	Utilize Final Design for on-site AHJ permit. **Work with property owner to prepare them for the easement execution**. Communicate customer side schedule with SCE to coordinate efforts. Begin communication with AHJ and SCE inspectors to begin working in sequence and prevent potential construction delays.	**Work with property owner to secure timely easement signature and return to Land Services Vendor**. Provide assistance on securing permits as necessary. Coordinate inspections with AHJ and SCE for final release.
SCE Activities & Deliverables	**Create and deliver a preliminary design for customer feedback/approval**. Conduct preconstruction meeting as necessary. Provide prelim design to SCE permitting to develop request to AHJ. Submit easement request to Land Services to develop execution documents.	Execute final design and deliver to customer. Initiate and procure long lead equipment and material. Deliver related Rule 15 invoice and contract to customer (if req'd). Provide courtesy package to SCE Civil team for visibility.	Confirm that easements have been executed and permit has been obtained. Environmental clearance has been received. Schedule installation of civil infrastructure **(running pilot in one Region to schedule work concurrently, civil and electrical)**. Communicate utility side schedule with customer for alignment.

RED = Critical step that reduces significant delays

EV Charging Station Permit Streamlining

September 2023

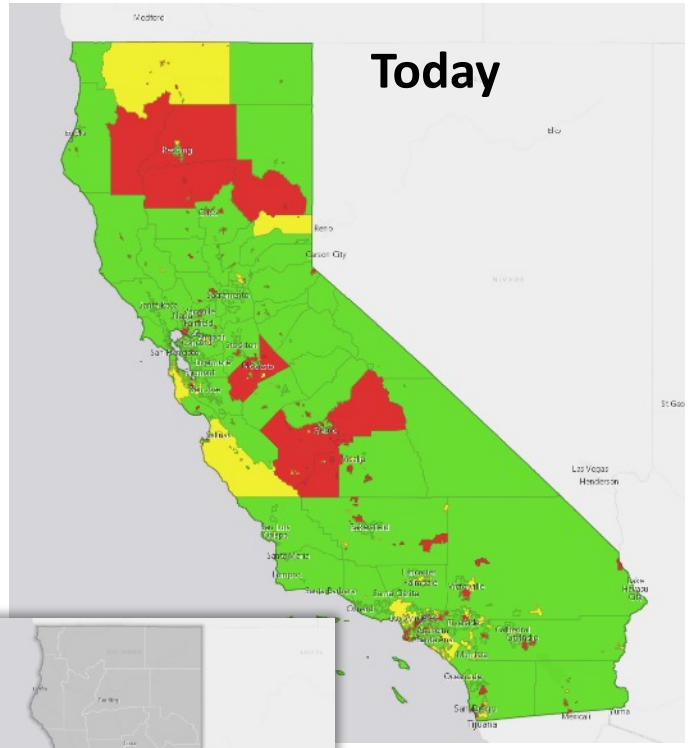
California Public Utilities Commission

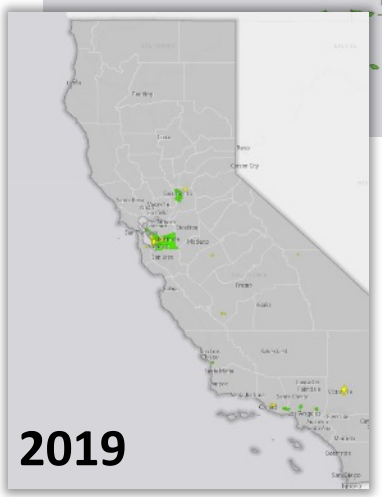
EV Charging Station Permit Streamlining

- Streamlining Laws
  - AB 1236 & AB 970 – administrative approval for EV charging stations and timeline for issuing a permit
- Support for local jurisdictions and project developers
  - Resources: Permit Streamlining Guidebooks, fact sheets, model ordinances, etc.
  - Direct assistance

https://business.ca.gov/industries/zero-emission-vehicles/plug-in-readiness/

AB 1236 Compliance





	Scoring Criteria:	Complete if:
☐	**1. Streamlining Ordinance** Ordinance creating an expedited, streamlined permitting process for electric vehicle charging stations (EVCS) including level 2 and direct current fast chargers (DCFC) has been adopted.	– Streamlining ordinance has been adopted
☐	**2. Permitting checklists covering L2 and DCFC** Checklist of all requirements needed for expedited review posted on city or county website.	– Permitting checklist is available and easily found on city or county website
☐	**3. Administrative approval of EVCS** EVCS projects that meet expedited checklist are administratively approved through building or similar non-discretionary permit.	– The streamlining ordinance states that permit applications that meet checklist requirements will be approved through non-discretionary permit (or similar)
☐	**4. Approval limited to health and safety review** EVCS project review limited to health and safety requirements found under local, state, and federal law.	– The streamlining ordinance states that no discretionary use permit is required and permit approval will be limited to health and safety review
☐	**5. Electronic signatures accepted** AHJ accepts electronic signatures on permit applications.*	– Electronic signatures accepted on City or County website (usually specified in the ordinance)
☐	**6. EVCS not subject to association approval** EVCS permit approval not subject to approval of an association (as defined in Section 4080 of the Civil Code).	– The streamlining ordinance states that EVCS permits do not require association approval
☐	**7. One complete deficiency notice** AHJ commits to issuing one complete written correction notice detailing all deficiencies in an incomplete application and any additional information needed to be eligible for expedited permit issuance.	– The streamlining ordinance dictates that a written correction notices must detail all deficiencies

Streamlined Jurisdictions
(Numbers of cities and counties)

Streamlined:	Streamlining in Progress:	Not Streamlined:
300	101	139

Ongoing Permitting Challenges

- Lack of awareness of the streamlining laws
- Staff levels, capacity, and workload
- Errors in completing the checklist
- Addressing conflicts with local zoning codes
- Larger and more complex projects

Panel 3 – Steps to Complete Construction Energization Steps

- Napallo Gomez, PG&E
- Ferdinand Changco, EVgo

IOU Construction Coordination Process

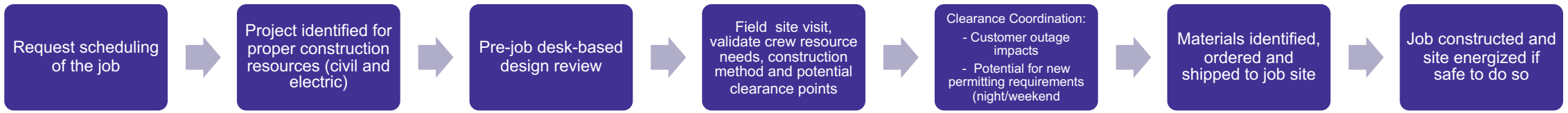
Jobs are scheduled for construction based upon the following conditions:

- All construction dependencies have cleared (AHJ permits, land rights, environmental, etc.)
- Customer Readiness (all inspections passed)
- Utility Crew Resource Availabilities
- Customer Requested Dates

Emergency Response Scenarios:

- Utility personnel will be needed periodically to respond to emergencies to restore service in a safe and timely manner. This will impact planned work schedules.
- Incident Command (IC) structure will be followed to organize emergency response efforts. Within the IC structure, work will be rescheduled when safe to do so

Scheduling Process:



10 Minute Break

Panel 4 – General Discussion on Efforts to Accelerate Energization

- Eric Martinot, Energy Division: Interconnection
- Adria Tinnin, TURN
- Micah Wofford, CEC

CPUC Rule 21 Interconnection Timelines

Panel 4 – General Discussion on Efforts to Accelerate Energization

Eric Martinot, Senior Regulatory Analyst

September 29, 2023

EV Service Energization Timing Workshop

California Public
Utilities Commission

Timeline Tracking and Reporting

Decision D.20-09-035 in 2020 requires PG&E, SDG&E and SCE to track 19 timelines and report results of the tracking every quarter

- Time from submission of Interconnection Request to the utility's acknowledgement of receipt;
- Time from submission of Interconnection Request to time deemed complete;
- Time from Interconnection Request deemed complete to completion of initial review and provision of results;
- Time from Supplemental Review start date to completion of Supplemental Review;
- Time from Electrical Interdependence Test start date to its completion;
- Time from Electrical Interdependence Test completion to Electrical Interdependence Test results scoping meeting held;
- Time from study scoping meeting until study agreement provided;
- Time from System Impact Study start date to its completion date;
- Time to provide Draft Generator Interconnection Agreement applicable milestone;
- Time from Draft Generator Interconnection Agreement provided or Final Study Report date for Detailed Study to date Generator Interconnection Agreement executed;
- Time from when the customer notifies the utility it has completed all of its obligations under the agreements including commissioning tests, to when the utility provides the customer Permission to Operate;
- Total time from submission of Interconnection Request to Permission to Operate (Not in Rule 21, tracked for informational purposes.)
- Time from request to consider modification to determination whether modification is material;
- Time for responding to line-side taps variance requests (for Utilities that require a variance request);
- Design and invoice of net generation output meter;
- Installation of net generation output meter;
- Time from customer agreement to proceed to final design and issuance of invoice;
- Time from customer payment of invoice and completion of customer work to completion of upgrade construction; and
- Time for scheduling of Commissioning Test.

Timeline Standard Requirements and Benchmark

- Design and construction of interconnection-related distribution upgrades standard requirements:
  - Design 60 business days
  - Construction 60 business days
  - Or as agreed between applicant and distribution provider
- "Distribution Provider shall use Reasonable Efforts to comply with these timelines and shall work with Applicant to reach a reasonable timeline when an emergency occurs."
- Benchmark: for NEM (net energy metering) projects greater than 30 kilowatts and for all non-NEM projects, at least 95% of projects meet all timelines
- Workshop ordered and held June 2023 to review progress against benchmark, further steps to meet benchmark, and sunset of tracking

Considerations and Positions in Developing Timelines (Rule 21 Working Group Three, 2019)

Utilities

- Looked to establish future baselines, not retroactive baselines
- Agreed with tracking; saw as means for process improvements
- Would need to update and improve existing IT systems
- Sought to enable enhanced visibility of tracking for customers
- Disagreed with including 7 timelines not already in Rule 21
- Disagreed with tracking net generation output meters (NGOM), saying OK for majority but minority complex, or varies by location, or IT systems not in place

Stakeholder Non-Consensus Proposals (Not Adopted)

- Proposed utilities not meeting benchmark must set additional intermediate goals and establish process to achieve compliance within two years
- Proposed that financial penalties be on the table as part of future discussions/reviews
- Proposed utilities should provide quarterly updates on substation upgrades

Progress on Benchmarks

- Two-year benchmarks 2021-2022
  - PG&E: 36% to 100%; 7 of 18 timelines meet 95%
  - SCE: 71% to 100%; 6 of 14 timelines meet 95%
  - SDG&E: 87% to 100%; 5 of 8 timelines meet 95%
- Some explanations of below-95% levels
  - Staffing turnover and training
  - Staffing, work flow, automation, and IT improvements still forthcoming
  - Increases in application volumes over time
  - Variations in process flow in different situations
  - Mid-review changes by customer
  - Task tracking includes unrelated tasks due to legacy systems
  - Handoffs from one work unit to another still being improved
  - Reliance on customer notifications of fulfilled customer obligations

Transportation Electrification Service Energization

R.18-12-006

Adria Tinnin, PhD
Director of Race Equity Policy
The Utility Reform Network

TURN
THE UTILITY REFORM NETWORK
Lower bills. Livable planet.

IOU Approved TE Program Funding Through End of 2022

Summary - Authorized TE Spending By Utility 2015 - 2022	Approved Budget
PG&E	**$675,249,000**
SCE	**$1,155,103,000**
SDG&E (not including PYD 1 $25M overrun)	**$234,920,000**
Total Approved as of end of 2022	**$2,065,272,000**
* Includes initial TE Infrastructure Rebate Program Funding of $600 million across three large IOUs	

EV Infrastructure Rule Costs are also Significant

- SCE's 2025 GRC forecasts a 60% increase in per site costs under the EV infrastructure rule as compared to Rule 16 5-year average cost for 2018-2022
- PG&E forecasts installation of the utility-side electric infrastructure to support EVs at $96 million in 2026
  - PG&E recently filed Phase II application in 2023 GRC docket to establish balancing account for incremental electric distribution capacity projects up to $1.469 billion in 2024, in addition to pending 2023 GRC request

Electric Rate Unaffordability is a Barrier to Climate Goals

- Rate increases discourage electric vehicle adoption and building electrification
- Speed cannot be the only goal. Affordability must be a primary concern.
- Electric rate increases have far outpaced inflation
- Middle income customers cannot make ends meet
  - Income is too high to receive CARE or FERA, but below the Self Sufficiency Standard

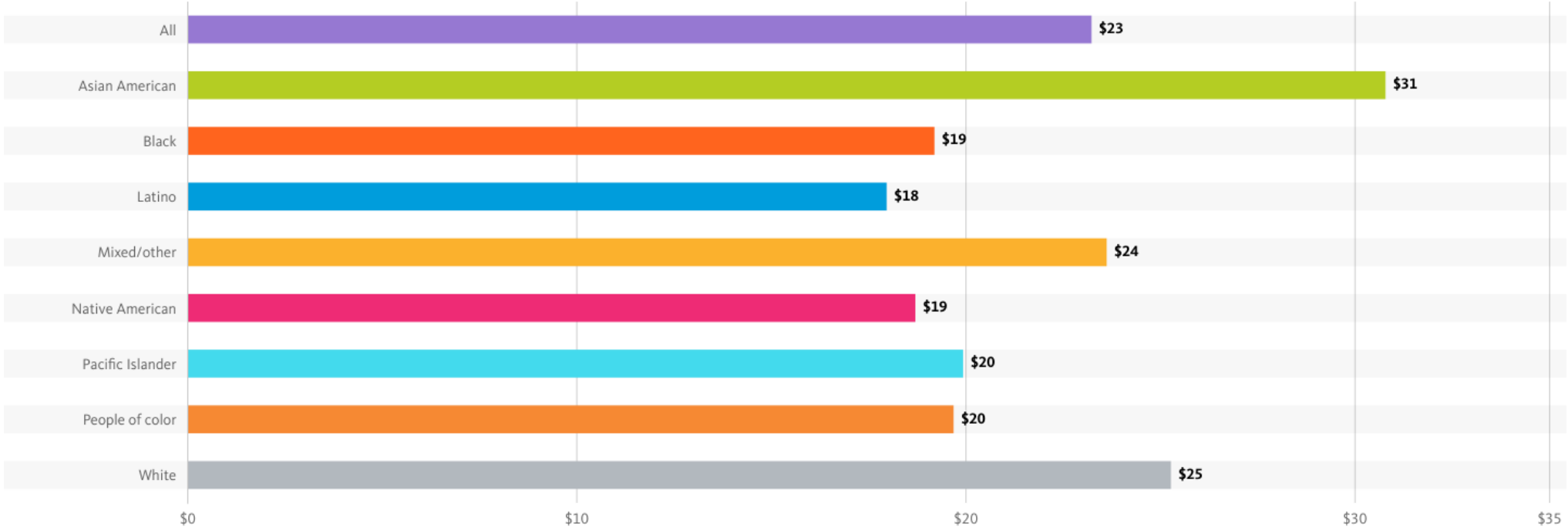
Equity Impacts of Rate Increases

- Affordability is a critical component of equity
  - Black & brown communities are most severely impacted by the regressive nature of utility bill increases
- Threshold equity issue: **who pays and who benefits**
  - Many low-income ratepayers cannot afford to purchase an EV
  - For energization costs under the EV infrastructure Rules, all ratepayers (including CARE customers) are subsidizing Commercial customers

Wages: Median United States

Median hourly wage by race/ethnicity: United States; **Age Group:** 25 to 64; **Year:** 2020

SELECT BREAKDOWN | FILTERS: | AGE GROUP | YEAR



WHAT IT SHOWS | WHY IT MATTERS | TOUR

Data source: IPUMS USA | National Equity Atlas

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Strategies to Limit Ratepayer Cost Impacts: Funding

- Leverage Federal Funding from the Bipartisan Infrastructure Law
  - Smart Grid Grants: $3 billion available for projects that "increase the flexibility, efficiency, reliability, and resilience of the electric power system, with particular focus on … facilitating the integration of increasing numbers of electric vehicles"
  - Grid Innovation Program: $5 billion for Advanced distribution grid assets and functionality including storage projects.

- Consider if the EV-Infrastructure Rebate Program authorized program funds should be reallocated for energization spending.
  - $600 million across the three IOUs initially authorized for program starting in 2025
  - State and federal funding available for EV charging infrastructure

- If funding beyond GRC authorizations is truly necessary, utilize one-way balancing accounts with cost caps

Strategies to Limit Ratepayer Cost Impacts: Policy Changes

- Re-evaluate distribution planning practices & assumptions
  - Are the utilities assuming all charging will occur on-peak when determining the kilowatt size of a project?
    - SCE has system in place that allows for projects with less than 500 kilowatts to bypass an engineering review in locations where there are not capacity constraint concerns. (Resolution E-5247, p. 11)
  - Can Active Load Management" (ALM) or other Vehicle Grid Integration (VGI) technologies be deployed to limit or avoid electrical system upgrades?
- Re-evaluate EV Infrastructure Rules
  - Under Resolution E-5167, rules will be evaluated by January 2025
  - Modify Rules so that civil construction work is no longer IOU responsibility to reduce ratepayer costs & allow motivated site hosts to expedite work
  - Prior to AB 841, under Rule 16 the responsibility of civil construction work (includes excavation, conduit, and substructures) were assigned to the customer

Thank you

- Contact Elise Torres for questions about this presentation, etorres@turn.org

General Discussion

- What outstanding questions on the service energization process need further clarification?
- When considering an updated service energization timeline, is it reasonable to maintain a single target, or are multiple targets for different charging use cases (i.e., LD, DCFC, fleet, MDHD, etc.) reasonable?
- Do the IOUs currently have the necessary authority to address the known barriers to timely service energization that are within their direct control?
- How can the CPUC and IOUs support efforts to resolve barriers to the service energization process that are not within the IOUs' direct control?
- Is there sufficient data available to inform the adoption of a service energization timeline(s) for projects that are currently excluded from the interim target?
- Should the CPUC adopt a strict EV service energization timing enforcement mechanism, and if so, what measure(s) should the CPUC consider?

Next Steps

- Ordering Paragraph 5 of Resolution E-5247 directs the IOUs to file a Joint Tier 2 Advice Letter by December 2023 to propose an updated average service energization timing target that is informed by the IOUs' efforts to implement the EV Infrastructure Rule.
  - The IOUs' participation in this workshop is considered their compliance of OP 6.
  - The CPUC may determine if additional steps beyond this AL filing are needed to resolve the outstanding barriers to timely energizing sites .
- The CPUC will continue to review the IOUs' EV Infrastructure Rule implementation and data collection efforts to inform a potential timing requirement for projects currently excluded from the adopted interim service energization timing target.
- Further guidance on the implementation of AB 50 (Wood, 2023) and/or SB 410 (Becker, 2023) will be provided if, and when Governor Newsom signs the bill(s).