

# CPUC's Transportation Electrification Efforts

*Emmanuelle Truax, Senior Analyst*

*California Public Utilities Commission*



California Public  
Utilities Commission

# CPUC's Mission and TE Strategic Focus Areas

CPUC regulates California's investor-owned utilities – seeks to ensure access to safe, clean, and affordable service.

The CPUC's activities on transportation electrification primarily fall into six main categories:

- Electric rates and cost of fueling
- Timely energization of electric vehicle charging infrastructure
- Proactive planning of grid infrastructure to support transportation electrification
- Vehicle-grid integration (VGI) policy, pilots, and technology enablement
- Strategic planning for charging infrastructure deployment and incentives
- Program evaluation and interagency coordination

# Timely Energization Challenges

Historically, utility energization kept pace with customer requests for service. However, current long energization timelines are impacting the ability to deploy EV charging infrastructure efficiently.

**Current length of energization timelines is the result of several factors:**

- California's ambitious climate and ZEV policies are resulting in more customers requesting electric service for significant new or upgraded load.
- These load requests are large and expect service within a shorter period as compared to historical loads of comparable size (e.g., new housing development).
- Trends reflect the utilities are taking longer than previously needed to complete customer energization requests. Reasons may include:
  - Number of new requests in each utility energization queue is growing significantly;
  - The need to balance numerous priorities;
  - Internal financial and resource constraints;
  - Barriers outside CPUC/utility control slowing down the construction processes.

# CPUC Initiatives Underway

**Distribution Planning  
Process  
Improvements**

**High DER  
Proceeding  
R.21-06-017**

**Energization Process  
and Timeline  
Improvements**

**Energization OIR  
R.24-01-018**

**Freight Infrastructure  
Plan**

**TE OIR  
R.23-12-008**

# Energization OIR

- Builds off and expands previous efforts to establish a 125-business day average service energization timing target for EV projects
  - Limited only to projects going through the EV Infrastructure Rules, and excludes projects needing a Rule 15 upgrade, requesting +2MW, and those that trigger larger grid upgrades.
- Will establish reasonable average and maximum energization timelines for the utilities to meet
  - Timelines will cover the full energization process
  - Efforts will focus on identifying the steps of the energization process, the party responsible for completing each step, and a reasonable timeframe for customers to expect completion of each step.
    - Will also establish a venue for customers to report energization delays to CPUC
  - Future efforts may seek to direct efforts to accelerate the energization process, where possible.

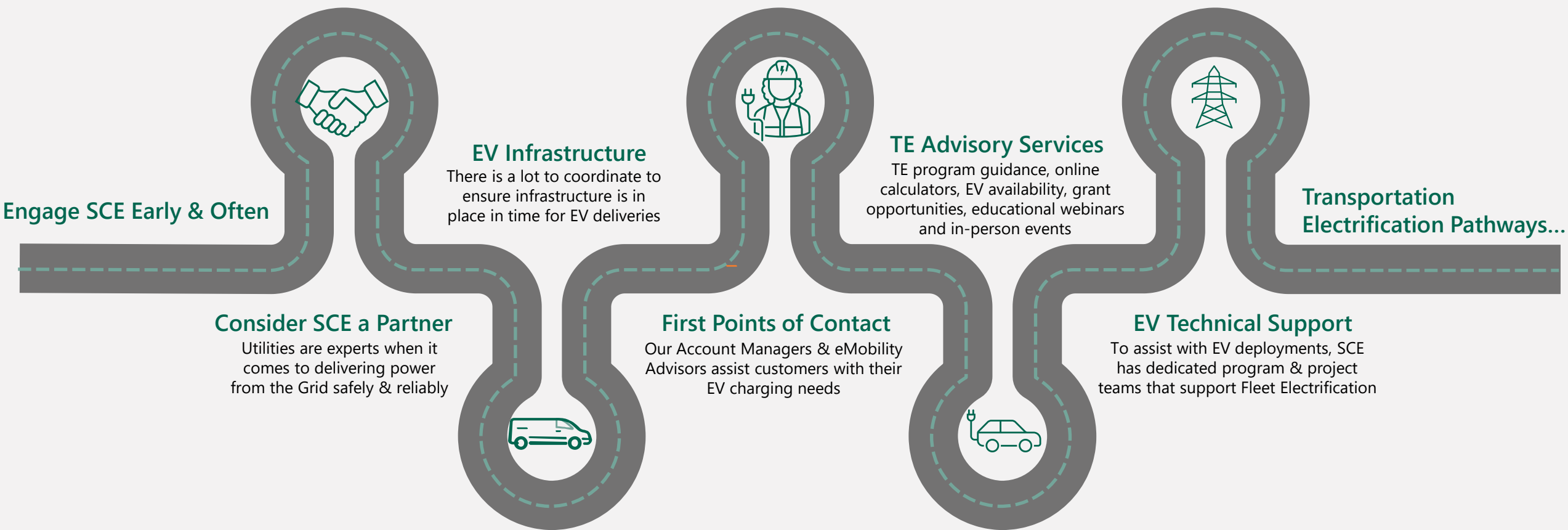
# SCEs Transportation Electrification Pathways

**CARB- Truck Regulation Implementation Group (TRIG)**



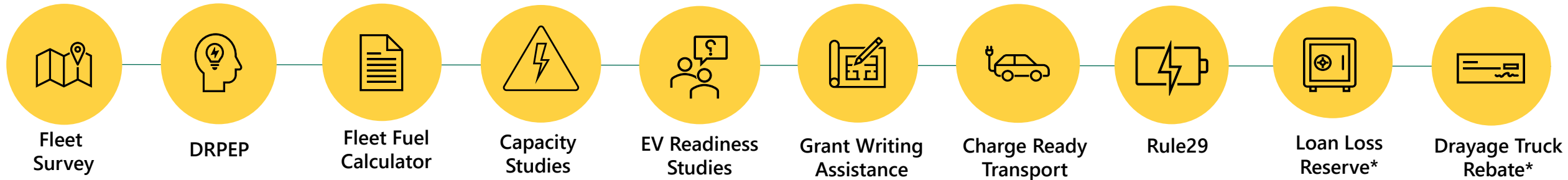
# Working With SCE For Your Power Needs

Requesting or upgrading power can seem like a long and complicated process, but by planning ahead, you don't have to do it alone



# SCE Supports Every Stage of Your Electrification Journey

Programs and self-serve resources are available to help you understand the impact of electrification, define requirements, and access funding for your fleet transition



## START HERE:

- [Power Service Request](#)

## SHARE YOUR PLANS:

- [EV Acquisition Plan Survey](#)
- SCE Forecasting Process
- SCE System Planning Process

## PLANNING:

- [SCE Distribution Resources Plan External Portal \(DRPEP\)](#)
- Engineering Analysis Reports
- [Electric Fleet Fuel Calculator](#)

## TE ADVISORY SERVICES:

- [EV Readiness Studies](#)
- [Grant Writing Assistance](#)
- [In Person Events & Webinars](#)

## EV INFRASTRUCTURE:

- [Charge Ready Transport](#)
- [EV Infrastructure \(Rule 29\)](#)
- [SCE Approved Product List](#)

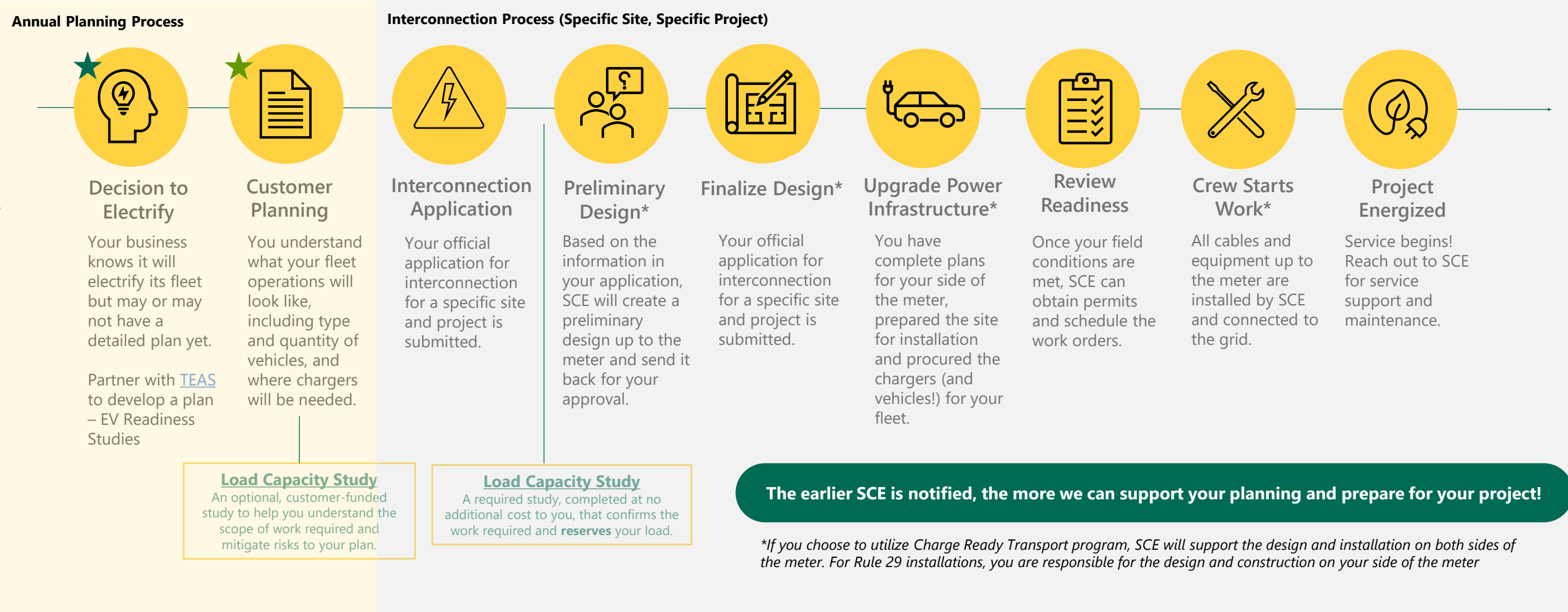
\* Coming Soon!



# What does it take to install charging infrastructure?

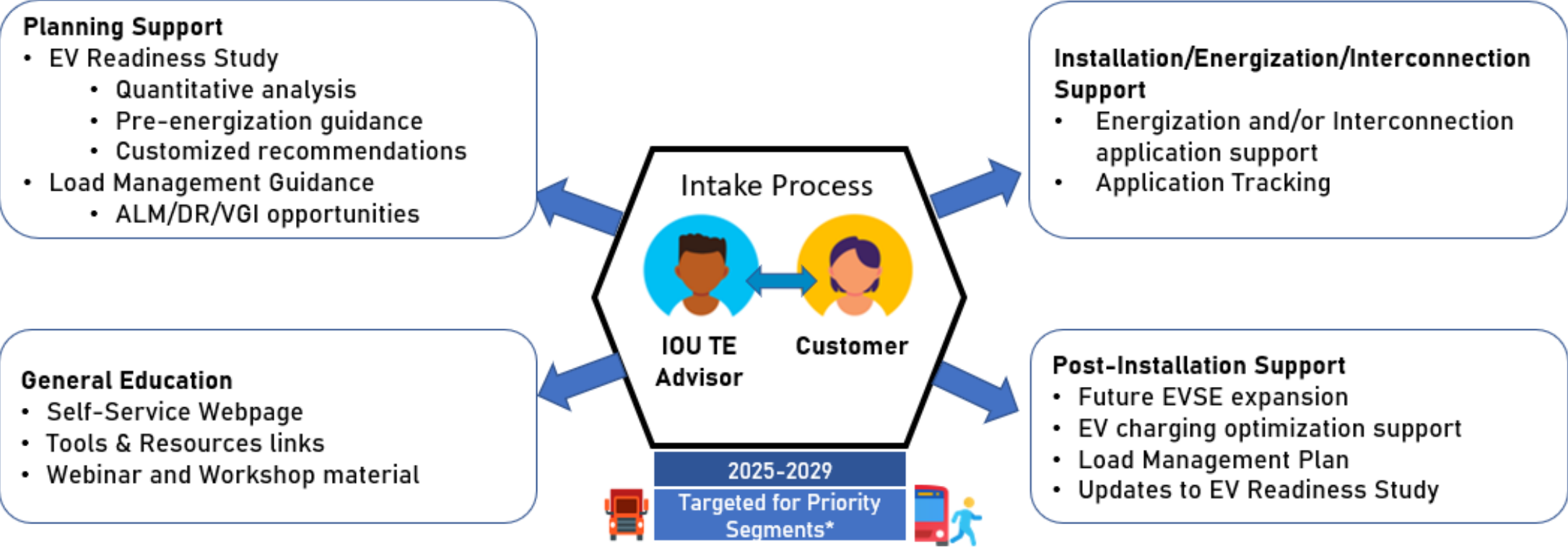
★ Current Point of Engagement  
★ Desired Point of Engagement

Understanding the process flow of installing electric chargers and the work that SCE is responsible for can ensure a smooth partnership from start to finish



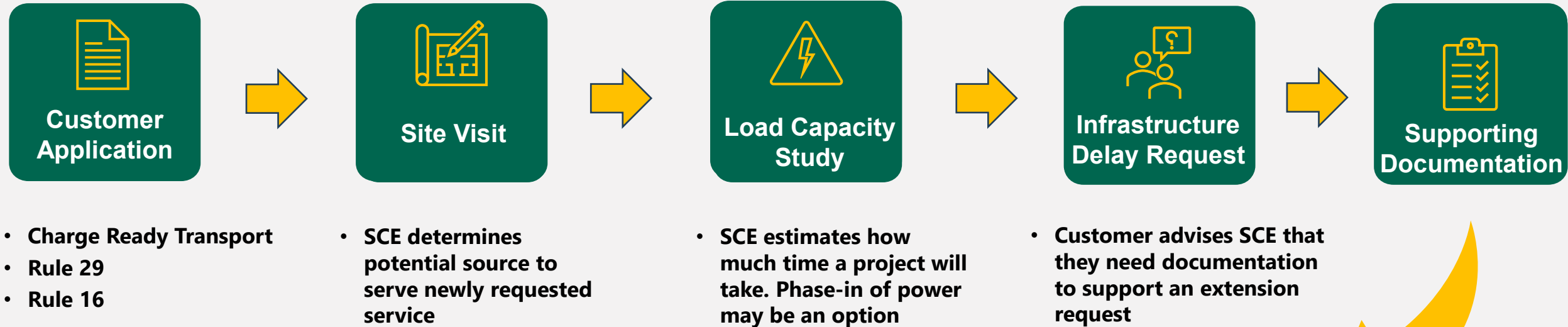
# SCE is Working With CA IOUs to Develop Technical Assistance

Dedicated TE Advisor will work with Customers to determine the level of support needed and provide commensurate support, expected to be available Q1 2025



\*light-duty (e.g. Multi-Unit Dwelling and MUD-serving public locations); medium-heavy-duty (e.g. fleet); as defined in D.22-11-040

# Utility Process for ZEV Infrastructure Site Electrification Delay



## If Site Electrification Delays are Encountered, SCE Representatives Will Provide:

- Reason for the delay
- Available capacity in kW that can be supplied within 1 year, and for each year of the requested extension
- Estimated project completion date
- Documentation showing that SCE is moving forward – if the customer has provided us with sufficient confidence that they are committed to the project

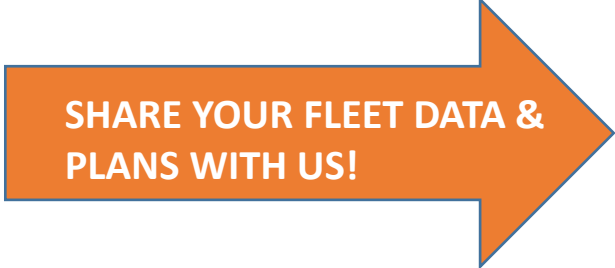
# For More Information & Support:

## Ramiro Lepe

Senior Advisor, Southern California Edison

[Ramiro.Lepe@sce.com](mailto:Ramiro.Lepe@sce.com)

(626) 842-7129



Or Email: [TEP@SCE.com](mailto:TEP@SCE.com)



**For Rule 15, 16, 29:** [TEPMCommercialEV@sce.com](mailto:TEPMCommercialEV@sce.com)

**For Charge Ready Transport:** [chargereadytransport@sce.com](mailto:chargereadytransport@sce.com)

**Transportation Electrification Advisory Services:** [www.sce.com/TEAS](http://www.sce.com/TEAS)



# EV Infrastructure Electric Rule 29

CARB – Truck Regulation Implementation Group (TRIG)



Together, Building  
a Better California



# EV Customer Journey Today

## Customer Experience

“Not enough capacity until 2027!? But my EV fleet is required to start electrifying in 2024!”



“A large load study is too costly and taking too long!”



“Where can I energize a site the fastest? These ICA maps don’t meet my needs...”



## Pain Point

~20% of EV sites receive load limit letters

Since 2020, ~50% of EV applications have been canceled

Construction and dependencies drive ~80% of EV project cycle time



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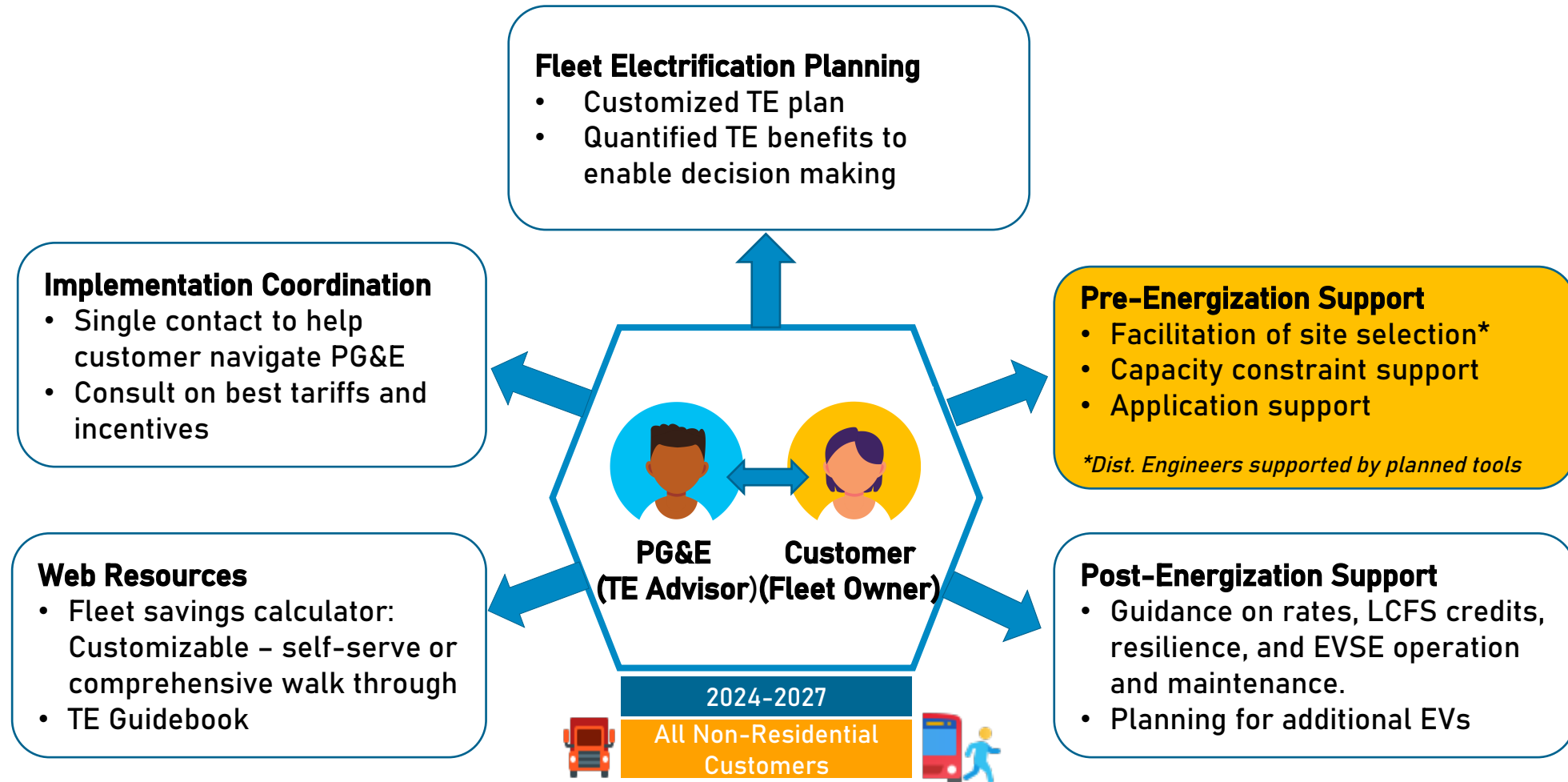
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## Solution

- Improving external **capacity transparency** (ICA) and internal tools for **simpler capacity checks**
- Multi-year **asset planning** to prepare the grid for targeted future capacity needs based on **customer input**
- **Single point of contact** to alleviate the communication challenges of working with various lines of business
- Testing a **Flexible Service Connection** program to support dynamic managed charging based on day-ahead grid availability
- Leveraging **Design Thinking** support to improve process improvement



# TE Advisory Services





# Appendix

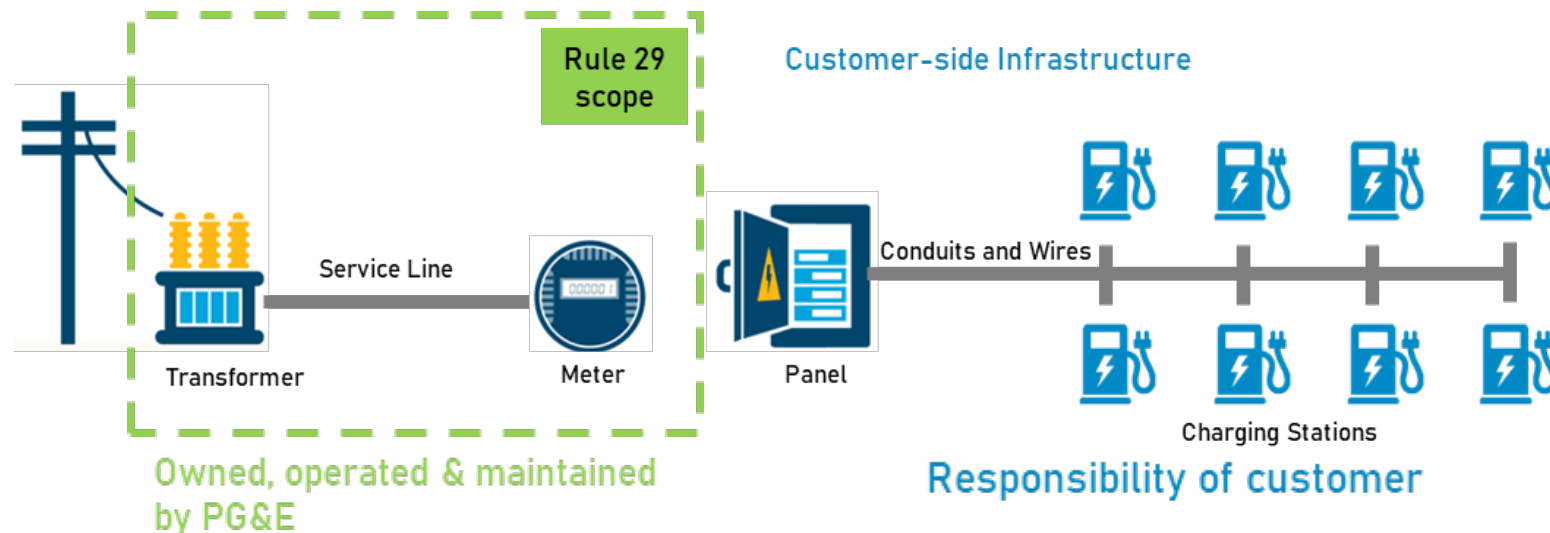


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# EV Infrastructure Rule 29

PG&E coordinates and pay for the design and deployment of electrical service extension work from distribution line facilities to the EV service delivery point.

- **WHAT:** Optional tariff designed to help reduce project costs and simplify the process to provide EV infrastructure for commercial, industrial, and multi-family customers.
- **WHY:** Rule 29 is expected to help CA meet its ZEV goals by making it simpler and less costly for customers to interconnect EV chargers.
- **HOW:**







# EV Infrastructure Rule 29

## BENEFITS:

1. Simplify process to interconnect EV chargers
2. Make it less costly for our customers to install EV charging equipment
3. Help support California's ACF goals by promoting EV infrastructure

Equipment on utility-side of the meter	
PG&E Costs Covered 	Customer Costs 
RULE 16 SERVICE EXTENSIONS	
Planning, designing, engineering and maintenance of line extension facilities installed	Trenching, conduit, protective structures
Conductors, support poles and service transformers	Overhead to underground conversions and relocations
	Permitting, riser materials and environmental studies
	Customer charging station
RULE 29 EV INFRASTRUCTURE	
Planning, designing, engineering and maintenance of line EV infrastructure installed	Environmental studies
	Facility relocations
Trenching, excavation, and permitting	Overhead to underground conversions



# Rule 29 Average Cycle Times

In 2023 PG&E energized (50) Rule 29 projects. Below is the average cycle time.\*

- **Intake:** 34 Calendar Days
- **Pre-Assessment:** 20 Calendar Days
- **Design:** 31 Business Days
- **Dependency:** 134 Business Days\*\*
- **Construction:** 72 Business Days
- **End-to-End:** 228 Business Days

*\* Cycle times vary by project complexity and past cycle times should not be considered a baseline or standard for future projects. Please engage with PG&E early and often to share planning goals so we can support your project needs.*

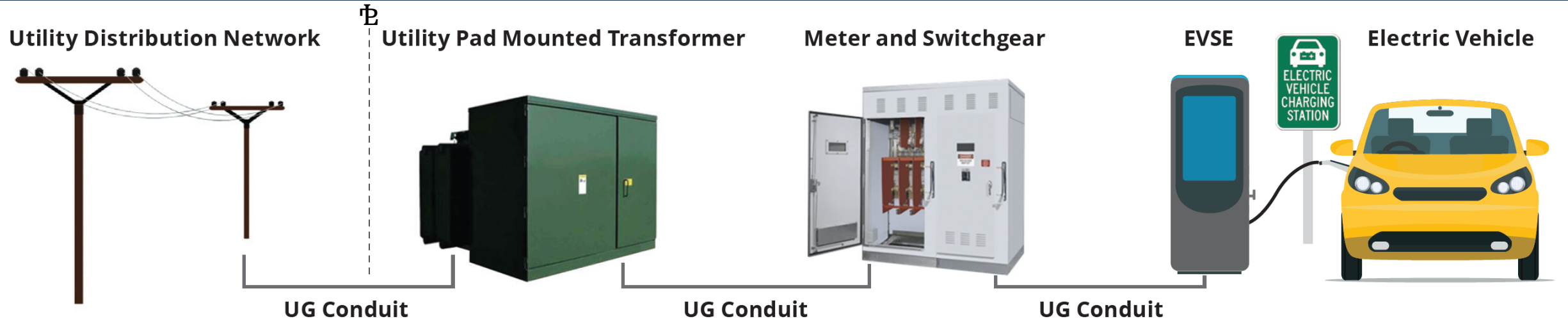
*\*\* Dependency cycle times vary based on the AHJ/applicable agencies which vary significantly system wide.*



# Electric Vehicle Service Planning

Greg Sarvas, Electric Transportation Program Supervisor

# LADWP Electric Service Requirements



## DWP installs, owns, and maintains

\*Customer installs UG conduit and substructures on private property

## Customer installs, owns and maintains

Charge Up LA! Rebate Program can offset customer costs



### Level 2 Chargers

- \$4,000 per charger (\$5,000 in disadvantaged communities)
- Maximum of 40 rebates per site

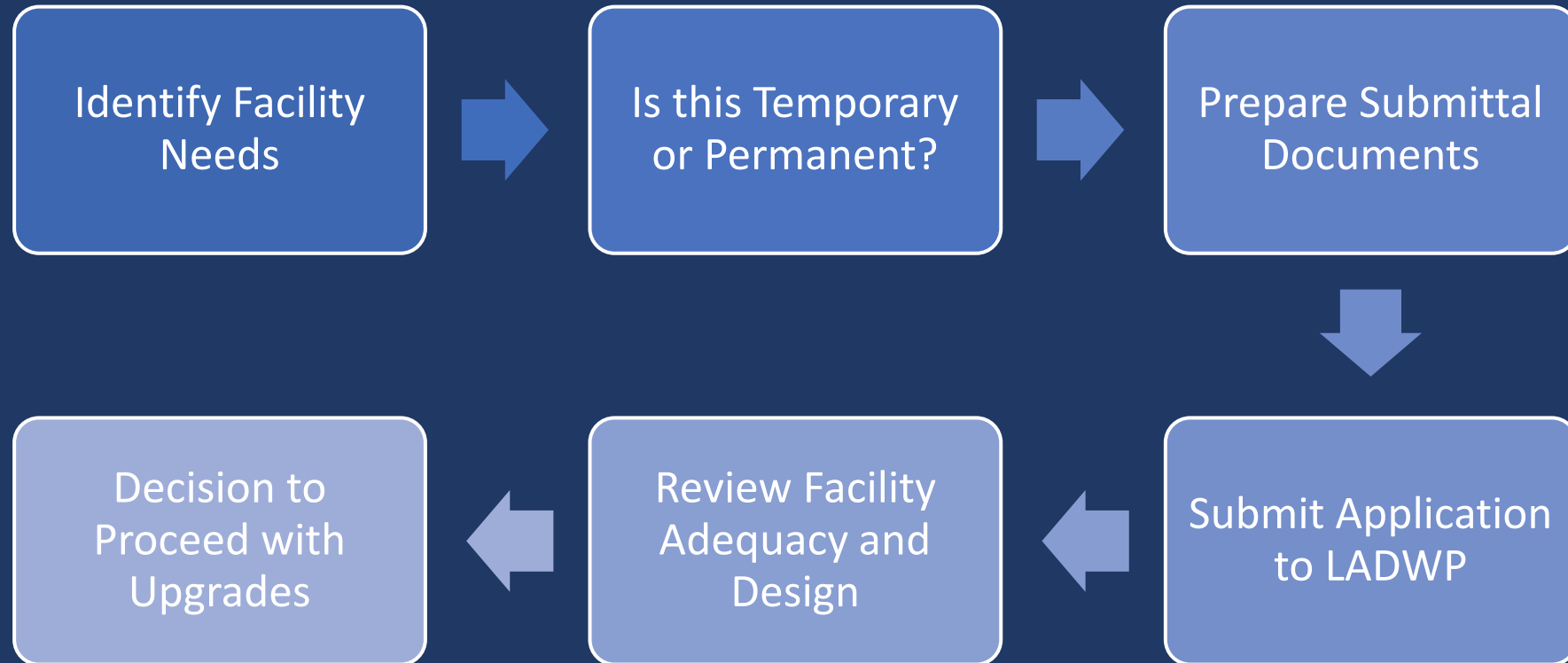
### DC Fast Chargers

- Up to \$75,000 per charger (depending on power output)
- Maximum of 8 rebates per site

### Chargers for Medium- and Heavy-Duty Vehicles

- Up to \$125,000 per charger (depending on power output)
- Maximum of \$500,000 per site

# Customer Decisions And Responsibilities



# Feasibility Study Report

- Preliminary LADWP cost estimate
- Proposed point of service connection
- Estimated project timeline
- Outline of LADWP's responsibilities and customer's responsibilities

Submit an application online:

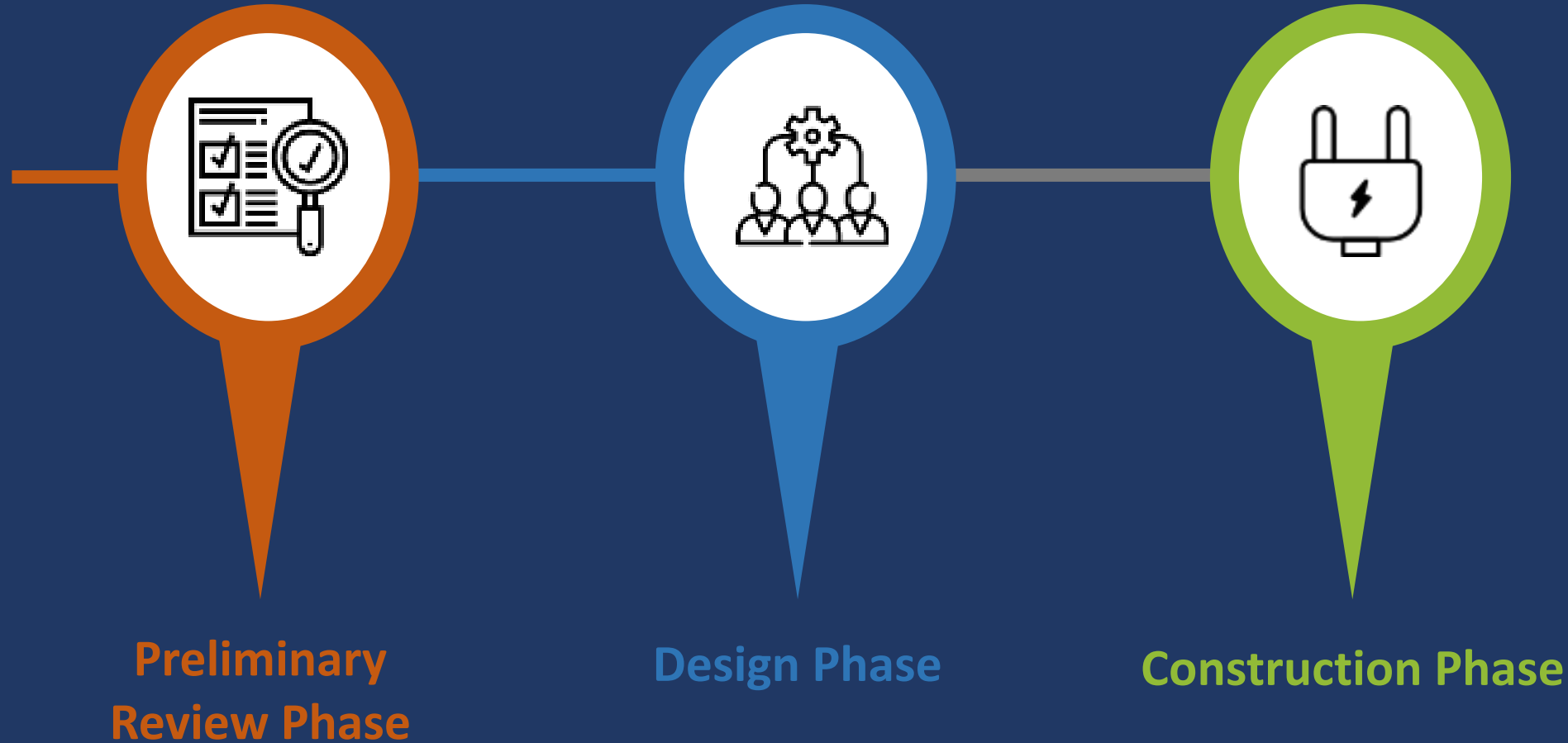
- a. Site plan with proposed equipment location
- b. Single line diagram with service voltage, phase and ampere
- c. Load schedule

\$1,500 feasibility study fee

1-2 months



# LADWP EV Charger Project Process



# Design and Construction

## 1. Adequate Facility (No LADWP Construction)

- LADWP equipment upgrade is not needed.
- DWP facility is ready/adequate for new EV Charger installation

## 2. DWP Equipment Upgrade Required

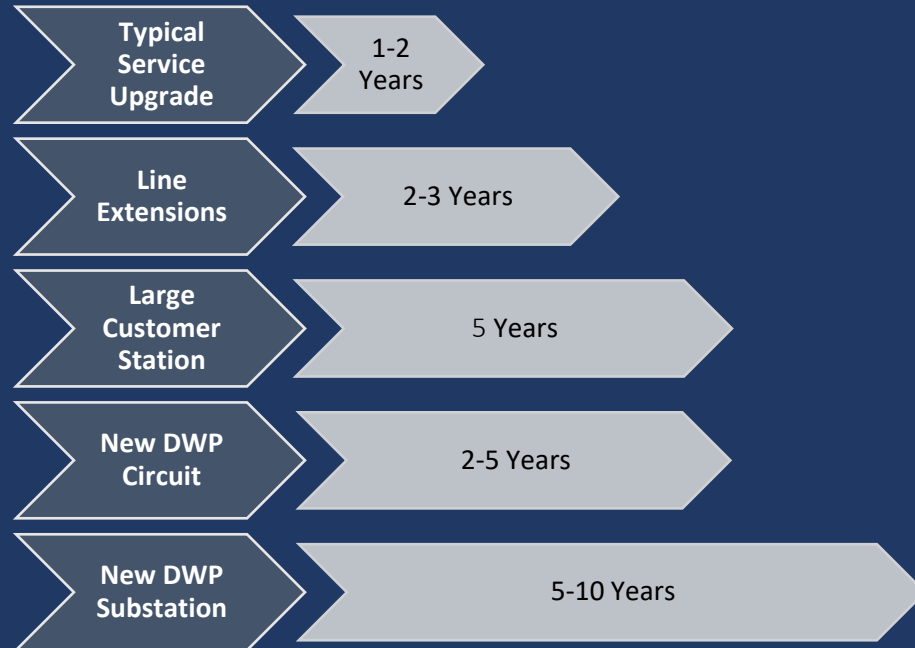
- Replace/upgrade DWP transformer, cables, and/or meter.
- Electric Service Representative (ESR) will perform site inspection and provide required corrections.

## 3. New DWP Equipment Installation

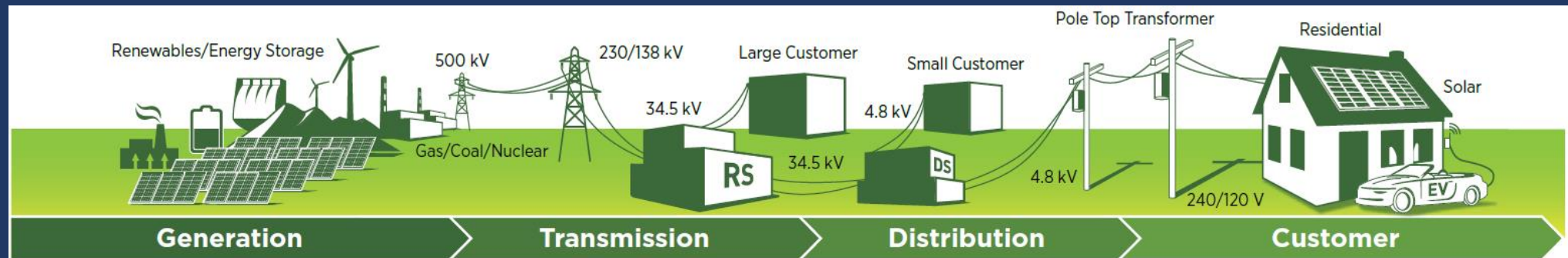
- Customer to obtain LADBS & LADWP releases
- LADWP construction takes up to 5 months.
- Install new DWP transformer, conduit, cables, and meter.
- Duration varies based on complexity of project scope.



# Interconnection Requirements for Permanent Customer Additions



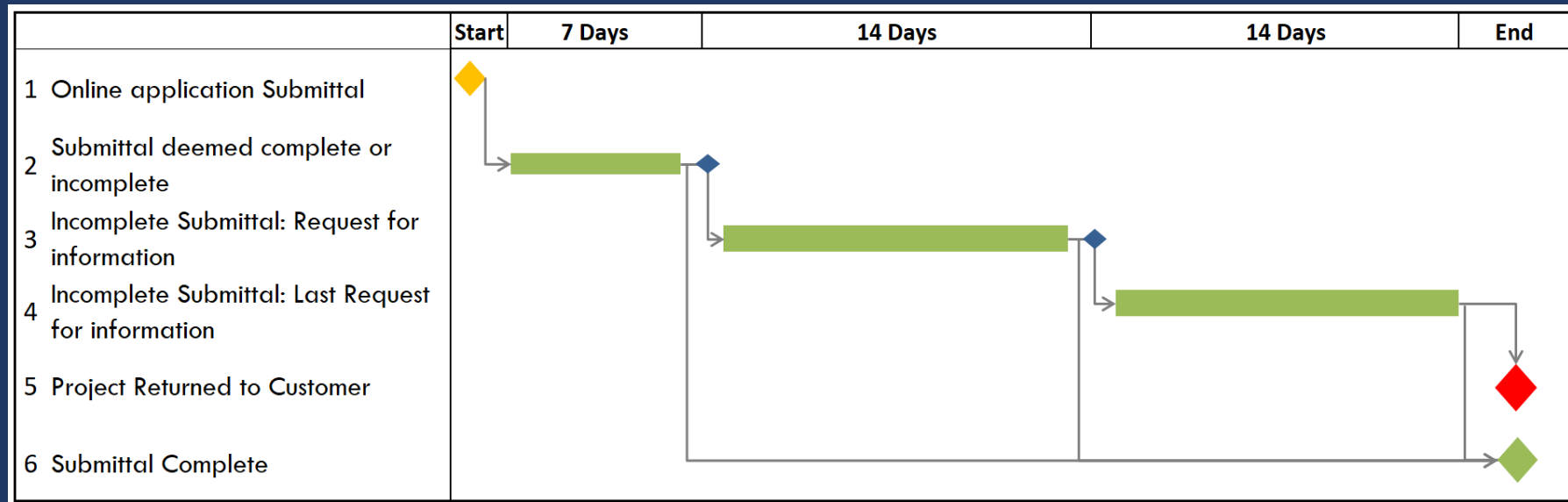
- Maintain Safety and Reliability
- Assess Project Demand
- Determine Supply Point
- Identify Distribution Impacts
- Recommend Upgrades and Improvements





[ladwp.com/ev](http://ladwp.com/ev)

# Preliminary Review Phase



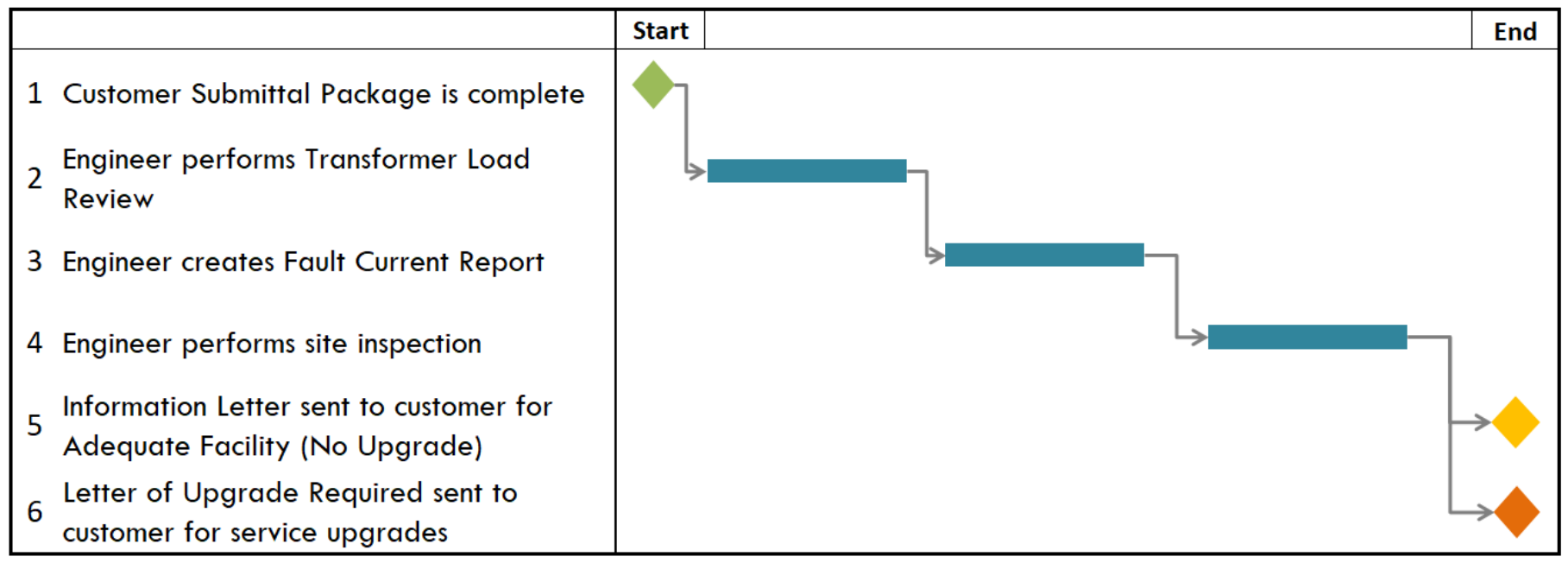
◆ : Hold Email – Requesting for more information.

◆ : Customer Submittal Package is received.

◆ : Job returned to customer – Not enough information. Re-submit when customer has necessary information.


◆ : Submittal package complete, job proceeds to Design phase.

# Design Phase



 : Customer Submittal Package is complete and ready for design.

 : Project has been deemed Adequate Facility (No Upgrade) Information letter sent to customer.

 : Project has been deemed Upgrade Required or New Installation Requirement letter sent to customer.

# Customer Submittal Requirements

- 1. Service Planning Information Sheet. Include name, address, telephone number and email address of the:**
  - Contact information for Property Owner, LADWP Customer contact, Consultant (Designate primary point of contact)
  - Service Wanted Date
  - Job Address based on the street where the facility is located
- 2. Plot Plans and/or site plans (to Scale)**
  - Proposed and existing (if applicable) metering equipment locations
  - Preferred location of LADWP Transformer and/or Switch Pads.
  - Locations of any existing overhead utilities (power poles) in the vicinity (if Applicable)
- 3. Elevation and/or building profile plans (if Applicable).**
- 4. One-Line electrical diagram detailing the requested service voltage and all the switch and bus ampacities.**
  - Show proposed and existing (if applicable) electrical equipment. Include existing meters with meter numbers.
- 5. Load schedule summarizing the service ampacity and all proposed connected electrical loads.**
- 6. Electrical Plan Check Permit or Correction List from City of Los Angeles Department of Building and Safety (LADBS)**

# Electrification Roadmap

