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Energization and Interconnection: An update on CPUC efforts

Matt Coldwell

Manager – Distribution Planning Branch

Energy Division - California Public Utilities Commission

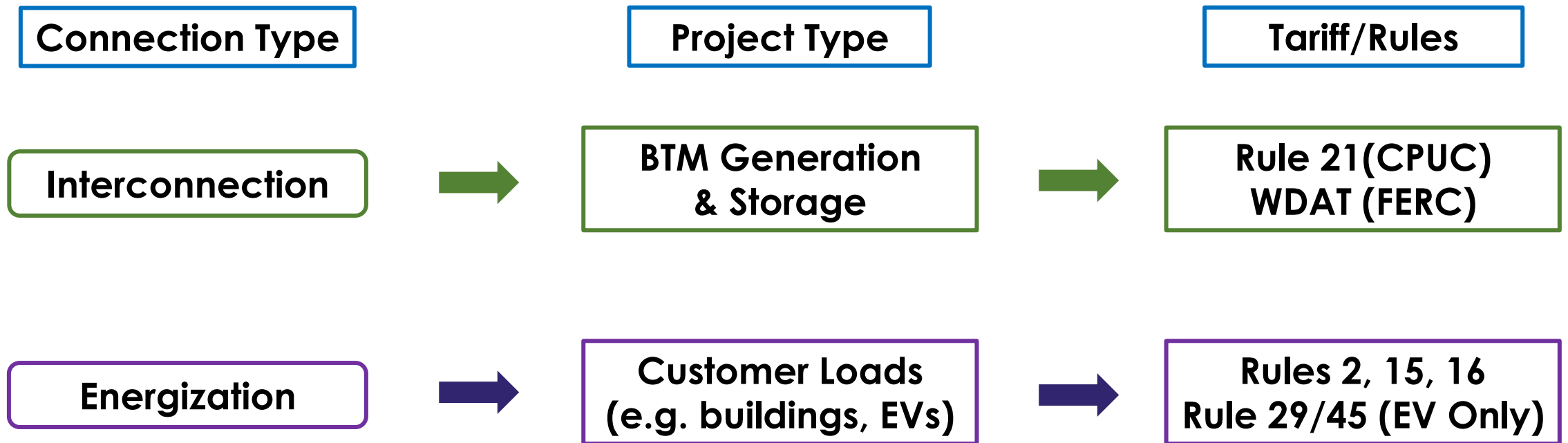
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Two Different Types of Connections to the Distribution System

The energization and interconnection processes govern different project types under different tariffs.



Rules that Govern Energization of Loads

For energization, there are different rules for different types of projects and infrastructure needs.

Rule 15: Distribution Line Extensions

- Extension of electric distribution lines
- Costs covered by ratepayers (through an allowance) and customer.

Rule 16: Service Extensions

- Service facilities that extend from distribution line
- Equipment located on customer site
- Costs covered by ratepayers (through an allowance) and customer.

Rule 2: Special Facilities

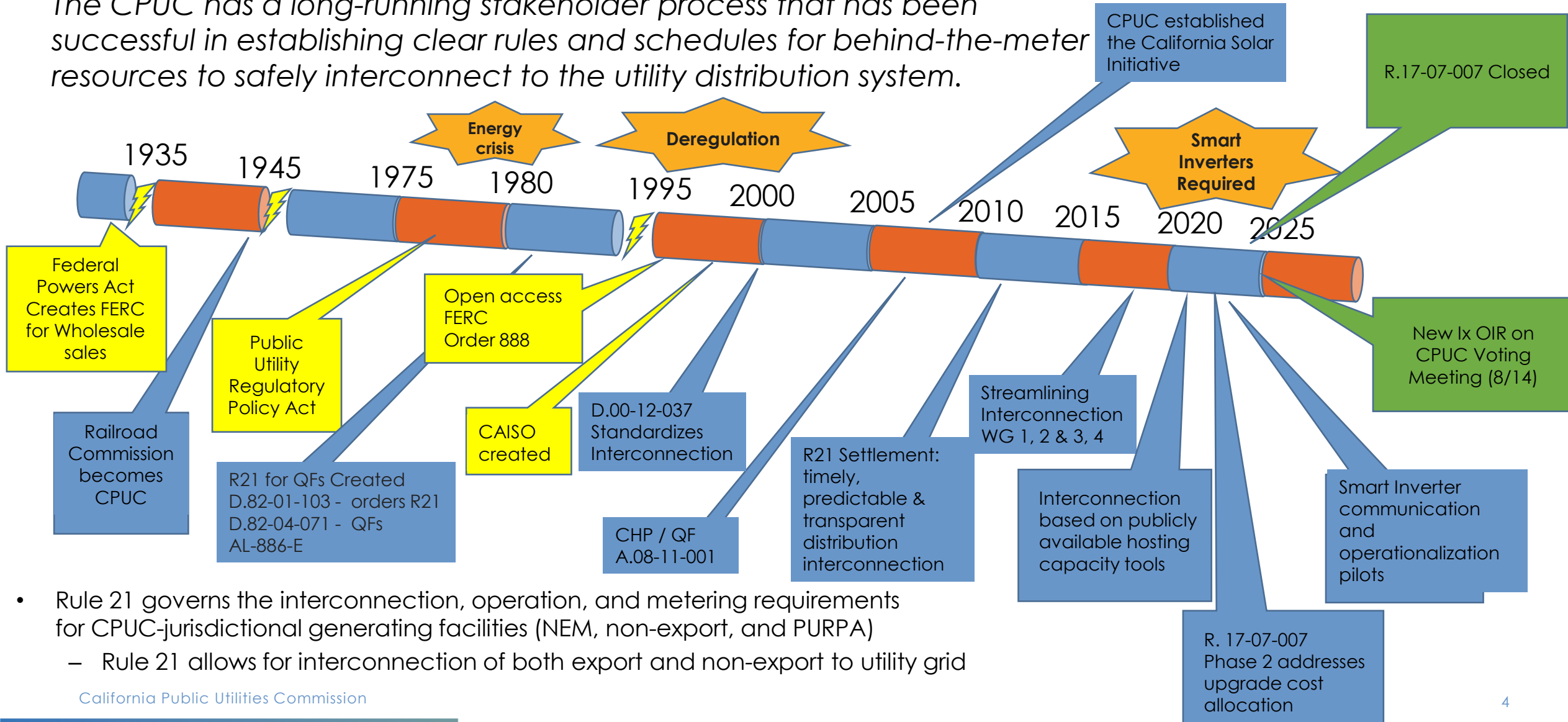
- Non-standard facility installs
- Costs covered by customer

Rule 29/45: EV Infrastructure

- Utility side of the meter service and distribution facilities
- Costs covered mostly by ratepayers

CPUC's Rule 21 Interconnection Stakeholder Process

The CPUC has a long-running stakeholder process that has been successful in establishing clear rules and schedules for behind-the-meter resources to safely interconnect to the utility distribution system.



- Rule 21 governs the interconnection, operation, and metering requirements for CPUC-jurisdictional generating facilities (NEM, non-export, and PURPA)
 - Rule 21 allows for interconnection of both export and non-export to utility grid

Powering Up Californians Act

In 2023, Senate Bill 410 (Becker, 2023) and Assembly Bill 50 (Wood, 2023) put into statute the Powering Up Californians Act, directing the CPUC and large IOUs to make various improvements to existing energization and distribution planning processes.

Senate Bill 410

- Directs CPUC to define and establish energization “target energization time periods” and establish a process for reporting energization delays to the CPUC by September 30, 2024.
- Directs CPUC and large IOUs to make improvements to distribution planning
- Provides large IOUs option to request the use of a ratemaking mechanism for energization related costs above existing authorizations.

Assembly Bill 50

- Directs CPUC to “determine the criteria for timely service for electric customers to be energized.”
- Establish annual reporting requirements for large IOUs to report out customer energization projects and fulfillment of timely electric service.



Active CPUC Proceedings

The CPUC is actively engaged in efforts to ensure needed infrastructure is available in the future.

**Distribution
Planning
Process
Improvements**

**Energization
Process
Improvements**

**Energization
Cost Recovery
Mechanism**

**Large Load
Energization
(e.g. data
centers)**

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

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

**PG&E: A.21-06-
021
SDG&E: A.25-
04-015**

**PG&E Rule 30
Application**

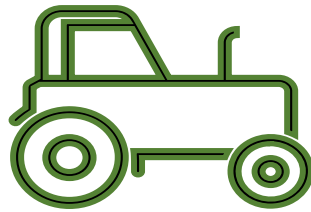


Distribution Energization

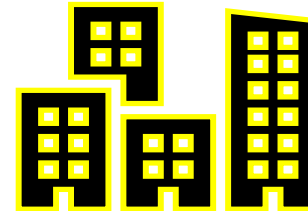
Timely Energization: Critical to California's Economy and Policies

There are significant and legitimate concerns about current and future energization delays across all of California's major economic sectors.

Agricultural



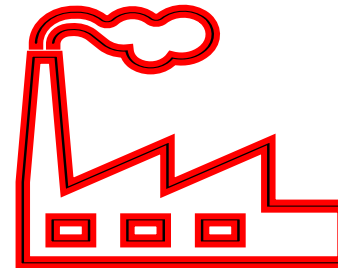
Buildings



Transportation



Industrial



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Energization OIR (R. 24-01-018) Scope

The primary directives of SB 410 and AB 50 that were addressed in Phase 1 focused developing energization timelines and various reporting requirements.

Phase 1 (Completed)

Energization
Timelines and
Criteria for
Timely Service

Customer
Process to
Report Delays

Annual
Energization
Reporting
Requirements

Ongoing Efforts

Bridging
Solution:
Flexible Service
Connections

PG&E SB 410
Cost Cap
Increase



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Energization Timelines Decision

In September 2024, the CPUC approved Decision (D.) 24-09-020 in Phase 1 of the Energization Rulemaking (R. 24-01-018)

- **D.24-09-020 implements several elements of the Powering Up Californians Act**
 - Expedites the process for connecting homes, businesses, electric vehicles, and other loads to the electric grid.
 - Provides transparency to the energization process
 - Adopts timelines based on the utilities' historic energization data and party comments.
 - Supports early engagement between customers and the utilities to coordinate project development schedules and increase transparency to the energization process.
 - Timelines apply to the large IOUs: SCE, SDG&E, PG&E and are for all types of energization requests.

Energization Process Steps & Responsibilities

Step #	Step Name	Description	Responsibility
1	Customer Intake	Customer submits energization request; IOU reviews and establishes "Application Final Submittal" date (AFS); energization clock starts when application is deemed complete and approved.	Shared: Customer initiates, IOU reviews/ approves
2	Engineering & Design	IOU conducts field visits, engineering study, develops project design, determines project cost.	IOU
3	Customer Dependencies	Customer obtains necessary permits, easements, signs contracts, pays fees, completes 3 rd party approvals.	Customer
4	Utility Dependencies	IOU obtains its own permits, easements, approvals from authorities having jurisdiction (AHJ).	IOU
5	Customer Site Readiness	For non- Rule 29/45: Customer requests pre- construction meeting/ inspection and completes customer- side construction. For Rule 29/45: Customer requests pre- construction meeting.	Customer
6	IOU Site Readiness	For non- Rule 29/45: IOU conducts pre- construction meeting and inspection. For Rule 29/45: IOU preforms site readiness work as required by the tariff.	IOU
7	Construction	IOU schedules and completes utility-side construction (including traffic control, outages, equipment install, etc.).	IOU
8	Service Energization Provided to Customer	Final inspections scheduled/ completed as required. IOU energizes service- project clock stops.	IOU

Adopted Energization Timelines by Tariff

D.24-09-020 requires the IOUs to meet or beat the below timelines.

Energization Type	Average Timeline*	Maximum Timeline*
Rule 15	182	357
Rule 16	182	335
Combined Electric Rule 15/16 or Rule 15 and 29/45	182	306
Electric Rule 29/45	182	335
Application Decision	10	45
Main- Panel Upgrade	30	45

*Days listed as calendar days.

Upstream Capacity Upgrade Projects & Preliminary Timelines

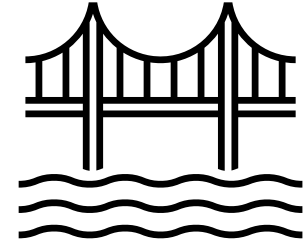
D.24-09-020 establishes maximum timelines for upstream capacity upgrades, however, will be considered more robustly in a future phase of the proceeding.

Type of Upgrade	Maximum Timelines*
New or Upgraded Circuit	684
Substation Upgrade	1,021
New Substation	3,242

*Days listed as calendar days.

- **New or upgraded circuit:** Install of a new 12, 16, and/or 33 kilovolt (kV) circuit, capacitor, switch/ sectionalizing, construct civil projects, and /or install a new circuit breaker.
- **Substation upgrades:** Any project within the substation fence of a preexisting substation, including increase substation capacity, upgrade substation transformer, replace substation banks, and install new substation banks.
- **New substations:** All projects in which a substation is built where one did not previously exist.

Next Steps Effort – Flexible Service Connections

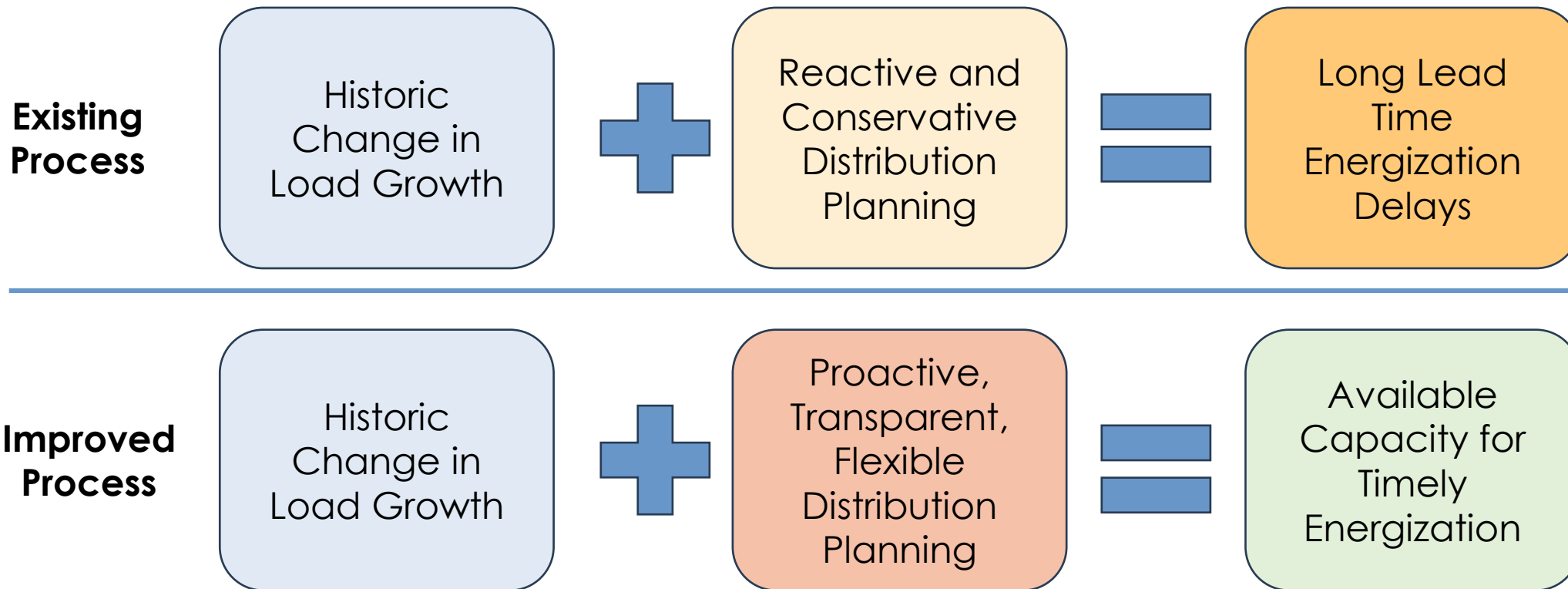


- Collecting record on how to scale Flexible Service Connections as a “bridge-to-wires” solution for customers who cannot receive their full requested capacity in a timely manner
- IOUs can offer eligible customers a “Limited Load Profile” that outlines certain load limits they must adhere to during certain times of the day/year when the distribution infrastructure is constrained
 - The Energization OIR is only addressing pre-determined, firm capacity Limited Load Profiles and “quick wins” to scale these programs and give customers more timely access
 - High DER Proceeding has collected record and will provide direction to IOUs on more complicated scenarios, e.g., using DERM to send day ahead load limits to customers

Distribution Planning

High DER OIR (R. 21-06-017)

The primary directives of SB 410 and AB 50 that were addressed in the High DER proceeding focused on improvements to the existing distribution planning process.



Distribution Planning Process Improvements Decision

In October 2024, D.24-10-030 was approved and directs the large IOUs to make various improvements to the existing distribution planning process

Categories of Improvement

- Enhanced Forecasting
 - Scenario Planning
- New and Improved Data
 - Pending Loads
- Enhanced Outreach and Coordination
 - Annual Community Engagement Plans
- Faster Connection
 - Bridging Solutions
- Transparency Measures
 - Equity Metrics Tracking
- Enhanced Integrated Capacity Analysis (ICA) Usefulness and Improved Data Portal Design
 - Incorporate Limited Generation Profiles

Table of Sections, Categories, and related Ordering Paragraphs

Section	Category	Related OP
3.1 Allow Utilities to Use Bottom-up, Known Load Data to Determine Growth	Better Forecasting	1
3.2 Require Utilities to Improve Method for Setting Caps on Load Growth from Integrated Energy Policy Report (IEPR) Data	Better Forecasting	2
3.3 Allow Utilities Flexibility on Which IEPR Vintage to Use in Distribution Planning and Direct Utilities to Develop Method for Incorporating Newer IEPR Data	Better Forecasting	3
3.4 Require Utilities to Expand the DPP Forecast Horizon to Align with IEPR and Expand the Planning Horizon to 10 Years	Better Forecasting	4
3.5 Require Utilities to Use Scenario Planning to Improve Forecasting and Disaggregation	Better Forecasting	5 6 7
3.6 Require Utilities to Improve Disaggregation Methodology for Load Growth	Better Forecasting	8
3.7 Require Utilities to Create a Pending Loads Category in the DPP	New and Better Data	9 10 11 12 13
3.8 Require Utilities to Develop Prioritization Methods Beyond the Current Consideration of Project Need Dates	Faster Connections	14
3.9 Require Utilities to Consider Distribution Planning Results in Other Distribution Work	Enhanced Outreach and Coordination	15 16
3.10 Require Utilities to Develop Bridging Strategies to Better Accommodate Energization Requests that Trigger Distribution Capacity Work	Faster Connections	17
3.11 Require Utilities to Prepare a Load Flexibility DPP Assessment	Better Forecasting	18 19
3.12 Allow Utilities More Flexibility in Requesting Distribution Capacity Costs in GRCs	New and Better Data	20 21
3.13 Require Utilities to Submit Community Engagement Plans to Address Equity	Enhanced Outreach and Coordination	22
3.14 Require Utilities to Deprioritize DIDF to Free Up Stakeholder Time	Transparency Measures	23
3.15 Require Utilities to Include Metrics to Evaluate Equity in Utility Distribution Plan Reporting	Transparency Measures	24
3.16 Require Utilities to Include Metrics to Track Project Execution in Utility Distribution Plan Reporting	Faster Connections	25
3.17 Require Utilities to Track and Report Up-to-Date Known Load Projects to the CEC	Enhanced Outreach and Coordination	26
3.18 Require Utilities to Facilitate Better Coordination and Data Sharing Between the DPP and Transportation Electrification Planning	Enhanced Outreach and Coordination	27
3.19 Require Utilities to Incorporate More Detail of the Limiting Criteria into ICA Results in the Data Portal Access	Enhanced ICA and Data Portal Design	28
3.20 Require PG&E and SDG&E to Remove All Registration Requirements for Data Portal Access Description of Proposed Improvements	Enhanced ICA and Data Portal Design	29
3.21 Require Utilities to Use the 15/15 Rule for Decisions About Data Redaction Protecting Individual Customer Privacy for the ICA, GNA, and DDOR	Enhanced ICA and Data Portal Design	30
3.22 Require Utilities to Modify ICA Maps to Enable Straightforward Customer Creation of Limited Generation Profiles	Enhanced ICA and Data Portal Design	31
3.23 Require Utilities to Modify ICA Methodology to Make Use of Limited Generation Profile Application Information	Enhanced ICA and Data Portal Design	32
3.24 Require Utilities to Create a New Report that Includes ICA Results Appended to the Current Rule 21 Quarterly Interconnection Report	Enhanced ICA and Data Portal Design	33 34 35
3.25 Require Utilities to Develop New Reporting Aimed at Understanding the Frequency of Zero-Load ICA Values	Enhanced ICA and Data Portal Design	35
3.26 Require PG&E to Incorporate Load ICA Results into Internal Energization Business Processes	Enhanced ICA and Data Portal Design	36 37
3.27 Other Miscellaneous ICA Usability and Data Portal Improvements	Enhanced ICA and Data Portal Design	38 39

Distribution Interconnection

Interconnection New Proceeding

- Order Instituting Rulemaking (OIR) mailed 8/4/2025 for adoption at the 8/14/2025 Commission meeting. If adopted, parties will have 60 days for opening comments.

“The purpose of this proceeding is to update and improve Rule 21 and associated interconnection procedures concerning the safety and reliability of the electric grid as distributed technologies continue to evolve, promote greater transparency and certainty around interconnection processes, and to contain costs for all ratepayers that use the electric grid.”
- The OIR recognizes that much has changed since the prior proceeding:

“In the time that has passed since the scoping of R.17-07-007, the DER landscape in California changed substantially, with new technology configurations—especially related to battery storage and electric vehicles— evolving from the prototype phase to the commercialization phase. These developments call for additional updates and improvements to interconnection requirements to preserve the safety and reliability of the grid, promote greater transparency and certainty around interconnection processes for customers and developers, and to responsibly contain costs for all ratepayers that use the electric grid.”
- Many important topics and priorities have been discussed with stakeholders in recent years, with many reflected in “preliminary topic areas” outlined in the OIR.

Interconnection New Proceeding—Preliminary Topic Areas

1. Electrical Independence Tests—Process Improvements
2. Interconnection Processes—Timelines, Disputes and Compliance
3. Interconnection Pathways and Technical Standards
4. Cost Sharing of Upgrade Costs and Responsibility for Upgrade Costs Due to Load Reduction
5. Tariff Implementation Costs
6. Net Energy Metering and Net Billing Tariff-Related Updates to Rule 21
7. Communications and Interoperability of Distributed Energy Resources
8. Utilities' WDAT Processes and Relationship to Rule 21

New “Limited Generation Profiles” Option for Interconnection

- Allow export-limited interconnection without time and cost of distribution upgrades where grid hosting capacity is constrained.
- Allow 24 unique export limits during the year that can vary by month and hour of the day. Three customer-selectable configurations are available: “Block”, “18-23” and “Hourly.”
- Export limits based on Integration Capacity Analysis (ICA) values for a specific interconnection location.
- Developed through a stakeholder working group and workshop process during 2021-2023, adopted in CPUC Resolution E-5296 in March 2024
- Implementation became effective as of July 9, 2025.

Transmission Energization

PG&E's Rule 30 Application

On November 21, 2024 PG&E submitted Application (A.)24-11-007 proposing a new Electric Rule 30 tariff to connect transmission-level customers seeking retail service.

Related to Other Tariffs

Voltage Category	Generation		Load	
	Wholesale	Retail	Wholesale	Retail
Distribution	FERC Wholesale Distribution Tariff (WDT) (Interconnection)	CPUC Rule 21	FERC Wholesale Distribution Tariff (WDT) (Service)	CPUC Electric Rules 15 & 16
Transmission	Large Generator Interconnection Agreements	CAISO's FERC Open Access Transmission Tariff (OATT)	FERC Transmission Owner (TO) Tariff	<u>Proposed</u> <u>CPUC Electric</u> <u>Rule 30</u> (50-230 kV)

PG&E's Motion for Interim Implementation

- On January 24, 2025 PG&E submitted a motion for Rule 30 interim implementation
- On July 24, 2025, the CPUC approved a decision partly granting PG&E's motion for interim implementation of its Electric Rule 30 application. Key points in the PD:
 - Authorizes PG&E to begin processing transmission-level service energization requests using the approved form agreement and submitted to the CPUC as Tier 2 advice letters.
 - Requires transmission-level customers to provide the entire cost of facility Types 1-3, including advances and/or actual cost payments, and a 100 percent pre-funded loan for any necessary Type 4 Facilities.
 - Declines to approve any repayments of the pre-funded loan for Facility Type 4, nor does it guarantee repayment of 100 percent of the loan.
 - Denies the establishment of memorandum account to track potential interest payments.
 - No rate recovery is authorized. Determinations on the refund calculation, timing, period, and availability for Facility Types 1-3, as well as whether to permit the accrual, tracking, and payment of interest on advances or actual cost payments, are deferred to a final decision on the application.
 - Requires PG&E to provide quarterly status reports to the CPUC during interim implementation.

Thank You

Matt Coldwell

Matthew.Coldwell@cpuc.ca.gov

(916) 823-4783