

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to Establish
Energization Timelines

Rulemaking No. 24-01-018

**OPENING COMMENTS OF TERAWATT INFRASTRUCTURE, INC. ON ASSIGNED
COMMISSIONER'S SCOPING MEMO AND RULING**

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Pursuant to the Assigned Commissioner’s Scoping Memo and Ruling (“Scoping Memo”), Terawatt Infrastructure, Inc. (“Terawatt”) hereby submits these comments on the issues set forth in Phase 1 of the Scoping Memo.

I. INTRODUCTION

California has robust electric vehicle (“EV”) adoption goals. A critical step in decarbonizing the state’s transportation system will be to construct charging facilities to power medium-duty and heavy-duty (“MDHD”) EVs. California has the goal of adopting 510,000 MDHD electric vehicles by 2035¹ and having 100% MDHD electric vehicles sales by 2040.²

A major barrier to California accomplishing its transportation electrification goals is the length of time it takes for its Investor-Owned Utilities (“IOUs”) to energize projects after a customer submits a request to construct a MDHD EV charging facility. These delays reduce the availability of charging stations and extend the air quality issues impacting millions of Californians. In response, the California State Assembly passed Senate Bill 410 and Assembly Bill

¹ CARB, Public Hearing to Consider the Advanced Clean Fleets Regulations Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Response at 56 (Apr. 2023), <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/acf22/ac/acffsor.pdf>.

² CARB, 2022 Scoping Plan for Achieving Carbon Neutrality at 186 (Dec. 2022), <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>.

50 which task the Commission with addressing this energization delay. Accordingly, the Commission issued this rulemaking on January 30, 2024 to implement portions of these bills.

Terawatt designs, operates, and owns electric vehicle charging hubs for MDHD EV operations and has repeatedly had its projects delayed due to a lack of distribution and sub-transmission capacity. Terawatt submits these opening comments on the Scoping Memo to emphasize that the California Public Utilities Commission (the “Commission”) should take swift action in this proceeding to address energization delays. Specifically, the Commission should establish customized, project-specific energization timelines for MDHD EV charging infrastructure projects; direct the IOUs to create an online energization project management system to manage the energization process; and prioritize the phase-in of energization timelines governing MDHD EV charging infrastructure projects.

II. RESPONSE TO QUESTIONS IN THE SCOPING MEMO

A. The Commission Should Establish Customized, Project-Specific Energization Timelines, Instead of a One-Size-Fits-All Approach

In Questions 1 and 4 of the Scoping Memo, the Commission seeks recommendations for specific energization timelines. Terawatt urges the Commission to establish a customized, project-specific approach to energization timelines for projects serving MDHD EV charging infrastructure. A customized approach recognizes that these projects are critical to California’s transportation electrification goals but can be complex and difficult to energize.

Under a customized approach, the Commission would set energization timelines for MDHD EV charging infrastructure projects that vary based on project type and size, the specific needs for service and distribution line extensions, any upstream capacity upgrades required, and barriers outside of utility control. In this way, less complicated projects would have shorter timelines, and vice versa. This customer approach would include an interim time target (or range)

for each step in the energization process within the utility’s control (*e.g.*, engineering/design, site readiness, construction) and an overall target spanning the entire project cycle. Terawatt recommends that the Commission use the best available data to craft a matrix of energization timelines that vary based on the factors described above. Also, the Commission should establish different energization timelines for HD and MD EV charging projects because HD EV charging projects typically take much longer to energize than MD EV charging projects due to increased power demands.

Terawatt recommends baseline energization timelines below for the various types of energization projects IOUs perform. The Commission should start with these baselines in the process of crafting customized energization timelines. These baseline timelines would then transform into the final energization targets upon performance of an in-depth engineering assessment and design which reflect the realities of a given project.

Baseline Timeline for Types of Energization Projects
Rule 29: 8-12 months
Rule 16: 8-12 months
Rule 15: 12-15 months
Rule 29 + 16 +15: 12-15 months
Rule 29 + 16: same as above
Rule 15 + 16: 12-15 months
New/Upgraded circuit: 15-18 months
New/Upgraded circuit with flexible service connection: 15-18 months
Upgrades to substation: 24 months
Upgrades to substation with flexible service connection: 24 months
New Substation: 5 years if no land is available, 24-36 months if customer-sited substation
New Substation with flexible service connection:5 years if no land is available, 24-36 months if customer-sited substation

The Commission should also update these baselines every other year, at the same time it updates its energization targets, once it is able to incorporate data on energization timelines from the IOUs' annual filings.

The Commission should set energization timelines for MDHD EV charging infrastructure facilities specifically due to the long delays associated with current projects and the necessity of these projects in helping California accomplish its transportation electrification goals. Based on Terawatt's experience with projects ranging from 5 MW to 20 MW, the majority of MDHD EV charging projects take 3-5 years to complete and require unique upstream capacity upgrades. These upstream needs include B-Bank upgrades or A-Bank upgrades that implicate an IOUs' transmission team, with other projects having an even longer timeline.

For example, Southern California Edison Company ("SCE") has told Terawatt that insufficient capacity exists on the majority of its distribution and sub-transmission systems to quickly energize Terawatt's projects. Terawatt has submitted dozens of energization requests but SCE has stated that there is currently only enough capacity for Terawatt to move forward with six projects and in some cases those projects only have a fraction, *e.g.*, 10% - 13%, of the power originally requested. SCE has stated in response to many of Terawatt's requests that it cannot provide power to Terawatt because there are sub-transmission limitations with 5-year constraint mitigation estimates, *e.g.*, Etiwanda Substation A-bank upgrades. In other areas, such as Fontana, SCE has stated that it will not be able to provide future distribution service because of distribution substation capacity limits at stations such as Bloomington Substation—which SCE has fully built out. SCE informed Terawatt that it will be unable to provide such service until it locates and builds a new substation, a process which takes at least eight years.

However, these long-delayed projects are critical to supporting California’s transportation electrification goals and recent regulations. The California Air Resources Board recently issued Advanced Clean Trucks, Cal. Code. Regs. tit. 13 § 1963.1, and Advanced Clean Fleets, Cal. Code. Regs. tit. 13 §§ 2013-2016, regulations which both have the goal of increasing MDHD electric vehicle adoption in California.

Terawatt also recommends that the Commission prioritize MDHD EV charging infrastructure projects in setting energization timelines. This prioritization would align with the directives of Senate Bill 410 which states that it is “the policy of the state that each electrical corporation . . . [p]romptly energize new customers, including by ensuring that . . . new charging for light-duty, **medium-duty, and heavy-duty vehicles** and off-road vehicles . . . can be used without delay caused by a failure of the electrical corporation to implement energization projects.”³ The Commission should especially prioritize projects with the ability to deploy automated load management to comply with load schedules because these projects will be able to energize with limited power and a greater amount of managed connected load.

Finally, Terawatt notes that it is challenging to recommend specific energization timelines pursuant to Questions 1 and 4 of the Scoping Memo because many problems with energization stem from the IOUs having scarce resources to facilitate energization. In Terawatt’s experience, one of the most challenging aspects of meeting energization timelines for large projects is that IOUs do not have enough resources to respond in a timely manner to energization requests. They also lack the proper project management tools and resources to manage the energization process and communicate requirements in detail and in a timely manner. Most EV project managers at the IOUs have 200+ projects and can have more if another manager transitions to a new role. In

³ Senate Bill 410, CAL. PUB. UTIL. CODE § 933(c) (emphasis added).

addition, IOU Distribution Planning, Engineering, and Design teams have similar or more projects to assess for capacity, engineering, and design. A significant number of energization delays are due to utility staff workload and the inability to respond to requests and adequately communicate with customers. Many energization timelines could be sped up with better project management tools, process mechanism improvements, clear customer communication, and customers having access to utility requirements and procedures from application to energization. Terawatt requests that the Commission adopt its online management system (described below) and customized energization timelines to speed up energization, but emphasizes that the IOUs fully staffing their energization teams is also a critical factor in accelerating energization.

B. The Commission Should Direct California’s IOUs to Create an Online Energization Project Management System that Allows Customers Seeking Energization to Report Delays and to Track the Progress of Their Projects

As part of this rulemaking, the Commission should direct California’s IOUs to develop and manage online energization project management systems, with a customer facing portal, which allow customers seeking energization to report delays and track the progress of their projects. Doing so will give customers a portal to report delays to the Commission, understand the relevant timelines for their projects, and communicate with the IOUs when the utilities miss a deadline. An online portal would also allow the Commission to gather data on energization statistics that it could use to update energization targets every other year.

Question 3 of the Scoping Memo seeks comment on procedures for customers to report energization delays and a description of how utilities currently engage with customers that have pending or missed deadlines in their energization projects requests, along with ways to improve engagement with customers. In Terawatt’s experience, the energization process is opaque and it is challenging to obtain information on estimated completion of energization tasks. IOUs give

customers seeking energization only limited information about the energization process, which makes the process inefficient. Typically, IOUs provide parties seeking energization with PDF handouts for customer requirements and Excel spreadsheet trackers which only track dates of completed items. IOUs provide estimated dates of completion, or a minimum number of days that a task will take, but not a maximum number of days. The IOUs frequently miss their deliverable dates due in part to the IOUs' workload described in the previous section. For Terawatt, when an IOU misses a deadline, it must contact the relevant utility to further understand the status of its project and navigate the IOUs' organizational hierarchy to escalate its request to management for resolution. Some utilities are easy to contact and communicate with, others will go silent for days or weeks. Terawatt has not previously reported energization delays to the Commission. The process of contacting the utility when it misses a deadline is time-consuming for both Terawatt and the IOUs and serves to further delay energization.

To address these problems, Terawatt recommends that the Commission direct the utilities to develop and manage online energization project management systems which allow customers seeking energization to report delays and track the progress of their projects. The management systems should include, among other items:

- A portal which allows customers seeking energization to track all energization requests submitted by a customer, critical milestones for those requests, utility and customer requirements, estimated timelines to completion which the IOUs would update when there is new information, and utility contact information;
- An outline of the energization process which includes flow charts illustrating all possible project pathways, a process map, and impacts based on outcomes;
- A library that defines relevant terms utilized by the IOUs in the energization process and sources for all required standards and documents; and
- An avenue to escalate questions regarding energization delays for unresolved utility tasks or other issues to utility management.

Critically, the project management system should also include a pathway for customers to report energization delays to the Commission if the utility exceeds the energization timeline set by

the Commission as part of this rulemaking. A common project management system across the three California IOUs would facilitate a systematic and common reporting process for energization delays.

This structure would also improve utility engagement with customers. A utility-owned project management software platform that allowed customers to track processes and submit inquiries would allow delayed issues to be escalated to management for resolution. The customer could file a “ticket” placed in a queue which utility staff must address in a given timeframe before the ticket is automatically escalated to management. Engineering firms across the globe have similar project management tools, and they should be a standard process for the IOUs.

Finally, in relation to Questions 6 and 8 of the Scoping Memo, the creation of such a system would allow for more seamless reporting of energization statistics to the Commission such that it would not need to direct the utilities to report average and maximum energization periods as it did in this proceeding. The Commission should direct the IOUs to maintain databases drawing from the online system calculating average and maximum energization periods by customer class and project size and provide that reporting to the Commission in its annual report. However, IOUs should provide data on energization projects supporting EV charging infrastructure separately for projects which will support MD and HD EV charging. As noted above, these are very different project types, with energization of HD EV charging infrastructure typically taking much longer in comparison to MD EV projects. The data collected by the Commission for these various types of projects could then be used to update the baseline timelines and the average and maximum energization targets that the Commission will set in this rulemaking. Terawatt recommends the Commission update the baseline timelines and the energization targets every other year based upon the best available data.

C. The Commission Should Phase In the Energization Timelines But Prioritize MDHD EV Charging Infrastructure Projects

Question 9 of the scoping memo raises the question of whether the average and maximum energization time period targets that the Commission establishes for utilities should be implemented all at once or phased in gradually over time. Terawatt supports a phased-in approach but notes that, as discussed above, the Commission and IOUs should prioritize phasing in energization targets for MDHD EV charging infrastructure projects.

III. CONCLUSION

Terawatt appreciates the opportunity to provide comments to the Commission on energization timelines. Terawatt looks forward to working with the Commission and other stakeholders to develop strategies around how to facilitate timely energization which will allow California to meet its transportation electrification goals in the years to come.

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Respectfully submitted,

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