



June 14, 2023

Senate Energy, Utilities, and Communications Committee
1021 O Street, Room 3350
Sacramento, CA 95814

Re: Vote YES on AB 691 (Ting) to Improve Distribution Interconnection

Dear Chair Bradford and Committee Members:

On behalf of the undersigned organizations, we would like to voice our strong support for AB 691 (Ting), a bill that would modernize clean energy technology deployment and provide a much-needed solution to the state's present challenges with energizing and interconnecting new customers and resources to the distribution grid.

Power Control Systems (PCS) is UL-certified energy management technology that can enable the rapid deployment of electric appliances and distributed energy resources (DERs). PCS is a software overlay to one or more physical devices that precisely adjusts load and / or generation levels in response to the total current at the customer meter, allowing resources to stay within the rated capacity limits of a customer's main panel, their utility service connection, and the distribution circuit, thus maximizing the utilization rate of existing grid infrastructure and customer facilities.

In this way, PCS technology addresses the most pressing near-term barriers to electrification and DER deployment – including the current 2–3-year lead time for distribution transformers due to supply chain constraints, and the well-publicized delays in grid upgrade construction and new service connections – by obviating the need to pursue capacity upgrades that would otherwise be entailed by unmanaged resources. PCS enables utilities to reserve scarce grid components and construction labor for high priority, high impact grid upgrades while allowing customer deployment of electrification and clean energy projects to continue apace.

PCS is approved for use in Rule 21 to achieve non-export or limited-export DERs operations, and the Rule 21 proceeding is considering how to incorporate circuit-level hosting capacity constraints into DER export limits in a "Limited Generation Profile." However, these approaches for PCS have not been extended to, or considered for, energizing new loads, historically governed by utility Rules 2, 3, 15, 16, and 29/45. Furthermore, owing to the novelty of PCS, utilities have sometimes required redundant protection equipment or grid upgrades for DER installations where PCS is used for non- or limited-export, which can kill projects entirely due to increased timelines and cost.

AB 691 (Ting) addresses these issues in two key ways:

1. Orders state agencies to coordinate with research at an independent entity such as EPRI or a national lab (e.g., NREL, PNNL) that tests and validates the ability of PCS to avoid thermal overloading of grid components such as distribution transformers. This work can inform future standards and tariff development and, critically, give utilities confidence that PCS-only limitation schemes do not pose a risk to the grid and that redundant protection schemes are unnecessary.
2. Orders the CPUC to create an optional tariff for customer resource energization and interconnection that uses PCS to limit import / export at the Point of Common Coupling. In electing this option, customers would have to agree to an up-front import / export curtailment schedule informed by distribution circuit constraints (a la Limited Generation / Load Profiles) and a determination of the available capacity from a customer's service facilities.



PCS should be a cornerstone of California's efforts to streamline connection timelines, while mitigating the recently estimated \$50 billion price tag for distribution upgrades required to meet the state's electrification targets through 2035.¹ Other jurisdictions, including the UK,² have already implemented flexible connections policy solutions in this manner, and they are being considered in Massachusetts, New Mexico, Illinois, and Hawaii.

We strongly urge your YES vote on AB 691 (Ting) to expand the use of PCS to the benefit of the state's electric customers and ratepayers.

Sincerely,

Emilie Olson
Advanced Energy United

Joe Desmond
California Efficiency + Demand Management Council

Rachel McMahan
California Energy Storage Alliance

V. John White
Clean Power Campaign

Marc Monbouquette
Enphase Energy

Adam Browning
Forum Mobility

Rebecca Lee
NRG Energy

Jacqueline Piero
The Mobility House

¹ <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M508/K423/508423247.PDF>

² Flexibility Connections: Explainer and Q&A, August 2021, See Sec. 2.2, [https://www.energynetworks.org/industry-hub/resource-library/on21-prj-open-networks-flexibility-connections-explainer-and-q-and-a-\(19-aug-2021\).pdf](https://www.energynetworks.org/industry-hub/resource-library/on21-prj-open-networks-flexibility-connections-explainer-and-q-and-a-(19-aug-2021).pdf); SP Energy Networks Flexible Connections Solutions document, <https://www.spenergynetworks.co.uk/userfiles/file/ESDD-01-009.pdf>