BEAR
Berkeley Economic Advising and Research, LLC
1442A Walnut Street, Suite 108
Berkeley, CA 94705
www.bearecon.com

California ISO

REGIONAL ELECTRICITY MARKETS AND

ASSEMBLY BILL 825

CALIFORNIA POWER-SECTOR JOBS

Jobs Assessment, 2025–2040

Policy Brief

Prepared for the California Independent System Operator

Prepared by

Berkeley Economic Advising and Research, LLC

David Roland-Holst | Sam Heft-Neal | Drew Behnke | Jonathan Chang

www.bearecon.com

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AB 825 AT A GLANCE

Assembly Bill 825 (Petrie-Norris, 2025) authorizes the California Independent System Operator (CAISO) to transition governance of the Western energy markets it operates to an independent regional organization. The statute also requires CAISO to study how that transition could affect the creation and retention of jobs in California, specifically including jobs constructing and maintaining power plants, and to submit the study to the Legislature by December 31, 2026. This brief summarizes BEAR's assessment of those employment effects for 2025–2040.

AB 825 acts on California's power sector in two ways. A regional market, potentially expanded by the new governance enabled by AB 825, changes how electricity is dispatched and traded across the West, letting California sell power it would otherwise curtail across a wider footprint. AB 825 also provides, through Public Utilities Code §399.16.5, that participation in a regional market does not expand the resources that qualify as Portfolio Content Category 1 under the Renewables Portfolio Standard (RPS). BEAR refers to this as the **source rule**: it keeps the clean energy California procures to meet its targets tied to resources delivered into the state. Together with SB 100, which sets how much clean energy California must secure, these provisions shape how many power-sector jobs are created in California.

+7,836
O&M jobs in 2040, AB 825 and SB 100 combined

~460,000
Construction job-years, 2025–2040

+1,736
O&M jobs in 2040 attributed to AB 825

Change from the Baseline, mean of 5,000 simulations.

Taken together, AB 825 and SB 100 increase California power-sector employment while lowering system costs and reducing emissions. By 2040, operations and maintenance (O&M) employment is about 7,836 jobs higher than in the Baseline, an increase of about 31%, and construction employment rises by about 460,000 job-years over 2025–2040. AB 825 contributes to these gains through the regional market, by preserving the rules that govern which clean energy counts toward California's requirements, and by keeping the RPS rules in force after 2030.

+1,736
AB 825 O&M jobs in 2040

+770
of which from keeping the RPS rules in force after 2030

AB 825, SB 100 AND THE SOURCE RULE

The Legislation

Three provisions of AB 825 frame the study:

Provision	Content
§345.6(f)	Requires CAISO to study the impacts of the transfer of governance on the creation or retention of jobs in California, including jobs constructing and maintaining power plants; to hold public workshops on the methodology and results; and to provide the study to the Legislature by December 31, 2026.
§345.6(g)(2)	CAISO shall not change its balancing authority area from that which existed on December 31, 2024, with three exceptions.
§345.6(h)(1)(A) and PUC §399.16.5	AB 825 does not change any requirement of the RPS program. Participation in a regional market does not expand the transactions that meet Portfolio Content Category 1 (§399.16(b)(1)), compared with those that qualified on December 31, 2025. Category 1 covers renewable energy connected to, or delivered hourly into, a California balancing authority.

California's Clean-Energy Requirements

Two existing laws determine how much clean capacity California must build regardless of AB 825. The RPS requires retail sellers to procure renewable energy equal to 44% of retail sales in 2024, 52% in 2027 and 60% from 2030. SB 100 (2018), as amended by SB 1020 (2022), sets clean-energy targets of 90% of retail sales in 2035, 95% in 2040 and 100% in 2045, counting renewable energy together with large hydro, nuclear and other zero-carbon resources.

The Source Rule

SB 100 determines how much clean energy California must secure; on its own it does not determine where that energy comes from. Under existing law at least 75% of RPS procurement must be Category 1. In a regional market dispatched across the West, the line between in-state and out-of-state supply blurs, and without a rule the transactions that qualify as Category 1 could widen. Section 399.16.5 prevents that. BEAR treats the provision as preserving the regulatory interpretation of which resources may count toward Category 1 eligibility: a regional market may affect prices, dispatch and trade, but it does not change the requirements governing the clean energy California relies on to meet its targets.

In-state employment from compliance therefore depends on the product of two factors: the quantity of clean energy required, set by SB 100, and the share sourced in state, protected by AB 825. The two policies act on the same California clean-energy buildout.

The RPS after 2030

The RPS schedule in statute ends with the 60% requirement for 2030, and SB 100's targets for 2035 and 2040 carry no content categories of their own. Whether the RPS rules continue to govern procurement after 2030 therefore matters for this assessment:

- **Baseline:** from 2031 there is no RPS requirement and no Category 1 rule; SB 100's targets still apply where SB 100 is enforced.
- **AB 825:** every AB 825 case keeps the 60% requirement and the content categories, and with them the source rule, through 2040. The effect of that extension is attributed to AB 825.

Every case is evaluated on the same 5,000 simulations.

STUDY APPROACH AND METHODOLOGY

BEAR estimated California employment in the electric power sector in two forms: permanent O&M jobs at generating and storage facilities, and construction employment, measured in job-years (one job for one year), associated with new capacity. Results are reported annually for 2025–2040 for eight technologies: natural gas, hydro, nuclear, solar, wind, geothermal, biomass and battery storage. The assessment uses the California Regional Electric Power Supply (CREPS) model, which links four stages.

Analysis	Description
1. Baseline and demand	Electricity demand grows 2.27% a year from 2025 to 2040 (+40%), matching the California Energy Commission's CED 2025 mid baseline; Low (1.135%) and High (4.54%) paths bracket it. The Baseline is current policy, with the RPS through 2030 but not after it, and assumes that Diablo Canyon retires in 2029–2030 under SB 846.[1]
2. Cost and capacity forecasts	Damped exponential smoothing projects each technology's levelized cost; autoregressive distributed-lag (ARDL) models project installed capacity from the early-2025 fleet of 129,240 MW.
3. Gravity share allocation	A gravity model converts relative capacity and relative cost into each technology's share of generation, determining how the fleet's mix changes over time.
4. Monte Carlo simulation	For each of 5,000 draws and every year, the model dispatches supply against demand on representative days, enforces the RPS and SB 100 by procuring solar, wind, storage or clean firm power, and computes employment, emissions and costs.
5. Attribution	A four-way decomposition divides the combined impact among the regional market, the source rule, the RPS extension and SB 100.

The Six Cases

BEAR simulates six cases to separate three factors: the regional market, the source rule and SB 100; the AB 825 cases also keep the RPS rules after 2030. Every case is evaluated on the same 5,000 random draws, so differences between cases are computed draw by draw.

- **Baseline and SB 100:** current policy without a regional market, with and without SB 100's clean-energy targets (enforced from 2031).
- **AB 825 and AB 825 + SB 100:** a regional market phased in over 2028–2032 that doubles California's export capability, makes imports more flexible in surplus hours and lowers renewable and storage financing costs, with compliance procurement delivered into California as the source rule requires.
- **No source rule, with and without SB 100:** the same regional market, but a share of each year's compliance shortfall is met by contracted out-of-state clean power. These two cases exist only to measure the source rule.

[1] There is active discussion of extending DCNPP's services beyond 2030, but current policy limits its service extension to 2030 and that is incorporated into the model Baseline. The present assessment is not a study and in no way reflects the ISO's positions on the state's nuclear power policy options.

Anchored in State Planning

The CPUC's adopted 2025–26 transmission-planning portfolio plans 9.0 GW of new out-of-state wind by 2035 and 10.7 GW by 2040, about 24% and 19% of new clean energy. Every case sources the same 22% of compliance out of state, so the source rule is credited only with the shift beyond what current rules already allow, a conservative and plan-consistent measure. Without the rule, the out-of-state share rises to a share drawn between 25% and 75% (mode 50%); only the 25% floor is evidence-based, so results are also reported at fixed shares.

Four-Way Attribution

The method estimates the contribution of each factor by introducing the four factors (the regional market, the source rule, the RPS extension and SB 100) in every possible order and averaging each factor's added effect across those orders. This avoids making the results depend on an arbitrary choice of which factor comes first, and the three contributions add up exactly to the combined impact in every simulation. AB 825's attribution is the sum of its market, source-rule and RPS-extension contributions.

EMPLOYMENT IMPACTS

AB 825 and SB 100 together raise O&M employment from about 25,300 jobs in the Baseline to about 33,000 in 2040 (medians). Through 2030 the entire impact is AB 825's, because SB 100's targets bind only from 2031 and the RPS applies in every case until then.

Change from the Baseline (mean)	AB 825: market	AB 825: source rule	AB 825: RPS extension	AB 825 total	SB 100	Combined
O&M jobs, 2030	+203	+82	0	+285	0	+285
O&M jobs, 2035	+284	+402	+407	+1,093	+3,324	+4,417
O&M jobs, 2040	**+295**	**+669**	**+772**	**+1,736**	**+6,100**	**+7,836**
range, P10 to P90	−848 to +1,390	+342 to +998	+484 to +1,060	+516 to +2,848	+5,497 to +6,706	+6,725 to +9,134
share of simulations above zero	69%	100%	100%	95%	100%	100%
Construction job-years, 2025–40 (thousands)	**−17.6**	**+43.0**	**+49.8**	**+75.2**	**+384.9**	**+460.1**

Means across 5,000 simulations; ranges are the 10th to 90th percentiles. The Baseline makes no RPS purchases after 2030. AB 825 total = market + source rule + RPS extension; AB 825 total + SB 100 = combined.

Permanent Jobs

AB 825 accounts for about 1,736 of the 7,836 additional O&M jobs in 2040: about 770 from keeping the RPS rules in force after 2030 and about 670 from the source rule, both positive in every simulation, and about 290 from the regional market. AB 825's total is positive in 95% of simulations. SB 100 accounts for about 6,100 jobs. The source rule's and the extension's contributions grow steadily with SB 100's requirement, because they keep compliance procurement in the state.

+770
O&M jobs in 2040 from AB 825's RPS extension, positive in every simulation

~50,000
Construction job-years, 2025–2040, from the RPS extension

Construction

Construction follows procurement. SB 100 drives a large and sustained construction program from 2031, about 385,000 job-years over 2025–2040. AB 825 adds about 75,000 job-years: the source rule adds construction every

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year from 2028 and the RPS extension every year from 2031 (about 50,000 job-years), while the market component reduces it slightly, because selling surplus power lets compliance be met with fewer new megawatts.

Where the Jobs Are

The jobs the source rule and the RPS extension keep in the state are in solar (+610 O&M jobs in 2040), wind (+460) and battery storage (+370), the resources procured for compliance. SB 100's jobs are in the same technologies, with some geothermal-type clean firm power. The regional market shifts employment from solar and storage toward geothermal, biomass and hydro.

QUANTITY, SOURCE AND THE IMPORT SHARE

SB 100 Sets the Quantity; AB 825 Informs the Source

Inside the regional market, SB 100 sets the quantity of clean energy and the source rule sets where it comes from. The source rule adds about 210 O&M jobs when only the RPS applies and about 2,490 when SB 100 also applies. About 2,280 of the 2040 O&M jobs exist only because both policies apply, a joint effect that is positive in every simulation. That effect has no single cause, and a sharing rule call the Shapley Value divides it equally between the two policies.[2]

How Much Compliance Would Go Out of State

The source rule's value depends on the share of compliance that out-of-state power would win without it. If, for example, California procured 50% of its compliance resources out of state (about 70 TWh in 2040), O&M employment would be about 2,510 jobs lower than the combined estimate. The share is uncertain, so results are also reported with the share fixed:

AB 825, 2040 O&M jobs / construction 2025–40 (thousands)	Import share 25%	Import share 50%	Import share 75%
AB 825 (four-way attribution)	+1,224 / +42.2	+1,741 / +75.5	+2,227 / +106.8

Import share: the fraction of each compliance shortfall met by contracted out-of-state clean power where the source rule does not apply. Central estimates draw it from 25% to 75% (mode 50%).

A larger import share raises AB 825's attribution, because the source rule and the RPS extension then keep more procurement in state.

CONCLUSIONS

The assessment gives a consistent picture. AB 825 and SB 100 together add several thousand permanent power-sector jobs and several hundred thousand construction job-years in California by 2040. SB 100, which sets how much clean energy California must secure, accounts for most of that gain. AB 825's contribution comes mainly from the source rule, which keeps the clean energy procured for SB 100 in the state, and from keeping the RPS rules in force after 2030.

AB 825's Contribution

AB 825 accounts for about 1,736 O&M jobs in 2040 and 75,000 construction job-years: about 770 jobs and 50,000 job-years from keeping the RPS rules in force after 2030, a source-rule contribution that is positive in every simulation, and a smaller, more uncertain market contribution.

[2] See e.g., https://en.wikipedia.org/wiki/Shapley_value for details.

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AB 825 at a Glance: Jobs Impact Summary

- +7,836 O&M jobs in 2040, AB 825 and SB 100 combined
- ~460,000 construction job-years, 2025–2040
- +1,736 O&M jobs in 2040 attributed to AB 825
- 22% out-of-state share of compliance in every case, from the CPUC 2025–26 planning portfolio

CONSIDERATIONS AND NEXT STEPS

The results point to a small number of questions that determine AB 825's employment effect.

For the Legislature and State Agencies

Whether AB 825 is read as extending the RPS rules, including the 60% requirement and the portfolio content categories, beyond 2030 adds about 770 O&M jobs in 2040 to AB 825's contribution. Clarity on that question would narrow the range of outcomes.

For CAISO

- **Legal reading:** BEAR recommends that CAISO counsel confirm the interpretation of §399.16.5 adopted here, including its extension to the zero-carbon portion of SB 100, which has no content categories of its own, and the treatment of the RPS rules after 2030 as extended by AB 825.

For the Final Report

- **Import share:** replace the 50% mode and 75% ceiling with values from the regional-market scenarios of the 2016 SB 350 regionalization study and a delivered-cost comparison of out-of-state wind with in-state solar and storage.
- **Data:** re-estimate the gravity and time-series stages on monthly EIA-923 generation and EIA-860M capacity data.
- **Investment response:** investment in the model does not yet respond to export prices, so the market component of AB 825's employment is best read as a lower bound.

About This Study

This policy brief summarizes the draft report Jobs Assessment of Assembly Bill 825 (October 2026), prepared by Berkeley Economic Advising and Research, LLC (BEAR) for the California Independent System Operator. The full report, including model specifications, data sources and detailed results, is available from CAISO. The report was authored by an independent consultancy and does not represent CAISO policy. Data are drawn from publicly available federal and state sources, including the California Energy Commission, the U.S. Energy Information Administration, the U.S. Bureau of Labor Statistics, the CAISO Department of Market Monitoring and the National Renewable Energy Laboratory. Other energy supply responses to AB 825 are possible and might change the magnitude, but not the direction, of the estimated impacts.