

# SB 150 - Net Metering Program and Fund *Senate Labor & Commerce*

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# History of Net Metering

- Enabled by 1978 Public Utility Regulatory Policies Act (PURPA), which required utilities to purchase power from qualifying facilities (QFs), including small renewable generators.
- Minnesota enacted the first net metering law in 1983 requiring utilities to credit small renewable generators at the retail rate for excess electricity delivered to the grid.
- MN framework became the model for early net metering programs.

# History of Net Metering

- 1990s: A handful of states adopted net metering (solar industry still small).
- Early 2000s: Rapid growth as states adopted Renewable Portfolio Standards.
- 2010–2016: Peak expansion period
- 2017–present: Many states began reforming or scaling back retail net metering (e.g., moving to net billing).

# Issues Associated with Net Metering Laws

Nationally, the net metering debate centers on:

- Equity (cost shifts) and utility fixed cost recovery
- Grid value of distributed solar
- System caps and feeder-level saturation
- Battery integration



# The Great Net Metering Cost Shift Debate

## Solar Customers



Sell Excess Power at Full Retail Rate

Lower Bills & Quick Payback

## Non-Solar Customers



Higher Bills

Cover More of Utility Costs



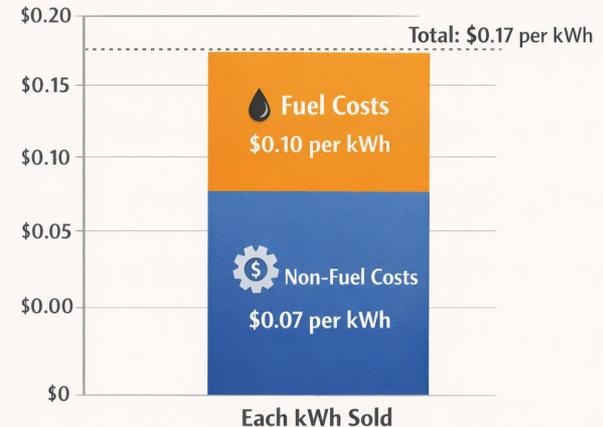
Retail rates include **fixed grid costs**. When solar customers receive full retail credit for exports, they avoid paying those fixed costs — even though they still rely on the grid at night or in winter.

Is the Financial Burden Fairly Distributed?

Pro: "Solar Owners Should Be Rewarded for Clean Energy!"

Con: "Non-Solar Customers Are Paying More for the Grid!"

## Cost Components of Each kWh Sold



# Lessons from Hawai'i's Rooftop Solar Transition



Kaua'i Island Utility Cooperative



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## Research Brief: Equity and Cost-Sharing in Hawai'i's Rooftop Solar Transition

*An Illustrative Analysis of Distributional Impacts Under Net Energy Metering and Successor Tariffs on O'ahu, Hawai'i*

Gwen Holdmann, Alaska Center for Energy and Power, UAF

November 18, 2025

### 1.0 Executive Summary

Hawai'i leads the nation in per-capita rooftop solar adoption, with more than 114,000 systems statewide. While rooftop solar has reduced fossil fuel use and household energy bills, it has also changed how utility costs are distributed. Under legacy Net Energy Metering (NEM), solar customers offset consumption at the full retail rate, creating a gap between utility revenues and avoided generation costs. Newer time-of-day export tariffs narrow this gap, but cost-shifting effects persist.



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# Lessons from Hawai'i's Rooftop Solar Transition

- Hawai'i's tariffs shifted an estimated *\$100 million a year* from households with rooftop solar to non-solar households in O'ahu alone.
- Adoption in Alaska not expected to be as widespread (Alaska has less than half the annual solar capacity as Hawai'i).
- Cost shifts will be smaller, though underlying cost-allocation dynamics still exist.
- Hawai'i switched from net metering to net billing (though many customers are grandfathered in).



# Net Metering versus Net Billing

## Net Metering:

- Excess electricity exported to the grid is credited at the full retail rate
- Your meter “runs backward”

## Net billing:

- Electricity you use from your solar system offsets your retail consumption
- Electricity you export is credited at a separate export rate (avoided cost or wholesale market price)

# Why have a net metering program in Alaska?

- Encourages private investment in energy infrastructure - allows homeowners and small businesses to invest their own capital
- Reduces fuel consumption (to the extent that solar displaces natural gas) & diversifies generation sources
- Consumer choice - gives Alaskans an incentive to produce part of their own power



# HB 150: Possible Amendments

**Disclaimer:** *The following amendment concepts are offered to support committee discussion and thoughtful policy design. They are not formal recommendations or endorsements by ACEP or the University of Alaska.*



# HB 150 “net metering reimbursement fund”

- Provides a mechanism for utilities to seek recovery of revenue losses attributable to net metering
- A **possible** solution to the equity and utility fixed cost concerns
- Creates the fund, but provides no automatic funding mechanism
- The cost shift, if one exists, is potentially socialized at the state level, not embedded automatically in utility rates



# No compliance without reimbursement funds

**Exempt** the load-serving entity from compliance unless and until the program reimbursement fund is capitalized.

Alternatively, place a **limit (cap) on the amount of net-metered capacity** or net-metered energy unless or until the reimbursement fund has money available.



# Avoid Cross-Subsidization

Allow **innovative rate structures** that more accurately reflect the costs of providing grid services to net-metering customers



*“A load-serving entity may implement minimum bills, system access charges, or demand-based components to ensure recovery of distribution and capacity-related costs from all customers, including consumer-generators.”*



# Avoid Cross-Subsidization

Allow **innovative rate structures** that more accurately reflect the costs of providing grid services to net-metering customers

- ★ A **monthly system charge**, for example, would ensure net-metering participants contribute to the cost of the distribution system and backup power they rely on, while still allowing them to sell excess generation back into the grid



# Clarify Revenue Loss Parameters

Clarify that only revenue losses **in excess of avoided costs** are eligible for reimbursement from the fund.

*While the RCA would likely implement this distinction through regulation, statutory clarity would reduce the risk of future disputes.*

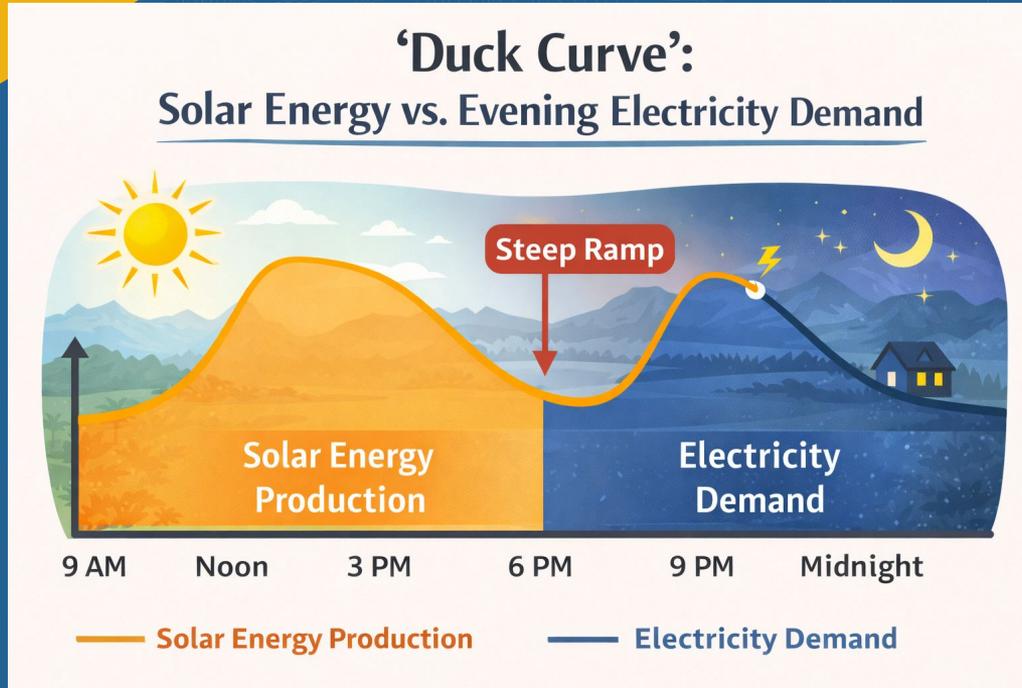


# Narrow the list of qualifying technologies

(C) through a generation system that produces the electric energy from solar photovoltaic ~~and solar thermal energy~~, wind energy, biomass energy, hydroelectric energy, ~~geothermal energy, hydrokinetic energy, ocean thermal energy~~, or other renewable energy source that has a similar environmental impact;

In practice, **solar and wind** are the most likely technologies to be deployed. Given that the bill already includes “other renewable energy source that has a similar environmental impact,” it may not be necessary to provide a laundry list.

# Additional Materials



As export compensation declines, batteries help shift daytime solar to evening peak demand. In Alaska, the mismatch is more seasonal than daily, so batteries offer some value—but they do not solve the winter shortfall.

