Informational Briefing: HECO Companies Interconnection Queue & Policies

Hawaii State Legislature

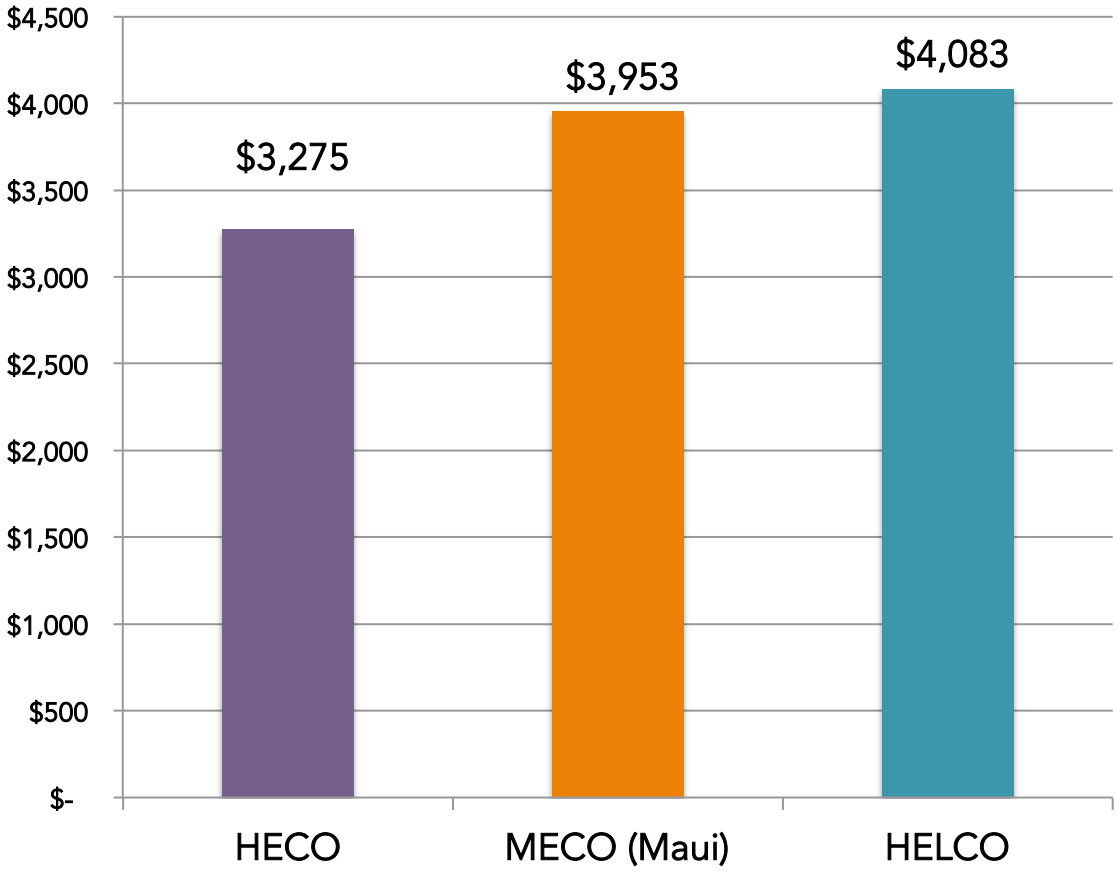
Senate Committee on Energy & Environment
Senate Committee on Commerce & Consumer Protection
House Committee on Energy & Environmental Protection
House Committee on Consumer Protection & Commerce

Mark Duda, President
Hawaii PV Coalition

January 20, 2015
Hawaii State Capitol, Room 329

Annual Value of Power Produced under Current NEM Program

Value of kWh Output of a Typical 7.0 kW (DC STC) Residential PV System at Current Retail Rate



(1) Equates to Monthly Energy Use of 905 kWh

(2) Equates to Monthly Energy Bill of:

$272 HECO
$329 MECO (Maui)
$340 HELCO

Note: System output calculation assumes (1) DC to AC de-rating factor of 0.81; (2) 475 sun zone (ie, 5.52 peak sun hours/day); and (3) 5% reduction for suboptimal tilt/ orientation. Current retail rate from HECO Companies Monthly Effective Rate Summaries at: http://www.heco.com/vcmcontent/StaticFiles/FileScan/PDF/EnergyServices/Tarrifs/HECO/EFFRATESSUMJAN2015.pdf

Retail Rate & Schedule Q Rate

January 2015

	Retail Rate ($/kWh)	Schedule Q Rate ($/kWh)
HECO	$0.302	$0.142
MECO (Maui)	$0.364	$0.164
HELCO	$0.376	$0.128

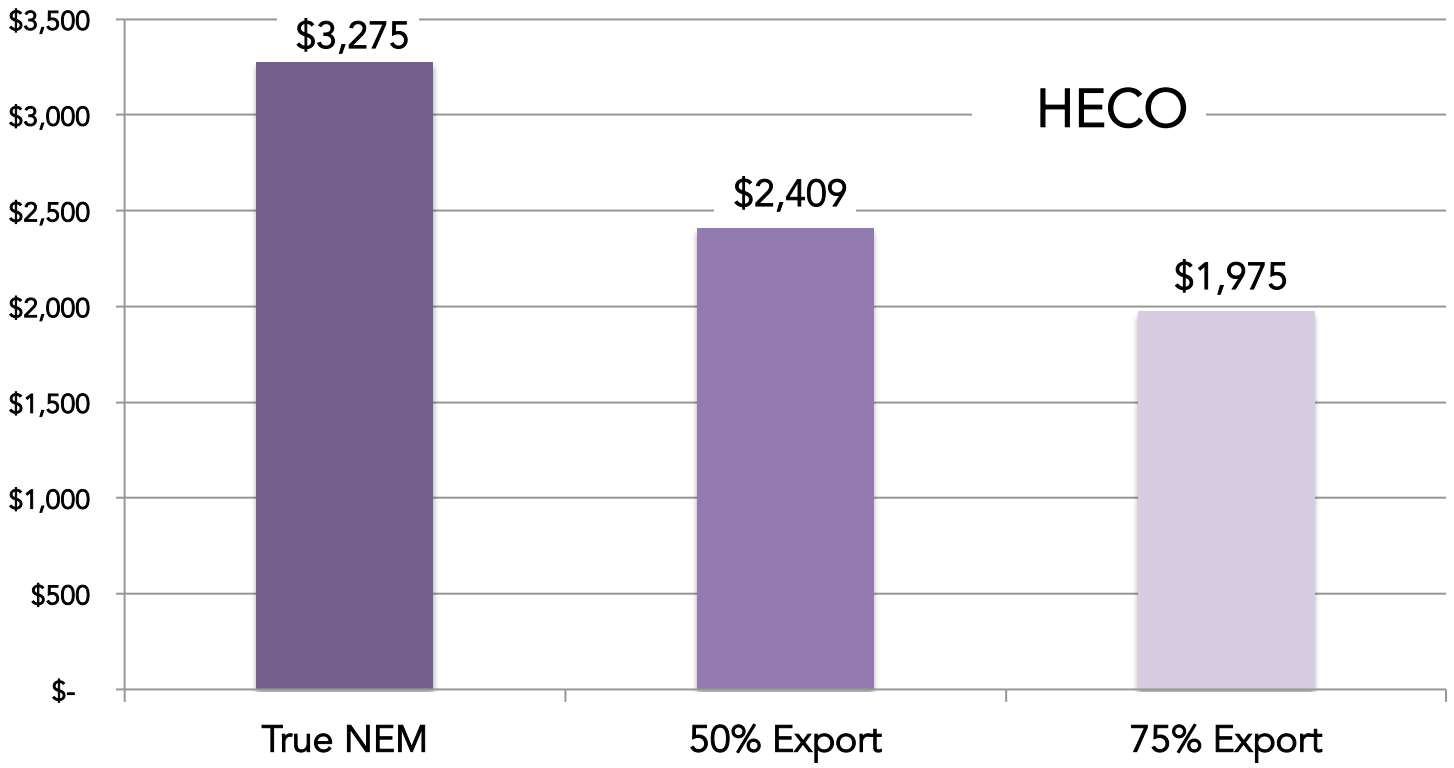
Note: Current retail rate from HECO Companies Monthly Effective Rate Summaries at: http://www.heco.com/vcmcontent/StaticFiles/FileScan/PDF/EnergyServices/Tarrifs/HECO/EFFRATESSUMJAN2015.pdf

Three Scenarios & Two Customer Types

- "True NEM": No relationship between daily customer load profile and billing impact of customer energy production.
- "50% Exporter": Customer who uses half of his/her power during the solar generation window and half outside it (*i.e.*, evening, night, early morning).
- "75% Exporter": Customer who uses only 25% of his/her power during the solar generation window (*e.g.*, working couple).

Value of Power Produced Declines under Proposed NEM Program

Value of kWh Output of a Typical 7.0 kW (DC STC) Residential PV System



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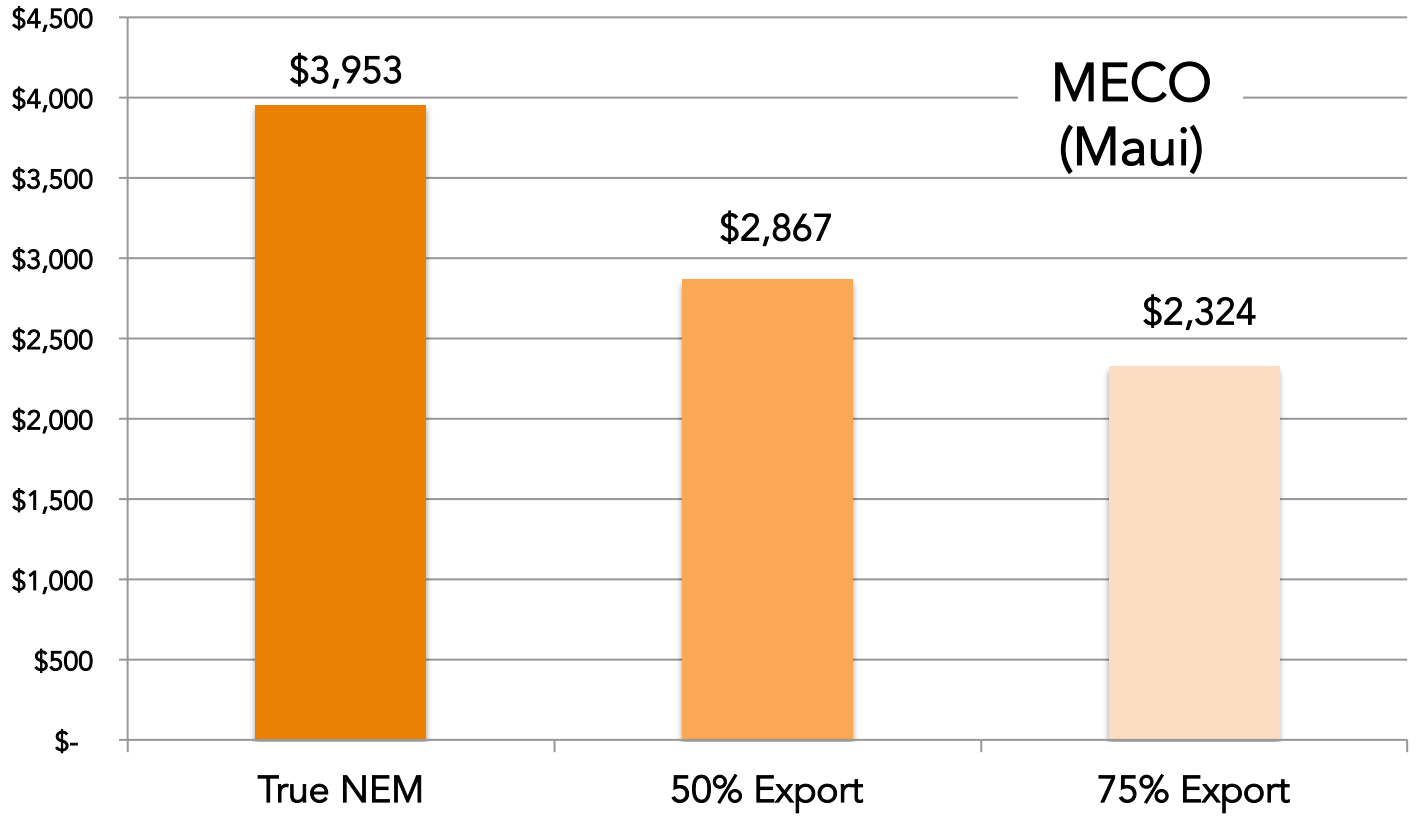

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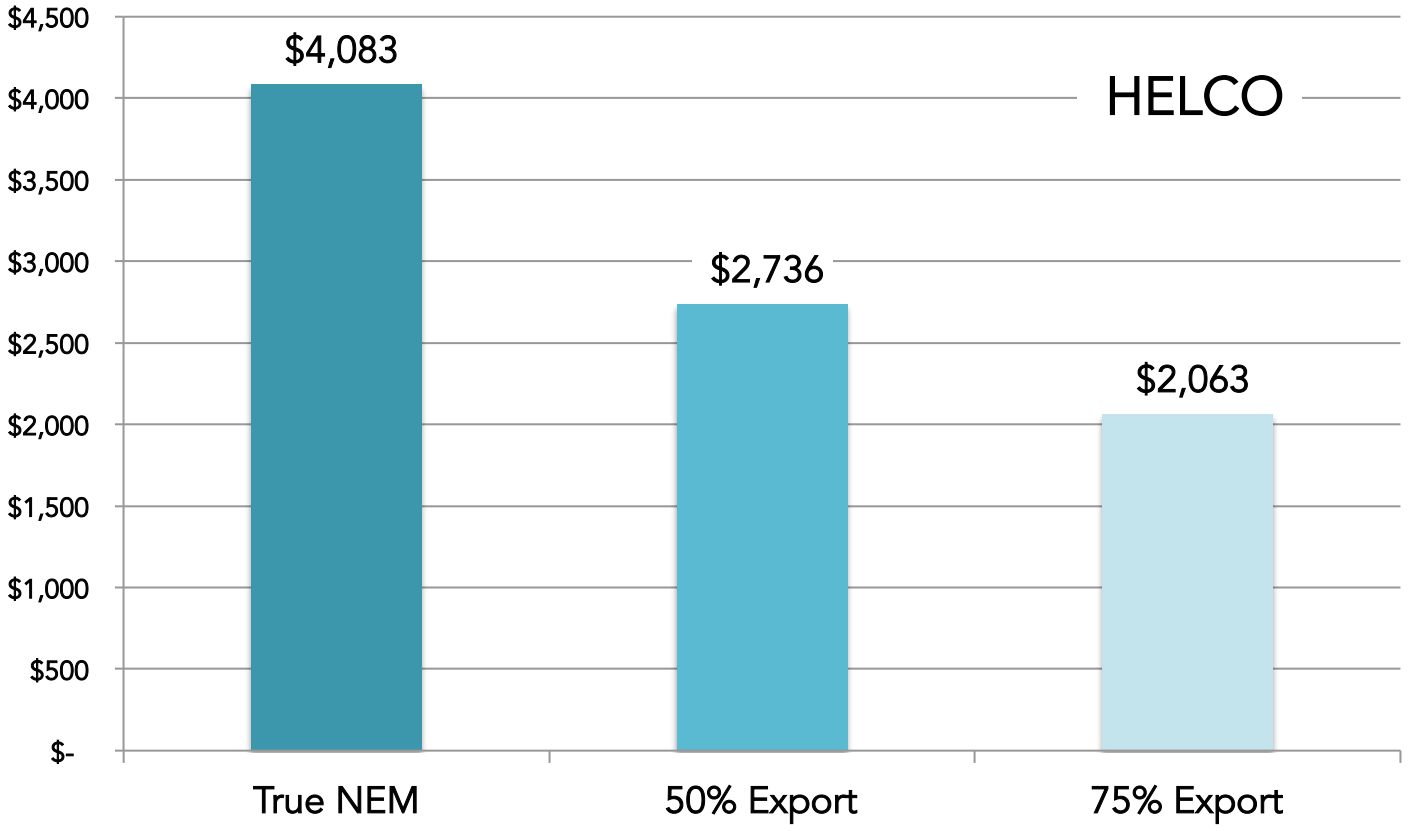

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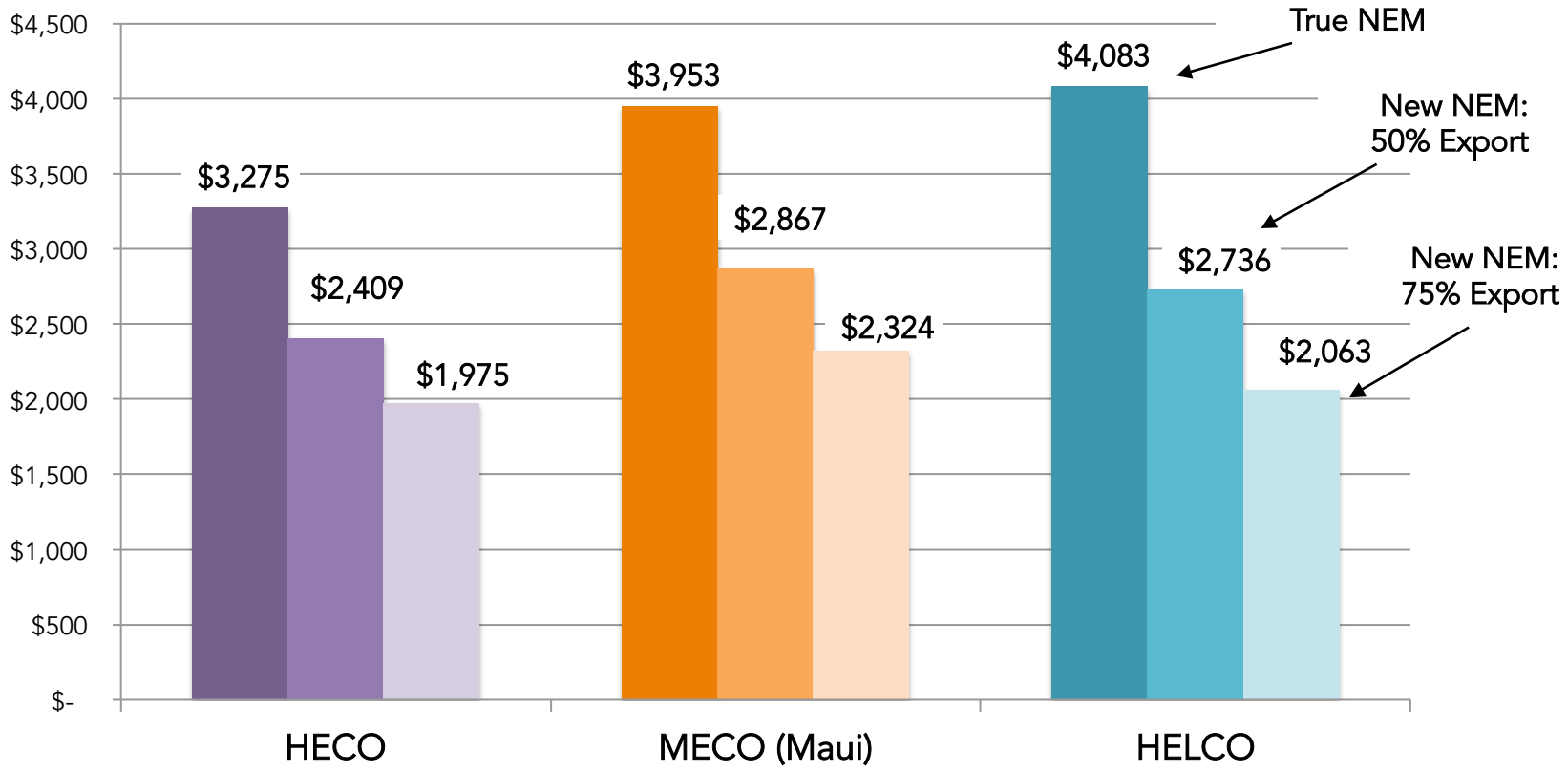

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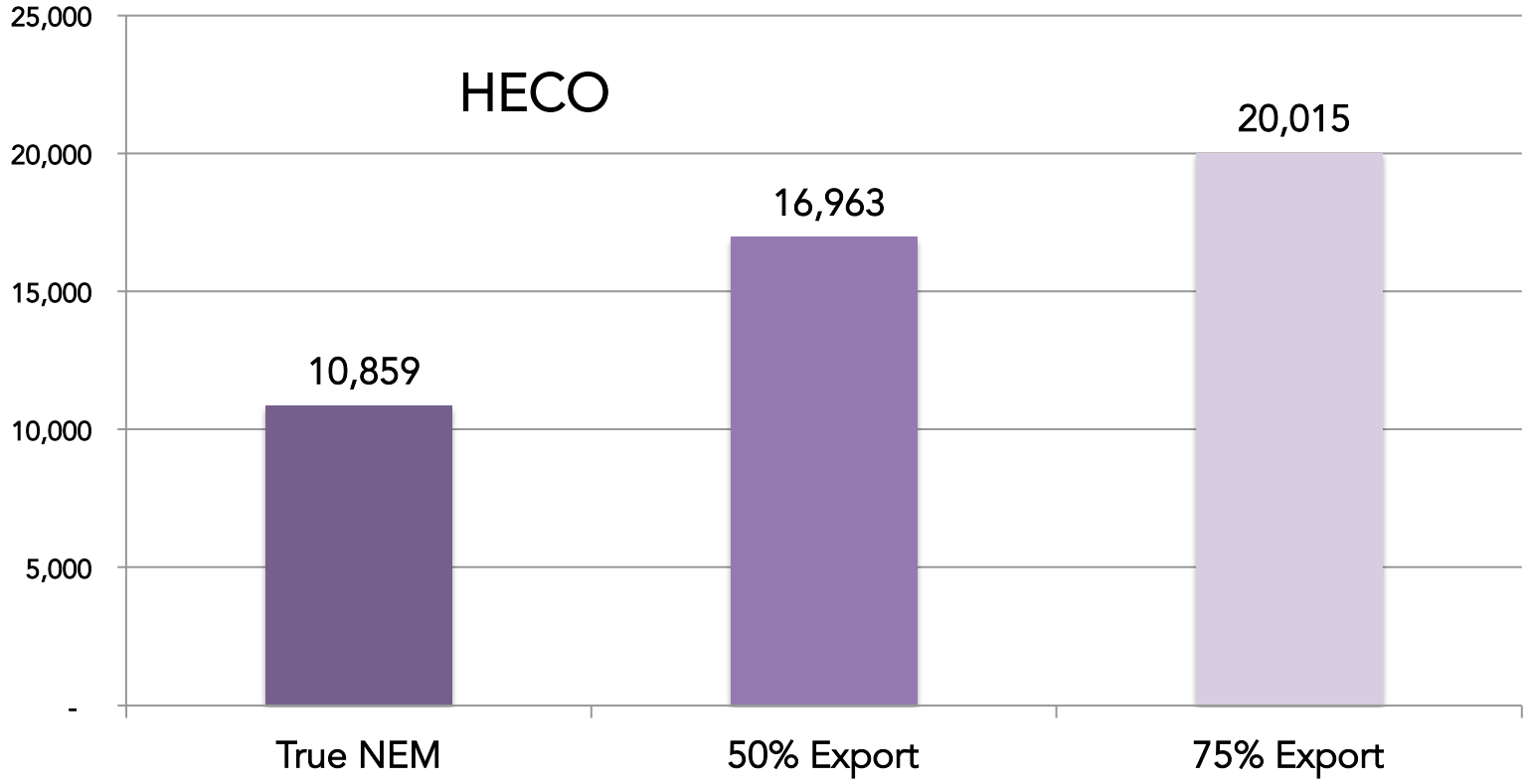
Homeowners Must Make More kWh under Proposed NEM Program

Number of Annual kWhs from PV System Required to Offset the Same Electrical Load as Current 7.0 kW (DC STC) NEM System



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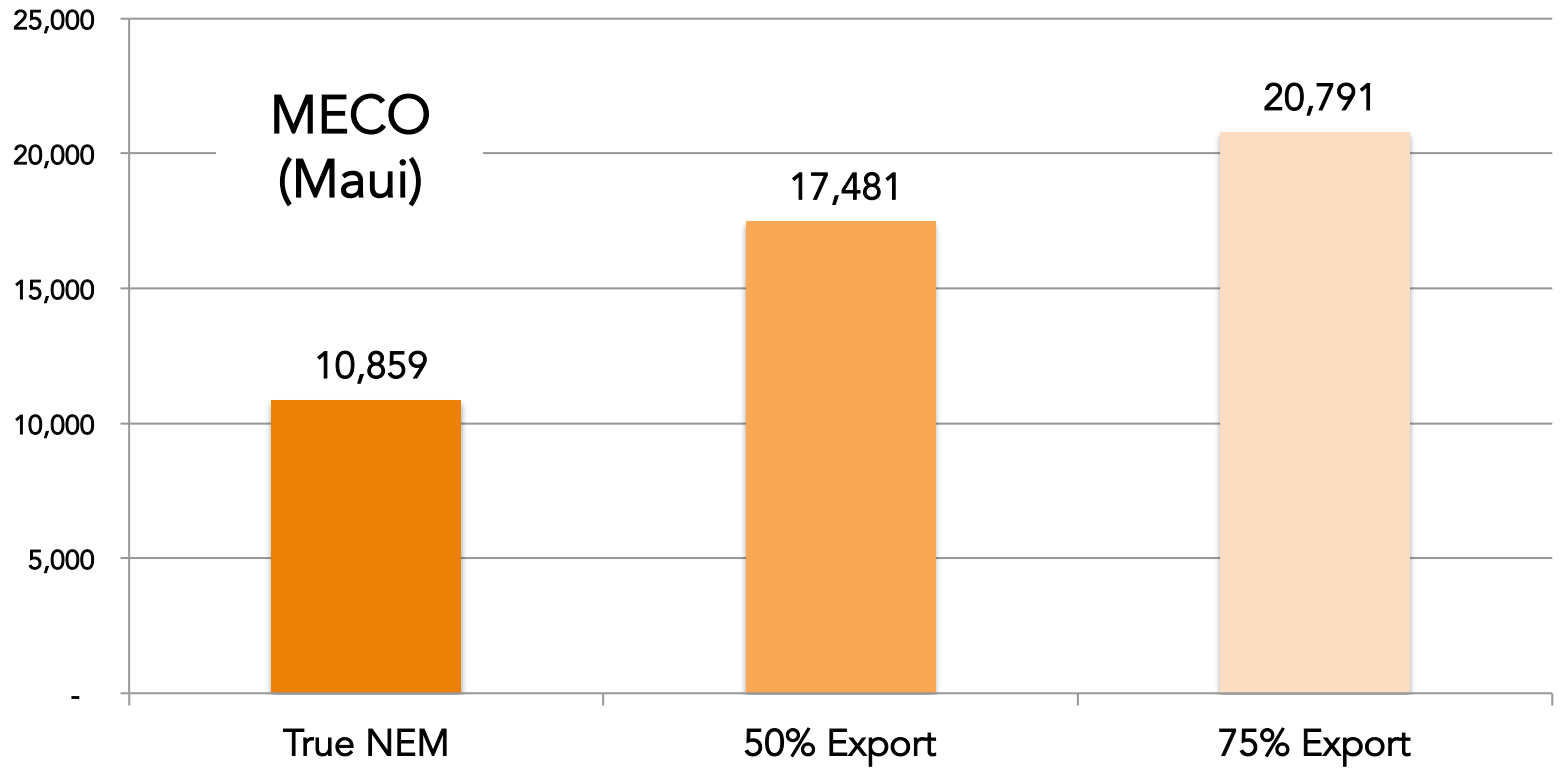

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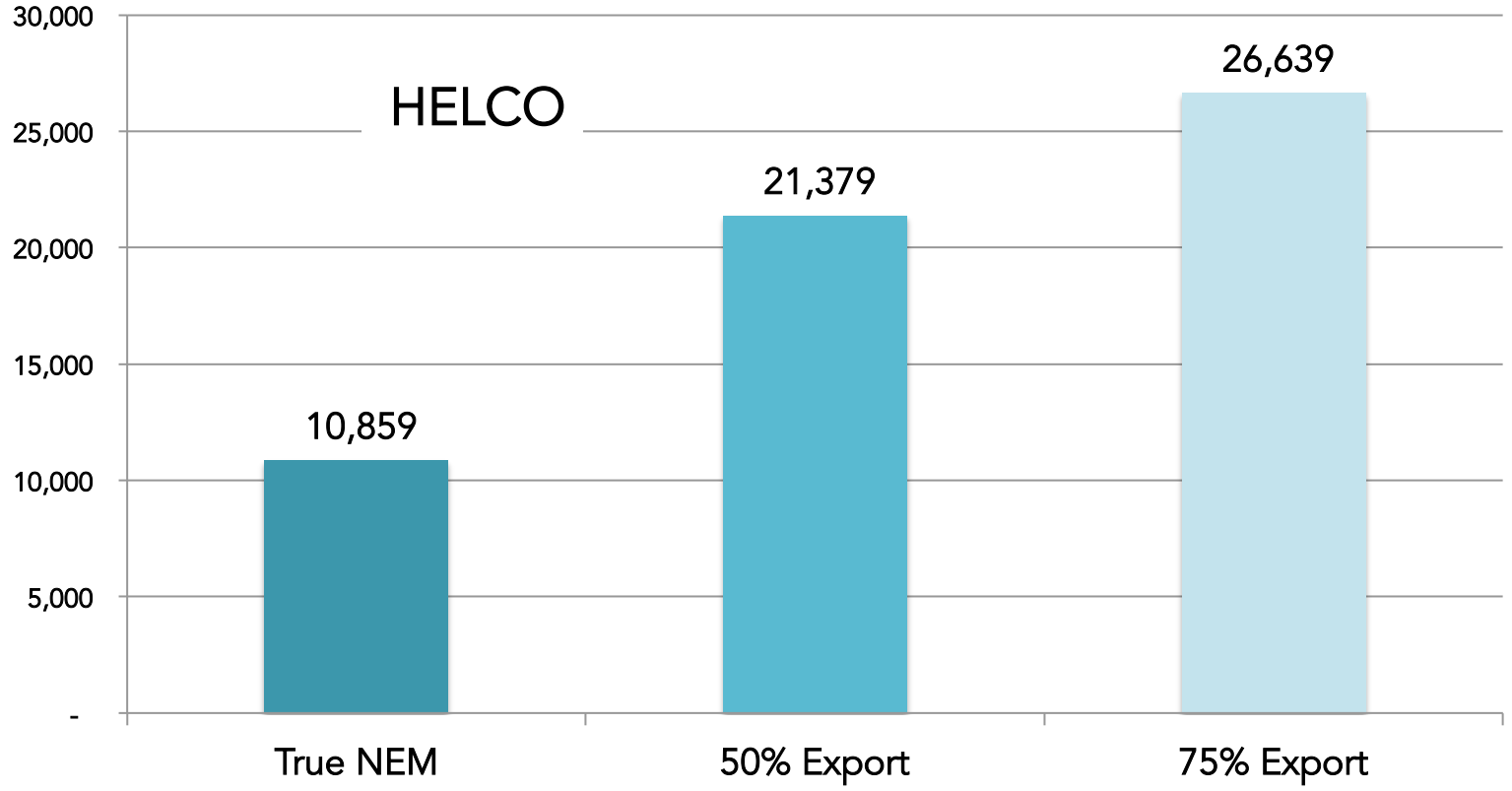

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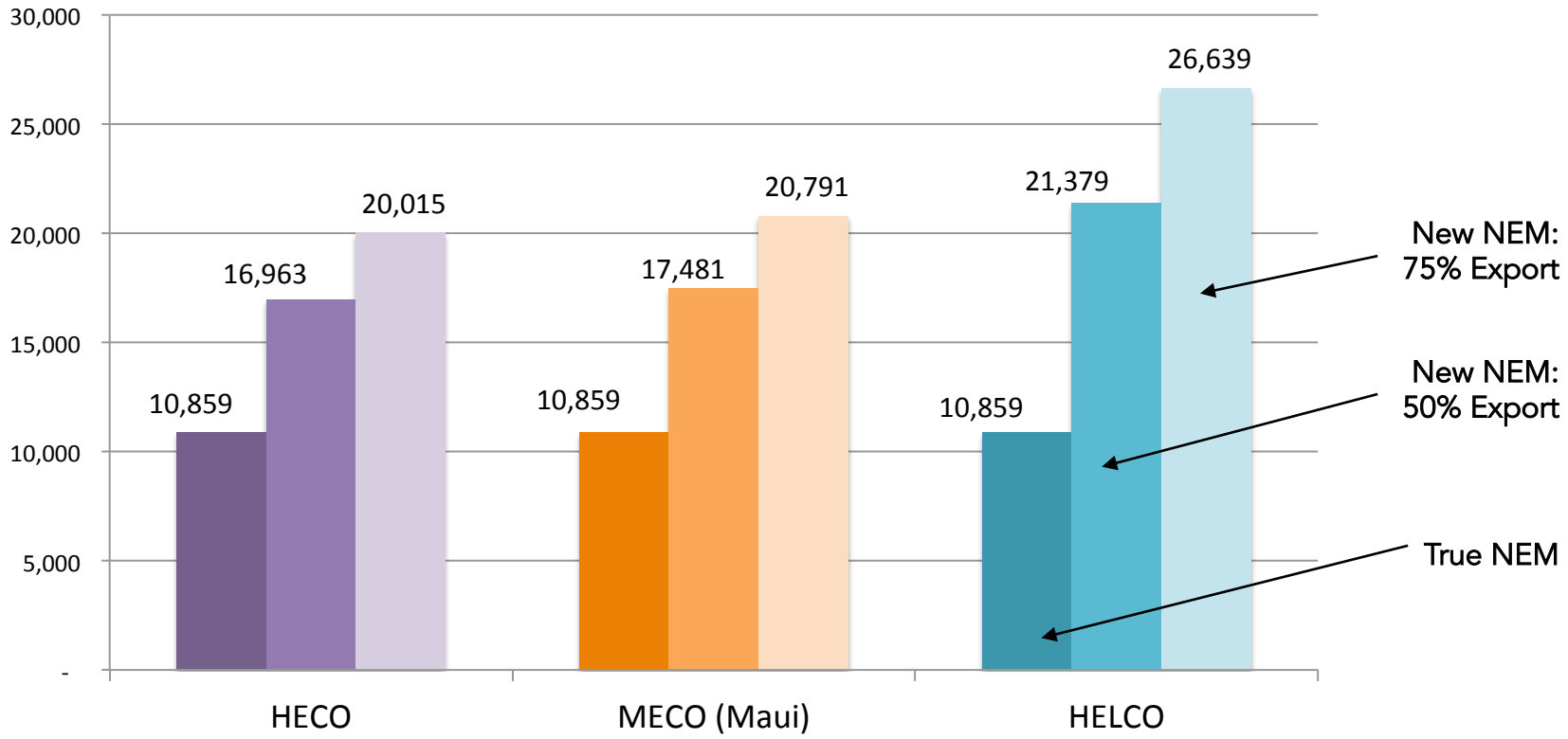

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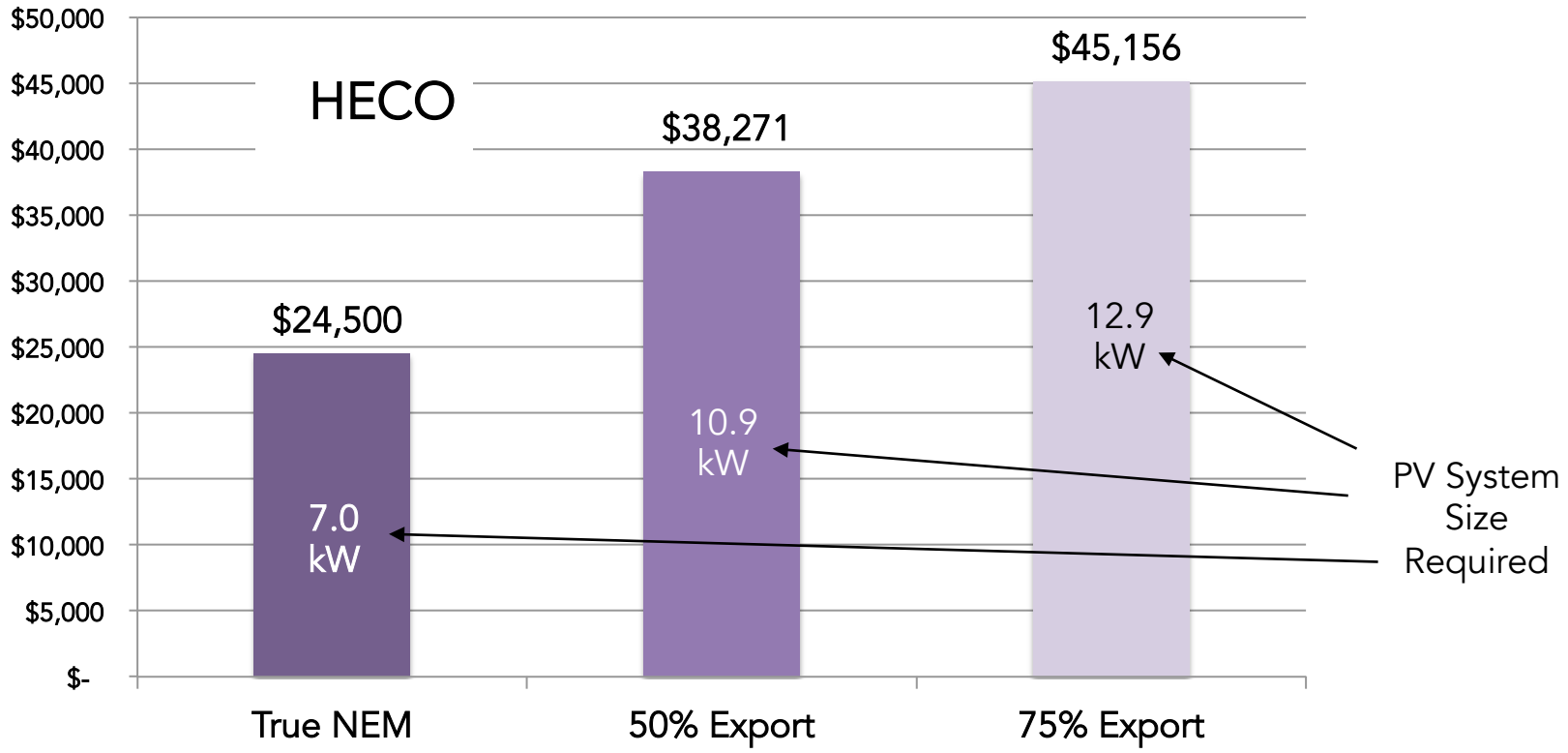
Offsetting Utility Bill Will Cost More under Proposed NEM Program

Cost of PV System Required to Offset the Same Electrical Load



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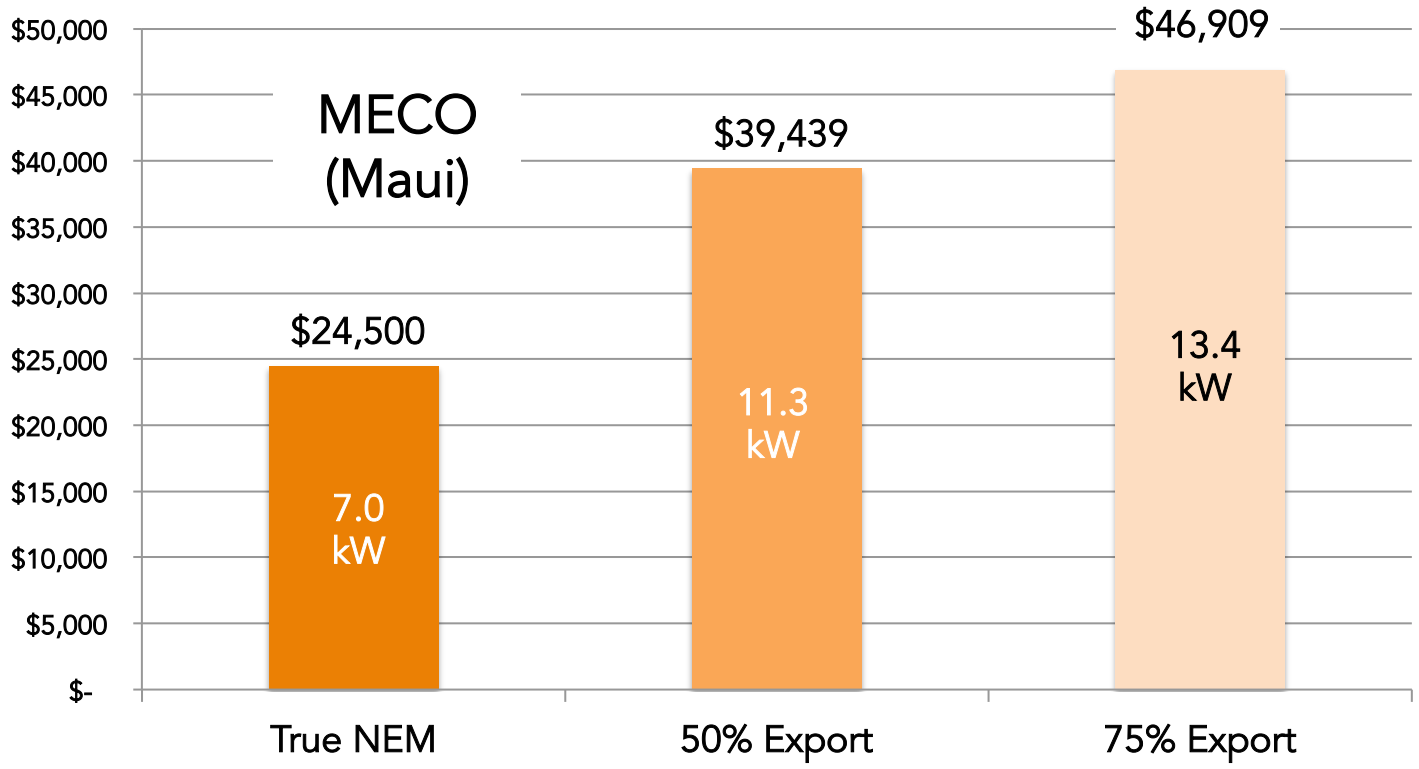

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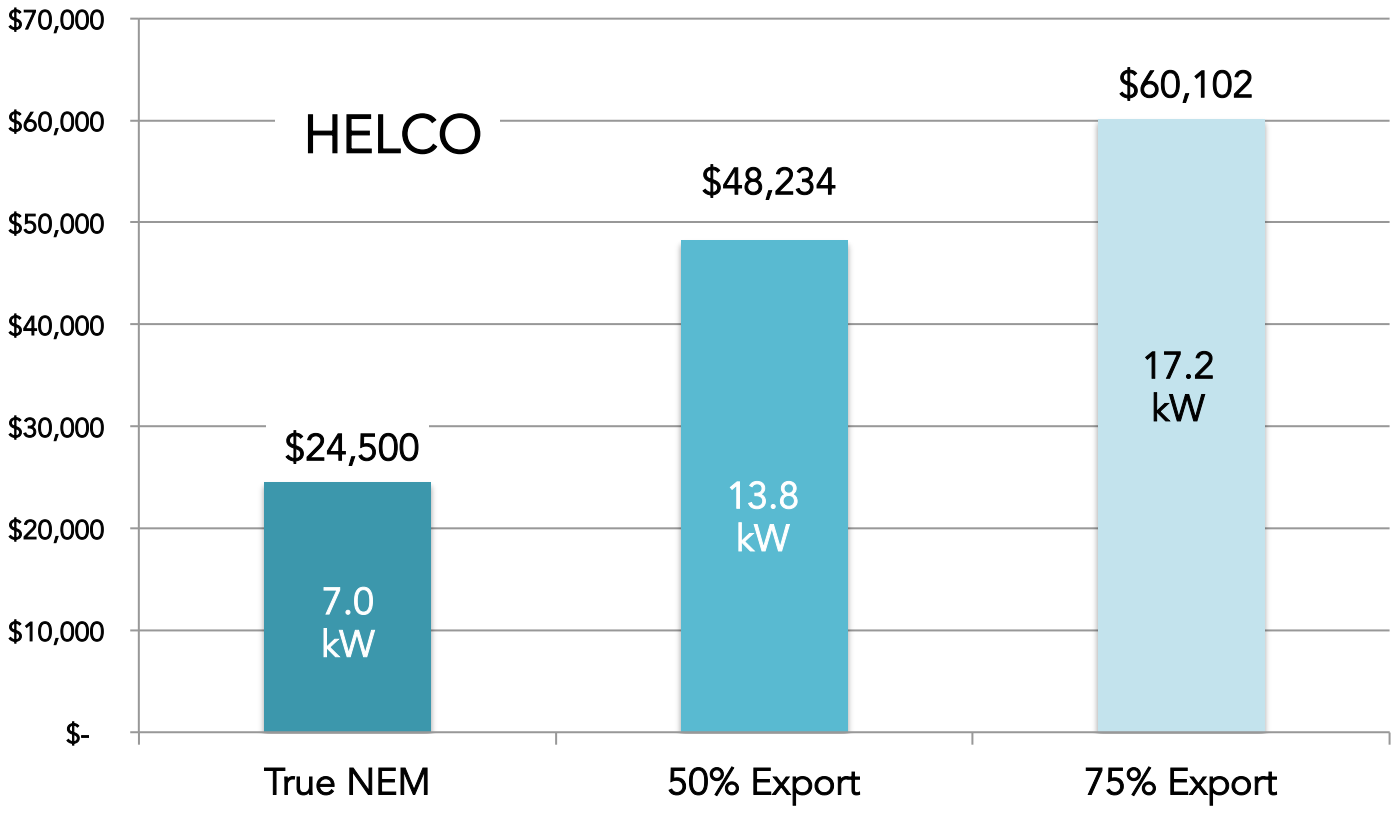

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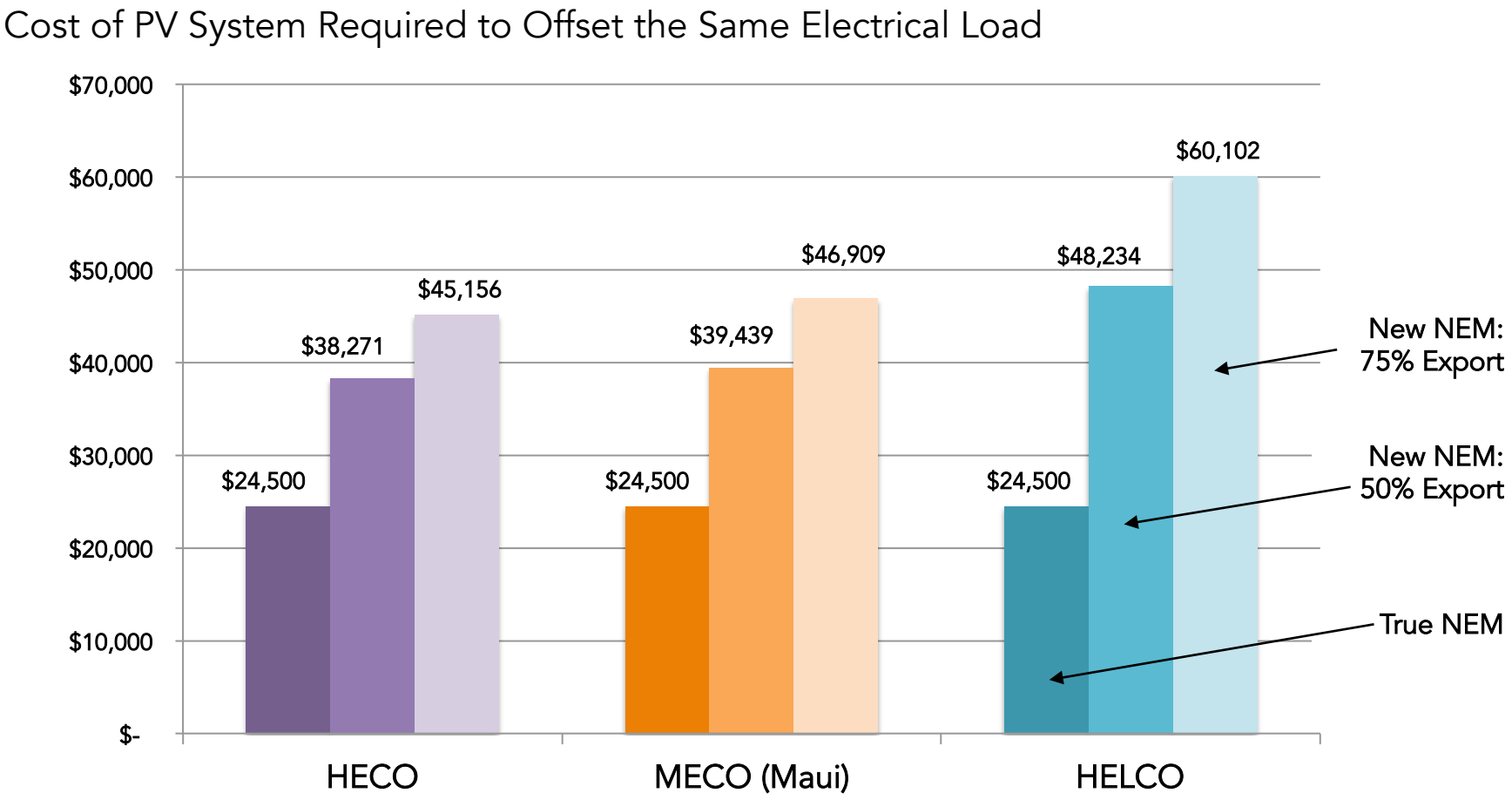

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Summary

- Proposed NEM program changes would reduce the value of a home PV system's energy output.
- Proposed NEM program changes would increase the number of kWhs necessary to offset residential electrical bills, and therefore the size of residential PV systems.
- Proposed NEM changes would increase PV system costs, with actual impact for specific users depending on the match between customer usage and the solar generation window.
- Impact of proposed changes would vary by utility, with HELCO ratepayers taking biggest hit.
- Increased system sizes in response to reduced compensation would restrict NEM program access to fewer ratepayers.