

The purpose of the table below is identify and briefly describe DG-related policies and programs in the Western Interconnection that are expected to have a significant enough impact on loads and/or resource quantities to warrant modeling explicitly in the WECC 2022 Common Case. The table therefore does not contain the numerous and varied PV incentive programs offered by utilities and state agencies (with the exception of the California Solar Initiative, due to its size), nor does it contain the varying net metering policies of each state and utility jurisdiction. The presumption is that those policies that are excluded from the table are either already sufficiently captured by the econometric load forecasts submitted by the balancing authorities and/or the incremental effect of those policies on transmission flows is too small to warrant explicit attention.

Implementation assumptions for modeling DG in the 2022 Common Case:

1. DG requirements will be modeled as Solar PV technologies within PROMOD unless additional information indicates that a technology other than Solar PV needs to be used.
2. State “goals” for DG specifying capacity (MW) or energy (MWh) targets will be attained to the goal level.
3. If it is unknown whether or not the DG policy has been captured in the BA load forecast, the assumption will be that it has not been captured in the load forecast.
4. All incremental DG will be modeled explicitly in the TEPPC dataset as a supply-side resource. Attempts will be made to determine the amount of existing DG in each state for accounting purposes, but will not be modeled explicitly unless it is already an existing resource in the TEPPC dataset. The incremental amount of DG modeled will be the stated DG requirement net of the estimated existing DG.
5. RPS is calculated based on net retail sales (i.e. net of behind-the-meter DG). As such, once the DG requirement is calculated, “retail DG” will be netted from the forecasted load value and the RPS requirement will be recalculated.

Distributed Generation Programs and Policies in Western States and Provinces to be Modeled in the WECC Common Case

State/ Province	Balancing Authority	Program/Policy Name	Program/Policy Details Relevant to Modeling	Captured in BA Load Forecast?	Modeling DG Method
AZ	APS TEP WALC	RPS DG set- aside	<ul style="list-style-type: none"> • Applicable only to IOUs and to <u>Class A Cooperatives</u> • Set-aside target equal to 4% of retail sales in 2022 (or 30% of RPS (12% for 2022)) • DG defined to be “customer-sited” • Broad technology eligibility (any eligible renewable technology, provided that it is DG, including some non-electric technologies such as solar heating/cooling) • 90% must be “retail DG” (behind-the-meter); remaining 10% can be wholesale DG (provided that it is still customer-sited) 	APS: Yes TEP: No WALC: No	To model incremental APS DG, it must be added back into the APS load forecast used in PROMOD. No adjustment is required for the TEP or WALC forecasts. <i>See calculations in “DG Calculations” spreadsheet</i>

State/ Province	Balancing Authority	Program/Policy Name	Program/Policy Details Relevant to Modeling	Captured in BA Load Forecast?	Modeling DG Method
CA	CISO	California Solar Initiative and Solar New Homes Partnership	<ul style="list-style-type: none"> • Program goal for PV capacity additions from 2007-2016: large IOUs = 2,300 MW, POUs = 700 MW • Only net metered applications eligible • REC ownership is retained by PV system owner (doesn't count towards RPS) 	CISO: Yes LADWP: unknown SMUD: partially IID: No TID: unknown	<p>Assume goal attained for capacity additions of IOUs = 2300 MW and POUs = 700 MW</p> <p>Add the amount of incremental IOU net metered PV assumed in the 2009 IEPR forecast back into the load forecasts used in PROMOD. This forecast is used for SCE, SDG&E, and PG&E in 2022.</p> <p><i>See calculations in "DG Calculations" spreadsheet</i></p>
CA	CISO	IOU PV Programs (RPS)	<ul style="list-style-type: none"> • Applicable only to the three major electric IOUs • Applicable to "mid-sized" wholesale PV projects: PG&E (1-20 MW ground-mounted), SCE (1-2 MW rooftop), SDG&E (1-5 MW ground-mounted) • Program capacity targets for 2015: PG&E (500 MW), SCE (500 MW), SDG&E (100 MW) 	No	Use assumptions carried through from RPS resource portfolio provided by the CPUC.
CA	CISO, PACW, SPP	Feed-in tariff for small renewables (RPS)	<ul style="list-style-type: none"> • Available for projects up to 3 MW, including any RPS-eligible technology • Small multi-jurisdictional IOU programs open only to water/wastewater facilities • Projects can sell all output at wholesale, or sell only net surplus • RECs transferred through wholesale electricity sale 	No	Use assumptions carried through from RPS resource portfolio provided by the CPUC.
CA	CISO	Renewable auction mechanism for small renewables (RPS)	<ul style="list-style-type: none"> • Applicable only to the three major electric IOUs • Open to all RPS-eligible renewable projects up to 20 MW • Initial program goal of 1,000 MW of renewable DG through 2012 	No	Use assumptions carried through from RPS resource portfolio provided by the CPUC.
CO	PSCO	RPS DG set-aside	<ul style="list-style-type: none"> • Applicable only to IOUs • Set-aside target equal to 3% of retail sales in 2020 • Broad technology eligibility (any eligible renewable technology, 	PSCO: Only historical DG additions;	Assume Retail DG 50% and Wholesale DG 50% shares.

State/ Province	Balancing Authority	Program/Policy Name	Program/Policy Details Relevant to Modeling	Captured in BA Load Forecast?	Modeling DG Method
			<p>provided that it is DG)</p> <ul style="list-style-type: none"> • Minimum of 50% must be retail DG (behind-the-meter); the remaining can be wholesale • Wholesale DG defined to be any eligible renewable technology <30 MW • Wholesale DG eligible for 1.25 in-state multiplier (retail DG ineligible for multiplier) 	future capacity additions not captured in load forecast	<i>See calculations in "DG Calculations" spreadsheet</i>
CO	All	RPS solar multiplier	<ul style="list-style-type: none"> • Applicable to municipal utilities with >40,000 customers and to all cooperatives • Credit multiplier is equal to 300% and is available for projects installed by July 2015 • Solar credit multiplier equal to 150% for Community-based installed by 2015. • Applicable to both distributed and central-station solar 	No	Will use LRS and resource planner survey to check if munis/coops selected DG or solar under this provision.
NM	PNM EPE	RPS DG & solar set-asides (two separate set-asides)	<ul style="list-style-type: none"> • Applicable only to IOUs • DG set-aside target equal to 0.6% of retail sales in 2022; separate solar set-aside equal to 4% of retail sales in 2022 • DG defined to be customer-sited (either behind-the-meter or wholesale) • Broad technology eligibility for DG set-aside (any eligible renewable technology, provided that it is customer-sited) • Solar set-aside can be met through both distributed and central-station solar 	PNM: No EPE: No	<p>IOU DG-PV = 0.6% of IOU sales in 2022</p> <p>IOU Solar = 4% of IOU sales in 2022 (=utility scale PV+CSP)</p> <p><i>See calculations in "DG Calculations" spreadsheet</i></p>
NV	NEVP SPP	RPS solar set-aside and PV multiplier	<ul style="list-style-type: none"> • Solar set-aside target equal to 1.32% of retail sales in 2022 • Applicable to both distributed and central-station solar • Solar heating/cooling technologies are eligible • PV also receives a credit multiplier (2.4 for central-station or 2.45 for distributed) 	Unknown, though the set-aside will likely be met largely via central station PV	<p>Solar set-aside does not relate to DG.</p> <p>Rebecca Wagner provided a summary of NV's solar incentive program. The structure of this program will be used to add net-metered PV resources to the model. These resources will reduce the NV retail sales forecast for RPS calculations, and can also be used to count towards the resulting RPS requirements.</p>

State/ Province	Balancing Authority	Program/Policy Name	Program/Policy Details Relevant to Modeling	Captured in BA Load Forecast?	Modeling DG Method
					<i>See calculations in "DG Calculations" spreadsheet</i>
OR	PACW PGE	Oregon Energy Trust renewable incentive programs	<ul style="list-style-type: none"> • Applicable only to PGE and PacifiCorp service territories • Targets behind-the-meter PV and wholesale renewable projects <20 MW • Current program goal is 124 aMW by 2014, but SBC funding assumed to continue beyond that date (82% of goal achieved by year-end 2010) 	Unknown	<p>Use ETO estimates for incremental resource additions through 2022 from their "optimistic" scenario.</p> <p>Resource additions are all assumed to be behind-the-meter.</p> <p><i>See calculations in "DG Calculations" spreadsheet</i></p>
OR	PACW PGE IPC	RPS solar set-aside and multiplier	<ul style="list-style-type: none"> • Applicable only to IOUs • 20 MW-ac PV required by 2020 • Credit multiplier of 2 available for projects completed by 2015 • Projects must be between 500 kW and 5 MW 	Unknown	Assume target attained for 20 MW- PV (total, not per utility)
OR	PACW PGE IPC	PV feed-in tariff	<ul style="list-style-type: none"> • Applicable only to IOUs • Program goal of 25 MW by 2015, of which at least 20 MW must consist of net metered systems (and the remainder can consist of wholesale PV projects <500 kW in size) 	Unknown	<p>Goal attained for 25 MW by 2015 = 25 MW of PV (total, not per utility)</p> <p>20MW assumed to be behind-the meter, as required by the program</p> <p><i>See calculations in "DG Calculations" spreadsheet</i></p>
WA	All	RPS DG multiplier	<ul style="list-style-type: none"> • DG receives a credit multiplier of 2 • DG defined to be any eligible renewable technology <5 MW 	Unknown	<p><i>Awaiting feedback from SPSC members.</i></p> <p>Interim assumption is to assume that distributed PV capacity continues to grow at 2010 rate (2.5 MW/yr).</p>