

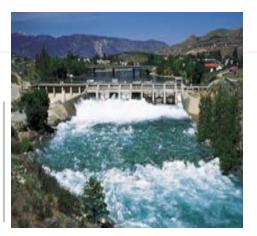


Renewable Portfolio Standards Implications for Hydroelectric Development

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NHA/NWHA

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Northwest RPS - Hydroelectric

- AK No RPS. Goals 50% RE by 2025, includes hydroelectric, hydrokinetic, tidal; 15% energy efficiency, conservation by 2020
- ID No RPS. Property tax incentive available to wind, geothermal
- MT 15% by 2015; "eligible renewable resource" includes hydroelectric = generation facility in operation after 1/1/05; hydro <10MW and no new diversion or impoundment</p>
- OR 25% by 2025; "qualifying electricity"- Generation after January 1, 1995; efficiency, capacity upgrades eligible for pre-January 1, 1995 generation
 - 50MW utility-owned, pre-1995, low impact hydro eligible only
 - 40MW non-utility owned, pre-1995, low impact hydro eligible only
- WA 15% by 2020; "eligible" hydroelectric energy limited to
 - Incremental energy from <u>efficiency improvements</u> after March 31, 1999 made to projects owned by utilities subject to RPS in the PNW, or to irrigation pipes, canals in PNW
 - No new fresh water diversion/impoundment



State Renewable Portfolio Standards: Good News/Not-so-Good News

The Good News



- Can drive known quantity of new renewable development
- Can spur economic development in rural areas
- Can ensure buyers for new renewable development
- The Not-so-Good News
 - Can adversely affect supply and demand conditions (supply outweighing any RPS-driven demand)
 - Can restrict eligibility of or displace existing in-state or regional resources
 - Can stimulate renewable energy not needed by utility (intermittent energy, but peaking power needed)
 - Can favor resource that is NOT the "integrated, least-cost option"



Implications for RPS and Hydroelectric Development – Problems and Fixes

Renewable Generation Surplus – wind generation expansion, "wind ghetto" effect



Equity Issues – impacts on energy conservation targets, questionable investment costs and rate increases; planning based upon future subsidies; land availability, environmental impacts

Hydroelectric development suffers implicit bias in policy against conventional hydro; RPS hydro only (limited capacity, no new diversion); "micro", "small" hydro defined by capacity and not ecological impacts, contribution to generation needs Putative fixes may be speculative or expensive – e.g., geographical diversification, increase load and/or transmission/export capability, increase storage capacity

Maintain RPS targets for energy efficiency, decrease subsidies that encourage "excess" intermittent energy growth ahead of load growth, avoid displacement of existing resources

Better define RPS hydro development goals, change emphasis from "low capacity" to "low impact" projects; add generating capacity at existing dams; e.g., 250 existing WA dams = potential 2,500MW development*

*2007 WA State Resource Assessment Report

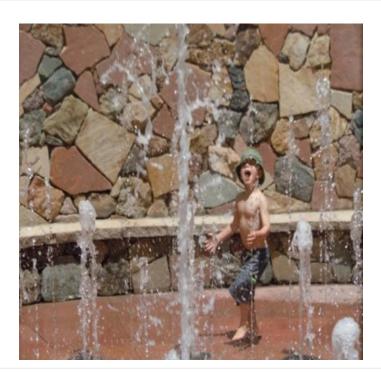


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THANK YOU For more information

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