

PGE Support for SB 333A - Renewable Hydrogen Study

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Renewable hydrogen, or hydrogen made from clean electricity, offers promising opportunities to enable economywide decarbonization. The production of renewable hydrogen - especially through electrolysis - will require an adequate supply of clean and renewable electricity. PGE's 2018 deep decarbonization study included electrolytic hydrogen in one of the pathways analyzed and found that this pathway required the largest build out of new renewable resources. However, this same pathway had the smallest build out of battery storage and smallest amount of renewable curtailment as the production of electrolytic hydrogen provided a significant source of flexible load for system balancing. As electric utilities decarbonize their systems, flexible loads are necessary to integrate renewable generation like wind and solar on the system cost effectively by shifting demand to times of high renewable generation. Production of electrolytic hydrogen can start and stop as the wind blows and the sun shines. Renewable hydrogen can also be used to fuel dispatchable thermal power generation, thereby displacing fossil fuels.

As we prepare for our next integrated resource plan, PGE is examining hydrogen technologies. We are also participating in and sponsoring the Electric Power Research Institute's Low Carbon Resources Initiative, focused on the low-carbon electric generation technologies needed to enable affordable pathways to economywide decarbonization, including clean hydrogen.

Senate Bill 333A examines benefits of and the barriers to renewable hydrogen production and use in Oregon. The study is an appropriate next step for state policymakers to more fully understand whether and how public policy could enable the economical use of renewable hydrogen in furtherance of Oregon's greenhouse gas emissions goals. Oregon Department of Energy (ODOE) is well positioned to conduct this analysis - ORS 469.030 directs ODOE to be "a clearinghouse for energy research," and the department has recently completed a thorough review of energy issues in its 2020 Biennial Energy Report. PGE encourages the committee to move forward with SB 333A.

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