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Title: A model-based assessment of border carbon adjustments in the western North American electricity sector

Abstract: To mitigate carbon leakage, jurisdictions with carbon pricing mechanisms can establish rules governing interactions with other jurisdictions. In the power sector, this usually involves pricing carbon on border flows: the border carbon adjustment. Different options for such border carbon adjustment have been proposed or implemented: based on the source, on the marginal/average emission rate (internal or external), or a fixed or time-varying deemed emission rate. Using JHSMINE, a generation-transmission expansion planning model, we explore the impact of such options on investment, operation, and emission reduction in the western US power system

Key words: Carbon Pricing, Societal Welfare, Emission, Border Tax Adjustment