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Working Title:

Interstate Natural Gas Pipelines, Price Controls, and the Secondary Market for Released Capacity: An Analysis of Regulatory Barriers to Complete Market Efficiency

{ Work in Progress }

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Over the past 40 years, the U.S. natural gas industry has gone from being fully regulated to nearly fully deregulated. The only major constraints remaining are price controls on primary contracts for interstate pipeline transmission. Meanwhile, an unregulated secondary market for the release of contracted capacity has blossomed, in which primary pipeline customers may capture the true market value of scarce capacity. Passed in 2008, FERC Order No. 712 formally conceded to the full liberalization of the capacity release market, while maintaining price controls on primary contracts. Previous analyses have suggested that the combination of a regulated primary market and an unregulated secondary market has resulted in a misallocation of rents that reduces the incentives for pipelines to expand capacity. We examine the effects of this dichotomy both analytically and empirically. In the theoretical component we model a two hub, one pipeline system and employ economic theories of network congestion. In the empirical component we estimate the effects of congestion on spot price basis differentials between two hubs in the Rocky Mountain region connected by a bottleneck pipeline transport route. We find that as scheduled flows approach maximum capacity, the price wedge increases substantially, indicating that primary purchasers of capacity are exploiting the secondary market. Our work suggests that the current policy framework that allows gas marketers and other third-party agents to capitalize on capacity release practices, while disallowing pipeline companies from sharing in these scarcity rents, has also perpetuated a negative externality on natural gas producers. Specifically, those constrained to shipment through bottleneck pipeline facilities are forced to accept lower wellhead prices as transport costs rise. High transport costs are also likely to be associated with some degree of deadweight loss. These inefficiencies stem from the reduced ability and incentive pipeline companies have to invest in greater capacity at bottleneck locations, since a large portion of potential revenue streams are diverted to the secondary capacity market.