

US natural gas market buffered against local policy intervention

February 18 2015



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The depth and efficiency of the United States natural gas market would buffer it against potential local policy interventions aimed at limiting access to shale gas resources, according to a new paper by energy economists at Rice University's Baker Institute for Public Policy.

The paper, "The Market Impacts of New Natural-Gas-Directed Policies in the United States," examines how new potential and proposed regulations could influence the natural gas market in the U.S. in the coming decades; it also examines scenarios in which domestic natural-gas development is stressed in a variety of ways.

"Perhaps the single most important result from this study is that the efficiency of the U.S. natural gas market—owing to deep market liquidity, robust existing natural gas infrastructure, relative ease of infrastructure development and significant connections to Canada—renders local policies largely irrelevant to the broader U.S. natural-gas market," said Kenneth Medlock, the James A. Baker III and Susan Baker Fellow in Energy and Resource Economics at the Baker Institute and senior director of the institute's Center for Energy Studies. Medlock co-authored the paper with Peter Hartley, the George and Cynthia Mitchell Chair in Sustainable Development and Environmental Economics and professor of economics at Rice. Hartley is also a Baker Institute Rice Scholar.

As part of their study, the authors considered a range of possible [policy](#) actions from the federal to the local level. These include supply-side actions, such as local regulations to limit gas flaring, localized bans on hydraulic fracturing motivated by grassroots movements founded in concerns over water quality and availability, and a federal ban on hydraulic fracturing perhaps due to heightened concerns related to water quality, water scarcity and seismic activity.

They found that local [policy interventions](#)—such as mandated reductions in upstream shale activity—may result in lower local incomes and employment and have substantial local implications; but these local policies have little impact on the broader U.S. natural gas market. The research also suggests that even local tax adjustments—for example, the introduction of new severance taxes—appear to have little impact on the broader market because it is relatively easy to supplant the affected supplies with different U.S. and other North American upstream opportunities, the authors said.

They also found that the impact of widespread local policy action, while more restrictive than singular interventions, is muted by several factors.

Namely, there are several areas where local economic activity has already seen robust improvement, which makes the likelihood of restrictive measures in these locations very low. In addition, the geologic and geographic breadth of resources across North America and the deep interconnectedness and strong trade ties between the U.S., Canada and Mexico play an important role, which suggests that measures should be taken to ensure those ties not be upset and perhaps should even be deepened.

However, any federal policy that substantively alters the U.S. supply opportunity would have major domestic supply and price implications. A restrictive federal policy would also have implications for global natural gas markets, the authors found. With the U.S. emerging as a supplier to global liquefied [natural gas](#) (LNG) markets, if shale gas production is limited by a major domestic policy intervention, the impact the U.S. ultimately has on global markets is also diminished, they said. This includes lower export volumes and a reduced presence of gas-indexed supplies in the LNG market—factors that have been attributed to increasing global market liquidity and a reduced impetus for market participants to seek alternative, non-oil-indexed pricing structures for supplies.

"This, in turn, has implications for any geopolitical advantage that shale resources afford the U.S. in both Asia and Europe," Medlock said.

"Altogether, the research indicates that federal action to limit shale gas production may carry a high cost to the U.S. as a whole and thus be unlikely. By contrast, localized policy action does not carry the same burden, and thus may be more likely. The cost benefit at the local level typically only weighs the fiscal and economic benefits at that level against the perceived local environmental costs. Since these are local, the broader market impacts are usually ignored, making local policy action more likely. In effect, local policy intervention is not encumbered by considerations of the broader macroeconomic and geopolitical impacts

that federal policy must consider, which may explain the shift in emphasis by shale opposition groups to the local level."

More information: Paper: [bakerinstitute.org/media/files ...
sPolicies-021615.pdf](https://bakerinstitute.org/media/files/2015-02-18-Policies-021615.pdf)

Provided by Rice University

Citation: US natural gas market buffered against local policy intervention (2015, February 18)
retrieved 23 April 2024 from
<https://phys.org/news/2015-02-natural-gas-buffered-local-policy.html>

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