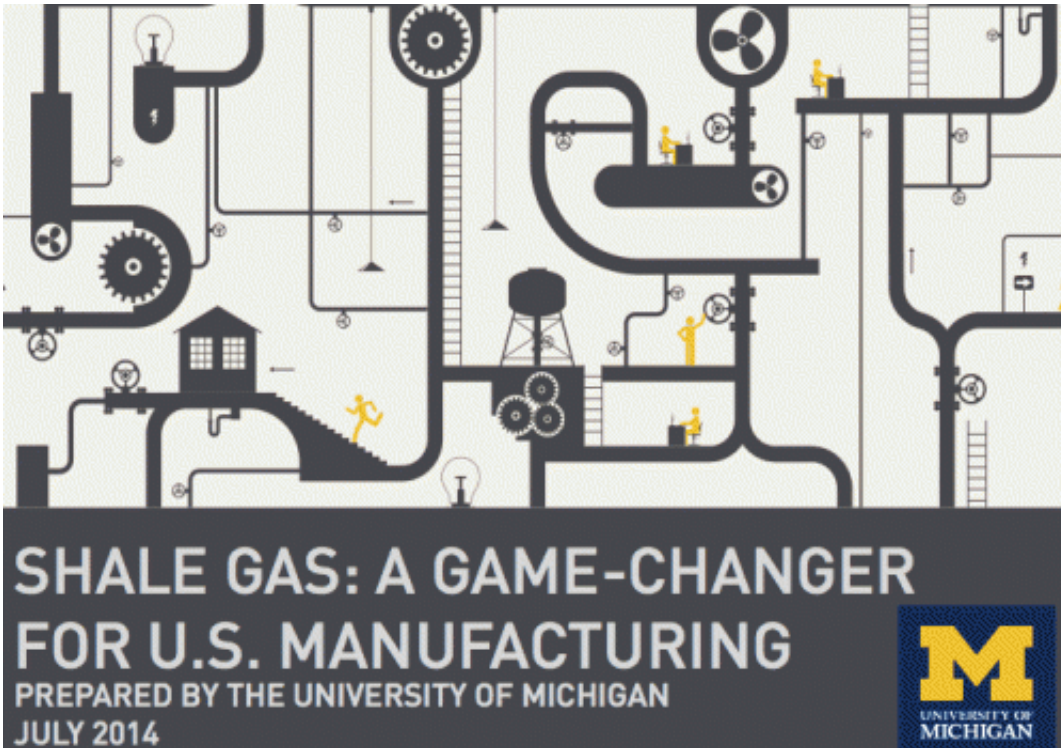


# How shale gas can boost US manufacturing

August 5 2014, by Amy Mast

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The American shale gas boom has the potential to revitalize domestic manufacturing, and a new report from a University of Michigan-led panel recommends steps to make that happen in a responsible manner.

Those steps include increasing public trust of hydraulic fracturing, monitoring and reducing methane emissions, and using shale gas profits to advance [renewable energy technologies](#), among other efforts.

The report, "Shale Gas: A Game-Changer for U.S. Manufacturing," summarizes and expands on the U-M-sponsored daylong conference of the same name held this spring in Washington, D.C. In addition to U-M faculty members, representatives from industry, environmental organizations and government agencies participated.

In recent years, the techniques of [hydraulic fracturing](#) and horizontal drilling have enabled energy companies to extract vast quantities of natural gas from deep shale rock formations.

"This rapid shift in energy supply and resource development has exposed an important weakness," said Mark Barteau, director of the U-M Energy Institute and one of the report authors. "The U.S. lacks a strategic plan and a suite of economically, socially and environmentally viable policies to responsibly leverage the new abundance of low-cost natural gas as both a fuel and a feedstock for a variety of industries."

Natural gas could revive the chemical industry and bolster energy-intensive [manufacturing](#) sectors such as aluminum, steel, paper, glass and food, the report states. A key consensus finding was that uncertainty of supply, rather than competition for supplies, represents the potentially greater limitation to manufacturing investment and operations.

The report contains five recommendations, which the panel calls for government and industry to work together to pursue. They are:

- Establish a federally administered, open-resource website where the public can obtain data on drilling sites, best practices, safety incidents and reported emissions, as well as chemical and water use, local economic and infrastructure impacts, and state and federal regulatory responsibilities.
- Incentivize infrastructure investment. Create incentives for investment in improved natural gas transmission, storage, and

distribution infrastructure in order to realize the potential benefits of shale gas across the economy and across our nation.

- Apply remote sensing technologies to methane emissions. In addition to investing in the development and deployment of new measurement technologies, the portfolio of [remote sensing technologies](#) developed and deployed by agencies such as DOE, NOAA, NASA, EPA and DOD should be reviewed for possible adaptation to address [methane emissions](#) monitoring and quantification.
- Train a next-generation energy workforce. The Department of Energy and the Department of Labor—in collaboration with groups including unions, utilities, and manufacturing and trade organizations—should assess workforce requirements and develop skills training certificate and degree programs in partnership with community colleges.
- Build the bridge to a cleaner energy future. With proper incentives, power plants and energy-intensive manufacturing industries, such as chemicals and paper that generate significant fractions of their own power requirements, may leverage faster growth of renewables by combination with the use of [natural gas](#). Invest a portion of the economic benefits realized from shale gas to fund research, development and deployment of clean energy technologies for the future [energy](#) and manufacturing economy.

Participating in the event were industrial interests such as U.S. Steel, Alcoa and the American Chemistry Council; environmental groups like the Environmental Defense Fund; and government agencies including the Department of Energy and the White House Office of Science and Technology Policy.

"Representatives from each of the groups attending this symposium had important pieces of the answers we need as we work to connect American manufacturing with the potential of [shale gas](#). Bringing them

together represented an opportunity to create considered and responsible policy solutions," said Sridhar Kota, the U-M Herrick Professor of Engineering who served as the assistant director for advanced manufacturing at the White House Office of Science and Technology Policy from 2009 to 2012.

**More information:** The report is available online:  
[energy.umich.edu/sites/default/files/PDF%20Shale%20Gas%20FINAL%20web%20version.pdf](https://energy.umich.edu/sites/default/files/PDF%20Shale%20Gas%20FINAL%20web%20version.pdf)

Provided by University of Michigan

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