The size of the Marcellus gas resource

The 30 m thick Marcellus shale contains over 360 trillion cubic feet (TCF) of producible natural gas- enough gas to supply US gas needs for16 years at the current consumption rate of 23 TCF/yr. A single well tapping 80 acres will deliver the energy equivalent of 3 million gallons of gasoline over its production lifetime. At $5 per thousand cubic feet, the value of gas under one acre is $30,000. If the Marcellus resource were produced over 30 years and used to fuel motor vehicles, at $100/barrel foreign oil purchases of $200 billion/year would be avoided. To deliver wind energy at the same rate, turbines would need to cover an area about the same size as the Marcellus (much of New York, Pennsylvania, Ohio and all of West Virginia). It should be possible to develop a resource of the magnitude and nature of the Marcellus safely to the economic and environmental benefit of our region and country. An academic community such as ours should constructively turn some of its intellectual resources to this challenge. (Calculations and references at http://www.geo.cornell.edu/marcellus-resource-calculations.pdf)

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