Atkinson Summer 2015 Intern, Understanding the extent to which the hydraulic fracturing revolution was incorporated into the analysis of energy markets in the US and internationally

Office of Economics and Policy Analysis

With world attention focused on both the environment and the economy, Environmental Defense Fund is where policymakers and business leaders turn for win-win solutions. This leading green group, founded in 1967, has tripled in size over the past decade by focusing on strong science, uncommon partnerships and market-based approaches.

Are you interested in exploring a career at an internationally-recognized environmental organization? By joining EDF as a summer intern, you too can be part of a vibrant workplace that welcomes diverse perspectives, talents and contributions, where innovation and a focus on results are a way of life. EDF’s Internship Program welcomes intellectually hungry leaders to join us, advance our work, and cultivate the skills and relationships needed for a successful career working for the environment. Alumni of our Internship Program have gone on to important leadership positions, most notably our own President, Fred Krupp. Could you be the next Fred Krupp?

Overall Function

EDF offers internships for students and recent graduates in a variety of programs and departments throughout the organization. Our internships typically run for 10 weeks during the summer. The ultimate goal of our internship program is to provide high-quality experiences (including relevant projects and opportunities for networking) that form the foundation for any individual who is serious about an environmental career.

Position Description

Context
In 1997, Mitchell Energy applied the hydraulic fracturing technique known as "slickwater fracturing" to the Barnett Shale of north Texas. The success of the technique in the Barnett was copied and adapted to other shales in the US, and this has revolutionized energy supply in the US. The technology was subsequently adapted and applied to extract 'tight oil'. It is expected by the US Energy Information Administration that the US will become a net gas exporter by 2020. Increased US oil production from hydraulically fractured tight oil wells was mostly responsible for the decrease in US oil imports since 2005 (decreased oil consumption was also an important component). There are now ambitions in many countries to emulate the US experience, and expand supplies using the same techniques.

Hypothesis
To test the validity of the proposition that economists and other members of the analytical community were very slow to recognize the impact of this cluster of technologies in supply, and therefore on price, fuel mix, imports, exports etc.. As a result, predictions across a range of variables were wrong, and the recommendations deriving from such assessments were misplaced.

Methodologies
Review the key sources of analysis on energy markets – International Energy Agency, OECD, US Energy Information Administration, BP Statistical Review of World Energy, etc. - from 1997 to the present to see to what extent the hydraulic phenomenon was recognized, and the implications built into analyses and predictions.

Key Responsibilities

Tasks will include but are not be limited to:

1. Access the key reports on energy markets from 1997 up to the present
2. Read them carefully and extract:
   - Any references to hydraulic fracking
• Any discussion of impact on energy supply and energy prices resulting from this innovation
• Projections of annual energy supply, consumption, prices with particular attention to the US, addressed in particular to oil, coal and natural gas, over the 1997-present period
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3. Compare the projections of energy supply, consumption and price, with the actual, by fuel, over the 1997-present period.

4. Findings: Write up a report comprising an Executive Summary (half page) with key findings, and the report itself (maximum of 30 pages) with the following chapters: objectives and methodologies employed; discussion of when hydraulic fracking was ‘noticed’ and appeared in the text of the reports assessed; projections of energy supply, consumption and prices, by fuel, for each report, presented in tables and graphically; actual energy supply, consumption and prices, by fuel, for each report; comparisons projections with reality; synthesis and key findings.

• Location: New York, NY
• Direct Work Supervisor: Dr. Frank Convery, Chief Economist, Environmental Defense Fund

Qualifications

• Graduate student in a business, economics, statistics, or energy studies program, or a well-qualified undergraduate senior.
• An interest in, and understanding of, energy data
• Ability to access and interpret data
• Rigor and care in checking and double checking the veracity and transposition of evidence
• Capacity to present information visually (graphs etc.) in ways that convey key messages accurately and quickly
• Ability to distil the essence
• Excellent written and oral communication skills.
• Must be well organized, motivated, and detail-oriented.
• Ability to multi-task, prioritize and meet deadlines.
• Ability to work in a team setting and have the ability to work independently when projects are due.
• Demonstrate initiative and problem solving skills.

Term

• 10 weeks during the summer.
• The position is full-time (35 hours/week).

Compensation

• Compensation is $5,000 for the summer term.

Location: EDF office, 257 Park Avenue South, New York New York, 10010

Due to the volume of employment applications and queries received, EDF is unable to respond to each application individually. Applicants will be contacted directly if selected as a candidate.

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