

**FACT SHEET: ECONOMIC IMPACTS OF HIGH-VOLUME
HYDRAULIC FRACTURING IN NEW YORK STATE**

The New York State Department of Environmental Conservation engaged a consultant to assist in analyzing the potential socio-economic impacts of high-volume hydraulic fracturing operations within New York state. This analysis, which was not sufficiently addressed in the 2009 study, confirms that high-volume hydraulic fracturing activities could provide a substantial economic boost for the state in the areas of employment, wages and tax revenue for state and local governments. However, the increased activity will also place a greater demand on government services.

Employment

Total direct construction employment is predicted to range from 4,408 full-time equivalent (FTE) workers under a low-development scenario to 17,634 FTE workers under an average development scenario. These employment figures correspond to the annual construction of 413 horizontal and vertical wells under the low-development scenario and 1,652 horizontal and vertical wells under the medium-development scenario.

At the peak of activity, employment in jobs operating well pads and related work is expected to range from 1,790 FTE workers under the low-development scenario to 7,161 FTE workers under the average development scenario.

The proposed drilling also could generate indirect employment in other sectors of the economy. Indirect employment impacts are expected to range from an additional 7,293 FTE workers under the low-development scenario to an additional 29,174 FTE workers under the average development scenario.

Maximum Direct and Indirect Employment Impacts on New York State

| Scenario | Total Employment (FTE jobs) | |
|---|-----------------------------|---------------|
| | Low | Average |
| Direct Employment Impacts | 6,198 | 24,795 |
| -Construction Employment ¹ | 4,408 | 17,634 |
| -Production Employment ² | 1,790 | 7,161 |
| Indirect Employment³ | 7,293 | 29,174 |
| Total Employment Impacts | 13,491 | 53,969 |
| Total Employment as a Percent of New York State 2010 Labor Force | 0.2% | 0.7% |

Source: U.S. Bureau of Economic Analysis 2011a; NYSDOL 2010

¹ These figures represent the maximum annual construction employment under each scenario and correspond to construction employment in Years 10 – 30. See Ecology and Environment Engineering, P.C., 2011, Economic Assessment Report for expected construction employment for all other years.

² These figures represent the maximum annual production employment under each scenario. These figures correspond to production employment in Year 30. See Ecology and Environment Engineering, P.C., 2011, Economic Assessment Report for expected production employment for all other years.

³ Type I direct employment multipliers for the oil and gas extraction industry from the U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II) were used to estimate the indirect employment impacts.

Earnings

The analysis also confirms high-volume hydraulic fracturing activities could generate significant income for employees of this sector. Up to \$621.9 million to \$2.5 billion in employee earnings could be directly and indirectly generated per year at maximum build-out, depending on the development scenario.

Maximum Direct & Indirect Annual Employee Earnings Impact on New York State

| Scenario | Total Employee Earnings (\$ millions) | |
|--|--|------------------|
| | Low | Average |
| Direct Earnings Impacts | \$419.6 | \$1,678.6 |
| Construction Earnings ⁴ | \$298.4 | \$1,193.8 |
| Production Earnings ⁵ | \$121.2 | \$484.8 |
| Indirect Employee Earnings Impacts^{5,6} | \$202.3 | \$809.2 |
| Total Employee Earnings Impacts | \$621.9 | \$2,487.8 |
| Total Employee Earnings as a Percent of New York State's 2009 Total Wages | 0.1% | 0.5% |

Source: U.S. Bureau of Economic Analysis 2011a; NYDOL 2009

State Revenue

The state could receive direct receipts from the lease of state land from subsurface horizontal drilling beneath state lands. In addition, the state could receive a significant increase in its indirect revenue streams as a result of the proposed high-volume hydraulic fracturing operations such as personal income tax receipts. Using conservative tax rates at maximum build-out, the state could receive between \$31 million and \$125 million a year in personal income tax receipts, depending on the level of development assumed. The socio-economic analysis found that increased activity also will increase the demand for governmental services, including emergency services and road repairs.

Local Government Tax Revenue

Local governments with sales tax revenue sharing could experience a substantial increase in sales tax receipts from the additional economic activity in the region. In addition, local governments could see an increase in ad valorem property tax revenue. Over the 30-year life of a typical horizontal well, a total of \$1.45 million in tax revenue could be generated.

Housing & Other Impacts

An influx of temporary workers in the early years could result in increased rates for temporary and low-income housing and possible tourism impacts. To mitigate such adverse impacts, the SGEIS proposes that DEC, in consultation with local governments, limit simultaneous construction of well pads and wells in proximity to each other in order to lessen cumulative impacts. This temporal phasing would also work to mitigate any impacts on local community character, as well as noise impacts, visual impacts and impacts from increased truck traffic.

⁴ These figures represent the maximum annual change in construction earnings under each scenario and correspond to construction earnings in Years 10 - 30. See Ecology and Environment Engineering, P.C., 2011, Economic Assessment Report for expected construction earnings for all other years.

⁵ These figures represent the maximum annual production earnings and indirect employee earnings under each development scenario. These figures correspond to operations earnings in Year 30. See Ecology and Environment Engineering, P.C., 2011, Economic Assessment Report for expected operation earnings for all other years.

⁶ Type I direct earnings multipliers for the oil and gas extraction industry from the U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II) were used to estimate the indirect employment impacts.