



**CENTER FOR URBAN &  
ENVIRONMENTAL SOLUTIONS**  
Florida Atlantic University

# **Socioeconomic Study of Indiantown Natural Gas Storage Facility**

**PREPARED FOR**

**FLORIDIAN NATURAL GAS STORAGE COMPANY, LLC  
CONTRACT NO. 07-202**

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**Submitted by**

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## Executive Summary

- Natural gas is brought into Florida through two transmission pipelines: The Gulfstream system which comes through Tampa from Mobile, Alabama, and the Florida Gas Transmission pipeline, a Florida land-based network delivering gas supplies from Texas and Louisiana.
- Both pipelines run near Indiantown, Martin County, Florida, the proposed location for a gas storage facility.
- The facility will serve as a backup supply for the state's use in case of a disruption in supply, e.g. from hurricanes or mechanical interruptions. At full capacity, a single tank of the proposed gas storage facility will be capable of servicing the needs of two million residential houses over a ten to twenty day period.
- The proposed gas storage facility will generate large economic impacts during its \$300 million four and one half-year permitting and construction phase and smaller ongoing impacts when it is fully operational. These impacts will occur in Martin County and statewide. The Project development began in June 2006 and the Project should be operational in the second quarter of 2011.
- During the permitting and construction phase, the state-wide direct and secondary impacts of the project will include payroll increases of more than \$70 million in 2008 and 2009 and more than \$40 million in 2010. In 2008 and 2009, total employment will rise by more than 2,000 jobs and there will be more than 1,000 additional jobs in 2010. The permitting and construction phase of the project will create almost 6,000 man-years of employment in the state.
- The direct and secondary impacts of the permitting and construction phase of the gas storage facility will lead to increases of almost \$40 million in labor earnings in Martin County in 2008 and 2009 and an increase of \$20 million in 2010. There will be increases of about 1,000 jobs in 2008 and 2009 and more than 500 in

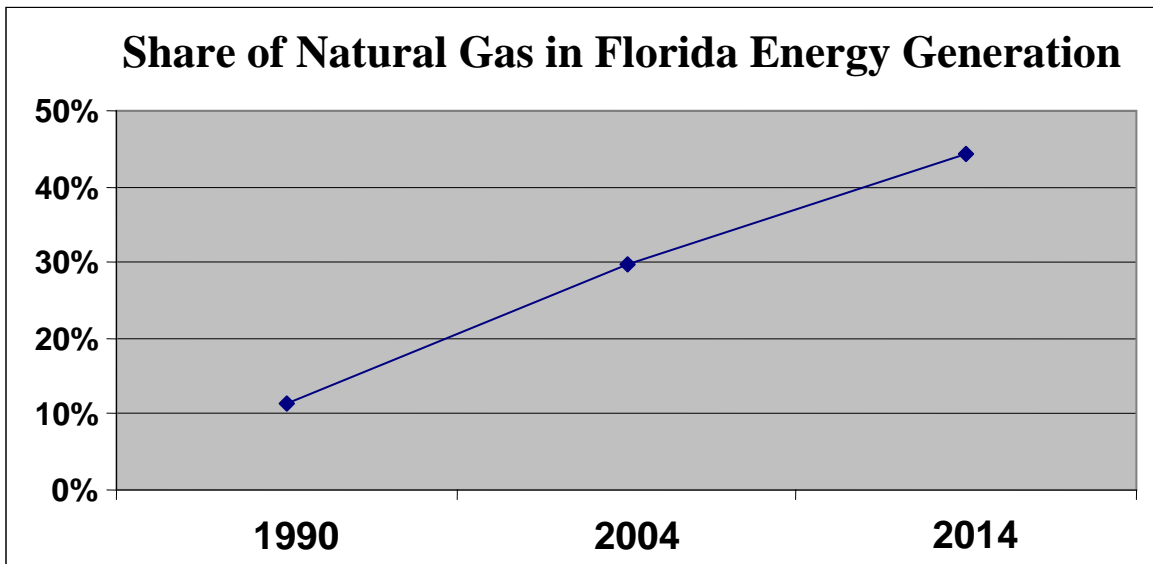
2010. The permitting and construction phase of the project will create almost 3,000 man-years of employment in the Martin County.

- The operations of the gas storage facility will result in ongoing direct annual expenditures of \$19 million (2006 dollars). The direct and secondary impacts of these direct expenditures will cause the state economy to expand by \$31 million of which \$22 million will occur within Martin County. There will be 249 jobs created statewide with annual earnings of 9 million 2006 dollars. Within the county, 109 jobs will be created with annual earnings of almost \$4 million.
- The operations of the gas storage facility will directly create more than 30 high paying jobs in the Martin County area – jobs with average annual salary and benefits of \$42,000, more than 20 percent higher than the average salary and benefits paid countywide of \$34,518, and even higher than the average salary and benefits in western Martin County, in 2005. The company plans to undertake local training programs in order to fill many of these jobs with workers from the Indiantown area.
- When construction of the gas facility is complete, the company will pay in excess of \$1.6 million in property taxes annually to Martin County governments, including the School Board.

## Introduction

Prior to 1987, the use of natural gas as a utility boiler fuel was restricted by the Power Plant and Industrial Fuel Act.<sup>1</sup> At this time, there was an oversupply of natural gas and prices had fallen. Congress repealed the Act and major manufacturers developed new efficient gas-fired technologies. The demand for natural gas increased, and the share of Florida electricity generation accounted for by natural gas expanded from 11.4 percent in 1990 to 29.9 percent in 2004 (see Figure 1). It is projected that the share of natural gas will rise to 44 percent of energy generation by 2014.

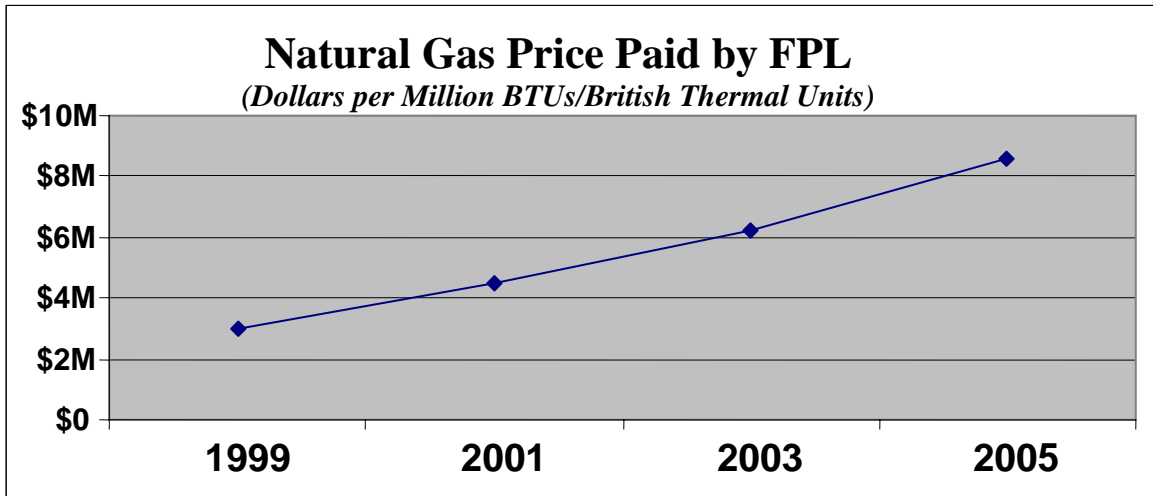
Figure 1



Natural gas prices have risen significantly in the new century. Florida Power and Light, for example, paid an average of \$3.00 per million BTUs in 1999.<sup>2</sup> The price had risen by fifty percent to \$4.50 in 2001 and by more than an additional third to \$6.24 in 2003. By 2005, the price had reached \$8.26, almost three times the 1999 level (see Figure 2). As a result, the state's utilities have begun to plan for the construction of

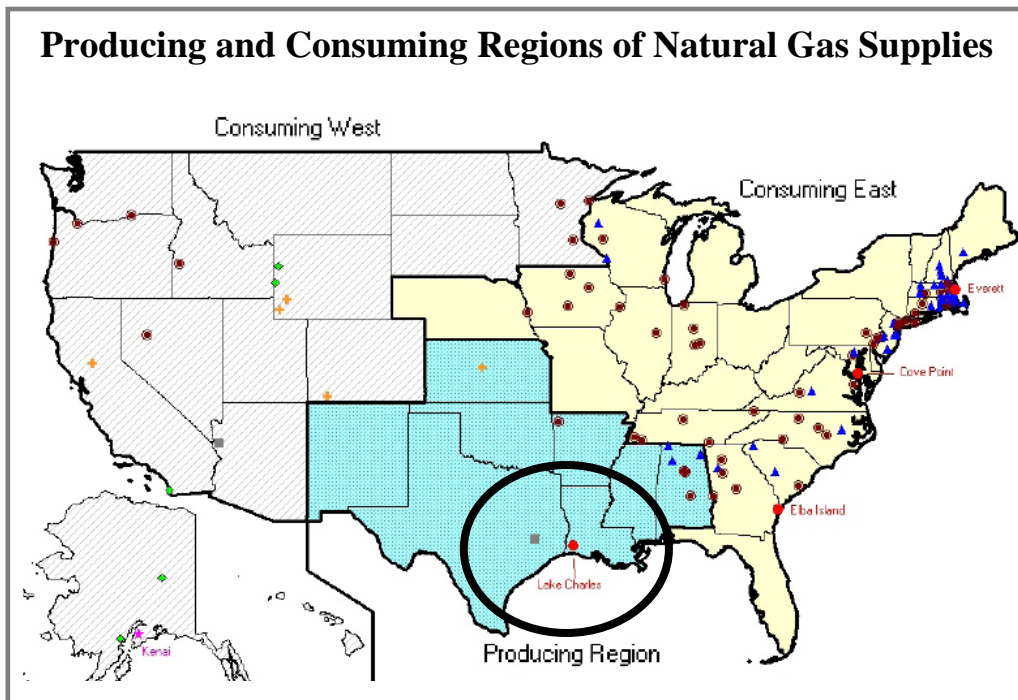
generating plants based on alternative fuels such as coal and nuclear fuel, but the earliest capacity based on alternative fuels is not projected to come online before 2012.

Figure 2



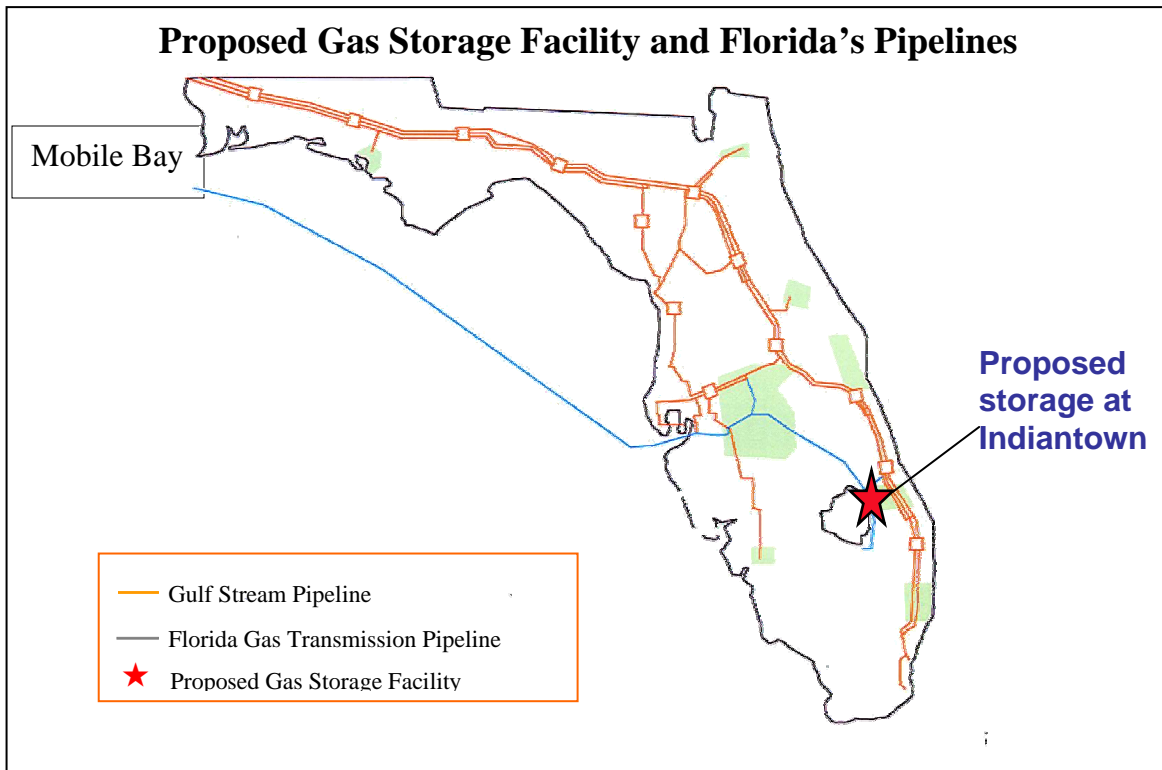
Stability of natural gas supplies has also become an issue. Florida obtains its natural gas supplies from onshore and offshore sources from the south central United States (see Figure 3). The 2005 Hurricanes Rita and Katrina shut down production in the

Figure 3



Gulf and disrupted supplies to Florida. The state’s utilities “needed to make public appeals for conservation, and sought environmental waivers allowing them to burn back-up fuels such as fuel oil.”<sup>3</sup>

**Figure 4**



Natural gas is brought into Florida through two long haul transmission pipelines. The Gulfstream Pipeline transports natural gas under the Gulf of Mexico between Mobile, Alabama and Tampa, Florida. The Florida Gas Transmission pipeline has a land-based network of pipelines that enters the state in the western panhandle region from Texas and Louisiana and runs down both coasts. Both the Gulfstream and Florida Gas Transmission pipelines currently run near Indiantown in Martin County where the proposed gas storage facility will be located.

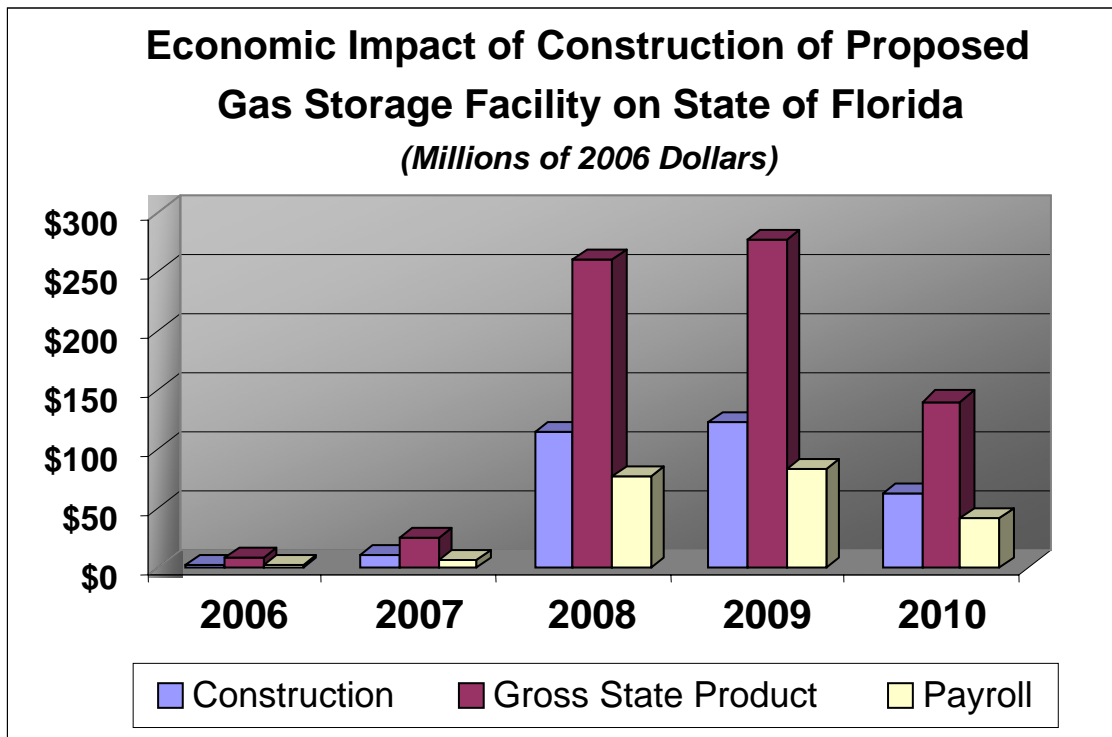
The natural gas storage facility will provide a backup supply for the state's electricity generating plants in the case of a supply disruption. The facility will have backup generators to be used in an emergency if the electricity grid is down that will enable the liquefied gas to be regasified and pumped out through the pipeline networks. At full capacity, there will be sufficient gas in the storage of one tank to generate electricity capable of servicing the needs of two million residential households over a ten to twenty day period. Much of the electricity, however, would be absorbed by non-household users, including emergency services and businesses. The backup gas supply would generate enough electricity to keep a large section of the state in operation and allow the state to curtail service in an orderly fashion as necessary in case of a major emergency.

Having natural gas storage increases reliability and the integrity of the energy delivery system within the State thereby increasing the safety to the consumer during an emergency. Natural gas storage would also help moderate the effect of price spikes experienced in times of tight supply.

## Economic Impact of Proposed Gas Storage Facility on State of Florida

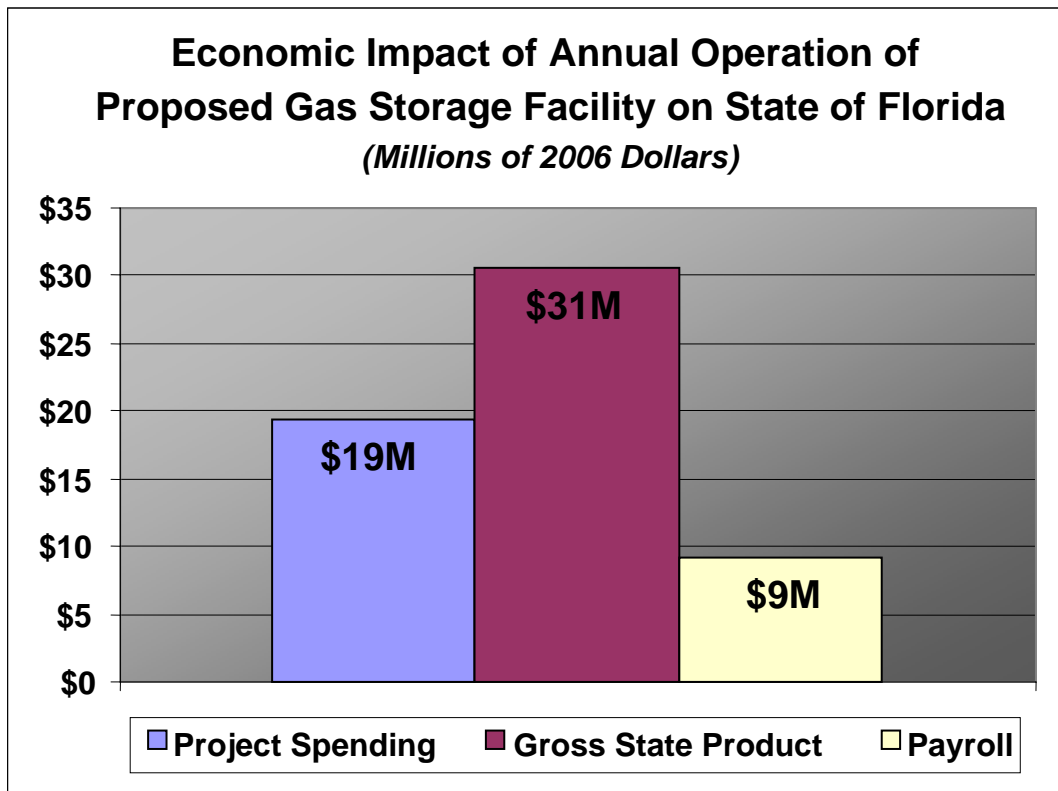
In addition to the important economic benefits that will flow to Florida as a result of the backup fuel supply that will be created by the Indiantown gas storage facility, the project will generate positive economic impacts on income and employment. The project will generate very large impacts during its extensive permitting and construction phase and smaller but significant ongoing impacts when it is fully operational. Permitting and construction is projected to occur over a five year period, with an impact of more than \$300 million in 2006 dollars (see Figure 5).<sup>4</sup> Spending will be relatively small in 2006 and 2007 but will exceed \$100 million in 2008 and 2009. Spending will be more than \$60 million in 2010, the final year of construction.

Figure 5



Project spending will generate additional spending in the economy as the suppliers to the construction project purchase from other businesses and as the employees of the affected businesses spend their earnings. This multiplier or ripple effect will cause the gross state product of Florida to increase by more than twice the level of construction spending during the permitting and construction phase of the project.<sup>5</sup> Payrolls in the state will also increase not only as a direct result of the construction expenditures but also as the other affected industries expand their production. Payrolls, or more properly called earnings since they include incomes of the self-employed, will increase by more than \$70 million in 2008 and 2009 and will rise by more than \$40 million in the final year of construction. During the peak construction years, an additional 2,000 plus jobs will be created in Florida and there will be an additional 1,000 jobs created in 2008 and 2009.

**Figure 6**

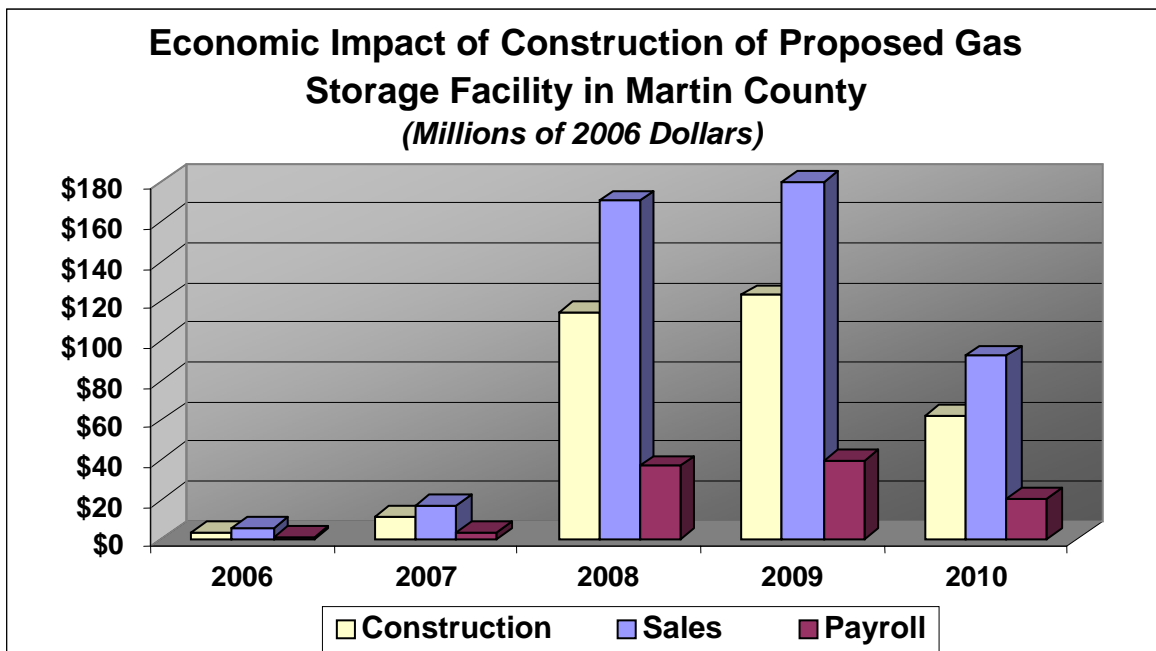


Once the gas storage facility is operational in 2011, there will be annual operating expenditures of almost \$19 million in 2006 dollars (see Figure 6). This will generate an annual increase in gross state product of more than \$30 million as all affected industries expand their production and sales. The number of jobs will expand in the state by 249 and payrolls, including the earnings of the self-employed, will rise by almost \$10 million annually.

## Economic Impact of Proposed Gas Storage Facility on Martin County

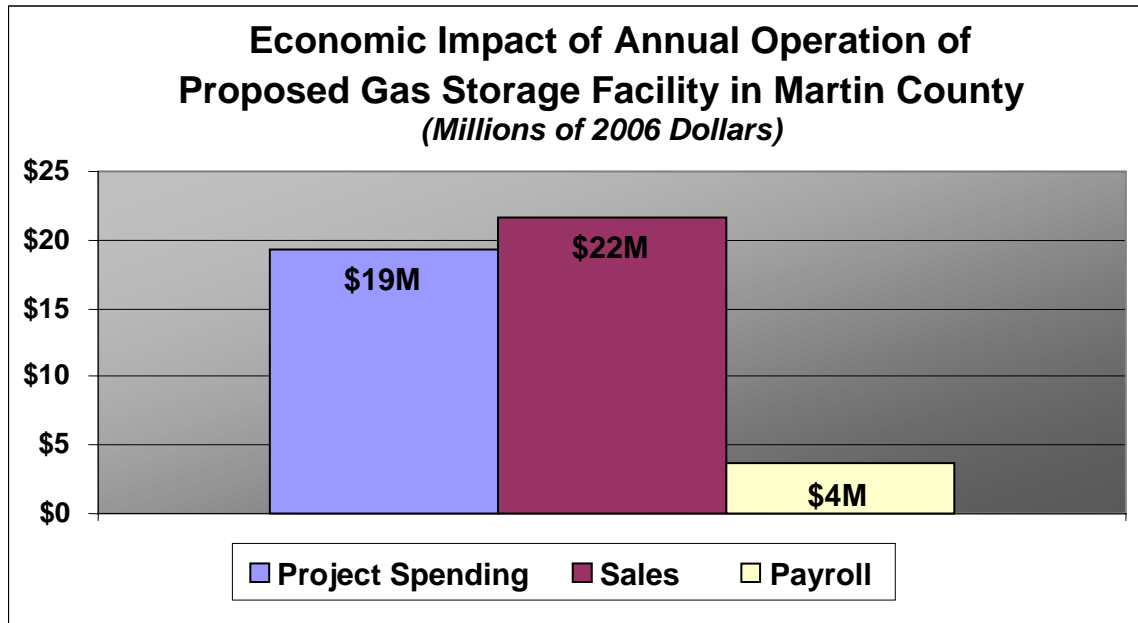
There will be similar proportional benefits to the economy of Martin County. This is because a portion of the economic impact will occur elsewhere in the state outside the county boundaries. In the peak construction years, the Martin County economy will expand by more than \$150 million (see Figure 7), compared to the more than \$250 million expansion of the state's economy as a whole.<sup>6</sup> In those years, payrolls, including the earnings of the self-employed, will expand by about \$40 million in the county, about one-half the expansion statewide. The number of jobs created in Martin County during 2008 and 2009, the peak construction years, will be about 1,000 and there will be more than 500 jobs in 2010, the final year of construction.

Figure 7



It was previously noted that the gas storage facility will have an annual operating budget of \$19 million in 2006 dollars when it is fully operational in 2011. This will cause the Martin County economy to expand by \$22 million, creating 109 jobs with a payroll, including the earnings of the self-employed, of \$4 million in 2006 dollars.

**Figure 8**



The gas storage facility project will bring high paying jobs to the Indiantown area. The average job will pay \$42,000, more than 20 percent higher than the average wage of \$34,518 paid countywide in 2005. An estimate of median labor income in western Martin County, where Indiantown is located, is even lower at \$32,550.<sup>7</sup>

The company plans to undertake local training programs to ensure that many of the new jobs at the gas storage facility will be filled by workers from the Indiantown area. In addition, the facility will hire locally for a number of service jobs, and the spending of the facility's employees will create local jobs in retail trade, restaurants and other local businesses. The gas storage facility project will bring high wage jobs to

western Martin County, and it will have a positive impact on the incomes of local families.

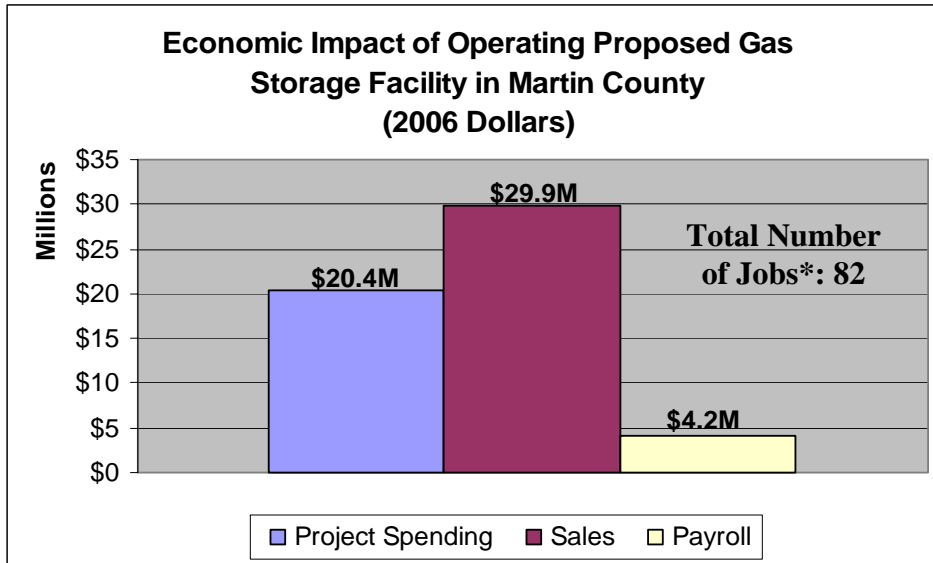
**Figure 9**

<b>Proposed Staffing in Gas Storage Facility</b> <i>(based on 2006 dollars)</i>		
<b>Position</b>	<b>Number</b>	<b>Average Salary &amp; Benefits</b>
Manager, Technical, or Other	32	\$42,000
Countywide Census (2005)		\$34,518
Western Martin County (2006)		\$32,550

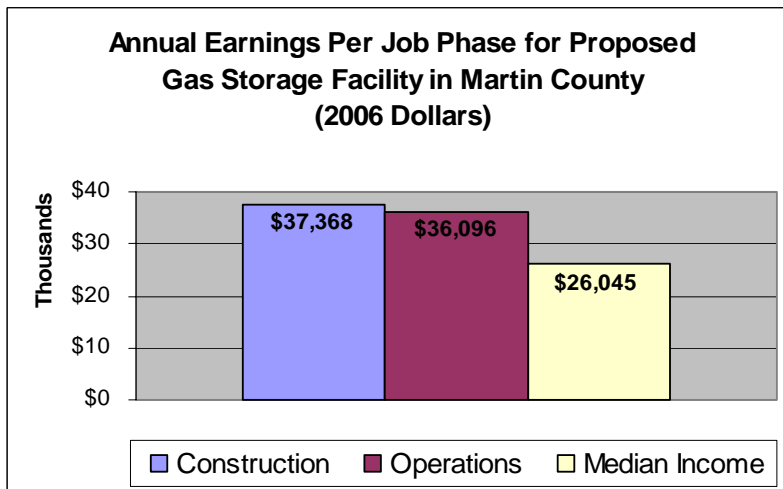
## Appendix

### Benefits of Proposed Gas Storage Facility in Martin County

Prepared by the Center for Urban and Environmental Solutions at  
Florida Atlantic University



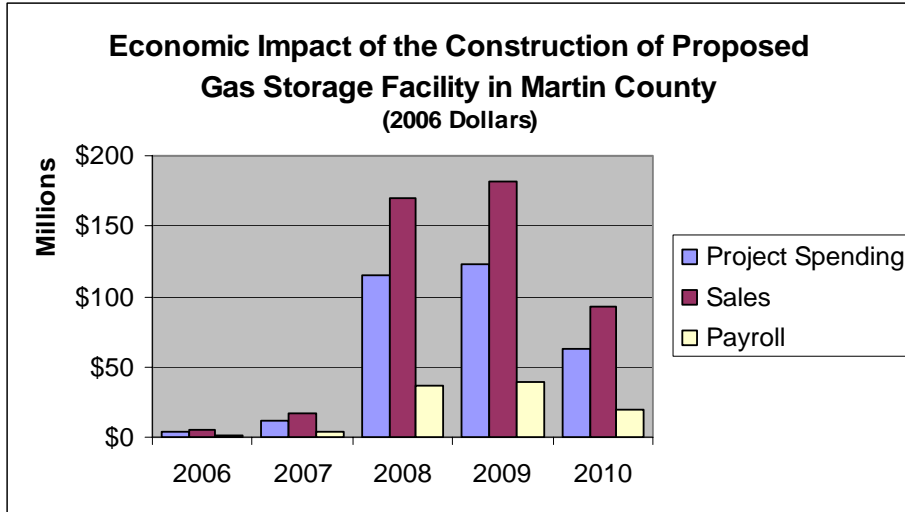
\*Direct and secondary jobs created. Assumes a fully operational facility by 2011.



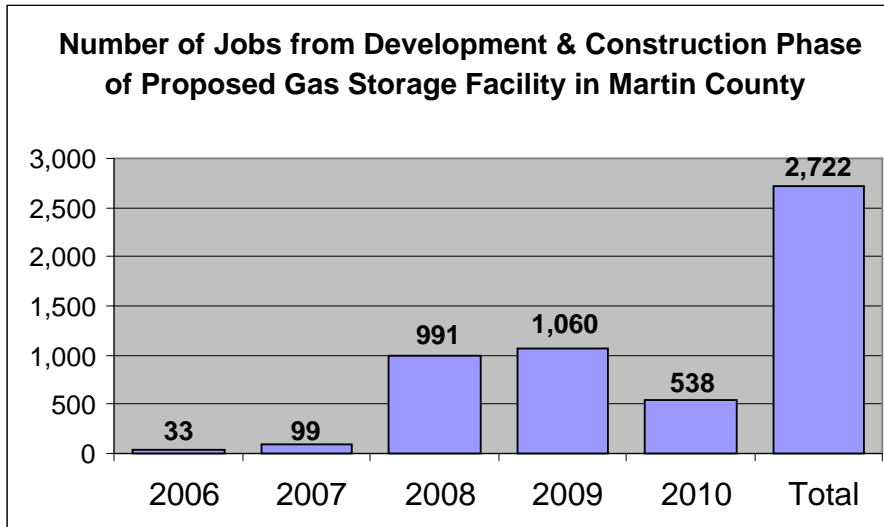
Includes Total Earnings (salary, benefits, self-employed) for 2006 income in Western Martin County.

#### **Significant Economic Impact of Operations on Western Martin County:**

- The operations of the gas storage facility will create jobs in other industries as suppliers expand and as workers spend their incomes
- Many of the jobs created in other industries will be local and characterized by lower average earnings (e.g. cleaners and landscapers, restaurant workers and workers in retail trade)
- The total jobs created across the economy as a result of the construction of the facility will have average earnings of \$37,000 and those created as a result of annual operations will have average earnings of \$36,000
- This compares with a median worker salary and benefits in Western Martin County of \$32,550
- \$20 million will be spent beginning when fully operational in 2011



Assumes that construction prices and wages remain at 2006 levels through 2010.



Assumes that construction prices and wages remain at 2006 levels through 2010. Total represents total man years.

#### Significant Economic Impact in Development & Construction Phase on Martin County:

- The proposed Gas Storage Facility will result in expenditures in excess of \$300 million in Martin County over the five year development and construction phase of the project
- As workers spend their incomes in the county, and local suppliers increase their sales, total production (sales) in the county will increase by close to half a billion dollars
- Total jobs in the county, including workers on the project and workers in other affected industries, will rise by more than 2,700 man years during the development and construction phase, peaking at more than 1,000 jobs in 2009
- Earnings of workers will increase by more than \$100 million during the development and construction phase

## End Notes

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<sup>1</sup> Division of Economic Regulation, Florida Public Service Commission, [A Review of Florida Electric 2005 Ten-Year Site Plans](#) page 11, available on the internet at <http://www.psc.state.fl.us/publications/pdf/electricgas/tysp2005.pdf>.

<sup>2</sup> Division of Economic Regulation, Florida Public Service Commission, [A Review of Florida Electric 2005 Ten-Year Site Plans](#) page 12, available on the internet at <http://www.psc.state.fl.us/publications/pdf/electricgas/tysp2005.pdf>.

<sup>3</sup> Division of Economic Regulation, Florida Public Service Commission, [A Review of Florida Electric 2005 Ten-Year Site Plans](#) pages 12-13, available on the internet at <http://www.psc.state.fl.us/publications/pdf/electricgas/tysp2005.pdf>.

<sup>4</sup> It is assumed that construction prices will remain flat during the five year construction phase.

<sup>5</sup> The multipliers used in this report come from the RIMS II Model produced by the Regional Economic Analysis of the Bureau of Economic Analysis of the U.S. Department of Commerce. The Bureau of Economic Analysis is the federal government agency that produces the official estimates of gross domestic product and other national economic statistics for the US economy.

<sup>6</sup> While sales make up the bulk of the production of the local economy the actual production measure also includes inventory changes.

<sup>7</sup> The Federal Financial Institutions Examination Council estimated median family income for western Martin County at \$39,061 in 2006. Under the assumption that all this income consists of labor earnings, and that there are 1.5 workers per family, the median income per worker would be \$26,040. Since self-reported census labor income data does not include benefits, if all workers in western Martin County received benefits, the average wage and benefits would amount to \$32,550. This is probably an overestimate since many workers in western Martin County probably receive little in the way of benefits. <http://www.ffiec.gov/webcensus/report.aspx?year=2006&state=12&county=085&report=demographic>.