Promoting Energy Supply: Impact on New Hampshire's Economy

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The energy outlook for the U.S. has changed substantially over the last few years as the outlook for natural gas supplies has undergone a complete about-face. There has been little growth in U.S. lower-48 supplies, and imports from Canada have leveled off and may have peaked. LNG is now expected to play a much larger role in meeting the growing demand for natural gas, but its development is subject to myriad regulatory hurdles that may derail many planned projects.

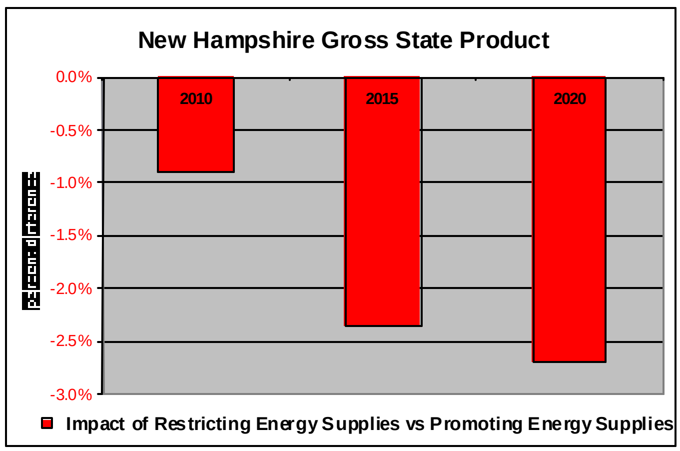
Against the backdrop of a tighter supply picture for natural gas, the fuel substitution option is severely constrained as a mechanism for meeting the steady tightening of emission limits. During the 1990s, it was forecast that the low cost of low-emission gas combined cycle plants combined with the low cost of natural gas would make gas the option of choice for meeting emission limits. As gas supplies have tightened (and gas prices have risen), power generators and large manufacturers are facing tightening emission limits with fewer, more expensive choices.

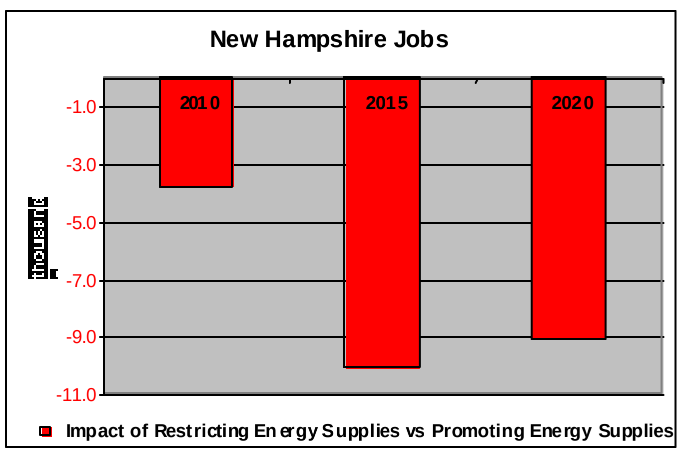
- New Hampshire's economy would expand by 37% from 2010 to 2020 (at a rate of 3.2% per year) under policies that increase access to domestic energy resources.

- In contrast, policies that restrict energy supplies would reduce New Hampshire's Gross State Product by 2.7% in 2020.

- Jobs are a critical issue for New Hampshire's prosperity. Policies promoting energy supplies would result in 40,000 new jobs in the next decade.

- In contrast, under restrictive energy policies, New Hampshire would have 9,000 fewer jobs by 2020, and hourly wages would be lower.





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Looking forward, there are policy options to improve economic performance by **promoting energy supplies** by ensuring adequate supplies at globally competitive prices while making steady improvements in air quality. Likewise, there are policies that would **restrict energy supplies** and lead to lower economic performance without a notable gain in air quality.

Global Insight has been commissioned by the National Association of Manufacturers and the American Council for Capital Formation to measure the impacts on U.S. manufacturing and the overall economy of two scenarios that are defined by key energy and environmental policy options.

Promoting Energy Supplies Increases US Economic Performance, US Manufacturing Output Expands, 18 Million Jobs are Created

Under the **Promoting Energy Supplies** scenario, US economic performance is enhanced by the availability of energy resources at globally competitive prices. Continued reliance on domestically produced fuels, a steady increase in economically attractive renewable resources and the building of several new nuclear units contributes to a strong economy. Over the period 2010-2020,

- Real GDP growth averages 3.1%.
- Business fixed investment grows at an annual rate of 6.3% per year.
- Industrial production increases at 3.5% per year.
- Real disposable income rises 3.2% per annum.
- Employment expands 1.25% per year; 18 million new jobs are created.
- Manufacturing output grows 3.0% per year.
- Manufacturers employ more than 13 million people.

Restricting Energy Supplies Would Cost the US Economy 1.3 Million Jobs, Manufacturing Output would be 6% Lower

Under the **Restricting Energy Supplies** scenario, tightening mercury emission limits, enactment of severe limits on carbon dioxide emissions, and barriers to development of natural gas supplies combine to dramatically increase the cost of energy and reduce economic growth compared to the Promoting Energy Supplies scenario.

- Homeowners would pay 26% more for natural gas in 2010, and 21% more for electricity. By 2020, natural gas would cost 31% more, and electricity prices would be 61% higher.
- Manufacturers would see similar price hikes, reducing global competitiveness.
- The economy's performance would be weaker.
- Real GDP would fall 2.3% below the Promoting Energy Supplies case by 2020.
- Industrial production would be 12% lower by 2020.
- Real disposable income would be 2.2% below the Promoting Energy Supplies case by 2020.

New Hampshire Gains Jobs and Better Wages with Policies that Promote Energy Supplies

New Hampshire's economic performance would benefit from policies that encourage development of domestic energy supplies, but could be damaged by stringent controls on mercury and greenhouse gas emissions. New Hampshire's economy would expand by 3.2% per year next decade, resulting in more and better paying jobs.

Stronger Economic Outlook for New Hampshire under the Promoting Energy Supply Scenario

New Hampshire	2010			2015			2020		
	PES	RES	%diff.	PES	RES	%diff.	PES	RES	%diff.
Gross State Product (million 2000$)	59896	59355	-0.9%	70234	68584	-2.3%	82326	80096	-2.7%
Manufacturing Output (mil. 2000$)	8991	8858	-1.5%	11000	10523	-4.3%	13415	12607	-6.0%
Manufacturing, Durables	7605	7496	-1.4%	9633	9217	-4.3%	12041	11318	-6.0%
Manufacturing, Nondurables	1386	1362	-1.7%	1367	1306	-4.5%	1374	1289	-6.2%
Non-Manufacturing Output (mil. 2000$)	50906	50497	-0.8%	59234	58061	-2.0%	68911	67489	-2.1%
Government	4432	4442	0.2%	4647	4653	0.1%	4835	4864	0.6%
Agriculture, Forestry, & Fishing	219	217	-0.9%	233	227	-2.5%	248	241	-2.9%
Construction	2803	2745	-2.0%	3326	3090	-7.1%	3988	3616	-9.3%
Mining	28	27	-3.1%	31	30	-4.7%	35	30	-14.1%
Educational & Health Services	5086	5077	-0.2%	5781	5736	-0.8%	6580	6555	-0.4%
Financial Activities	14115	14029	-0.6%	16510	16357	-0.9%	19070	18951	-0.6%
Information	2039	2042	0.1%	2422	2408	-0.6%	2874	2842	-1.1%
Leisure & Hospitality	2195	2188	-0.3%	2487	2453	-1.3%	2815	2788	-0.9%
Professional & Business Services	6231	6149	-1.3%	7705	7631	-1.0%	9621	9701	0.8%
Trade & Transportation	11145	11040	-0.9%	13185	12811	-2.8%	15624	15163	-3.0%
Utilities	1419	1337	-5.8%	1574	1304	-17.2%	1742	1221	-29.9%
Other Services	1193	1204	0.9%	1330	1362	2.4%	1479	1517	2.6%
Employment (thousands)									
Total Nonfarm	661	658	-0.6%	676	666	-1.5%	701	692	-1.3%
Manufacturing									
Manufacturing, Durables	62	61	-1.2%	60	57	-5.1%	59	54	-7.8%
Manufacturing, Nondurables	18	18	-0.7%	17	17	-1.6%	17	17	-0.9%
Non-Manufacturing									
Government	95	96	0.3%	99	100	0.5%	104	105	1.2%
Construction, Natural Rsrcs, Mining	33	32	-2.0%	35	33	-6.7%	39	36	-8.8%
Educational & Health Svcs	100	100	-0.1%	101	100	-0.4%	105	105	0.2%
Financial Activities	40	40	-0.6%	41	41	-0.5%	41	41	0.0%
Information	13	13	0.2%	14	14	-0.2%	15	15	-0.5%
Leisure & Hospitality	69	69	-0.3%	69	68	-0.9%	69	69	-0.3%
Professional & Business Svcs	63	63	-1.3%	72	71	-0.6%	81	82	1.4%
Trade & Transportation	143	142	-0.9%	145	141	-2.4%	148	144	-2.4%
Utilities	2	2	-2.6%	2	2	-11.0%	2	2	-19.0%
Other Services	21	21	1.0%	21	22	2.8%	21	22	3.2%
Wages (2000$)									
Avg. Hourly Earnings, Manufacturing	17.49	17.33	-0.9%	19.47	19.10	-1.9%	21.67	20.98	-3.2%
Income (Millions, 2000$)									
Personal Income	53359	52753	-1.1%	61331	59918	-2.3%	70295	68422	-2.7%
Disp. Personal Income	47269	46789	-1.0%	53760	52721	-1.9%	61829	60444	-2.2%
Population (Thousands)	1384	1384		1450	1450		1513	1513	

Source: Global Insight, Inc.

Note: The Promoting Energy Supply Case is denoted by PES, Restricting Energy Supply Case is RES.

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Scenario Descriptions

	Promoting Energy Supply Scenario	Restricting Energy Supply Scenario
Climate Change Policy Assumptions	No federal requirements for mandatory reduction in greenhouse gases (GHG)	McCain-Lieberman (S. 139) enacted for GHG emission reductions in 2010 and 2016
Mercury Policy Assumptions	15-ton cap by 2018, with a cap and trade program, no MACT	Emissions reduced by 90% by 2010-2012 through MACT standards, without regard to coal type, no cap and trade and assuming limited technology advancement by 2012
SO2, NOx Assumptions	CAIR and all ongoing regulatory programs, including required future phases	CAIR and all ongoing regulatory programs, including required future phases
Natural Gas Supply Assumptions		
Offshore drilling	Restrictions/moratoria removed	No leasing of new areas
Federal Onshore	Federal changes to increase access (excluding Wilderness and Parks) reduce permitting costs and delays by 50% in first five years (as in 9/03 NPC study)	Highly restrictive federal impediments [to access]
Alaskan gas pipeline	Pipeline completed by 2018	No pipeline
Canadian gas	Imports ramp down to 1.0 tcf by 2015	Imports ramp down to zero by 2015
LNG	As many as 5-7 regasification terminals are built before 2015	No new LNG regasification terminals are built other than the facilities that are contracted and under construction.
Nuclear Power Assumption	4 new gigawatts on-line by 2015 (in addition to the rise in nuclear generation due to returning units, uprates of existing units, and increased utilization)	0 new gigawatts on-line by 2015 (but, does include the rise in nuclear generation due to returning units, uprates of existing units, and increased utilization)
Renewable Portfolio Standards Assumption	No new federal or state standards and a permanent extension of the Renewable Energy Production Tax Credits	No new federal or state standards and a permanent extension of the Renewable Energy Production Tax Credits