

Promoting Energy Supply: Impact on the Kansas 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.

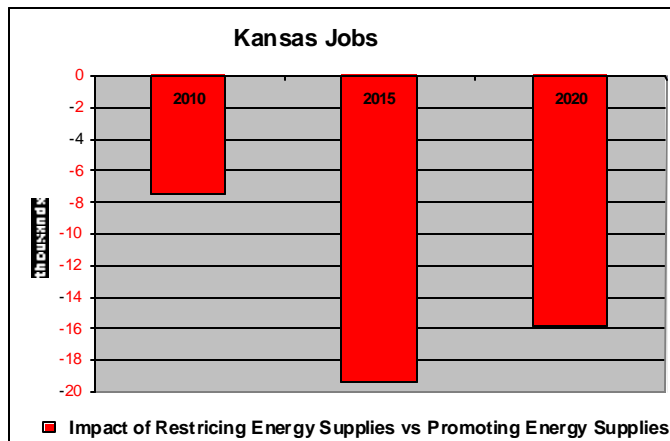
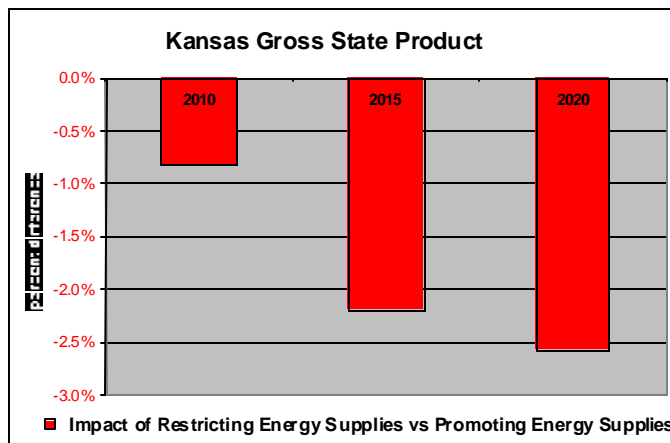
Against the backdrop of a tighter supply picture for natural gas, the fuel substitution option is severely constrained as a mechanism for meeting the steady tightening of emission limits. During the 1990s, it was forecast that the low cost of low-emission gas combined cycle plants combined with the low 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.

- The Kansas economy would expand by 31% from 2010 to 2020 (at a rate of 2.7% per year) under policies that increase access to domestic energy resources.

- In contrast, policies that restrict energy supplies would reduce the state's Gross State Product by 2.6% in 2020.

- Jobs are a critical issue for prosperity. Policies promoting energy supplies would result in 137,000 new jobs in the next decade in Kansas.

- In contrast, under restrictive energy policies, Kansas would have 16,000 fewer jobs by 2020, and hourly wages would be lower.



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 (this headline sounds like "vs regular policy", rather than the truth, "over the period")

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.

Kansas Gains Jobs and Better Wages with Policies that Promote Energy Supplies

The Kansas economy would benefit from policies that encourage development of domestic energy supplies while avoiding stringent controls on mercury and greenhouse gas emissions (the second half of this sentence doesn't fit here, as it doesn't describe this case). The state's economy would expand by 2.7% per year next decade, resulting in more and better paying jobs.

Stronger Economic Outlook for Kansas under the Promoting Energy Supply Scenario

Kansas	2010			2015			2020		
	PES	RES	%diff.	PES	RES	%diff.	PES	RES	%diff.
Gross State Product (million 2000\$)	107472	106583	-0.8%	122925	120213	-2.2%	140480	136855	-2.6%
Manufacturing Output (mil. 2000\$)	15354	15118	-1.5%	16255	15542	-4.4%	17185	16141	-6.1%
Manufacturing, Durables	9917	9775	-1.4%	10283	9839	-4.3%	10677	10036	-6.0%
Manufacturing, Nondurables	5437	5343	-1.7%	5972	5704	-4.5%	6508	6105	-6.2%
Non-Manufacturing Output (mil. 2000\$)	92118	91465	-0.7%	106670	104670	-1.9%	123295	120714	-2.1%
Government	12976	13008	0.2%	14051	14068	0.1%	15109	15200	0.6%
Agriculture, Forestry, & Fishing	2899	2873	-0.9%	4282	4176	-2.5%	6286	6104	-2.9%
Construction	4396	4306	-2.0%	5330	4951	-7.1%	6432	5832	-9.3%
Mining	1149	1113	-3.1%	1380	1314	-4.7%	1618	1390	-14.1%
Educational & Health Services	7368	7355	-0.2%	8130	8067	-0.8%	8935	8901	-0.4%
Financial Activities	15575	15480	-0.6%	17017	16859	-0.9%	18397	18282	-0.6%
Information	9406	9417	0.1%	11739	11668	-0.6%	14585	14420	-1.1%
Leisure & Hospitality	2824	2815	-0.3%	3054	3013	-1.3%	3274	3243	-0.9%
Professional & Business Services	9577	9450	-1.3%	11551	11439	-1.0%	13884	13999	0.8%
Trade & Transportation	21791	21586	-0.9%	25840	25106	-2.8%	30361	29465	-3.0%
Utilities	1965	1852	-5.8%	1991	1649	-17.2%	1999	1401	-29.9%
Other Services	2190	2210	0.9%	2305	2360	2.4%	2414	2477	2.6%
Employment (thousands)									
Total Nonfarm	1410	1402	-0.5%	1471	1452	-1.3%	1547	1531	-1.0%
Manufacturing									
Manufacturing, Durables	110	109	-1.2%	106	100	-5.1%	103	95	-7.8%
Manufacturing, Nondurables	70	70	-0.7%	68	67	-1.6%	67	66	-0.9%
Non-Manufacturing									
Government	263	264	0.3%	272	274	0.5%	282	285	1.2%
Construction, Natural Rsrcs, Mining	72	70	-2.0%	76	71	-6.7%	84	76	-8.8%
Educational & Health Svcs	174	174	-0.1%	181	180	-0.4%	191	192	0.2%
Financial Activities	74	74	-0.6%	77	76	-0.5%	79	79	0.0%
Information	45	45	0.2%	49	49	-0.2%	55	55	-0.5%
Leisure & Hospitality	121	120	-0.3%	125	124	-0.9%	130	130	-0.3%
Professional & Business Svcs	154	152	-1.3%	180	179	-0.6%	207	210	1.4%
Trade & Transportation	264	261	-0.9%	272	266	-2.4%	281	274	-2.4%
Utilities	7	7	-2.6%	7	6	-11.0%	7	5	-19.0%
Other Services	56	56	1.0%	58	60	2.8%	62	64	3.2%
Wages (2000\$)									
Avg. Hourly Earnings, Manufacturing	17.58	17.42	-0.9%	17.98	17.64	-1.9%	18.50	17.91	-3.2%
Income (Millions, 2000\$)									
Personal Income	92933	91877	-1.1%	105405	102978	-2.3%	119257	116080	-2.7%
Disp. Personal Income	82212	81377	-1.0%	92443	90657	-1.9%	104751	102404	-2.2%
Population (Thousands)	2813	2813		2874	2874		2931	2931	

Source: Global Insight, Inc.

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

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, NO_x 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