

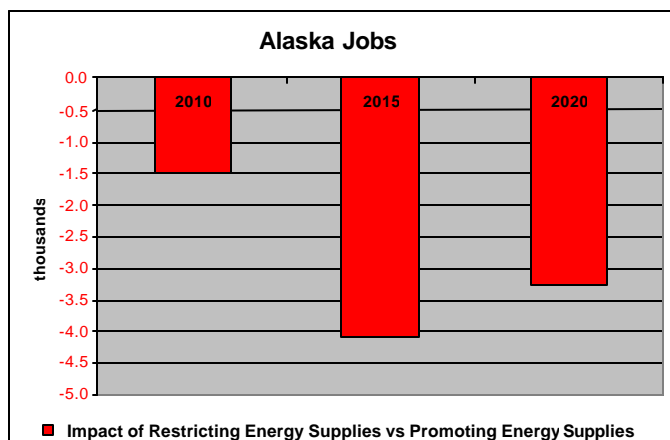
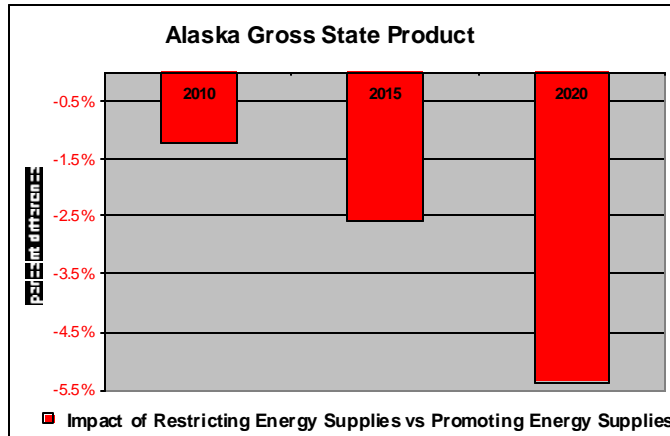
# Promoting Energy Supply: Impact on Alaska's Economy

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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.

- Alaska's economy would expand more than 15% next decade under policies that increase access to domestic energy resources.
- In contrast, policies that restrict energy supplies would reduce Alaska's Gross State Product by 5.4% in 2020.
- Jobs are a critical issue for Alaska's prosperity. Policies promoting energy supplies would result in 28,000 new jobs in the next decade.
- In contrast, under restrictive energy policies, Alaska would have 3,300 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**

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.

# Alaska Gains Jobs and Better Wages with Policies that Promote Energy Supplies

Alaska'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. Alaska's economy would expand by 15% next decade, resulting in more and better paying jobs.

## Stronger Economic Outlook for Alaska under the Promoting Energy Supply Scenario

Alaska	2010			2015			2020		
	PES	RES	%diff.	PES	RES	%diff.	PES	RES	%diff.
<b>Gross State Product (million 2000\$)</b>	31125	30741	-1.2%	33324	32468	-2.6%	35772	33851	-5.4%
<b>Manufacturing Output (mil. 2000\$)</b>	508	502	-1.2%	492	474	-3.7%	473	449	-5.0%
Manufacturing, Durables	142	140	-1.4%	152	145	-4.3%	162	152	-6.0%
Manufacturing, Nondurables	368	362	-1.7%	343	328	-4.5%	317	297	-6.2%
<b>Non-Manufacturing Output (mil. 2000\$)</b>	30617	30239	-1.2%	32832	31995	-2.5%	35300	33402	-5.4%
Government	5169	5182	0.2%	5027	5033	0.1%	4828	4856	0.6%
Agriculture, Forestry, & Fishing	570	565	-0.9%	757	738	-2.5%	1005	976	-2.9%
Construction	1236	1211	-2.0%	1256	1167	-7.1%	1266	1148	-9.3%
Mining	7585	7347	-3.1%	8732	8320	-4.7%	10144	8711	-14.1%
Educational & Health Services	1995	1992	-0.2%	2214	2196	-0.8%	2471	2462	-0.4%
Financial Activities	3645	3623	-0.6%	3927	3891	-0.9%	4211	4185	-0.6%
Information	812	813	0.1%	782	777	-0.6%	744	736	-1.1%
Leisure & Hospitality	1036	1033	-0.3%	1117	1102	-1.3%	1199	1187	-0.9%
Professional & Business Services	1758	1734	-1.3%	1796	1778	-1.0%	1821	1836	0.8%
Trade & Transportation	5975	5918	-0.9%	6345	6165	-2.8%	6695	6497	-3.0%
Utilities	334	315	-5.8%	370	306	-17.2%	407	285	-29.9%
Other Services	502	507	0.9%	508	520	2.4%	510	524	2.6%
<b>Employment (thousands)</b>									
Total Nonfarm	320	319	-0.5%	333	329	-1.2%	348	344	-0.9%
Manufacturing									
Manufacturing, Durables	2	2	-1.2%	2	2	-5.1%	2	2	-7.8%
Manufacturing, Nondurables	10	10	-0.7%	10	9	-1.6%	9	9	-0.9%
Non-Manufacturing									
Government	83	84	0.3%	85	85	0.5%	86	87	1.2%
Construction, Natural Rsrscs, Mining	30	29	-2.0%	31	29	-6.7%	34	31	-8.8%
Educational & Health Svcs	38	38	-0.1%	40	40	-0.4%	43	43	0.2%
Financial Activities	16	16	-0.6%	16	16	-0.5%	17	17	0.0%
Information	7	7	0.2%	8	8	-0.2%	8	8	-0.5%
Leisure & Hospitality	32	32	-0.3%	34	33	-0.9%	36	36	-0.3%
Professional & Business Svcs	26	25	-1.3%	29	28	-0.6%	31	32	1.4%
Trade & Transportation	63	62	-0.9%	64	63	-2.4%	66	65	-2.4%
Utilities	2	2	-2.6%	2	2	-11.0%	2	2	-19.0%
Other Services	12	12	1.0%	13	13	2.8%	13	14	3.2%
<b>Wages (2000\$)</b>									
Avg. Hourly Earnings, Manufacturing	12.13	12.03	-0.9%	12.44	12.21	-1.9%	12.78	12.37	-3.2%
<b>Income (Millions, 2000\$)</b>									
Personal Income	24689	24408	-1.1%	28216	27566	-2.3%	32009	31156	-2.7%
Disp. Personal Income	22172	21947	-1.0%	25135	24649	-1.9%	28642	28000	-2.2%
<b>Population (Thousands)</b>	699	699		733	733		771	771	

Source: Global Insight, Inc.

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

## Scenario Descriptions

	<b>Promoting Energy Supply Scenario</b>	<b>Restricting Energy Supply Scenario</b>
<b>Climate Change Policy Assumptions</b>	No federal requirements for mandatory reduction in greenhouse gases (GHG)	McCain-Lieberman (S. 139) enacted for GHG emission reductions in 2010 and 2016
<b>Mercury Policy Assumptions</b>	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
<b>SO<sub>2</sub>, NO<sub>x</sub> Assumptions</b>	CAIR and all ongoing regulatory programs, including required future phases	CAIR and all ongoing regulatory programs, including required future phases
<b>Natural Gas Supply Assumptions</b>		
<b>Offshore drilling</b>	Restrictions/moratoria removed	No leasing of new areas
<b>Federal Onshore</b>	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]
<b>Alaskan gas pipeline</b>	Pipeline completed by 2018	No pipeline
<b>Canadian gas</b>	Imports ramp down to 1.0 tcf by 2015	Imports ramp down to zero by 2015
<b>LNG</b>	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.
<b>Nuclear Power Assumption</b>	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)
<b>Renewable Portfolio Standards Assumption</b>	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