

The seal of the Office of the Ohio Consumers' Counsel is a circular emblem. It features a central sun with rays rising over a landscape with fields and two sheaves of wheat. The text "THE OHIO CONSUMERS' COUNSEL" is written around the top inner edge, and "OFFICE OF" is written around the bottom inner edge. A single star is positioned at the bottom center of the seal.

Senate Energy and Public Utilities Committee

**Senate Bill 298
Ohio Energy Policy**

**Presented by:
Janine L. Migden-Ostrander
Consumers' Counsel**

December 12, 2006

**TESTIMONY OF
JANINE MIGDEN-OSTRANDER
BEFORE THE
SENATE ENERGY AND PUBLIC UTILITIES COMMITTEE**

**SENATE BILL 298
OHIO ENERGY POLICY**

Mr. Chairman and members of the Senate Energy and Public Utilities Committee, thank you very much for the opportunity to testify today in support of SB 298. I applaud Senator Schuler for his efforts on behalf of the public in introducing this bill that will begin to define a state energy policy. It is a bold policy statement of the direction Ohio needs to take to secure our energy future. It is the right step at the right time and it is an imperative that policy makers around the nation address this sleeping giant – the sustainability of our energy future.

Two key objectives are set forth in Sec. 156.10 (B) of this legislation: stabilizing energy prices and increasing energy independence. As the state's advocate for residential utility consumers, I support thoughtful policies and planning that can stabilize rates that will not only be critical in keeping vital and necessary services affordable for all Ohioans, but will also help the engine of our economy – the businesses – so that they can continue to employ these residential customers. As a patriotic American I urge this legislature to focus on our energy future to protect our security and keep us from being dependent on other nations for the energy that is the lifeblood of our economy and our future.

Consider these facts:

1. World energy consumption is projected to increase by 72 percent in the next 25 years. This additional demand is equal to the combined current consumption of all of North America, South America, Europe, Africa and Japan and China.¹
2. Three nations – The United States, India and China will account for 49 percent of the world's incremental energy consumption.²
3. The three primary fossil fuels – coal, natural gas and oil will continue to meet 86 percent of the demand in 2030 as it does now.³
4. In North America, we have approximately 67 years of economically recoverable supplies of natural gas.⁴
5. The U.S. currently imports a significant portion of its natural gas from Canada, Algeria, Egypt, Nigeria and Trinidad/Tobago.⁵
6. Over the past three years, natural wholesale gas prices in the Midwest have more than doubled.⁶

¹ See 2006 International Energy Outlook (IEO) produced by the Energy Information Administration, page 7, <http://www.eia.doe.gov/oiaf/ieo/pdf/world.pdf> .

² Id.

³ Id., pages 8-10.

⁴ See IEO Chapter 4, Natural Gas, page 38.

⁵ U.S. Natural Gas Imports and Exports, 2004-2006, Table 5 Energy Information Administration/Natural Gas Monthly November 2006.

7. Natural gas is rapidly becoming a global commodity as Europe increases its dependence on gas pipelines and LNG imports. This is due to the projection that Europe's dependence on natural gas will increase from 23 percent today to 33 percent by 2030. This means that by 2030, Europe will need to import 20 tcf – more than the total production of the U.S.⁷
8. Although Ohio has abundant sources of coal it currently imports 61 percent of its coal. This is because most of Ohio coal has a high sulfur content.⁸
9. Utility companies in Ohio have and will be spending more than \$5 billion to comply with environmental regulations. These costs are being passed on to Ohio consumers.
10. When carbon regulations occur, this will add more costs to Ohioans as companies retrofit their plants to comply.

An analysis of these facts demonstrates the interrelationship between energy, our economy, our national security and our environment. These facts also demonstrate that we have a serious problem that must be addressed proactively through studied planning and implementing policies that foster alternative methods of providing for our state's energy needs now and in the future. SB 298 establishes a key step by requiring forecast reports by the utilities so we can see what is needed to assure reliable power into the future. It is the first and critical step in the planning process and provides us with tools that were available prior to deregulation.

Another important part of the energy equation which is set forth in SB 298 is examination of the implementation of renewable energy portfolio standards (RPS). More than twenty-two other states have these standards already in place. A recent survey of Ohio consumers indicates the 82 percent of them support renewable energy requirements and 89 percent are willing to pay a premium of \$5.00 or more per month to support this important policy objective.⁹ I look forward to the discussion next year and hope that Ohio seizes the opportunity to join these other states.

The ability for Ohio to invest, utilize and supply renewable energy like the 22 other states that have passed an RPS would be very beneficial. Ohio's economy stands to gain nearly 23,000 manufacturing jobs and \$3.6 billion during a 10-year, nationwide development of 74,000 megawatts of renewable energy.¹⁰ American Electric Power, FirstEnergy, and Duke Energy already offer renewable energy in other states in which they operate.

SB 298 also sets forth the objective of reducing energy consumption and developing sustainable practices in energy efficiency and conservation. This is a necessary part of any energy plan. The cheapest kilowatt hour is the kilowatt hour not consumed. On the gas side alone, by reducing

⁶ See "Energy Efficiency: Ohio's Best Defense Against High Natural Gas Prices", produced by the Midwest Energy Efficiency Alliance, 2006, page 1.

⁷ See IEO Chapter 4, Natural Gas, page 40.

⁸ See "Examining The Potential For Energy Efficiency To Help Address The Natural Gas Crisis In The Midwest" by Martin Kushler, Dan York, and Patti Witte, produced by the American Council for an Energy-Efficient Economy, December 2004. Also see Martin Kushler presentation "The Midwest Energy Crisis & Why Energy Efficiency Should Be a Top Priority", May 25, 2005.

⁹ See Executive Summary of "Project to Develop Renewable Energy Receptivity – Consumer Research" produced by The Strategy Team, LTD., page 4, December 12, 2006 and funded by the Ohio Office of Energy Efficiency.

¹⁰ George Sterzinger and Matt Svrcek, "Component Manufacturing: Ohio's Future in the Renewable Energy Industry", Renewable Energy Policy Project, October 2005, pages 4-5.

consumption by 1 percent per year over the next five years in the Midwest region, it is estimated that this could reduce the price of natural gas by 10 to 20 percent. For every \$1 spent in energy efficiency, consumers will save \$4. Investment in a robust energy efficiency program can save all Ohio gas customers \$266 million and all Ohio electric customers \$385 million by 2010. A comprehensive statewide energy efficiency program can produce 5,300 jobs generating \$100 million in employee compensation by the year 2010 in Ohio.¹¹

Another hallmark of SB 298 is the development of distributed generation. Distributed generation allows a customer to generate a portion of their own energy for internal use with the ability to sell excess power back to the grid. Certain technologies known as Cogeneration or Combined Heat and Power (CH&P) have efficiency ratings of 60 to 65 percent as compared to centralized power plants whose efficiency ratings range from 30 to 35 percent. This is because CH&P utilizes waste heat to generate additional electricity or steam heat. These plants can play a vital role in Ohio’s economy by reducing the cost of manufacturing and also using our resources far more efficiently. Yet, Ohio ranks at the bottom of Midwest states in terms of the proliferation of CH&P because of the regulatory barriers that have yet to be removed.¹² A docket (Case No. 05-1500-EL-COI) was opened at the Public Utilities Commission of Ohio (PUCO) in which OCC participated extensively. In that docket, OCC urged that the utility tariff rates, which require the owners of distributed generation to pay a high monthly fee to assure availability of standby power, be replaced with a fee for any power the utility purchases in the market on behalf of the distributed generator when needed, plus a profit of 25 percent to the utility. Without this change, distributed generation will not flourish because under the current paradigm it is uneconomical. We would urge you to contact the Commission and discuss this issue while the decision is still pending.

Any plan for Ohio to comprehensively and thoughtfully address our energy future must include energy efficiency, renewable energy, distributed generation and clean coal technology. SB 298 is the right step at the right time towards moving Ohio rapidly into a position of energy affordability and reliability.

¹¹ Kushler et al., Table 25 on page 42.

¹² According to a recent study on CHP in the Midwest, Ohio CHP installed capacity is well behind other Midwest states. Compared to its neighboring Midwest states, Ohio has 1/10 the capacity of Michigan and 1/6 the capacity of Indiana as reflected in the table below.

State	Installed CHP Capacity (MW)
Illinois	1,232
Indiana	2,032
Michigan	3,101
Minnesota	1,045
Wisconsin	1,219
Ohio	377

Clifford P. Haefke and John J. Cuttica, “CHP Market Entry Status in the Midwest: A State by State Analysis”, Midwest CHP Application Center, December 2005, page 7. They further state that “a major obstacle for CHP in Ohio is the Standby rates placed on CHP applications by the electric utilities. If this could be removed, market conditions in Ohio suggest significant CHP opportunities.”

Thank you for the opportunity to offer this testimony. I have attached a number of exhibits which I believe you will find useful as you consider this important piece of legislation. My office is certainly available to answer any questions on these issues.

Strategic Issues

- ▶ World oil demand is rising
- ▶ U.S. energy and economic security is increasingly at risk
- ▶ World oil supply will peak and decline
- ▶ Military preparedness and homeland defense requires secure fuel sources
- ▶ Current energy policy relies on Middle East
- ▶ Replace aging mining workforce

**America's
unconventional
fuel resources
can help bridge
the gap to future
fuels.**



Total U.S. Imports of Petroleum (Top 15 Countries)

(Thousand Barrels Per Day as of April 2005)

	<u>Apr-05</u>	<u>Percent</u>
CANADA	2,190	18.55%
MEXICO	1,632	13.82%
VENEZUELA*	1,567	13.27%
SAUDI ARABIA*	1,494	12.65%
NIGERIA*	1,243	10.53%
RUSSIA	645	5.46%
IRAQ*	542	4.59%
ALGERIA*	467	3.95%
UNITED KINGDOM	394	3.34%
ANGOLA	365	3.09%
VIRGIN ISLANDS	358	3.03%
ECUADOR	261	2.21%
NORWAY	250	2.12%
COLOMBIA	237	2.01%
KUWAIT*	<u>164</u>	<u>1.39%</u>
	11,809	100.00%

Source: U.S. Department of Energy,
Energy Information Administration.

*Member of OPEC.

**Table 8. World Natural Gas Reserves by Country
 as of January 1, 2006**

Country	Reserves (Trillion Cubic Feet)	Percent of World Total
World	6,112	100.0
Top 20 Countries	5,510	90.2
Russia	1,680	27.5
Iran	971	15.9
Qatar	911	14.9
Saudi Arabia	241	3.9
United Arab Emirates	214	3.5
United States	193	3.1
Nigeria	185	3.0
Algeria	161	2.6
Venezuela	151	2.5
Iraq	112	1.8
Indonesia	98	1.6
Norway	84	1.4
Malaysia	75	1.2
Turkmenistan	71	1.2
Uzbekistan	66	1.1
Kazakhstan	65	1.1
Netherlands	62	1.0
Egypt	59	1.0
Canada	57	0.9
Kuwait	56	0.9
Rest of World	602	9.8

Source: "Worldwide Look at Reserves and Production," *Oil & Gas Journal*, Vol. 103, No. 47 (December 19, 2005), pp. 24-25.

Table 5. U.S. Natural Gas Imports and Exports, 2004-2006
(Volumes in Million Cubic Feet; Prices in Dollars per Thousand Cubic Feet)

	YTD 2006	YTD 2005	YTD 2004	2006		
				September	August	July
Imports						
Volume (million cubic feet)						
Pipeline						
Canada ^a	^E 2,661,437	2,742,519	2,641,762	^E 278,884	^{RE} 305,260	^E 304,941
Mexico.....	2,726	1,881	0	0	0	0
Total Pipeline Imports.....	^E2,664,163	2,744,400	2,641,762	^E278,884	^{RE}305,260	^E304,941
LNG						
Algeria.....	17,449	67,736	95,140	0	0	3,028
Australia.....	0	0	11,847	0	0	0
Brunei.....	0	0	0	0	0	0
Egypt.....	88,616	33,809	0	8,782	8,880	15,004
Indonesia.....	0	0	0	0	0	0
Malaysia.....	0	5,610	19,999	0	0	0
Nigeria.....	39,521	5,254	8,831	6,025	6,199	6,129
Oman.....	0	2,464	9,412	0	0	0
Qatar.....	0	2,986	8,850	0	0	0
Trinidad/Tobago.....	303,290	344,562	343,872	25,197	37,043	33,390
United Arab Emirates.....	0	0	0	0	0	0
Other ^b	0	0	1,500	0	0	0
Total LNG Imports.....	448,876	462,420	499,450	40,004	52,122	57,550
Total Imports.....	^E3,113,039	3,206,820	3,141,213	^E318,888	^{RE}357,382	^E362,491
Average Price(dollars per thousand cubic feet)						
Pipeline						
Canada.....	NA	6.96	5.56	NA	NA	NA
Mexico.....	6.96	8.48	--	--	--	--
Total Pipeline Imports.....	NA	6.96	5.56	NA	NA	NA
LNG						
Algeria.....	NA	7.01	5.59	--	--	NA
Australia.....	--	--	6.17	--	--	--
Brunei.....	--	--	--	--	--	--
Egypt.....	NA	8.91	--	NA	NA	NA
Indonesia.....	--	--	--	--	--	--
Malaysia.....	--	5.97	4.93	--	--	--
Nigeria.....	NA	9.24	5.61	NA	NA	NA
Oman.....	--	5.72	5.59	--	--	--
Qatar.....	--	5.97	5.77	--	--	--
Trinidad/Tobago.....	NA	6.78	5.61	NA	NA	NA
United Arab Emirates.....	--	--	--	--	--	--
Other.....	--	--	5.52	--	--	--
Total LNG Imports.....	NA	6.98	5.59	NA	NA	NA
Total Imports.....	NA	6.96	5.56	NA	NA	NA
Exports						
Volume (million cubic feet)						
Pipeline						
Canada.....	^E 209,860	299,795	284,181	^E 14,456	^{RE} 17,264	^E 16,170
Mexico.....	^E 254,537	248,942	293,771	^E 32,281	^E 32,281	^E 32,281
Total Pipeline Exports.....	^E464,397	548,737	577,951	^E46,737	^{RE}49,545	^E48,451
LNG						
Japan.....	48,371	48,408	45,667	3,726	5,628	5,595
Mexico.....	NA	194	265	NA	NA	NA
Total LNG Exports.....	48,437	48,602	45,932	3,726	5,628	5,595
Total Exports.....	^E512,834	597,339	623,884	^E50,464	^{RE}55,173	^E54,046
Average Price (dollars per thousand cubic feet)						
Pipeline						
Canada.....	NA	7.02	6.10	NA	NA	NA
Mexico.....	NA	7.07	5.72	NA	NA	NA
Total Pipeline Exports.....	NA	7.04	5.90	NA	NA	NA
LNG						
Japan.....	NA	5.55	4.82	NA	NA	NA
Mexico.....	NA	11.48	7.54	NA	NA	NA
Total LNG Exports.....	NA	5.57	4.83	NA	NA	NA
Total Exports.....	NA	6.92	5.82	NA	NA	NA
Net Imports - Volume.....	^E2,600,205	2,609,481	2,517,329	^E268,424	^{RE}302,209	^E308,445

See footnotes at end of table.

Table 5. U.S. Natural Gas Imports and Exports, 2004-2006
(Volumes in Million Cubic Feet; Prices in Dollars per Thousand Cubic Feet) — Continued

	2006					
	June	May	April	March	February	January
Imports						
Volume (million cubic feet)						
Pipeline						
Canada ^a	R288,593	R285,300	R277,360	316,315	283,360	321,424
Mexico.....	0	R130	R70	691	486	1,349
Total Pipeline Imports.....	R288,593	R285,430	R277,430	317,006	283,846	322,773
LNG						
Algeria.....	2,808	0	2,804	3,019	2,802	2,988
Australia.....	0	0	0	0	0	0
Brunei.....	0	0	0	0	0	0
Egypt.....	14,334	19,826	13,560	0	5,261	2,970
Indonesia.....	0	0	0	0	0	0
Malaysia.....	0	0	0	0	0	0
Nigeria.....	5,996	3,100	5,991	0	3,053	3,028
Oman.....	0	0	0	0	0	0
Qatar.....	0	0	0	0	0	0
Trinidad/Tobago.....	38,568	44,346	36,437	30,209	27,620	30,480
United Arab Emirates.....	0	0	0	0	0	0
Other ^b	0	0	0	0	0	0
Total LNG Imports.....	61,705	67,271	58,792	33,228	38,737	39,466
Total Imports.....	R350,299	R352,701	R336,222	350,234	322,583	362,239
Average Price(dollars per thousand cubic feet)						
Pipeline						
Canada.....	R5.78	R6.40	R6.63	6.95	7.89	10.07
Mexico.....	--	R5.28	R6.16	6.11	7.33	7.46
Total Pipeline Imports.....	R5.78	R6.40	R6.63	6.95	7.89	10.06
LNG						
Algeria.....	R6.57	--	R7.15	7.63	9.13	13.69
Australia.....	--	--	--	--	--	--
Brunei.....	--	--	--	--	--	--
Egypt.....	R5.68	R6.93	R7.02	--	8.11	8.31
Indonesia.....	--	--	--	--	--	--
Malaysia.....	--	--	--	--	--	--
Nigeria.....	R5.96	R7.35	R7.38	--	8.66	11.94
Oman.....	--	--	--	--	--	--
Qatar.....	--	--	--	--	--	--
Trinidad/Tobago.....	R6.11	R7.15	R7.17	7.54	8.45	10.35
United Arab Emirates.....	--	--	--	--	--	--
Other.....	--	--	--	--	--	--
Total LNG Imports.....	R6.02	R7.09	R7.16	7.55	8.47	10.57
Total Imports.....	R5.82	R6.53	R6.72	7.01	7.96	10.11
Exports						
Volume (million cubic feet)						
Pipeline						
Canada.....	R22,925	R21,300	R15,640	37,407	32,718	31,979
Mexico.....	R37,136	R35,625	R23,948	22,474	20,469	18,043
Total Pipeline Exports.....	R60,061	R56,925	R39,587	59,881	53,188	50,022
LNG						
Japan.....	R5,586	5,575	5,570	5,556	5,563	5,572
Mexico.....	R12	R14	R13	5	15	7
Total LNG Exports.....	R5,598	R5,589	R5,582	5,561	5,578	5,579
Total Exports.....	R65,660	R62,514	R45,170	65,442	58,766	55,600
Average Price (dollars per thousand cubic feet)						
Pipeline						
Canada.....	R6.03	R7.15	R7.04	7.18	8.36	10.74
Mexico.....	R5.99	R6.20	R6.73	6.43	7.19	8.48
Total Pipeline Exports.....	R6.01	R6.56	R6.85	6.90	7.91	9.92
LNG						
Japan.....	R6.78	R6.78	R6.44	6.33	6.52	6.70
Mexico.....	R11.91	R12.86	R12.72	15.37	14.58	19.67
Total LNG Exports.....	R6.79	R6.80	R6.45	6.34	6.54	6.72
Total Exports.....	R6.07	R6.58	R6.80	6.85	7.78	9.60
Net Imports - Volume.....	R284,639	R290,188	R291,053	284,792	263,817	306,639

See footnotes at end of table.

Table 5. U.S. Natural Gas Imports and Exports, 2004-2006
(Volumes in Million Cubic Feet; Prices in Dollars per Thousand Cubic Feet) — Continued

	2005					
	Total	December	November	October	September	August
Imports						
Volume (million cubic feet)						
Pipeline						
Canada ^a	3,700,454	353,390	298,722	305,823	293,028	308,175
Mexico	9,320	3,844	2,689	906	1,055	0
Total Pipeline Imports.....	3,709,774	357,234	301,411	306,729	294,082	308,175
LNG						
Algeria.....	97,157	8,630	8,954	11,837	6,016	3,170
Australia.....	0	0	0	0	0	0
Brunei.....	0	0	0	0	0	0
Egypt.....	72,540	11,263	18,945	8,523	11,036	11,127
Indonesia.....	0	0	0	0	0	0
Malaysia.....	8,719	0	0	3,109	0	0
Nigeria.....	8,149	0	0	2,895	0	2,574
Oman.....	2,464	0	0	0	0	0
Qatar.....	2,986	0	0	0	0	0
Trinidad/Tobago.....	439,246	31,394	30,077	33,212	34,772	26,759
United Arab Emirates.....	0	0	0	0	0	0
Other ^b	0	0	0	0	0	0
Total LNG Imports.....	631,260	51,288	57,977	59,576	51,824	43,630
Total Imports.....	4,341,034	408,522	359,387	366,305	345,907	351,805
Average Price(dollars per thousand cubic feet)						
Pipeline						
Canada.....	8.09	11.00	11.10	11.96	9.97	7.51
Mexico	8.46	8.80	7.16	10.87	9.99	--
Total Pipeline Imports.....	8.09	10.98	11.07	11.95	9.97	7.51
LNG						
Algeria.....	8.86	12.27	14.29	12.84	10.20	7.70
Australia.....	--	--	--	--	--	--
Brunei.....	--	--	--	--	--	--
Egypt.....	10.88	11.06	12.89	13.97	11.42	8.48
Indonesia.....	--	--	--	--	--	--
Malaysia.....	9.00	--	--	14.47	--	--
Nigeria.....	10.11	--	--	11.69	--	11.11
Oman.....	5.72	--	--	--	--	--
Qatar.....	5.97	--	--	--	--	--
Trinidad/Tobago.....	7.68	9.76	11.81	11.30	9.34	6.60
United Arab Emirates.....	--	--	--	--	--	--
Other.....	--	--	--	--	--	--
Total LNG Imports.....	8.26	10.47	12.54	12.17	9.88	7.43
Total Imports.....	8.12	10.91	11.31	11.99	9.96	7.50
Exports						
Volume (million cubic feet)						
Pipeline						
Canada.....	358,280	22,828	20,488	15,169	16,123	19,254
Mexico	304,954	16,863	18,884	20,265	22,110	27,137
Total Pipeline Exports.....	663,234	39,691	39,373	35,433	38,233	46,391
LNG						
Japan.....	65,124	5,568	5,574	5,574	5,577	5,587
Mexico	242	13	17	18	15	9
Total LNG Exports.....	65,367	5,581	5,591	5,592	5,591	5,596
Total Exports.....	728,601	45,272	44,964	41,025	43,824	51,987
Average Price (dollars per thousand cubic feet)						
Pipeline						
Canada.....	7.80	11.13	12.23	12.21	10.25	7.85
Mexico	7.74	11.15	9.45	11.52	10.26	8.36
Total Pipeline Exports.....	7.77	11.14	10.90	11.82	10.26	8.15
LNG						
Japan.....	5.77	6.66	6.38	6.22	5.95	6.07
Mexico	11.87	16.07	13.93	11.09	13.28	13.82
Total LNG Exports.....	5.79	6.68	6.40	6.24	5.97	6.08
Total Exports.....	7.59	10.59	10.34	11.06	9.71	7.93
Net Imports - Volume.....	3,612,434	363,249	314,423	325,280	302,083	299,818

See footnotes at end of table.

Table 5. U.S. Natural Gas Imports and Exports, 2004-2006
(Volumes in Million Cubic Feet; Prices in Dollars per Thousand Cubic Feet) — Continued

	2005					
	July	June	May	April	March	February
Imports						
Volume (million cubic feet)						
Pipeline						
Canada ^a	332,683	265,332	281,172	278,501	333,485	302,957
Mexico.....	269	0	197	80	280	0
Total Pipeline Imports.....	332,952	265,332	281,369	278,581	333,765	302,957
LNG						
Algeria.....	6,028	12,007	11,420	9,004	2,817	11,309
Australia.....	0	0	0	0	0	0
Brunei.....	0	0	0	0	0	0
Egypt.....	5,926	2,865	0	2,854	0	0
Indonesia.....	0	0	0	0	0	0
Malaysia.....	0	0	0	0	2,624	0
Nigeria.....	0	0	0	0	0	0
Oman.....	0	0	0	0	0	0
Qatar.....	0	0	0	0	0	2,986
Trinidad/Tobago.....	41,187	41,505	41,207	35,709	40,444	39,244
United Arab Emirates.....	0	0	0	0	0	0
Other ^b	0	0	0	0	0	0
Total LNG Imports.....	53,141	56,377	52,628	47,567	45,885	53,538
Total Imports.....	386,093	321,710	333,997	326,147	379,650	356,495
Average Price(dollars per thousand cubic feet)						
Pipeline						
Canada.....	6.82	6.34	6.56	6.93	6.25	6.11
Mexico.....	6.69	--	6.21	6.54	6.68	--
Total Pipeline Imports.....	6.82	6.34	6.56	6.93	6.25	6.11
LNG						
Algeria.....	6.78	6.28	6.81	7.04	6.16	6.67
Australia.....	--	--	--	--	--	--
Brunei.....	--	--	--	--	--	--
Egypt.....	6.67	7.43	--	7.02	--	--
Indonesia.....	--	--	--	--	--	--
Malaysia.....	--	--	--	--	6.67	--
Nigeria.....	--	--	--	--	--	--
Oman.....	--	--	--	--	--	--
Qatar.....	--	--	--	--	--	5.97
Trinidad/Tobago.....	6.93	6.32	6.63	6.87	6.14	6.27
United Arab Emirates.....	--	--	--	--	--	--
Other.....	--	--	--	--	--	--
Total LNG Imports.....	6.88	6.37	6.67	6.91	6.17	6.34
Total Imports.....	6.82	6.35	6.58	6.92	6.24	6.14
Exports						
Volume (million cubic feet)						
Pipeline						
Canada.....	17,957	18,392	28,465	29,221	64,725	52,597
Mexico.....	29,622	32,648	26,725	20,662	25,909	31,390
Total Pipeline Exports.....	47,579	51,041	55,190	49,883	90,634	83,987
LNG						
Japan.....	7,454	3,744	3,734	5,630	5,559	5,560
Mexico.....	14	22	20	26	27	30
Total LNG Exports.....	7,468	3,766	3,754	5,655	5,586	5,589
Total Exports.....	55,048	54,807	58,944	55,538	96,220	89,576
Average Price (dollars per thousand cubic feet)						
Pipeline						
Canada.....	7.18	6.48	7.20	7.46	6.72	6.45
Mexico.....	7.33	6.79	6.46	7.00	6.53	5.95
Total Pipeline Exports.....	7.27	6.68	6.84	7.27	6.67	6.26
LNG						
Japan.....	5.88	5.46	5.35	5.16	5.23	5.37
Mexico.....	13.03	11.29	11.71	11.14	10.68	10.93
Total LNG Exports.....	5.89	5.49	5.38	5.19	5.26	5.40
Total Exports.....	7.09	6.60	6.75	7.06	6.59	6.21
Net Imports - Volume.....	331,045	266,903	275,053	270,610	283,430	266,919

^a EIA has reduced the reported volume of gas imported by pipeline from Canada by the amount of natural gas liquids removed from the saturated natural gas carried by Alliance Pipeline. Alliance moves saturated natural gas from the border to a processing plant in Illinois. After the adjustment, volumes of imported natural gas on this pipeline are on the same physical basis as other reported volumes of pipeline imports.

^b The point of origin for volumes of imported LNG was unassigned in the reports to the Office of Fossil Energy.

^e Estimated data.

^f Not applicable.

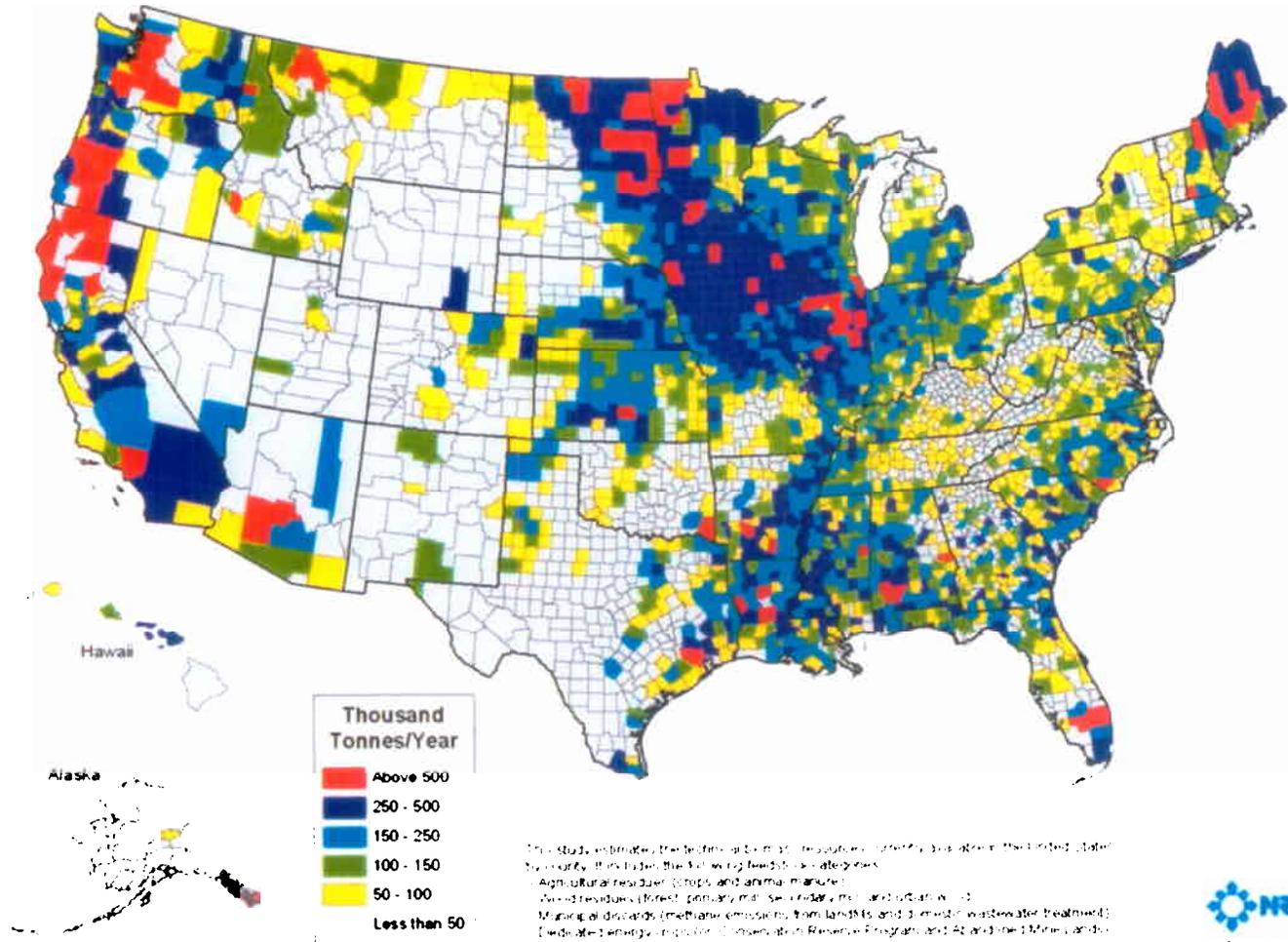
^{na} Not available.

^r Revised data.

^{re} Revised estimated data.

Sources: Office of Fossil Energy, U.S. Department of Energy, "Natural Gas Imports and Exports," and EIA estimates of dry natural gas imports. Estimated pipeline data are taken from data from the National Energy Board of Canada and EIA estimates.

Biomass Resources Available in the United States



THE GRAVITY OF COAL

*Keynote address to the Bluefield Coal Symposium
presented by*

Don L. Blankenship, Chairman, President and CEO of Massey Energy

If the world is thought of as a village with the population of 100, in the village there would be 8 Europeans, both Western and Eastern; 9 Latin Americans; 13 Africans, 56 Asians, and only 5 Americans. Among your friends and close neighbors: almost 50 would be living on less than \$2 a day; almost 50 would have limited access to energy; more than 30 would have no electric power, many burning animal dung to cook; and half will be hungry and diseased. Assume that 80% of the wealth is in the hands of only 16 people and finally assume that you are not one of the select 16. This is roughly the way the world is organized today. Poverty is a dominant factor in building up social unrest and resentment between nations. This unrest led to revolution and war in the 20th Century, but today poverty feeds terror, which is the warfare of the materially weak.

Only electric power can create the economics that enable the people of the developing world to work their way out of poverty peacefully. It is the essential pre-requisite, the one component that causes other components to develop, a cause of causes. When a village or a world is electrified, expectations go up, social conditions improve, and the birth rate goes down. Coal is the key to doing this over the next 20 years.

The current forecast through 2025 of EIA is: world energy demand up 77%; Central and South American demand up 119%; India demand up 122%; average of all developing nations energy demand up 129%; and China up 174%. Despite carbon taxes and nuclear growth, the model predicts a world energy structure that evolves along with following ratios: renewables will hold steady at about 8% of energy demand; natural gas and oil will fall from a present high of 62 to 23%; nuclear energy will [sic] rise from 6 to 27%; and coal will rise from 24% to 42% of total world energy. The rising coal demand alone may exceed the world's present total energy consumption by the equivalent of more than 11 million barrels of oil a day. In summary, about 60% of the world's new energy over the next 90 years will have to come from coal, if the world is to have sufficient energy, especially electric power.

Source: The Gravity of Coal, by Don L. Blankenship, Chairman, President and CEO of Massey Energy, Coal News, Volume 3, Number 12, December 2006.