WYOMING STATE GEOLOGICAL SURVEY

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***STATE GEOLOGIST* – Lance Cook**

November 24, 2003

Madam Chairman Cubin:

Thank you for the opportunity to address you today. My name is Lance Cook, and I am the State Geologist of Wyoming and Executive Director of the Wyoming Geological Survey. I also serve as a member of the Wyoming Oil and Gas Conservation Commission. I am a Registered Professional Geologist in the State of Wyoming. I have a Bachelor of Science degree in Geology from Texas Christian University and a Masters Degree in Geology from the University of New Mexico. Prior to my service as State Geologist, I spent over 20 years working in the petroleum industry for Shell Oil Company and Union Pacific Resources. During my term as State Geologist, I have been actively involved in evaluating and analyzing Wyoming's energy resources.

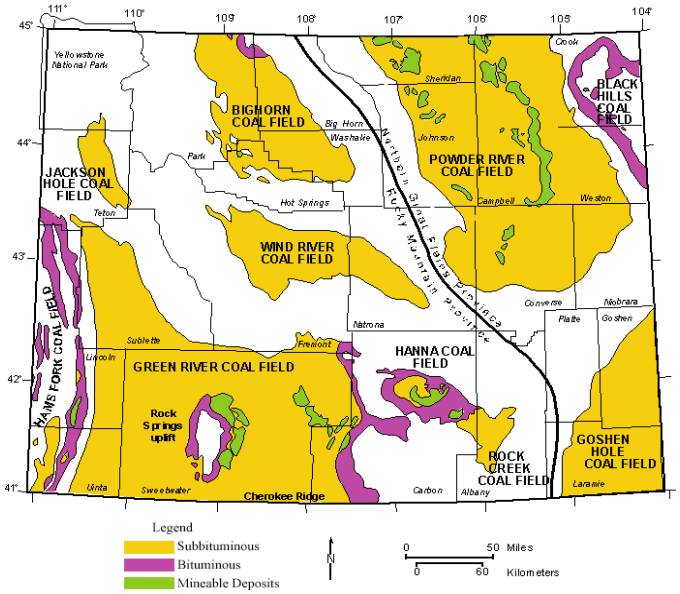
Your topic today, "Coal's Contribution to the United States Economy and Intermountain West", is most important to our state since the Federal Government is by far the largest owner of coal lands in Wyoming. Wyoming is also the largest producer of coal in the nation. As a result, the economic impact of coal on the State's budget is quite substantial, with much of that impact coming from federal coal taxes and royalties. Historically, coal has contributed roughly one-third of the severance taxes paid to the state annually and continues to be a large and relatively predictable source of severance tax revenues for the state. Additionally, the importance of the employment of our citizens by the coal industry cannot be over-emphasized.

Wyoming Coal Reserves and Resource Information

The coalfields of Wyoming fall into two coal-bearing provinces: those in eastern Wyoming are within the Northern Great Plains Province, while all other coal deposits of the state are in the Rocky Mountain Province. Beyond these the state's coal-bearing areas are divided into 10 major coalfields (Figure 1):

1. Bighorn Coalfield
2. Black Hills Coalfield
3. Goshen Hole Coalfield
4. Green River Coalfield
5. Hams Fork Coalfield
6. Hanna Coalfield
7. Jackson Hole Coalfield
8. Powder River Coalfield
9. Rock Creek Coalfield
10. Wind River Coalfield

Figure 1: Wyoming Coal Deposits



These coalfields underlie more than 53,000 square miles, approximately 54%, of the state, and collectively contain a remaining in-place coal resource greater than 1.456 trillion tons (Table 1).

Table 1: Wyoming In-Place Coal Resources as of January 1, 2003
(in million short tons)

	Original in-place resources			Historic Losses due to production		Remaining in-place Resources
Field Name	Identified and Hypothetical	Speculative	Total	Surface	Deep	Total
Bighorn	23,500	0	23,500	0.9	23.9	23,475.2
Black Hills	4,150	3,740	7,890	0.0	10.6	7,879.4
Goshen Hole	230	0	230	0.0	0.0	230.0
Green River	237,110	0	237,110	330.4	404.1	236,375.5
Hams Fork	22,080	27,530	49,610	165.0	142.3	49,302.7
Hanna	23,270	0	23,270	183.8	145.5	22,940.7
Jackson Hole	6,340	0	6,340	0.0	0.1	6,339.9
Powder River	1,030,340	255	1,030,595	5,139.1	89.8	1,025,366.1
Rock Creek	3,400	0	3,400	0.0	0.1	3,399.9
Wind River	81,010	0	81,010	0.0	7.6	81,002.4
Wyoming State total	1,431,430	31,525	1,462,955	5,819.2	824.0	**1,456,311.8**

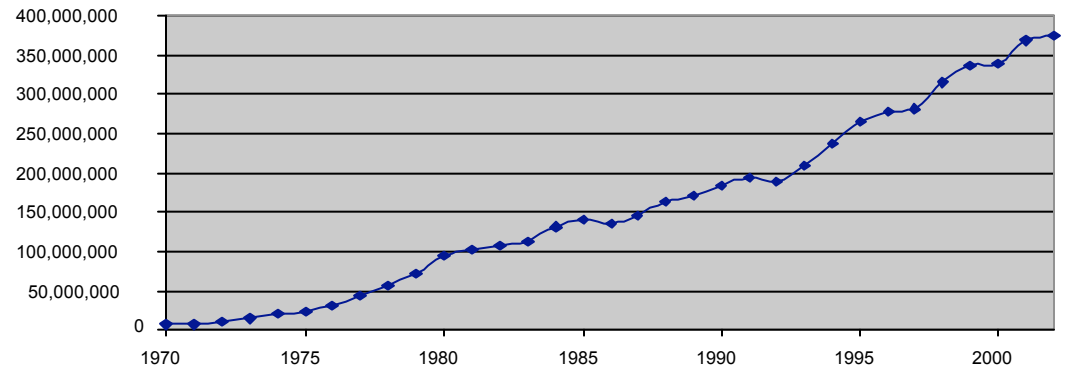
Wyoming's in-place coal resources are more than twice the in-place resources of any other state in the contiguous United States. Only Alaska has more in-place coal than Wyoming.

Of this vast in-place resource, 64.5 billion tons are currently classified as Wyoming's Demonstrated Reserve Base. This is the portion of the remaining state resource that is believed economically mineable under current available mining technologies, acceptable coal quality, seam thickness, environmental, regulatory and national policy.

The remaining Demonstrated Recoverable Reserve Base for Wyoming as of January 1st, 2003 is estimated to be over 45.5 billion tons. This tonnage represents the portion of the state's Demonstrated Reserve Base recoverable at the point of mining and after processing, which can be delivered to the market. Deep (underground mineable) remaining Demonstrated Recoverable Reserves are estimated to total 22.952 billion tons. Surface (mineable) remaining Demonstrated Recoverable Reserves currently are estimated to be 23.633 billion tons.

The nation produces approximately 1 billion tons of coal annually. In 2002, Wyoming mines supplied 373.2 million tons or roughly 37.3% of our country's total annual production. Ranking as the nation's number 1 coal producing state, the lion share of Wyoming production comes from the large Powder River Basin surface mines in Campbell and Converse counties. Combined these mines contribute 359.6 million tons or 96.4% of our state's total 2002 production. Figure 2 shows the rapid growth of Wyoming's coal production since the 1970 Clean Air Act legislation was enacted.

Figure 2 : Wyoming Coal Production 1970 to 2002 (short tons)



This production comes from the Paleocene Fort Union formation coals within the Wyodak coal zone. This deposit contained 14.7 billion tons or 62.4% of the states remaining Demonstrated Surface Reserve Base as of January 1, 2003. Under current production rates, these mines have a projected current life-of-mine of 40 years. It should be remembered that this is based on current economics and thus are conservative by nature. As real price and demand increases, the resultant economics impacting these mines will enable them to increase the overburden height they can profitably remove to access the coals, and we expect the actual mine-life of these operations to be twice the current projections.

In conclusion, I would encourage you to look to Wyoming for part of the solution to our energy supply problems. We have large resources that the nation can draw upon. Since

Wyoming has been keeping production numbers (1868), Wyoming mines have consumed only 0.05% of the state's original estimated in-place coal resource base. In light of these statistics, Wyoming will continue to be the major player in the nation's coal supply for generations to come. It is important that federal agencies and Congress recognize our capability and vital role in supplying the nation's energy needs for all Americans.