CURRENT AND FUTURE ENERGY DEVELOPMENT IN WYOMING AFFECTS ON FISH AND WILDLIFE AND THE GAME AND FISH DEPARTMENT
Today’s Energy Economy: This is Not Your Father’s Boom

Last 20 Years
Supply > Demand

Political Pricing
(i.e., Oil embargo in 1973)

Next 20 Years
Supply < Demand

Demand Pricing
(i.e., 2003+; Increasingly Intense Worldwide Competition for Finite Energy Resources)
Global Market Demand: China and India

The Future World Economy will be characterized by Intense Competition for Energy Resources.
Market Supply: Wyoming’s Role

- Inevitable Energy Import Disruptions: Middle East, Nigeria, Venezuela
- Declining Mid-Continent, Gulf of Mexico and Canadian Natural Gas Supply
- Wyoming located in Natural Gas “Production Alley” = North American Rockies
- 200 trillion cubic feet natural gas reserves – 10-year domestic supply
- 250 years coal reserves
# Domestic Energy Production vs. Consumption

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>Crude Oil Production Quadrillion Bbl/year</th>
<th>Natural Gas Production Quadrillion Cubic ft/year</th>
<th>Natural Gas Quadrillion Btu</th>
<th>Coal Production Quadrillion Btu</th>
<th>Total Production Quadrillion Btu</th>
<th>Consumption Quadrillion Btu</th>
<th>Total delta</th>
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<tbody>
<tr>
<td>1</td>
<td>Wyoming</td>
<td>54.8</td>
<td>0.29</td>
<td>1.51</td>
<td>1.52</td>
<td>373.2</td>
<td>6.65</td>
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<td>W. Virginia</td>
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<td>0.01</td>
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<td>0.34</td>
<td>1.70</td>
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<td>Total</td>
<td></td>
<td>1,499.6</td>
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<td>14.70</td>
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Wyoming Annual Coal Production Actual 1995 to 2003 and Projected for Period 2004 to 2035
POTENTIAL WYOMING GAS PRODUCTION
1950-2003 WITH PROJECTIONS TO 2035
Current Statewide Active Oil and Gas Wells
Aerial View of Jonah Field
Current Statewide Well and Major Pipeline System
Major Natural Gas Production Areas
Current Oil & Gas Production

- **Wind River**: 2,500 Wells
- **Pinedale Anticline**: 600 Wells, 270 Pads
- **Jonah Field**: 600 Wells
- **Moxa Arch**: 4,300 Wells
- **Powder River**: 34,000 Wells
- **Continental Divide**: 2,200 Wells
- **Atlantic Rim**: 200 Wells
Sage Grouse Leks
Sage Grouse Leks And Big Game Crucial Range
Leks, Crucial/Parturition, Major Streams/Lakes
**Continental Divide**
- Currently 2,200 wells
- 9,000 more being permitted
- 5X Increase

**Atlantic Rim**
- Currently 200 wells
- 2,000 more being permitted
- 10X Increase
Moxa Arch
- Currently 4,300 wells
- 1,800 more being permitted
- 0.4X Increase

Jonah
- Currently 600 wells
- 3,000 more just permitted
- 6X Increase

Pinedale Anticline
- Currently 270 Pads
- 430 more permitted
- 2.2X Increase
Wind River
- Currently 2,500 wells
- No projections on increase
- High localized interest
Powder River Basin
- Currently 34,000 wells
- 39,000 more expected
- 2.1X Increase
Terrestrial Regions, Wildlife Biologist Regions
Aquatic Regions

Legend

Aquatic Regions
The extent and intensity of energy development in Wyoming is unprecedented in Wyoming history

Development is a long-term process that also includes many short-term issues

Development will impact huge areas of key fish and wildlife habitat and many fish and wildlife populations

Our Department will obviously need to provide significant focus on this situation to adequately and effectively address it, and maintain the fish and wildlife resource
QUESTIONS

What is our strategy to deal with this situation?

What will it mean in terms of department organization, personnel, and budget?
EFFORTS SO FAR

Working collaboratively with industry on individual plans

Working collaboratively with BLM on their development plans, and revisions of their Resource Management Plans which guide how they permit these operations

Jonah Interagency Field Office (industry funded)

Oil and Gas Coordinator in Pinedale (BLM/USFS funded)

NE WY Coal Bed Natural Gas Coordinator (Dept funded)

Department staff considering organizational strategies to address the issues

We will need additional personnel to adequately address this scale and intensity of development