Alaska’s Petroleum Industry: Transformative, But is it Sustainable?

by
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Institute of Social and Economic Research
University of Alaska Anchorage

Alaska House Finance Committee
Invited Presentation
March 17, 2011
Juneau, Alaska
Alaska at Statehood

- SMALL: 90 thousand jobs
- THIN: limited support businesses
- SEASONAL: summer private jobs 2x winter
- TRANSIENT: seasonal and temporary
- FEDERAL DOMINATION: ½ jobs with fed
- INFRASTRUCTURE UNDERDEVELOPED
- LIMITED TAX BASE
- POOR: Income 10-20% below US average
1960 Economic Structure

Actual 1960
92,000 jobs

- Federal government: 80%
- Seafood, mining, timber: 15%
- Tourism, air cargo: 2%
- Other: 3%
- Oil: 0%
Alaska Today: No Oil

- SMALL: 187 thousand jobs
- THIN
- SEASONAL
- TRANSIENT
- FEDERAL DOMINATION
- INFRASTRUCTURE UNDERDEVELOPED
- LIMITED TAX BASE
- POOR: Income 10-20% below US average
2007 Economic Structure without Petroleum

2007 Without Oil
187,000 jobs

- Federal government: 59%
- Seafood, mining, timber: 16%
- Tourism, air cargo: 18%
- Other: 7%
- Oil
Alaska: An Island Economy

Oil and the Alaska Economy
Petroleum Jobs: Oil Patch Related

Job creation

- 41,744 jobs – direct, indirect, induced
  - 4,497 Direct – primary companies
  - 8,410 Indirect – support industry companies providing goods and services
  - 28,837 Induced – jobs created when direct and indirect employees spend their income locally
Petroleum Jobs:
Oil Patch Payroll (Million $)
Petroleum Jobs:
Oil Patch Support
General Fund Oil Revenues

Oil and the Alaska Economy
Petroleum Jobs: Funded by Petroleum Revenues

Assumption: All Spent Petroleum Revenues Pay for Operations.

- **State Government Employees**: 16 Thousand
- **Private Sector Jobs**: 18 Thousand
- **Local Government Employees**: 15 Thousand

**Total Jobs = 49 Thousand.**
Spinoffs from Petroleum

- Population twice as big
- Public spending per resident double the U.S. average
- Economy twice the size, richer, more stable
- No personal state income or sales tax
- Light state tax burden for most businesses

Spinoffs from oil wealth

Oil and the Alaska Economy
Alaska Petroleum Revenues

Lighter Tax Burden

$50 Billion

SPEND

$120 Billion

Greater Public Spending

SAVE

$37 Billion

$70 Billion

59-10 in 2010 $
Petroleum Spinoff: Lite Tax Burden on Households

$2,300 per capita*

* Based on national average state Income and sales tax rates in 2008.

Oil and the Alaska Economy
Petroleum Spinoff: Lite Resource Industry Tax Burden

State & Local Revenues from Seafood, Tourism, Mining, Timber

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual (avg 05-07)</td>
<td>$200 mill</td>
</tr>
<tr>
<td>If Oil $ Disappeared</td>
<td>$900</td>
</tr>
<tr>
<td>Incremental Burden, no Oil $</td>
<td>$700</td>
</tr>
<tr>
<td>Increase in Tax Rate</td>
<td>4 X</td>
</tr>
</tbody>
</table>
Petroleum Spinoff:
Enhanced Public Spending
Petroleum Spinoff: Stability

Bristol Bay

Denali Borough

Oil and the Alaska Economy
Petroleum Transforms Alaska Economy

**Actual 2007**
- 187,000 jobs
  - 34% 127,000 jobs from oil production and state oil revenues
  - 16% 60,000 jobs from oil wealth

**Actual 2007**
- 374,000 jobs
  - 34% Oil
  - 13% Tourism, air cargo
  - 7% Other
  - 11% Seafood, mining, timber
  - 34% Federal government
A Troubling Indicator:
Oil Barrels per Capita

Oil and the Alaska Economy
Looking Ahead:
The Official Story (Extended)
Strategies Moving Forward #1: Gasline

Figure 7. Value of Equivalent Energy from Oil and Natural Gas*
(1 million BTUs, or about one-sixth of a barrel of oil)

North Slope wellhead value | Transportation costs
$13 | $1 Oil market value: $14

$2 | $4 Gas market value: $6

*Assumes oil at $80 per barrel and 5.6 million BTU per barrel; price per thousand cubic feet of gas
Strategies Moving Forward #2:
Non Petroleum Natural Resources

MINING 1K
$4,000 / Oz.

TOURISM 10K
$2,000 / Visitor

SEAFOOD 0K
$20 / Salmon

* $3 Billion
Strategies Moving Forward #3: Traditional Economic Development

Alaska Economic Development Strategic Plans

About 374,000 results
Strategies Moving Forward #4: Speculatively Invest in Infrastructure
Strategies Moving Forward #5: Develop Renewable Energy
What Is the Economic Future of Alaska?

- We Are the Chosen Ones
- The Big Crash
- The Slow Squeeze
## Undiscovered Potential North Slope Resources: Technically Recoverable

<table>
<thead>
<tr>
<th></th>
<th>OIL (Billion Barrels)</th>
<th>GAS (TCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colville/Canning</td>
<td>4.5</td>
<td>37.5</td>
</tr>
<tr>
<td>ANWR 1002</td>
<td>10.3</td>
<td>3.8</td>
</tr>
<tr>
<td>OCS-Beaufort</td>
<td>6.9</td>
<td>32.1</td>
</tr>
<tr>
<td>OCS-Chukchi</td>
<td>15.5</td>
<td>60.1</td>
</tr>
<tr>
<td>NPRA</td>
<td>.9</td>
<td>52.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>38.1</strong></td>
<td><strong>186.3</strong></td>
</tr>
</tbody>
</table>
Alaska’s North Slope

Oil and the Alaska Economy
Daily Oil Production per Worker (Barrels)

- Y-axis: 0 to 300 barrels
- X-axis: 1980 to 2005

[Graph showing the trend of daily oil production per worker from 1960 to 2005]

Oil and the Alaska Economy
One Petroleum Employment Projection

Oil and the Alaska Economy
How to Get Those Petroleum Jobs

Get Access Federal Lands

Find the Petroleum Tax “Sweet Spot”
### Fiscal Terms

<table>
<thead>
<tr>
<th></th>
<th>Onshore to 3 Miles Offshore</th>
<th>Offshore</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State</td>
<td>Federal</td>
</tr>
<tr>
<td>Cook Inlet Lease</td>
<td>&lt;1980</td>
<td>&gt;1980</td>
</tr>
<tr>
<td></td>
<td>3-6 Miles</td>
<td>More Than 6 Miles</td>
</tr>
<tr>
<td>ACES Production Tax</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Corporate Income Tax</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Property Tax</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>State Royalty: Negotiated</td>
<td>Typical 12.5% of value</td>
<td>Typical 12.5% of value</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>27%</td>
</tr>
<tr>
<td>Federal Royalty</td>
<td>Typical 12.5% of value</td>
<td>Typical 12.5% of value</td>
</tr>
<tr>
<td>Royalty—PF Share</td>
<td>25%</td>
<td>50%</td>
</tr>
<tr>
<td>Royalty—GF Share</td>
<td>75%</td>
<td>50%</td>
</tr>
</tbody>
</table>
# State Revenues (million $ / year):
## Hypothetical Field

<table>
<thead>
<tr>
<th></th>
<th>ONSHORE TO 3 MILES OFFSHORE</th>
<th>OFFSHORE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STATE</td>
<td>FEDERAL</td>
</tr>
<tr>
<td></td>
<td>North Slope</td>
<td>Cook Inlet</td>
</tr>
<tr>
<td>Lease &lt;1980</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease &gt;1980</td>
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</tr>
<tr>
<td>ACES Production Tax</td>
<td>$ 400</td>
<td>$ 400</td>
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<tr>
<td>Corporate Income Tax</td>
<td>$ 99</td>
<td>$ 99</td>
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<tr>
<td>Property Tax</td>
<td>$ 20</td>
<td>$ 20</td>
</tr>
<tr>
<td>State Royalty: Negotiated</td>
<td>$ 319</td>
<td>$ 319</td>
</tr>
<tr>
<td>Federal Royalty &amp; State Share of Federal Royalty</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$ 319</td>
<td>$ 319</td>
</tr>
<tr>
<td></td>
<td>$ 319</td>
<td>$ 319</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$ 838</td>
<td>$ 838</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$ 838</td>
<td>$ 838</td>
</tr>
<tr>
<td>—PF Share</td>
<td>$ 80</td>
<td>$ 160</td>
</tr>
<tr>
<td>—GF Share</td>
<td>$ 758</td>
<td>$ 678</td>
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</tbody>
</table>

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Oil and the Alaska Economy

[Institute of Social and Economic Research, University of Alaska Anchorage]

[Understanding Alaska: Special Economic Studies]
## Petroleum Wealth (Billion $)

### Financial Assets

<table>
<thead>
<tr>
<th>Financial Asset</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent Fund</td>
<td>$33.3</td>
</tr>
<tr>
<td>Constitutional Budget Reserve</td>
<td>$8.7</td>
</tr>
<tr>
<td>Statutory Budget Reserve</td>
<td>$1</td>
</tr>
<tr>
<td>General Fund</td>
<td>$2</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
</tr>
</tbody>
</table>

### Petroleum in the Ground: Net Present Value of Revenues

- **Oil**: $74 billion
  - State Land—North Slope 2011-2020: $45 billion
  - State Land—North Slope 2021+: $27 billion
- **State Land—Other Locations**: $1 billion
- **State Land—Heavy Oil**: $1 billion
- **Federal NPRA**: $1 billion
- **Federal OCS**: $1 billion
- **Federal ANWR**: $7 billion

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Oil and the Alaska Economy
What is My Annual Share?

$7,200
Wealth Preservation Strategy: Implementation = Spending Cap

<table>
<thead>
<tr>
<th>Annual Share</th>
<th>$7,200</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Population</td>
<td>700,000</td>
</tr>
</tbody>
</table>

= Petroleum Wealth Spending Cap $5.0 Billion
Wealth Preservation Strategy: The Long View

Oil and the Alaska Economy
Can We Do It?
Alaska’s Petroleum Industry: Sustainable—If We Take Action.

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