Issues In Considering SB49

Senate Resources Committee
March 18, 2011
A Question Of Nature or Nurture?

Source: Fall 2010 Revenue Sources Book
Fiscal System Design

- 2 Parts Art to every 1 Part Science

- What works well for one state/country does not necessarily work for another
  
  Over time it may actually no longer work optimally where it once did

- Influencing factors include (but not limited to):
  
  - GDP & GDP/Capita
  - Energy as % of GDP
  - Infrastructure Availability
  - Infrastructure Capacity
  - Competition from elsewhere
  
  - Hydrocarbon Basin Maturity
  - Skilled Local Labor Force
  - H S & E
  - Institutional Capacity
The “Pressure” to Change

- Fiscal system change occurs generally because:
  a) Governments want their perceived fair share; or
  b) Attract Investment/Industry

- The two are not always the same or even nearly the same

- Request for change justified by:
  - ‘Objective’ Calculations – model results based on a large number of assumptions
  - ‘Subjective’ Calculations – experts assessing major changes in direction or behavior
Creating “Best” Fiscal Systems

- Countries and States continually assess their internal needs and their world-wide competitive position to set hydrocarbon fiscal terms
  - Attract Investment
  - Generate revenue for the treasury
  - Create jobs, increase local skill base

- There are far more systems in place than there are countries with petroleum legislation
  - Many areas of similarity
  - Many areas of difference
  - Different ‘vintages’ can be active at the same time
Where is Alaska today?

1. Production continues to decline despite unprecedented prices
2. TAPS (either operational limit or economic limit)
3. Heavy oil potential under assessment
4. New plays on the verge of being unlocked?
5. New resources viewed by some as "stranded"
   - Access to infrastructure
6. Logistical challenges and high costs remain
7. Long lead times to bring on new fields
8. Players
   - Incumbents and new entrants
Future Scenarios for Alaska

Hard to predict the future in a nice tidy narrow range

- Requires many assumptions that leads to ‘noise’ and time and focus taken away from discussing and understanding root causes and the real issues
- Lack of planning data

What are the possible upside/downside scenarios to consider in looking to change ACES?

- Upside – Reduced taxes leads to investment in new resources and technologies that keep TAPS flowing through 2050
- Downside – Reduced taxes, still no new fields brought on line, TAPS reaches limit in the 2020’s
The Importance Of Oil To Alaska

- **Alaska (2010)**
  - Oil taxes and royalties accounted for almost 90% of unrestricted General Fund revenue

- **Big 3 (2010)**
  - Alaska profits and production accounted for 5% - 30% of their “economy”

*Alaska remains very important to the big oil companies . . . but the relative importance to them is much, much less than it is to the State*
Some Big Questions …

- Is it necessary to change ACES?
  - Will I get +/- the same investment and production anyway if I do not?
  - If I get more investment and production, how much more?
  - Will TAPS obtain oil from “somewhere” to keep flowing, regardless?
  - How long can I “delay” before being comfortable that I know the likely outcome?
  - What can I influence? How?
Some (Very High Level) Metrics …

- Difference between 3% and 6% decline
  - 1.5 to 2 billion barrels (TAPS threshold dependent)
- 150,000 Bopd for 20 years
  - 1 billion barrels
- Delays cost money; value halves …
  - In 7 years at 10% discount rate
  - In 15 years at 5% discount rate
- $100 a barrel (market price) worth to State approximately (undiscounted)
  - $40 under ACES
  - $30 under SB49 (area dependent)
- $150 a barrel (market price)
  - $75 under ACES
  - $55 under SB49 (area dependent)
Some (Very High Level) Metrics ...

- **Put another way, at $100/Bbl**
  - Getting 150,000 Bopd for 20 years that you might not have got is worth ~$30 billion to the State
  - Changing to SB49 if you would have got it anyway costs $10-15Bn

- **At $150/Bbl**
  - Getting 150,000 Bopd for 20 years that you might not have got is worth ~$50-60 billion to the State
  - Changing to SB49 if you would have got it anyway costs $15-25Bn

- **Delaying 150,000 Bopd by 10 years (halve value; i.e. discounted)**
  - ~$20 – 40 Bn?
Based On Cash Flow Model

- Examine the “what if” economic impacts (for example) to try and assess some possible “goalposts”
  - Change fiscal take and limit long term decline to 3% - 4% (DoR 2010 Fall Profile)
  - Do Nothing and decline is actually around 6%
  - Do Nothing and still limit long term decline to 3% - 4%
Continued 6% Decline and DOR
Fall 2010 Forecast

1.75 Bn Bbls

~ 6%

~ 4%

MBOPD
State Undiscounted Cash Flow

~$100 + Bn Potential Gain...

Continued Decline
- Existing Fields
- 6% p.a. decline
- No new major investment
- No TAPS enhancement

SB49

ACES

$Bn

95

2011-mid 2020’s

110

2011-late 2020’s

210

2011-2050

DOR Profile
- Existing
- Discovered
- New regular investment
- TAPS enhancement

* DOR price & cost forecasts
State Undiscounted Cash Flow

~$20-50 Bn Potential Downside...

Assumes:
• Make change to SB49
• Still no new investment
• No TAPS enhancement

SB49

75

2011-mid 2020’s

SB49

90

2011-late 2020’s

$Bn

* DOR price & cost forecasts

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State Undiscounted Cash Flow

~$20-50 Bn Potential Downside...

DOR Profile
- Existing
- Discovered
- Continued
- regular investment
- TAPS enhancement

$Bn
-20
75
2011-mid 2020’s

-20
90
2011-late 2020’s

SB49

210
50
2011-2050

2011-2050

* DOR price & cost forecasts

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How To Consider The Options

- Examine the “what if” economic impacts of (for example) to try and assess some possible “goalposts”
  - Do Nothing and still limit long term decline to 3% - 4%
  - Do Nothing and decline is actually around 6%
  - Change fiscal take and limit long term decline to 3% - 4%

- The prize of achieving 3% decline ..
  - .... or better
Potentially Better Still

Ongoing Infield and Exploratory Drilling …

… Heavy Oil and Non-Conventional Resources?
### Illustrative Potential Capital Requirements

<table>
<thead>
<tr>
<th></th>
<th>Bn Bbls</th>
<th>Cost Range ($/Bbl)</th>
<th>Capex ($Bn)</th>
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<tbody>
<tr>
<td><strong>DOR Fall 2010</strong></td>
<td>5</td>
<td>14</td>
<td>68</td>
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<tr>
<td><strong>Conventional Oil, Existing Field Areas</strong></td>
<td>1</td>
<td>10, 15</td>
<td>10, 15</td>
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<tr>
<td><strong>Conventional Oil, New Areas</strong></td>
<td>2</td>
<td>15, 25</td>
<td>30, 50</td>
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<tr>
<td><strong>Heavy Oil</strong></td>
<td>4</td>
<td>20, 40</td>
<td>80, 160</td>
</tr>
<tr>
<td><strong>If All of the Above (Beyond DOR Forecast)</strong></td>
<td></td>
<td></td>
<td><strong>120, 225</strong></td>
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</tbody>
</table>

... and then there are unconventional resources ...
Available Investment Capital

- Producer spending can be put in three categories:
  - Mandatory – loss of license if they don’t
  - Should – monetary penalties / loss of production if they don’t
  - Discretionary – used to “balance the books”

- How much of the lack of new discretionary spending in Alaska is because the ‘tax is too high’ versus significant spending being directed to the top two categories above?
  - Projects not viable
  - Better alternatives elsewhere at present
Conclusion

- Hard to predict the future in a nice tidy narrow range

- Potential impact of early pipeline shutdown significant to all parties, but most significant by far to the State

- Production Tax one of the possible levers the State can use to incentivize further investments and help extend the life of TAPS