Addressing Impacts in Western Communities

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Williston Basin Petroleum Conference
Bismarck, ND
May 22, 2018
The First Boom Happened Quickly

• Within two months of the 1951 Iverson oil strike, 30 million acres were under lease.

• By 1952, Standard Oil of Indiana was building a 30,000 barrel per day refinery near Mandan.
  – Forty-two oilfield service and supply companies had opened offices in Williston.
  – In June 1952 Service Pipeline Company announced it would build a pipeline to the Standard refinery.

• The earliest producing wells of the Bakken shale formation were drilled in the 1950s on Henry Bakken’s farm less than five miles from the Iverson No. 1 well.
1953 Legislative Research Committee Report

68 REPORT OF LEGISLATIVE RESEARCH COMMITTEE

The bill has two purposes. First, the raising of revenue, and, second, the termination of severed mineral interests which the owners regard so lightly that they will not pay any taxes upon them.

Senate Bill 41. Gross Production Tax on Oil and Gas. Introduced by the Legislative Research Committee. This bill provides for the payment of tax equal to 4% of the value of oil and gas produced, which tax will be in lieu of all ad valorem taxes upon the property from which the oil or gas is produced and upon equipment used in its production at the well site, and providing for the distribution of such revenues. The merits of taxing oil and gas property on the basis of gross production rather than under the ad valorem system is more thoroughly discussed in the oil and gas report of the Legislative Research Committee included elsewhere in this report.
Need for Local Share Recognized

The question of the distribution of this tax is not free from difficulty. Clearly part of the revenue should go to the state of North Dakota as one of the natural resources of the state is being depleted by the production. On the other hand, *it is equally obvious that part of the tax should go to the county and to the local subdivisions.* The impact upon the county is largely through the wear and tear on the highways because of the hauling of heavy drilling equipment. The impact upon the local subdivisions is through the influx of oil workers with their families and the increased need for school facilities and municipal services. The impact upon the local subdivisions is not upon the particular township where the oil well is located, but rather upon the cities and villages within the area. There is no exact measure or standard upon which to base the distribution of this revenue. Manifestly, the local subdivisions feel the impact most severely during the early stages of development. Ultimately the increase of population will bring an increase of the tax base, but that increase will lag several years behind the demand for public services. *Hence, a greater share of the tax should go to the local subdivisions during the early years of production.*

-- Excerpt from 1953 report of Legislative Research Committee
Interim Study of Hub City Funding

• Hub City topic assigned to Energy Development & Transmission Committee

• Public input hearings and committee tours conducted in Williston, Dickinson and Minot

• Additional committee discussion regarding industry impacts in the Big Four producing counties
WDEA Interim Study Support

- Hub City Study – updated last year’s Six-City Study, and expanded to include Minot
- Worked with AE2S Nexus to assist cities with tours and presentations in each Hub City
- Developed 4-County Study to support effort to re-write GPT distribution formula
- Partnered with NDPC on research project to identify historic expenditures of oil tax revenue
Key Findings of Hub City Studies

• Competition
  – While price of oil often dictates activity by employers, quality of life and cost of living dictate activity of workers
  – ND is in competition with other plays for workforce:
    • Permian
    • Eagle Ford
    • Haynesville
    • Niobrara
    • Scoop/Stack
    • Marcellus
It’s happening in other plays too

West Texas faces a labor shortage

The latest shale drilling boom is driving unemployment to the lowest levels in years in many of the areas that encompass the Permian Basin, a 17-county region that spans West Texas and eastern New Mexico, according to data compiled by the Permian Basin Regional Planning Commission, a cross-border coalition geared toward diversifying the region’s economy.

Reeves and Ward Counties, in the heart of a Permian subbasin called the Delaware, are seeing unprecedented growth in oil and gas development; Winkler County, also in the Delaware, has become an active sand mining hub, driven by demand from hydraulic fracturing, which pumps water and sand under pressure to crack shale rock and release oil and gas.

In February, Permian Basin Regional Planning Commission examined the workforce in the Permian region and found that its unemployment rate is at 2.9 percent, much lower than the Texas rate of 4 percent and national average of 4.1 percent. Unemployment in the region has plunged nearly 2 percentage points over the past year, pushing joblessness to levels not seen the end of 2014, a year when oil soared above $100 barrel. Nearly every county in the region has unemployment rates below the state average.

But there is a downside to the Permian’s boom, namely acute labor shortages. Nearly all of the workers who want jobs in the Permian’s 17 counties are employed, according to the Planning Commission. This has been good for workers, who are getting more hours and earning more money. As oil production rises, companies need even more workers, but fewer people are looking for oil industry jobs, according to a survey by the Federal Reserve Bank of Dallas.

As one unnamed company summed it up in the survey, “The labor shortage in West Texas is only getting worse.”

Some of this labor shortage is coming from a drain of workers and equipment after 2016, when oil prices tanked, companies scaled back operations and many workers in the industry left the boom-and-bust industry for good. As oil prices picked up in December, services companies still reported a shortage of workers for 30-person fracking crews, forcing companies to leave hundreds of wells untouched for months.

As labor remains in short supply, companies are going further afield to find workers and paying them more, increasing production costs and shrinking profit margins. With oil trading between $60 and $65 a barrel, lower unemployment rates in Midland, Odessa and neighboring communities could mean that output in the Permian will slow.
It’s Expensive to Live in North Dakota

<table>
<thead>
<tr>
<th>City</th>
<th>Cost of Living Index*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ft. Collins, CO</td>
<td>124.2</td>
</tr>
<tr>
<td>Watford City, ND</td>
<td>117.2</td>
</tr>
<tr>
<td>Williston, ND</td>
<td>115.1</td>
</tr>
<tr>
<td>Dickinson, ND</td>
<td>112.6</td>
</tr>
<tr>
<td>Minot, ND</td>
<td>105.4</td>
</tr>
<tr>
<td>Gillette, WY</td>
<td>104.4</td>
</tr>
<tr>
<td>Greeley, CO</td>
<td>104.2</td>
</tr>
<tr>
<td>Casper, WY</td>
<td>100.5</td>
</tr>
<tr>
<td>Midland, TX</td>
<td>97.7</td>
</tr>
<tr>
<td>Odessa, TX</td>
<td>94.5</td>
</tr>
<tr>
<td>Norman, OK</td>
<td>87.8</td>
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</table>
Total Debt Load / Debt per Capita

TOTAL DEBT (MILLIONS)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2018</th>
<th>2008</th>
<th>2018</th>
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<tbody>
<tr>
<td>WILLISTON</td>
<td>$34</td>
<td>$73</td>
<td>$39</td>
<td>$73</td>
<td>$34</td>
<td>$73</td>
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<tr>
<td>DICKINSON</td>
<td>$6</td>
<td>$92</td>
<td>$14</td>
<td>$63</td>
<td>$26</td>
<td>$104</td>
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<tr>
<td>MINOT</td>
<td>$340</td>
<td>$267</td>
<td>$104</td>
<td>$92</td>
<td>$63</td>
<td>$79</td>
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</table>

Assessment Debt | Other Debt

DEBT PER CAPITA

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2018</th>
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<td>$92</td>
<td>$14</td>
<td>$63</td>
<td>$26</td>
<td>$104</td>
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<tr>
<td>MINOT</td>
<td>$383</td>
<td>$2,710</td>
<td>$383</td>
<td>$2,773</td>
<td>$351</td>
<td>$4,016.65</td>
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</tbody>
</table>

Assessment Debt | Other Debt
## Hub City Projected Growth (2017-2023)  
(Moderate Oil & Gas Activity)

<table>
<thead>
<tr>
<th>City</th>
<th>Annual Pop. Growth</th>
<th>Infrastructure Miles</th>
<th>Utility Accts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dickinson</td>
<td>3.5%</td>
<td>23.5%</td>
<td>24.1%</td>
</tr>
<tr>
<td>Williston</td>
<td>2.8%</td>
<td>19.0%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Minot</td>
<td>2.0%</td>
<td>12.7%</td>
<td>12.8%</td>
</tr>
</tbody>
</table>
Major Revenue Source Projections

**Revenues by City**

**Dickinson**
- Gross Production Tax
- Sales Tax
- Property Tax
- Utility Rate Revenues*

**Minot**
- Gross Production Tax
- Sales Tax
- Property Tax
- Utility Rate Revenues*

**Williston**
- Gross Production Tax
- Sales Tax
- Property Tax
- Utility Rate Revenues*

*Water, Sewer, Storm, Refuse
Need to Invest in our Communities

• Further projected population increases will place additional service demands on each city
• Hub Cities have made required, smart, and prudent investment through the boom
• Hub Cities have tall task of maintaining an affordable quality of life and cost of living
• Future investment needs will keep pressure on cities to maintain affordable tax/fee levels
• GPT/Hub City funding is a critical tool
Four-County Impact Analysis

- Dunn, McKenzie, Mountrail and Williams currently produce 92% of the oil in North Dakota
- Significant oil and gas tax revenue generated in a small geographic area to benefit the entire state
- Huge Industry Impacts – GPT Revenue is Essential
  - $987 million in road needs funded since 2010
  - $230 million in capital facilities since 2014
    - Corrections Centers - 170 new beds in 4 County Region
    - Public Works Facilities: to accommodate staff, fleet, and increased demand for county services
    - Courthouse Needs: Significant Additions and Renovations
Oil Production - Big Four Counties

PERCENT OF OIL PRODUCTION

- Dunn
- McKenzie
- Mountrial
- Williams
- Remaining State

County Personnel Needs Exploded

Growth Since 2010

Dunn: 31%
McKenzie: 225%
Mountrail: 72%
Williams: 84%
Truck Traffic Drives County Costs

2017 Budget Expenditures

Road & Bridge Expenditures Comprise over Half of Total County Budgets
UGPTI Road Needs 2017-2036

Projected Need in 4-County Area as compared to non-oil producing rural counties

2017 - 2036 Road & Bridge Infrastructure Need ($M)
Cumulative Total by County (60-Rig Scenario)

- Dunn: $326M
- McKenzie: $494M
- Mountrail: $309M
- Williams: $447M

Per County Average: $128M

*Excludes Grand Forks, Cass, and Burleigh Counties

Legend:
- Unpaved
- Paved
- Bridge
Counties Build Industrial Roads

Capital Improvement Plan – McKenzie County

2010-2017:
- Gravel Reconstruction – 97 Miles
- New Pavement – 111 Miles
- Reconstructed Pavement – 11 Miles
- Resurface (Chip Seals/Overlays) – 6 Miles
- Bridges/Structures – 14 Total

2018-2022:
- Gravel Reconstruction – 75 Miles
- New Pavement – 73 Miles
- Reconstructed Pavement – 42 Miles
- Resurface (Chip Seals/Overlays) – NA
- Bridges/Structures – 15 Total
Population will continue to grow

<table>
<thead>
<tr>
<th></th>
<th>Dunn</th>
<th>McKenzie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth to 2026</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>Population</td>
<td>4,366 -&gt; 5,256</td>
<td>12,621 -&gt; 14,541</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mountrail</th>
<th>Williams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth to 2026</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>Population</td>
<td>10,242 -&gt; 12,149</td>
<td>34,337 -&gt; 40,729</td>
</tr>
</tbody>
</table>
Four-County Needs Summary

• On-going development of oil and gas in the 4 Counties
• Further production increases expected with increased price and efficiency in the drilling process that will impact all oil and gas producing counties
• Significant past investments have been made and GPT has been an essential resource to meet the need
• Moving forward, large infrastructure demands remain in oil and gas producing counties
• To meet this demand - GPT will continue to be critical tool for oil and gas producing counties moving forward
As Price Climbs, Impacts Will Grow

- Drilling and production technology has improved
- Wells drilled in half the time, so current 62 rigs can drill nearly 150 wells/month
- If $60 is the new $90, then $70.00 = $105.00/bbl
- “Bakken Premium” comes back into play, construction costs ↑

14:22 pm CST 05/07/2018
WTI Crude
70.00 +0.4%

www.oilprice.com
Contact Information

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  701-527-1832 (mobile)

Additional study details at
https://ndenergy.org/News/GPT-Study