Small Business COVID Assistance Informational Session

“Impacts of COVID-19 and Declining Energy Prices on Wyoming’s Economy”

Presented by the

University of Wyoming
College of Business

June 2, 2020
College of Business Hosts

- Steve Farkas, Assistant Dean
WYOMING BUSINESS RELIEF PROGRAMS

wyobizrelief.org
WHERE TO GO FOR HELP …

"If everyone is moving forward together, then success takes care of itself."
– Henry Ford

• Visit wyobizrelief.org
• Review the program rules
• Review the application info & criteria
• Review FAQs
• Register to receive WBC press releases
• Reach out to your WBC or SBDC Regional Director for technical assistance
STAY INFORMED

BUSINESS RELIEF PROGRAM
PUBLIC WEBINAR SCHEDULE

Join one of our public webinars to learn more about the program. Register at wyobizrelief.org

JUNE 1
4 PM

JUNE 2
7 AM

JUNE 2
4 PM

JUNE 4
7 AM

JUNE 4
4 PM
Featured Experts

- Dave Aadland, Department Chair, Economics Co-Director, CBEA
- Anne Alexander, Interim Provost
- Ben Cook, Director, MBA Program Co-Director, CBEA
- Rob Godby, Associate Dean, Haub School Director, CERP
Dave Aadland
Department Chair, Economics & Co-Director, CBEA
Center for Business and Economic Analysis (CBEA)

• **Origin:** Created in 2017

• **Mission:** Support the economic growth and diversification of Wyoming’s economy through applied economic and business analytics.

• **Outreach:** Regular meetings and presentations with industry and policymakers regarding Wyoming’s economy.

• **Personnel:** Interim Directors (Ben Cook and Dave Aadland)
  
  Future Director (Anne Alexander)

• **Clients:** Wyoming Business Council, Ciner, Laramie Jubilee Days Committee, Wyoming State Parks & Cultural Resources, Power Wyoming
COVID-19: Impact on U.S. GDP

- GDP IS THE VALUE OF ALL FINAL GOOD & SERVICES

- PRIOR TO COVID-19, CURRENT DOLLAR GDP = $21.5 TRILLION

- REAL GDP FELL 1.2% IN Q1

- CBO PROJECTS REAL GDP TO FALL 12.2% IN Q2

- COVID ERASES ALL GDP GAINS SINCE 2014

- CONGRESS PASSED THE CORONAVIRUS, AID, RELIEF, & ECONOMIC SECURITY (CARES) ACT

- $2 TRILLION IN EMERGENCY SUPPORT (~10% OF GDP)

- SUPPORT FOR HOUSEHOLDS, SMALL BUSINESS, BIG BUSINESS, HEALTH CARE, STATE & LOCAL GOVERNMENTS, EDUCATION

- CARES ACT HAD BI-PARTISAN SUPPORT, BUT ADDS TO FEDERAL DEBT

- CBO ESTIMATES DEBT-TO-GDP RATIO WILL JUMP TO 100%
COVID-19: Monetary Policy Response

- The Federal Reserve lowered the Federal Funds Rate to 0%

- More quantitative easing

Other tools:
- Forward guidance
- Provide liquidity:
  - Direct lending
  - Lower reserve requirements
  - Backstop lending for CARES Act
Anne Alexander
Interim Provost and overall super awesome lady
Feb. 2020: National unemployment rate was at its lowest point in 50 years.

GDP growth was steady, and the US was in the midst of the longest recorded expansion in its history.
Feb. 2020: National unemployment rate was at its lowest point in 50 years.

GDP growth was steady, and the US was in the midst of the longest recorded expansion in its history.
Feb. 2020: National unemployment rate was at its lowest point in 50 years.

GDP growth was steady, and the US was in the midst of the longest recorded expansion in its history.

Then SARS-CoV-2 came along. (that's what causes COVID-19)
Feb. 2020: National unemployment rate was at its lowest point in 50 years.

GDP growth was steady, and the US was in the midst of the longest recorded expansion in its history.

Then SARS-CoV-2 came along. (that’s what causes COVID-19)
Unprecedented times....
Unprecedented times....

~ 30 million initial unemployment claims March - April 2020
Unprecedented times....

~ 30 million initial unemployment claims March - April 2020

~ 20.5 million jobs reported as lost in April, 701,000 in March
Unprecedented times....

~ 30 million initial unemployment claims March - April 2020

~ 20.5 million jobs reported as lost in April, 701,000 in March

4.8% wage growth (that’s not actually good news...
Labor force participation rate
Labor force participation rate
The Labor Force Participation Rate Formula

\[
\text{Labor Force Participation Rate} = \frac{\text{Employed} + \text{Unemployed}}{\text{Civilian Non-Institutionalized Population}}
\]
Labor force participation rate

Limitations
Labor force participation rate

Limitations

If you're unemployed and have given up looking because you're discouraged.
Labor force participation rate

Limitations

If you're unemployed and have given up looking because you're discouraged.

Most acutely limiting during recessions
Down from ~63% to ~60% in one month
Unemployment rate, Jan. 2020 = 3.6%
Unemployment rate, Jan. 2020 = 3.6%

Unemployment rate, Feb. 2020 = 3.5%
Unemployment rate, Jan. 2020 = 3.6%

Unemployment rate, Feb. 2020 = 3.5%

Unemployment rate, March 2020 = 4.4%
Unemployment rate, Jan. 2020 = 3.6%

Unemployment rate, Feb. 2020 = 3.5%

Unemployment rate, March 2020 = 4.4%

Unemployment rate, April 2020 = 14.7%
Unemployment rate, Jan. 2020 = 3.6%

Unemployment rate, Feb. 2020 = 3.5%

Unemployment rate, March 2020 = 4.4%

Unemployment rate, April 2020 = 14.7%
Percent of American labor force who want to work full time but can’t find full time work, 2003-2020
Percent of American labor force who want to work full time but can’t find full time work, 2003-2020

Worst of Great Recession
17.1% of the civilian workforce
Percent of American labor force who want to work full time but can’t find full time work, 2003-2020

April 2020: 22.8% of the civilian workforce

Worst of Great Recession 17.1% of the civilian workforce
More than a third of vulnerable private-sector jobs are in small firms with fewer than 100 workers.

Vulnerable private-sector jobs[^1], by industry and company size, %

<table>
<thead>
<tr>
<th>Industry and Company Size</th>
<th>0-100 Employees</th>
<th>100-499 Employees</th>
<th>500+ Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation and food services</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Retail trade</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Healthcare and social assistance</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Construction</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Administrative, support, and waste services</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Arts, entertainment, and recreation</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Real estate and rental</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Educational services</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Personal services</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Professional, scientific, and technical services</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Religious services</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Information</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Repair and maintenance</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Management of companies and enterprises</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Utilities</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Mining, quarrying, and oil and gas</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Agriculture, forestry, and fishing</td>
<td>12.9%</td>
<td>10.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50.8 million</strong></td>
<td><strong>employees</strong></td>
<td></td>
</tr>
</tbody>
</table>

[^1]: Vulnerable jobs are subject to furloughs, layoffs, or being rendered unproductive by workers kept on payroll but not working due to periods of high social distancing.

Wyoming Employment Situation
Wyoming Employment Situation

As of Week 19 of 2020 (the week ending May 9), 42,700 initial unemployment claims were filed in Wyoming in 2020.
Wyoming Employment Situation

As of Week 19 of 2020 (the week ending May 9),
42,700 initial unemployment claims were filed in Wyoming in 2020.

19,199 initial claims were filed in Wyoming in April 2020,
an increase of 60.2% over the month
and 1,025.4% over the year.
Wyoming Employment Situation

As of Week 19 of 2020 (the week ending May 9), 42,700 initial unemployment claims were filed in Wyoming in 2020.

19,199 initial claims were filed in Wyoming in April 2020, an increase of 60.2% over the month and 1,025.4% over the year.

Employment fell by ~14K from March to April 2020
Wyoming Employment Situation

As of Week 19 of 2020 (the week ending May 9), 42,700 initial unemployment claims were filed in Wyoming in 2020.

19,199 initial claims were filed in Wyoming in April 2020, an increase of 60.2% over the month and 1,025.4% over the year.

Employment fell by ~14K from March to April 2020

Unemployment rose from 3.8% to 9.2% from March to April 2020
The majority of the initial unemployment claims escalation has been concentrated in the leisure and hospitality, retail and wholesale trades, health care and social assistance, and professional and business services sectors.
The continuing claims in 2020 are concentrated in the leisure and hospitality sector (26%), followed by construction and mining sectors (10% each) and unknown (15%), which is likely self-employed employers and gig workers.
Ben Cook
Director, MBA Program & Co-Director, CBEA
Rob Godby
Associate Dean, Haub School & Director, CERP
Energy Implications for Wyoming’s budget
Mining/Oil and Gas produce over \( \frac{1}{4} \) of Wyoming Output (2019, Q4)

Source: US. BEA
Mineral Revenues as a Percentage of the Wyoming Budget (2017)

Source: Wyoming Taxpayer’s Assoc.
## Tax Sensitivity to Mineral Value Change

<table>
<thead>
<tr>
<th>Price Changes</th>
<th>Severance Taxes</th>
<th>Federal Royalties</th>
<th>Ad Valorem (SFP, 43mills)</th>
<th>Total (excl. Sales &amp; Use)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5 change in Oil</td>
<td>$24.10</td>
<td>$12.40</td>
<td>$16.80</td>
<td>$53.30</td>
</tr>
<tr>
<td>$0.5 change in Gas</td>
<td>$31.05</td>
<td>$35.15</td>
<td>$21.50</td>
<td>$87.70</td>
</tr>
<tr>
<td>$1 change in Coal</td>
<td>$15.10</td>
<td>$14.90</td>
<td>$9.50</td>
<td>$39.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production Changes</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1MMbbl change in Oil</td>
<td>$3.20</td>
<td>$1.60</td>
<td>$2.40</td>
<td>$7.20</td>
</tr>
<tr>
<td>100 Bcf</td>
<td>$11.30</td>
<td>$12.80</td>
<td>$8.40</td>
<td>$32.50</td>
</tr>
<tr>
<td>10 Million Tons</td>
<td>$6.40</td>
<td>$6.30</td>
<td>$4.00</td>
<td>$16.70</td>
</tr>
</tbody>
</table>

Most WY Coal is exported, and there is no end in sight for the transition away from coal across the US.

Sources: Coal Production from MSHA, Generation share from EIA
WY Monthly Gas Production

WY Gas declining since 2009 when HH Prices fell below $6/mcf.

Some production stability around $3/mcf or higher, otherwise, decline.

Sources: Gross Production from WOGCC, Prices from EIA
WY Monthly Gas Production

Sources: Gross Production from WOGCC, Prices from EIA

WY Gas declining since 2009 when HH Prices fell below $6/mcf.

Some production stability around $3/mcf or higher, otherwise, decline.


Henry Hub Gas Price ($/mcf)

Monthly Production (Bcf)
Generally, WY Oil Production has grown with price expectations at or above $50/bbl.
Assessed Valuation of Minerals

• Minerals are assessed at 100% of the prior year’s production value
  • Introduces a 1-year lag to valuation and payments
  • Puts margin pressure on companies in falling price environment

• Commercial property is assessed at 11.5% of value

• Residential property is assessed at 9.5% of value
Assessed Valuation of Minerals

• Minerals are assessed at 100% of the prior year’s production value
  • Introduces a 1-year lag to valuation and payments
  • Puts margin pressure on companies in falling price environment

• Commercial property is assessed at 11.5% of value
• Residential property is assessed at 9.5% of value

**Key Insight:** It takes 10x as much commercial/residential property value to replace every dollar lost in mineral production values every year.

• **$5 Billion** lost in mineral valuation since 2014 requires **$50 Billion** in new commercial/residential property value.
  • WY State GDP is about $40 billion per year.
Oil, Gas, Coal and Machinery directly represent 48% and 62% of major negative S&U changes (FY'10 & FY'16).
Residents do not pay the full cost of public services they receive.

Economic diversification efforts are unable to improve revenue flow in Wyoming - without tax reform.

“Under its current tax structure, Wyoming effort to stimulate non-resource sectors in the state presents fiscal challenges. Only growth in resource sectors has significant positive fiscal impacts.” - REMI

Source: Wyoming taxpayer’s Assoc (2018)
Wyomingites pay for 1/9 of public services received

**Direct Tax Collections & Public Service Costs**
For a 3-person family with income of $60,000 and owning a home valued at $200,000

### Personal Tax Collections

<table>
<thead>
<tr>
<th>Tax Category</th>
<th>Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail Sales</td>
<td>$900</td>
</tr>
<tr>
<td>Gasoline</td>
<td>$220</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>$110</td>
</tr>
<tr>
<td>Alcohol</td>
<td>$90</td>
</tr>
<tr>
<td>Vehicle Registration</td>
<td>$460</td>
</tr>
<tr>
<td>Property Tax</td>
<td>$1,400</td>
</tr>
</tbody>
</table>

### Public Service Costs

<table>
<thead>
<tr>
<th>Public Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>$2,970</td>
</tr>
<tr>
<td>City/Town</td>
<td>$3,320</td>
</tr>
<tr>
<td>Special District</td>
<td>$5,310</td>
</tr>
<tr>
<td>K-12 Education</td>
<td>$7,320</td>
</tr>
<tr>
<td>State Services</td>
<td>$8,130</td>
</tr>
</tbody>
</table>

**Total** $3,180

**Total** $27,050
So What does Wyoming’s budget look like going forward?
Recent coal declines: Wyoming Impacts (Pre-COVID)

- Employment decline since 2015: 18%
- Production decline since 2015: 27%
- Coal severance tax decline since 2015: 32%

Sources: MSHA and CREG
Natural gas declines (Pre-COVID):

- Price decline since 2015: 13%
- Projected Production decline since 2015: 18%
- Nat. gas severance tax decline since 2015: 19%

Sources: EIA and CREG
Oil outcomes (Pre-COVID):

14% Projected Production increase since 2015

28% Projected Price increase since 2015

9% Oil severance tax increase since 2015

Sources: EIA and CREG
Increasing instability in our revenue stream
Our energy revenue outlook is falling fast!

Fall 2019

Total Energy Mineral Revenue (Nov 2019)

- Reference
- High Resource case
- Low Resource case
- CREG Oct 2019
Our energy revenue outlook is falling fast!
Fall 2019 vs. Jan. 2020
Looming Structural Deficit Known before COVID

[Graphs showing revenue and expenditure trends for different scenarios from 2018 to 2024]
Our energy revenue outlook is falling fast!

Fall 2019 vs. Jan. 2020 vs. May 2020

Total Energy Mineral Revenue (Nov 2019)
Reference
High Resource case
Low Resource case
CREG Oct 2019

Total Energy Mineral Revenue (Jan 2020)
Reference
High Resource case
Low Resource case
CREG Jan 2020
CREG Oct 2019

Total Energy Mineral Revenue (May 2020)
Reference
High Resource case
Low Resource case
CREG May 2020
What is driving this forecast decline?

• Oil production had never fallen more than 10% in one year
What is driving this forecast decline?

- Oil production had never fallen more than 10% in one year.
- Forecast a 46% decline in oil production, 43% decline in prices in the coming year.
  - Wyoming oil prices not assumed to reach $50 again until 2024.
  - Production 19% below 2019 in 2024.
What is driving this forecast decline?

- Oil production had never fallen more than 10% in one year
- Forecast a 46% decline in oil production, 43% decline in prices in the coming year.
  - Wyoming oil prices not assumed to reach again $50 until 2024.
  - Production 19% below 2019 in 2024.
- Natural gas production and prices decline 24% in 2020.
  - Production and prices 10% below 2019 in 2024.
What is driving this forecast decline?

- Oil production had never fallen more than 10% in one year
- Forecast a 46% decline in oil production, 43% decline in prices in the coming year.
  - Wyoming oil prices not assumed to reach again $50 until 2024.
  - Production 19% below 2019 in 2024.
- Natural gas production and prices decline 24% in 2020.
  - Production and prices 10% below 2019 in 2024.
- Coal production declines 25% with stable prices in 2020
  - Structural decline continues – production in 2024 predicted 36% below 2019 (175 vs. 275 mill. tons in 2019) with prices only 2% lower.
Sales Tax Outlook

• Outlook depends on shape of recovery (COVID resurgence?) and energy production

• Forecast a 13.9% decline in 2020
  • -30.1% in 2021
  • -25.8% in 2022
  • -21.6% in 2023
  • -19.2% in 2024
Property Tax Outlook

• Primary recipient is education, with cities and counties using this as a significant source of income

• 2019 forecast a 1.5% increase in assessed value
  • -20.6% in 2020
  • -20.5% in 2021
  • -18.9% in 2022
  • -15.7% in 2023
  • -12% in 2024
What does this all mean?

• The baseline CREG forecast:
  • FY2020: $200.7 mill to shortfall to General Fund, $39 mill shortfall to Educ.
  • For the upcoming biennium,
    • a shortfall of $896 mill to General Fund
      • a 30% shortfall to the budget passed in March.
    • a $357 mill shortfall to schools/education
      • Shortfalls continue into next biennium due to lag in property tax collections.
How can the State deal with these shortfalls?

1. State can cut, however cuts of this magnitude would require either
   • Completely defunding the entire Dept. of Health in Wyoming, or
   • Completely defunding all higher ed (comm colleges+ UW), all justice and corrections, or
   • Completely defunding all other Wyoming government agencies not listed above, or
   • Laying off all state employees (would then be able to fund all agencies, but then there would be no one to provide the services!)

   • You cannot cut your way out of this shortfall.
How can the State deal with these shortfalls?

1. State can cut.
2. State can use the Rainy Day fund (LSRA)
   • If used exclusively – would run out in 2022.
How can the State deal with these shortfalls?

1. State can cut.

2. State can use the Rainy Day fund (LSRA)
   • If used exclusively – would run out in 2022.

3. State could raise taxes
   • This will be required, not only because of COVID, but because the underlying structural budget deficit has not gone away.
How can the State deal with these shortfalls?

1. State can cut.

2. State can use the Rainy Day fund (LSRA)
   • If used exclusively – would run out in 2022.

3. State could raise taxes
   • This will be required, not only because of COVID, but because the underlying structural budget deficit has not gone away.

4. State could borrow or hope for Federal aid.
   • Does not solve underlying structural deficit.
Questions

Please utilize the chat feature in Zoom for your questions and comments.
Thank you for participating in today’s seminar.

Participants will receive an email with a link to an evaluation form and an opportunity to ask questions not covered in session.

A video of the session and an FAQ will be posted at [www.uwyo.edu/business/covid-19/](http://www.uwyo.edu/business/covid-19/)