M. DATA CENTER IMPACT Study

House Bill No. 67, enacted in 2010, and subsequently amended by House Bill No. 117 the following year exempted purchases and rentals of certain equipment for resident data centers from state sales and use tax.

The amended bill created two categories for these purchases and rentals, each with a specific list of qualifying equipment. To qualify for tax exemption, the aggregate purchase in each category must exceed \$2 million. The data centers must be located in Wyoming.

Other requirements must be met for these transactions to be exempt from tax. Among these requirements are minimum initial capital investments and certification to create a minimum number of jobs.

This appendix contains a report from the Wyoming Department of Revenue, published in 2019, that describes these laws and their resultant economic impact on the state. Also included is a two-page summary from Cheyenne LEADS about the financial benefits realized from data centers located in Wyoming.

The Effects of the Sales and Use Tax Exemption For Qualifying Data Processing Services Center's Purchases and Rentals

Compiled by the staff of the Education and Taxability Section, Wyoming Department of Revenue

and edited by Terri Lucero, Administrator

Seventh Edition

2010, W.S. 39-15-105(a)(viii)(S) and W.S. 39-16-105(a)(viii)(H), as amended

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Cheyenne, Wyoming 82002

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Overview

In the Wyoming Legislature 2010 Session Original House Bill No. 67 (Enrolled Act No. 31) was passed and signed by Governor Freudenthal into law on March 5, 2010. This act relates to taxation and revenue and provides for a sales and use tax exemption for the purchases and rentals of qualifying computer equipment including computers, servers, monitors, keyboards, storage devices and other peripherals, racking systems, cabling and trays that are necessary for the operation of a data processing services center when the aggregate purchase of the qualifying equipment exceeds two million dollars in any calendar year. The act provides for a reporting requirement and an effective date. This law took effect upon signature.

Subsequently House Bill No. 117 (Enrolled Act No. 17) was passed and signed by Governor Mead on February 18, 2011. This had the effect of amending and expanding the first Act. As it now reads, subject to meeting the applicable provisions of the exemption, the following purchases by a data processing services center (as defined in W.S. 39-15-101(a)(xliv)) are exempt:

(I) The sales price paid for the purchase or rental of qualifying prewritten and other computer software, computer equipment including computers, servers, monitors, keyboards, storage devices, containers used to transport and house such computer equipment and other peripherals, racking systems, cabling and trays that are necessary for the operation of a data processing services center when the aggregate purchase of the qualifying equipment exceeds two million dollars (\$2,000,000.00) in any calendar year;

(II) The sales price paid for the purchase or rental of qualifying uninterruptable power supplies, back-up power generators, specialized heating and air conditioning equipment and air quality control equipment used for controlling the computer environment necessary for the operation of a data processing services center when the aggregate purchase of the qualifying equipment exceeds two million dollars (\$2,000,000.00) in any calendar year;

This exemption is located within the "economic incentive" group of sales and use tax exemptions in the Wyoming statutes. [W.S. 39-15-105(a)(viii) and W.S. 39-16-105(a)(viii)] In order to avail themselves of the exemption a qualifying data processing services center must meet certain requirements.

In addition to having a physical location in the state where the qualifying equipment will be maintained and operated (until it is scheduled for replacement or until it has reached the end of its serviceable life) for Subparagraph (I) the qualifying data processing services center must make, or have made within the five years immediately preceding March 5, 2010, an initial capital investment of not less than five million dollars (\$5,000,000) and for Subparagraph (II) the qualifying data processing services center must make, or have made within the five years center must make, or have made within the five years immediately preceding April 1, 2011, an initial capital investment of not less than fifty million dollars (\$50,000,000). Furthermore the data processing services center must have received certification from the Wyoming Business Council that the business has created or will create a number of jobs in Wyoming that is appropriate to the size and stage of development of the data processing services center as determined by the Wyoming Business Council.

Specific Requirements by Statute

Wyo. Stat. Ann. § 39-15-105(b)

"The Wyoming business council, the department of workforce services and the department of revenue shall jointly report to the joint revenue interim committee on or before December 1 of each year that the exemption is in effect. If requested by the department of revenue, any person utilizing the exemption shall report to the department the amount of sales tax exempted, and the number of jobs created or impacted by the utilization of the exemption."

This report is to evaluate the cumulative effects of the exemption from initiation of the exemption and shall include:

- (i) A history of employment in terms of the numbers of employees, full-time and part time employees, and rate of turnover classified by the 2007 edition, as amended, of the North American Industry Classification System (NAICS) code manufacturing section 31 – 33 from information collected by the Department of Employment;
- (ii) A history of wages and benefits disaggregated by gender for each job category; and
- (iii)A comprehensive history of taxes paid to the state of Wyoming.

Findings

This year represents the seventh year the Department of Revenue has requested information from companies potentially utilizing the exemption. A cover letter attached to the return instructed the respondents that once completed, the information could be mailed, faxed or emailed back to the Department of Revenue's Excise Tax Division. All of the respondents replied electronically.

For the calendar year ending December 2018, the Department reached out to seven entities that have been identified as data processing service centers in this State. This is one less than last year. Of those, the Department received responses from three, however one company indicated it did not make sufficient purchases to trigger the exemption and did not provide any additional information regarding purchases or employment. Of the two companies, both made sufficient purchases to trigger part (I) but only one made sufficient purchases to trigger part (II).

Exemption Cost

Companies claiming exemption on qualifying prewritten and other computer software, computer equipment including computers, servers, monitors, keyboards, storage devices, containers used to transport and house such computer equipment and other peripherals, racking systems, cabling and trays reported \$423.5M in exempt purchases in 2018. In addition \$11.9M in qualifying uninterruptable power supplies, back-up power generators, specialized heating and air conditioning equipment and air quality control equipment used for controlling the computer environment necessary for the operation of a data processing services center was made in 2018.

Applying an average 2018 tax rate of 5.39% this resulted in \$23.47M in unrealized sales and use tax in 2018. This is more than double the amount of exempt purchases in 2017 and represents 25.7% of the exemption's total usage since its inception in 2010. Table 1 describes the total purchases and unrealized tax for each year. Table 2 graphically represents the cumulative effect of the exemption.

| | Qualifying Exemption (I) | Qualifying Exemption (II) | Total Exempt Purchases | Unrealized Sales and Use Tax |
|-----------------|-----------------------------|------------------------------|---------------------------|---------------------------------|
| 2Q10 – 2Q13 | \$ 22,260,014.00 | \$ 40,845,160.00 | \$ 63,105,174.00 | \$ 3,319,332.15 |
| 3Q2013 – Yr End | \$ 277,488,171.00 | \$ 38,647,960.00 | \$ 316,136,131.00 | \$ 16,976,510.23 |
| 2014 | \$ 162,583,622.00 | \$ 6,836,331.00 | \$ 169,419,953.00 | \$ 9,080,909.48 |
| 2015 | \$ 181,946,836.00 | \$ 5,904,642.00 | \$ 187,851,478.00 | \$ 10,106,409.52 |
| 2016 | \$ 319,517,743.00 | \$ 12,123,508.00 | \$ 331,641,251.00 | \$ 17,908,627.55 |
| 2017 | \$ 195,682,743.00 | \$- | \$ 195,682,743.00 | \$ 10,488,595.02 |
| 2018 | \$ 423,514,743.00 | \$ 11,903,520.00 | \$ 435,418,263.00 | \$ 23,469,044.38 |
| Total | \$1,582,993,872.00 | \$ 116,261,121.00 | \$1,699,254,993.00 | \$ 91,349,428.34 |

Table 1: Exempt Purchases and Unrealized Tax Revenue, 2010 - 2018





Employment

The total reported employee count is 220. This is an additional 23 positions over last year, of which 13 are new part time unskilled labor positions. By occupational classification, skilled workers make up the largest percentage of the workforce, accounting for 41.4%, or 91 positions in 2018. This is the same as in the preceding year. The second largest occupational classification is unskilled labor. In 2018, full and part time unskilled laborers filled 85 positions, making up 38.6% of the workforce. Unskilled labor grew in the workforce by more than 5% over 2017. Combined skilled

and unskilled labor made up 80% of the workforce in 2018. Since 2013, skilled and unskilled workers have made up between 72 and 83% of the total workforce. Table 3 details the distribution of the workforce by occupational classification. Table 4 expresses this information as a percentage of the workforce.

| Table 3: Workforce Distribution by Occupational | Classification 2013 - 2018 | 3 |
|---|----------------------------|---|
|---|----------------------------|---|

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------------------|------|------|------|------|------|------|
| Supervisor / Manager | 11 | 18 | 20 | 28 | 25 | 27 |
| Administrative Svcs | 20 | 4 | 3 | 3 | 2 | 2 |
| Customer Svc | 2 | 2 | 2 | 11 | 13 | 15 |
| Skilled Labor | 45 | 33 | 55 | 72 | 91 | 91 |
| Unskilled Labor | 38 | 49 | 64 | 95 | 66 | 85 |

Table 4: Workforce Distribution as a Percentage of Workforce, 2013 - 2018

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------------------|-------|-------|-------|-------|-------|-------|
| Supervisor / Manager | 9.5% | 17.0% | 13.9% | 13.4% | 12.7% | 12.3% |
| Administrative Svcs | 17.2% | 3.8% | 2.1% | 1.4% | 1.0% | 0.9% |
| Customer Svc | 1.7% | 1.9% | 1.4% | 5.3% | 6.6% | 6.8% |
| Skilled Labor | 38.8% | 31.1% | 38.2% | 34.4% | 46.2% | 41.4% |
| Unskilled Labor | 32.8% | 46.2% | 44.4% | 45.5% | 33.5% | 38.6% |

Since 2015 women have occupied 9% of the workforce. By occupational classification in 2018 this breaks down to 2 administrative positions, 3 customer service positions and 16 positions as skilled labor. Historically women have not held any managerial/supervisory positions since 2016. Further since 2014 men have not held any administrative support positions. And for the first time, 2018 saw no unskilled labor positions held by women. Table 5 details the workforce distribution by occupational classification and gender from 2013 - 2018.

| Table : | 5: Workf | orce Distribu | ition by Occ | upational Cla | assification a | and Gender, | 2013 - 2018 |
|----------------|----------|---------------|--------------|---------------|----------------|-------------|-------------|
|----------------|----------|---------------|--------------|---------------|----------------|-------------|-------------|

| | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | | 2018 | |
|----------------------|-------|-------|-------|-------|-------|------|-------|------|-------|------|-------|------|
| | М | F | М | F | М | F | М | F | М | F | М | F |
| Supervisor / Manager | 10 | 1 | 16 | 2 | 17 | 3 | 25 | 3 | 25 | 0 | 27 | 0 |
| Administrative Svcs | 16 | 4 | 0 | 4 | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 2 |
| Customer Svc | 2 | 0 | 2 | 0 | 2 | 0 | 8 | 3 | 12 | 1 | 12 | 3 |
| Skilled Labor | 40 | 5 | 30 | 3 | 53 | 2 | 69 | 3 | 79 | 12 | 75 | 16 |
| Unskilled Labor | 35 | 3 | 44 | 5 | 59 | 5 | 88 | 7 | 63 | 3 | 85 | 0 |
| | | | | | | | | | | | | |
| Total | 103 | 13 | 92 | 14 | 131 | 13 | 190 | 19 | 179 | 18 | 199 | 21 |
| Percentage | 88.8% | 11.2% | 86.8% | 13.2% | 91.0% | 9.0% | 90.9% | 9.1% | 90.9% | 9.1% | 90.5% | 9.5% |

Wage Earnings

Between 2013 and 2018 wages have been inconsistent. For example supervisor/managers earned an hourly wage of \$51.61 in 2013. This dipped to \$34.60 by 2016. However by 2018 it had recovered to \$53.14. Similarly administrative positions saw a similar dip, beginning at \$26.81 in 2013, dropping to a low of \$23.48 in 2015 and rebounding to \$27.32 by 2018. In contrast unskilled labor positions earned an hourly wage of \$15.72 in 2013 and saw a high of \$23.45 in 2017 before dropping back down to \$22.09 in 2018. Customer service positions saw the most change, beginning 2013 at \$28.88/hour and increasing every year. By 2018, the average hourly wage was \$59.87, more than double the wage only six years earlier. Table 6 details the average hourly wage per occupational classification and per year.

Table 6: Average Wage per Occupational Classification, 2013 - 2019

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------------------------|----------|----------|----------|----------|----------|----------|
| Supervisor / Manager | \$ 51.61 | \$ 37.49 | \$ 36.23 | \$ 34.60 | \$ 50.88 | \$ 53.14 |
| Administrative Services | \$ 26.81 | \$ 23.99 | \$ 23.48 | \$ 27.10 | \$ 26.23 | \$ 27.32 |
| Customer Service | \$ 28.88 | \$ 29.00 | \$ 31.30 | \$ 44.37 | \$ 43.51 | \$ 59.87 |
| Skilled Labor | \$ 32.74 | \$ 34.28 | \$ 23.68 | \$ 32.20 | \$ 28.27 | \$ 28.70 |
| Unskilled Labor | \$ 15.72 | \$ 17.99 | \$ 23.13 | \$ 23.23 | \$ 23.45 | \$ 22.09 |

Table 7 graphically represents the average hourly wage per occupational classification, per year. It may be important to note that the average hourly wage earned by customer service positions is higher than that earned by supervisor/managers.



Table 7: Average Wage by Occupational Classification, 2013 - 2018

Table 9: Average Wage for Unskilled Labor Positions,

Looking at gender, men and women frequently do not hold similar positions. Men have exclusively held supervisory or managerial positions since 2017. Similarly women have held all of the administrative positions since 2014. Customer service positions, originally held only by men, only saw the addition of women starting in 2016. The two employment classifications that have had the most consistent employment by both genders is skilled and unskilled labor. Table 8 depicts the wage difference for skilled labor and Table 9 depicts the same for unskilled labor.

Table 8: Average Wage for Skilled Labor Positons, year



Survey respondents report similar if not slightly higher wages than the statewide average. In 2018, the Wyoming Department of Workforce Services ("DWS") reported persons in managerial positions earned an average of \$45.29/hour while survey responses indicated an average of \$53.14/hour. Similarly DWS reported skilled laborers earned an average wage of \$29.48 whereas survey responses indicated a wage of \$28.70/hour. DWS reported unskilled labor at \$20.21/hour and the survey responses indicated \$22.09 per hour. While this has remained relatively constant throughout the period, we would be remiss if we did not point out the exceptional difference for those in administrative or customer service positions. DWS reported persons in these positions earned an average of \$18.34 and \$15.73 respectively. Survey responses indicates those in administrative positions earned \$27.32/hour and customer service positions earned \$59.87/hour. Unfortunately it is unclear if the occupational classification as reported by DWS and that of survey responses are of similar duties and responsibilities.¹ Table 10 demonstrates the average annual wage per responses versus the Wyoming average.

¹ Wyominng Occupational Employment and Wages March 2018 as reported by the Wyoming Department of Workforce Services', Research and Planning Section (<u>https://doe.state.wy.us/lmi/lewismarch2018eci/toc000.htm</u>) retrieved 10/1/2019.

| | | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------|------------|----------|----------|----------|----------|----------|----------|
| Managerial | Response | \$ 51.61 | \$ 37.49 | \$ 36.23 | \$ 34.60 | \$ 50.88 | \$ 53.14 |
| 11-3021 | WY Average | \$ 39.83 | \$ 40.05 | \$ 40.24 | \$ 42.52 | \$ 42.71 | \$ 45.29 |
| Administrative | Response | \$ 26.81 | \$ 23.99 | \$ 23.48 | \$ 27.10 | \$ 26.23 | \$ 27.32 |
| 43-3031 | WY Average | \$ 16.81 | \$ 17.31 | \$ 17.37 | \$ 17.44 | \$ 17.94 | \$ 18.34 |
| Customer Service | Response | \$ 28.88 | \$ 29.00 | \$ 31.30 | \$ 44.37 | \$ 43.51 | \$ 59.87 |
| 43-4051 | WY Average | \$ 13.13 | \$ 13.52 | \$ 13.80 | \$ 14.32 | \$ 15.03 | \$ 15.73 |
| Skilled Labor | Response | \$ 32.74 | \$ 34.28 | \$ 23.68 | \$ 32.20 | \$ 28.27 | \$ 28.70 |
| 15-0000 | WY Average | \$ 27.19 | \$ 27.34 | \$ 27.71 | \$ 28.43 | \$ 28.52 | \$ 29.48 |
| Unskilled Labor | Response | \$ 15.72 | \$ 17.99 | \$ 23.13 | \$ 23.23 | \$ 23.45 | \$ 22.09 |
| 49-2011 | WY Average | \$ 19.42 | \$ 18.96 | \$ 18.43 | \$ 17.48 | \$ 18.53 | \$ 20.21 |

 Table 10: Average Annual Wage per Occupational Classification as reported by Survey Responses compared to Average Statewide Wage for Similar Occupational Classification

Benefits

Consistent with every year surveyed, all companies employing in this field reported a full benefits package including medical and dental insurance, a prescription plan, a vision plan and retirement savings plans for full time employees. However part time employees did not receive any benefit package.

Turnover

Turnover rates within the industry are relatively low compared to the Wyoming average. In 2018, like the year before, no turnover was reported in administrative or customer service positions. Skilled labor reported a 4.0% turnover rate, unskilled labor 6.0% and managers 8.0%. Compared to the 29.6% average turnover rate for 2018Q1 through 2018Q3 across all industries employees tend to enjoy more job stability.²

Survey Costs

Due to the limited number of businesses contacted for this report, the cost to mail was nominal. As a result, the primary expense associated with this report is the time spent following up with the respondents and reviewing and analyzing the data received as well as the preparation of this report. The Department estimates office personnel expended 40 to 50 hours over the course of several weeks on this endeavor.

² Turnover rates for 2017Q3 and prior obtained previously and cited in previous editions. 2017Q4 obtained from *Trends*, Vol 55 No 7, Wyoming Department of Workforce Services, Research& Planning office. 2018Q1 obtained from *Trends*, Vol 55 No 10, Wyoming Department of Workforce Services, Research& Planning office. 2018Q2 obtained from *Trends*, Vol 56 No 1, Wyoming Department of Workforce Services, Research& Planning office. 2018Q3 obtained from *Trends*, Vol 56 No 4, Wyoming Department of Workforce Services, Research& Planning office. 2018Q3 obtained from *Trends*, Vol 56 No 4, Wyoming Department of Workforce Services, Research& Planning office.

Wyoming Business Council Regional Project Assessment System (RPAS)

Data center tax incentive economic analysis

The RPAS model has been developed for Wyoming by Applied Economics, LLC of Phoenix, Arizona, <u>www.aeconomics.com</u>. The model identifies measurable effects associated with either a specific activity in a specific location or the value of economic and revenue impacts of existing businesses. The model has multipliers for 66 NAICS-based industry types based on Minnesota IMPLAN group data. It provides the value of additional output for job creation in addition to the direct jobs created and measures direct and indirect property and sales tax benefits to local and state revenues.

- Jobs, wages and output:
 - There has been significant growth in the last several years in data hosting jobs and wages.
 - Not all jobs created are reflected in the numbers below. Data centers often contract out a significant amount of work.

| Year | Workforce | Average Wage | Total Direct Wages |
|-----------|-----------|--------------|--------------------|
| 2010-2012 | 15 | \$ 51,798 | \$ 776,970 |
| 2013 | 116 | \$ 57,955 | \$ 6,722,780 |
| 2014 | 106 | \$ 55,758 | \$ 5,910,348 |
| 2015 | 144 | \$ 52,580 | \$ 7,571,520 |
| 2016 | 209 | \$ 60,344 | \$ 12,611,896 |
| 2017 | 198 | \$ 55,465 | \$ 10,956,288 |
| 2018 | 202 | \$ 66,655 | \$ 13,471,438 |
| Totals | | | \$ 58,021,240 |

• The economic output from these direct wages is significant. The numbers below do not include indirect economic output of suppliers.

| Outp | out from | |
|------|---------------------------------------|----|
| Emp | oloyment Income | |
| \$ | 2,231,226 | |
| \$ | 19,305,821 | |
| \$ | 16,972,759 | |
| \$ | 21,743,750 | |
| \$ | 7 <u>6</u> 8 | |
| \$ | | |
| \$ | 99 | |
| \$ | BIACK MILS ENER 157,059,352 | gy |

* The year, workforce numbers and average wage are from data available of Workforce Services, Research and Planning Labor Market Information, Quarter Black Hills Energy

* Output represents the total economic activity generated. It is derived from employment income and calculated by the WBC economic impact model. The inputs are direct employment numbers and average wages. The model then calculates additional multipliers of the wages rolling over in the community. Real estate market valuation for tax purposes

*2018 numbers forward are calculated using an updated RPAS model





Regional Economic Models, Inc. (REMI) PI+ model. REMI PI+ is the next generation Policy Insight model built exclusively for Wyoming. It is an integrated model that combines the best features of the input-output, general equilibrium, econometric, and economic geography methodologies. PI+ is also a dynamic rather than a static model allowing for year-by-year analysis of the total regional effects of any specific policy initiative.

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| Category | | | Years | | | Average |
|--|---------------|--------------|--------------|---------|---------|-----------|
| (Change from Baseline) | 2018 | 2019 | 2020 | 2021 | 2022 | 2018-2030 |
| | | | | | | |
| Total Employment - Jobs | -42 | -63 | -78 | -88 | -94 | -88 |
| Information | -4 | -7 | -10 | -12 | -13 | -14 |
| Finance & Insurance | -4 | -7 | -9 | -11 | -12 | -12 |
| Retail Trade | -6 | -8 | -9 | -10 | -10 | -10 |
| Construction | -7 | -11 | -13 | -13 | -13 | -9 |
| All Other | -21 | -30 | -37 | -42 | -45 | -43 |
| Population - Individuals | -16 | -31 | -46 | -60 | -74 | -80 |
| Wages and Salaries | -\$2.3 | -\$2.9 | -\$3.4 | -\$3.8 | -\$4.1 | -\$4.1 |
| Personal Income | -\$4.5 | -\$5.3 | -\$6.2 | -\$6.9 | -\$7.4 | -\$7.6 |
| Disposable Personal Income | -\$4.0 | -\$4.8 | -\$5.6 | -\$6.2 | -\$6.7 | -\$6.8 |
| Gross Domestic Product | -\$3.5 | -\$5.3 | -\$6.6 | -\$7.6 | -\$8.2 | -\$7.9 |
| Output | -\$5.7 | -\$8.7 | -\$11.0 | -\$12.6 | -\$13.6 | -\$13.1 |
| Note: All dollar amounts are expressed | as millions o | of fixed (20 | 17) dollars. | | | |

| Table 2: Economic Imp | pact of Sales & Use T | ax Exemption Removal | for Data Centers |
|-----------------------|----------------------------------|----------------------|------------------|
|-----------------------|----------------------------------|----------------------|------------------|

The economic impact of the **removal of the sales tax exemption** for purchases and rentals of qualifying computer equipment necessary for the operation of a data processing center was modeled in REMI as an increase in the production costs for the data center industry of \$15.0 million per year beginning in 2018 (see Table 2). This exemption removal would result in an average annual loss of 88 jobs and a decrease in GDP of \$7.9 million per year over the period of 2018 to 2030 when compared to the baseline scenario.

The information, finance & insurance, retail trade, and construction sectors will incur the majority of the job losses. Direct job losses are attributed to information, finance & insurance, and construction sectors while the retail trade sector will be adversely impacted from the decline in disposable personal income.

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KEY DEFINITIONS

Total Employment comprises estimates of the number of non-farm jobs, full-time plus part-time, by place of work. Full-time and part-time jobs are counted at equal weight. Includes direct, indirect, and induced jobs.

Population reflects mid-year estimates of people, including survivors from the previous year, births, special populations, and three types of migrants (economic, international, and retired).

Wages and Salaries are the monetary remuneration of employees, including the compensation of corporate officers; commissions, tips, and bonuses; voluntary employee contributions to certain deferred compensation plans, such as 401(k) plans; and receipts in kind that represent income. Wages and salaries disbursements are affected by changes in Wage Rate and Employment.

Personal Income is the income that is received by all persons from all sources. It is calculated as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance.

Disposable Personal Income equals personal income minus personal taxes.

Gross Domestic Product or **GDP** is the market value of goods and services produced by labor and property. It is often referred to as "value added" and is equal to its gross output (sales or receipts and other operating income, plus inventory change) minus its intermediate inputs (consumption of goods and services purchased from other industries or imported).

Output is the amount of production, including all intermediate goods purchased as well as valueadded (compensation and profit). Output can also be thought of as sales or supply or simply price multiplied by quantity ($P \times Q$).

ABOUT THE REMI PI+ MODEL

The REMI PI+ model incorporates aspects of four major modeling approaches: **Input-Output**, **General Equilibrium**, **Econometric**, and **Economic Geography**. Each of these methodologies has distinct advantages as well as limitations when used alone. The REMI integrated modeling approach builds on the strengths of each of these approaches.

The REMI model at its core has the inter-industry relationships found in **Input-Output models**. As a result, the industry structure of a particular region is captured within the model, as well as transactions between industries. Changes that affect industry sectors that are highly interconnected to the rest of the economy will often have a greater economic impact than those for industries that are not closely linked to the regional economy.

General Equilibrium is reached when supply and demand are balanced. This tends to occur in the long run, as prices, production, consumption, imports, exports, and other changes occur to stabilize the economic system. For example, if real wages in a region rise relative to the U.S., this

will tend to attract economic migrants to the region until relative real wage rates equalize. The general equilibrium properties are necessary to evaluate changes such as tax policies that may have an effect on regional prices and competitiveness.

REMI is sometimes called an "Econometric model," as the underlying equations and responses are estimated using advanced statistical techniques. The estimates are used to quantify the structural relationships in the model. The speed of economic responses is also estimated, since different adjustment periods will result in different policy recommendations and even different economic outcomes.

The **New Economic Geography** features represent the spatial dimension of the economy. Transportation costs and accessibility are important economic determinants of interregional trade and the productivity benefits that occur due to industry clustering and labor market access. Firms benefit having access to a large, specialized labor pool and from having access to specialized intermediate inputs from supplying firms. The productivity and competitiveness benefits of labor and industry concentrations are called agglomeration economies, and are modeled in the economic geography equations.

The primary national, state, and county data source for REMI PI+ is the Bureau of Economic Analysis (BEA) State Personal Income (SPI) and Local Area Personal Income (LAPI) series (which also include employment and total population at both the state and county level). REMI also relies on numerous other data sources including the Bureau of Labor Statistics, Energy Information Administration, Center for Disease Control and Prevention, National Center for Health Statistics, and the Department of Defense. *Source: remi.com*.





Data Centers in Wyoming

Data Centers are good for Wyoming as they bring high capital investment, high wage technology jobs, low fiscal impact on local and state government services and diversify the economy. Additionally, hundreds of construction workers are employed during the development of data centers.

It is a growing industry for Wyoming as at least 3 new centers are considering Wyoming.

4 - Data Centers in LEADS business parks1

\$82M - Annual contribution to Wyoming Gross Domestic Product²

209 - Primary jobs at those data centers today³

148 - Additional jobs in support occupations, not including construction employment⁴

\$1.5B+ - Capital investment since opening⁵

\$82.6M - Total wages paid to employees since coming to Wyoming 6

\$18.7M - Sales Taxes paid on power since opening7

\$40.6M - Property taxes paid since opening*

32 other states offer data center tax exemptions



FOR ADDITIONAL INFORMATION CONTACT: Betsey Hale, CEcD - CEO Cheyenne LEADS (307)630-2179

1. Microsoft, Lunavi, EchoStar/Dish, The National Center for Atmospheric Research

2. University of Wyoming CBEA

3. UW CBEA Quarterly Census of Employment and Wages

4. REMI and University of Wyoming

5. Laramie County Building Permit Valuations and companies

6. REMI and University of Wyoming

7. REMI and University of Wyoming 8. Laramie County Assessor



Data Centers in Wyoming

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