

Economic Impact of Data Centers

June 23rd, 2026

Alexander Gebben & Bailey Kirkland



College of Business
Center for Business
and Economic Analysis

Center for Business & Economic Analysis

Provide applied economic insight to support decision-making across Wyoming. The CBEA serves as a resource for policymakers, communities, and businesses, producing accessible, nonpartisan research on the state's most pressing issues.

- Corporate, government, and academic
- Association for University Business and Economic Research (AUBER)

Past Work

- Over 65 projects
- Data center industry reports
- Energy and policy analysis
- Nuclear sector analysis



Outline

- 1 Trends and background
- 2 Data center model importance
- 3 Modeling considerations
- 4 Wyoming case study
- 5 Results

Introduction

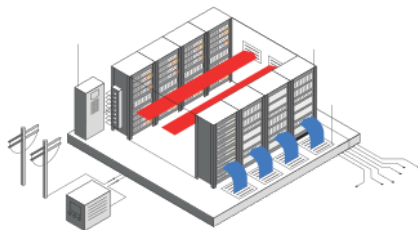
What are data centers?



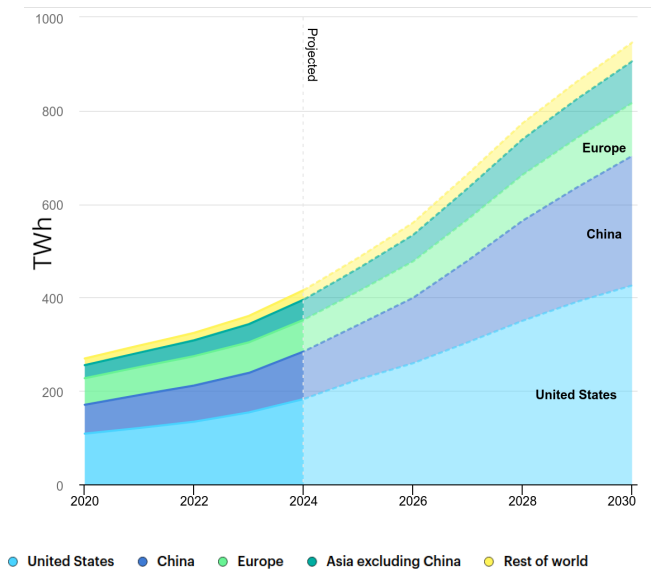
Data Centers

A data center is any facility that houses and runs computer infrastructure.

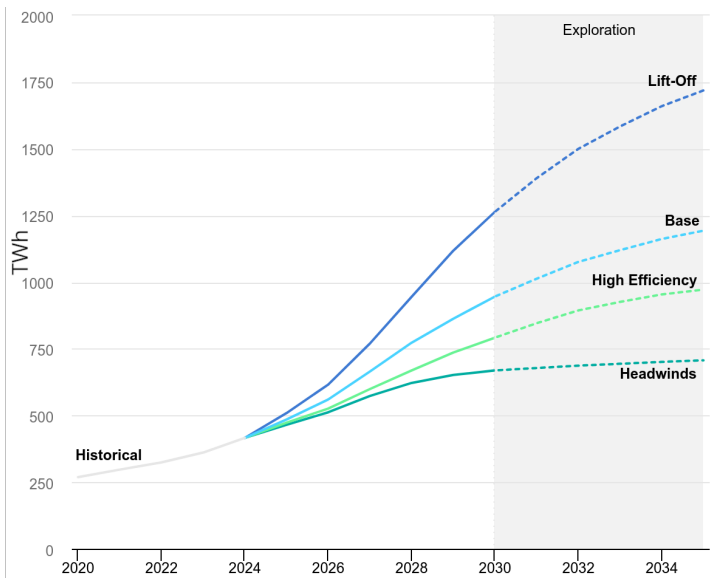
1. Large language models
2. Proof of work mining
3. Cloud storage
4. Hosting services
5. Virtual private networks



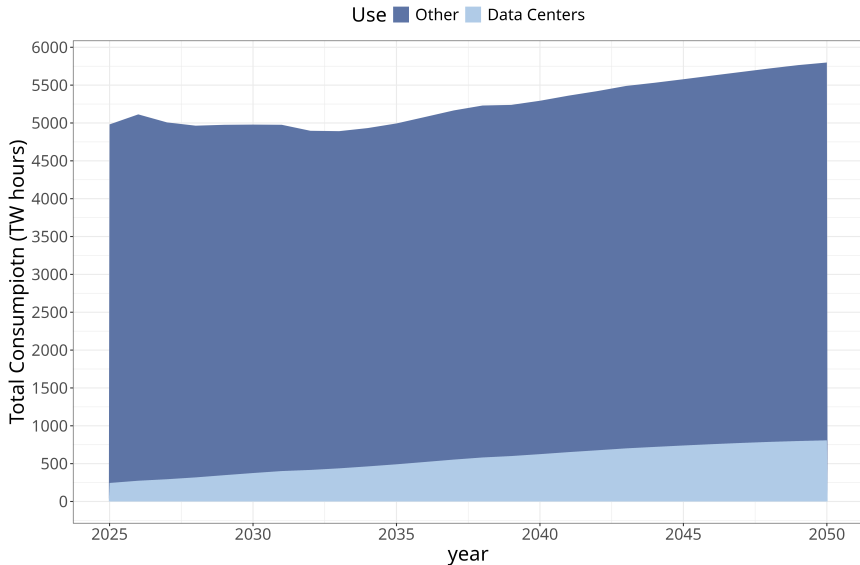
Projected Energy Use



Projected Energy Use

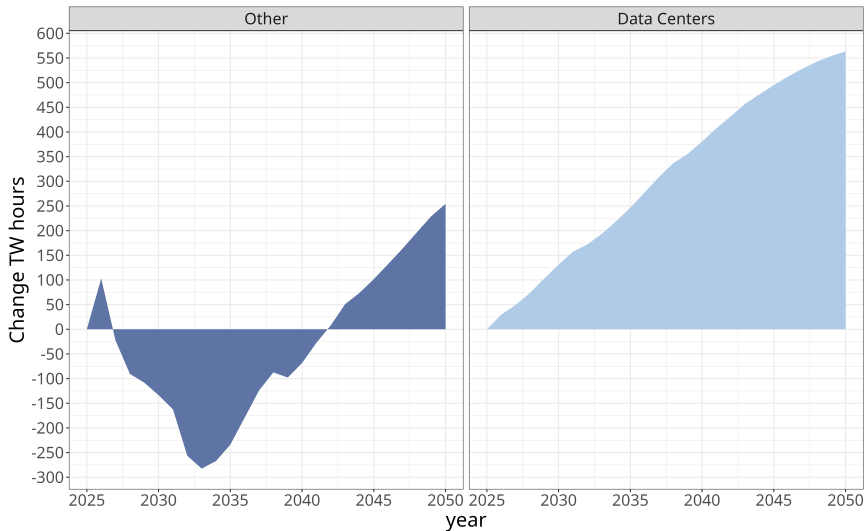


Projected Energy Use



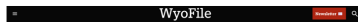
Projected Energy Use

Use ■ Other ■ Data Centers



Data centers in Wyoming

- Land, cool climate, low population, etc.
- Need for diversification
- Ten current providers, many more to come
- Wyoming data center sales tax exemption



FEATURED TOP STORY

Gov. Gordon demands data center developers 'do it the Wyoming way'

The order comes amid high anxieties over a wave of digital development that could triple the state's electrical consumption.

By David Blakeslee June 5, 2025

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Big Questions

Benefits

- Large upfront capital investments
- Employment
 - Temporary (e.g., construction) vs. permanent (e.g., operation)
 - Wages
- Fiscal Revenue
- Wage spillovers to surrounding labor market
- Productivity gains for co-located firms



Big Questions

Costs

- Energy consumption
 - Prices
 - Volatility
 - Infrastructure expansion
- Water consumption
- Land use pressure
- Workforce housing
- Light and noise pollution
- AI-driven downstream unemployment

The screenshot shows a web browser displaying a WyoFile article. The main article is titled "Amid growing concern, data center developers insist they won't stress Wyoming water" and is dated May 11, 2020. It is categorized under "FEATURED TOP STORY". The article text mentions that companies say geothermal and closed-loop cooling systems require a fraction of the water that other data centers use. To the right, there is a sidebar with a related article titled "Not In My Back Yard! The Effects of Data Centers on Housing Prices", dated March 14, 2020. Below the main article, there is a section titled "The New York Times" with a link to "Federal Energy Regulator Seeks to Limit Conflicts Over Data Centers".

WyoFile

FEATURED TOP STORY

Amid growing concern, data center developers insist they won't stress Wyoming water

Companies say geothermal and closed-loop cooling systems require a fraction of the water that other data centers use.

By Heidi Rabiner May 11, 2020

Artificial Intelligence • Student Cheating • "Stealthwashing" • States Investigating OpenAI • White House Executive Order

Federal Energy Regulator Seeks to Limit Conflicts Over Data Centers

The Federal Energy Regulatory Commission directed grid managers to make changes that protect individuals from higher electricity bills while giving data centers access to power faster.

Like this 4:56 min

Share full article

Not In My Back Yard! The Effects of Data Centers on Housing Prices

36 Pages • Posted: 14 Mar 2020 • Last revised: 6 Mar 2020

Also Print

University of Rochester - Simon Business School

Date Written: February 27, 2020

Abstract

Data centers have become a focal point of local opposition in the United States, with communities citing environmental, noise, and aesthetic concerns. Using a novel dataset of air permit measures in Virginia matched to ZIP code-level house price indices, this paper estimates the causal effect of data center permitting on nearby residential property values in a difference-in-differences framework. Across multiple specifications and control models, the estimated effects are economically small and slightly positive, providing no evidence of large negative impacts of data centers on house prices. Confounding variables rule out substantial price declines, and results are similar for nearby growth associated with AI-related facilities. Overall, the findings suggest that data center development appears to have little measurable impact on local housing prices.

Keywords: house prices, difference-in-differences, DID, environmental permits

JEL Classification: R51, R52, L94, Q01

NY State Senator Kristen Gonzalez Passes Data Center Moratorium, First in the Nation If Signed

KRISTEN GONZALEZ • June 9, 2020 • ISSUE: ARTIFICIAL INTELLIGENCE & DATA CENTERS

SUSTAINABILITY • ENERGY COSTS • UTILITIES • CLOUD • GREEN ENERGY • ACCOUNTABILITY

Policy questions

- Tax incentives
- Zoning policy
- Housing (temporary vs. permanent)

Challenges

1. On-site or grid power
2. Feedback of electricity demand
3. Delayed industry data (NAICS)
4. Rapid industry change
5. Tax code
6. Where are inputs purchased?

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Our Study

- Economic impact study, commissioned by a data center
- Possible use cases
 - Argue for tax exemptions to business council
 - Garner some public support
 - Prepare county/town with some sense of expectations around employment effects, population effects, temporary housing needs, etc.

Scenario

- Lincoln County Wyoming
- \$5 Billion capital investment
- Construction (2027-2030)
 1. Data center
 2. Natural gas power
 3. Battery energy storage system
- Operation (2031-2060)



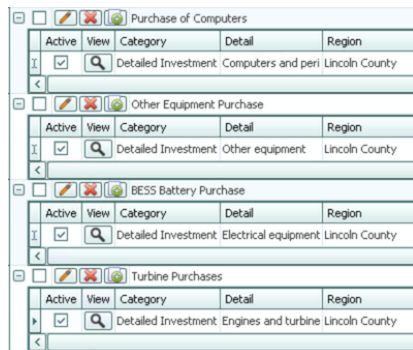
Eight parameters to consider

- Detailed investment
- Industry output
- Employment

Modeling Economic Impacts

Eight parameters to consider

- Detailed investment
- Industry output
- Employment



Purchase of Computers				
Active	View	Category	Detail	Region
☒		Detailed Investment	Computers and peri	Lincoln County

Other Equipment Purchase				
Active	View	Category	Detail	Region
☒		Detailed Investment	Other equipment	Lincoln County

BESS Battery Purchase				
Active	View	Category	Detail	Region
☒		Detailed Investment	Electrical equipment	Lincoln County

Turbine Purchases				
Active	View	Category	Detail	Region
☒		Detailed Investment	Engines and turbine	Lincoln County

Modeling Economic Impacts

Eight parameters to consider

- Detailed investment
- Industry output
- Employment

Active	Edit	Group		
☐	  	Construction of Buildings		
Active	View	Category	Detail	Region
☐		Output	Industry Sales: Con	Lincoln County
<				

Modeling Economic Impacts

Eight parameters to consider

- Detailed investment
- Industry output
- Employment

The screenshot displays a software interface with three data tables, each preceded by a collapse icon and a set of control icons (checkmark, pencil, eraser, and refresh). The tables are titled 'Power Generation Employment', 'Power Generation Construction Employment', and 'Data Center Employment'. Each table has a header row with columns: 'Active', 'View', 'Category', 'Detail', and 'Region'. The 'Active' column contains a checked checkbox. The 'View' column contains a magnifying glass icon. The 'Category' column contains the text 'Employment'. The 'Detail' column contains the text 'Industry Employer'. The 'Region' column contains the text 'Lincoln County'. Below each table is a search bar with a left-pointing arrow.

Active	View	Category	Detail	Region
☒		Employment	Industry Employer	Lincoln County

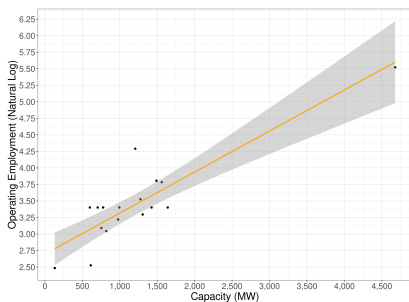
Active	View	Category	Detail	Region
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Modeling Economic Impacts

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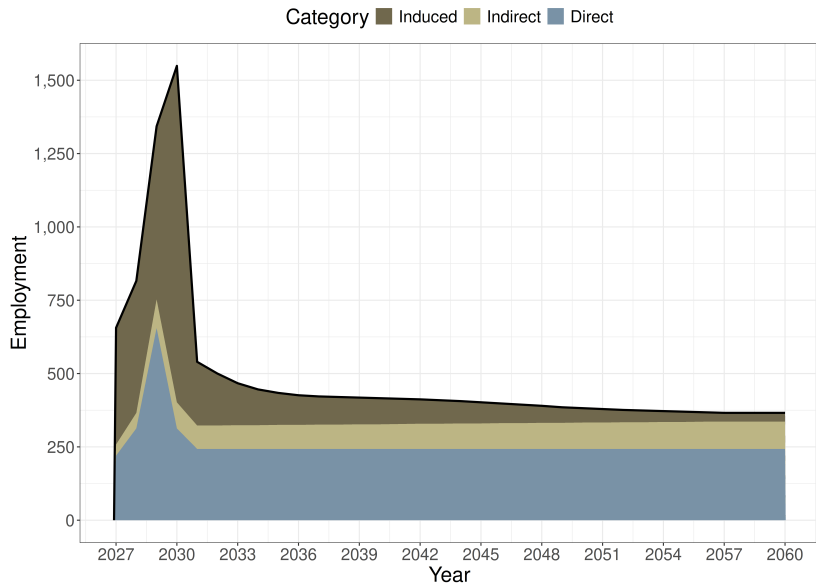
Modeling Tax Impacts

- Tax PI at a state-level
- WyEAD data to calibrate
- Tax exemptions for computing, power generation, battery, and air filtration equipment
- Sales taxes from out of state purchases

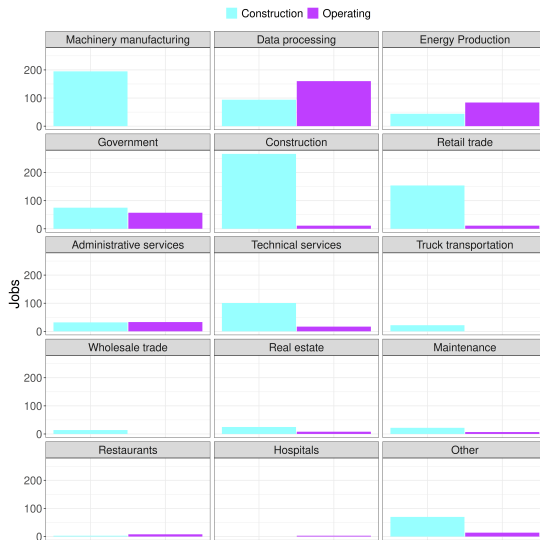
Budget
Setup a budget by adding revenue and expenditure items and entering budget values. Double-click on an item or

Revenues		Expenditures					
Add Revenue		Display Settings					
		Select which years are displayed on the budget grid					
		2001	2002	2003	2004	2005	2006
Edit	Revenue	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
	State Sales & Use Taxes - ...	158950					
	State Sales & Use Taxes - P...	476850					
	Severance Taxes, Coal	69700					
	Severance Taxes, Oil and N...	251900					
	Severance Taxes, Other	22100					
	PMRs, Coal	138400					
	PMRs, Other Minerals	302500					
	State Mineral Royalties	38300					
	Property Taxes, Coal	90000					
	Property Taxes, Oil and Gas	399700					
	Property Taxes, Other Min...	31300					
	Property Taxes, Agricultural	18200					
	Property Taxes, Commercial	298700					
	Property Taxes, Residential	351300					
	Investment Income, State ...	169600	149000	140000	140000	140500	143500
	Investment Income, Spend...	238700	238700	238700	238700	238700	238700

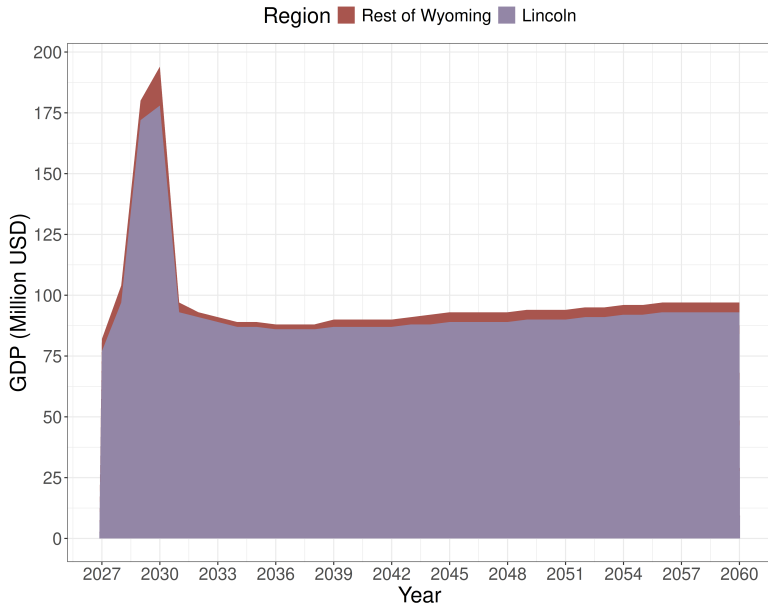
Job Outcomes



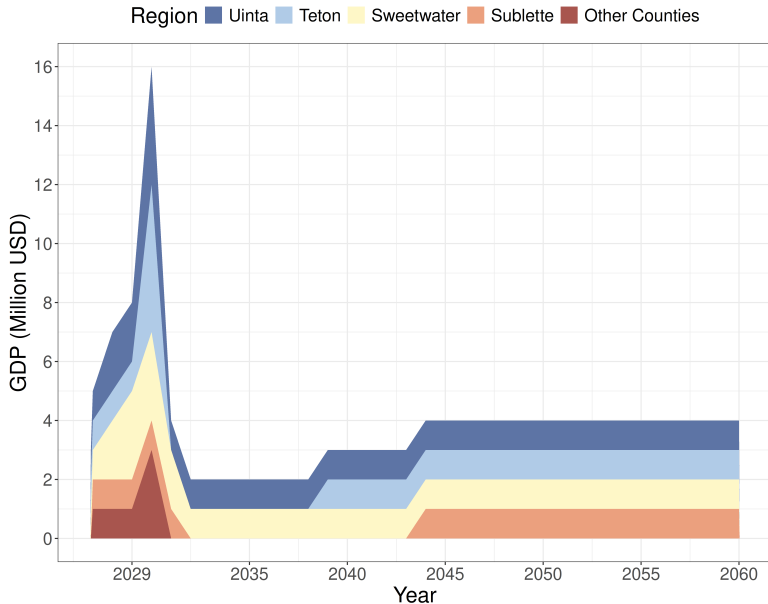
Job Outcomes



GDP



GDP



Thank you

For more information contact: agebben@uwyo.edu, or bkirkla1@uwyo.edu

Useful REMI Model Options

New Industry Output Variable

Define a variable that will adjust the compensation rate, productivity, and industry-specific intermediate demand for an existing industry.

Select a Base Industry

Base Industry

Detailed Column

Select a base industry that is similar to the new industry that you would like to create. The employment, output, wages, etc. generated by this new industry will be applied to the base industry but the intermediate demand will be adjusted to match the newly created industry.

Select a Base Year
 Year

Select a base year for the new variable. The new variable will create adjustments to the base variable using the differences between the custom and base IO columns in the base year.

Modify IO Column

IO Column	Base	Custom
Forestry and Logging	0.00000	0.00000
Fishing, hunting and trapping	0.00000	0.00000
Support activities for agriculture and forestry	0.00000	0.00000
Oil and gas extraction	0.00011	0.00011
Coal mining	0.00000	0.00000
Metal ore mining	0.00035	0.00035
Nonmetallic mineral mining and quarrying	0.00002	0.00002
Support activities for mining	0.00001	0.00001
Electric power generation, transmission and distribution	0.00579	0.32000
Natural gas distribution	0.00002	0.00002
Water, sewage and other systems	0.00003	0.00003
Construction	0.00043	0.00043
Sawmills and wood preservation	0.00083	0.00083
Veneer, plywood, and engineered wood product manufacturing	0.00201	0.00201
Other wood product manufacturing	0.00468	0.00468
Clay product and refractory manufacturing	0.00046	0.00046
Glass and glass product manufacturing	0.00006	0.00006
Cement and concrete product manufacturing	0.00397	0.00397

Industry Options

Specify the labor productivity and compensation rate for the custom industry output variable.

Nominal \$ (000s)	
Compensation Rate	179.476
Labor Productivity	514.235

Compare

Base Custom

Useful REMI Model Options



Definition

- The industry fuel cost in the region relative to the nation.



Variable

- The Fuel Cost policy variables change the Relative Fuel Cost to the specified user group. The Relative Fuel Cost of the specified fuel is then weighted by the purchased fuel weight for that fuel along with the other fuel types, resulting in substitution between types of fuel, to determine the aggregate relative fuel cost of the region. Fuel rate changes for consumers should be modeled by changing the Consumer Price consumption category.



Warning

- This variable will not directly alter employment in the fuel manufacturing sectors through a price elasticity response.



Details

- 156 Private Non-Farm Industries
- Electricity, Natural Gas, Residual