Understanding Oregon's Data Center Industry

An Evidence Based Assessment

Preliminary Findings Presented to the Oregon Data Center Advisory Committee

July 31, 2026

ECOnorthwest
IMPACT THROUGH INSIGHT

University of Virginia

Introductions

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Building Information for Oregon’s Data Center Policy Discussions

Data centers are increasingly important to Oregon’s economy, infrastructure, resources, and finances, but basic information about the industry remains difficult to establish.

Purpose: Provide objective information about Oregon's data centers that can help inform the public and improve future policy discussions, not to advocate for or against data center development.

Photo credit: SNEHIT PHOTO/Shutterstock.com

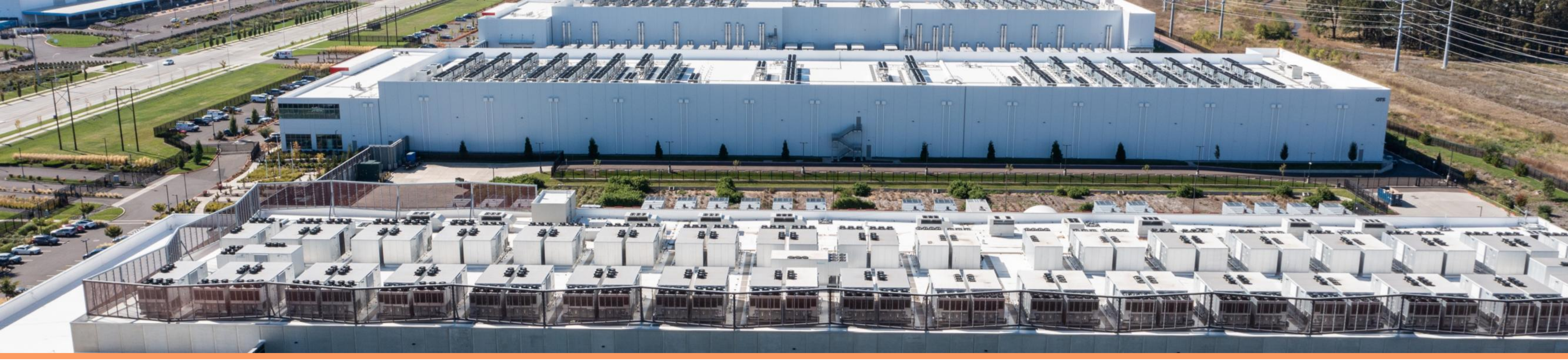

Photo credit: Hrach Hovhannisyan/Shutterstock.com

Oregon Data Center Industry Inventory

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Database: S&P/451 Facility Data

What Is in the Database?

- Facility status
- Starting date (construction vs. refurbishment)
- Location
- Physical scale
- Energy fields
- Facility type

Why it Matters

Counts alone are not enough. The dataset helps show how facility size and energy intensity changed over time.

Core Location and Size Variables

Facility count, status, effective year, gross building space, regional location, and data center type.

Core Variables to Describe Energy

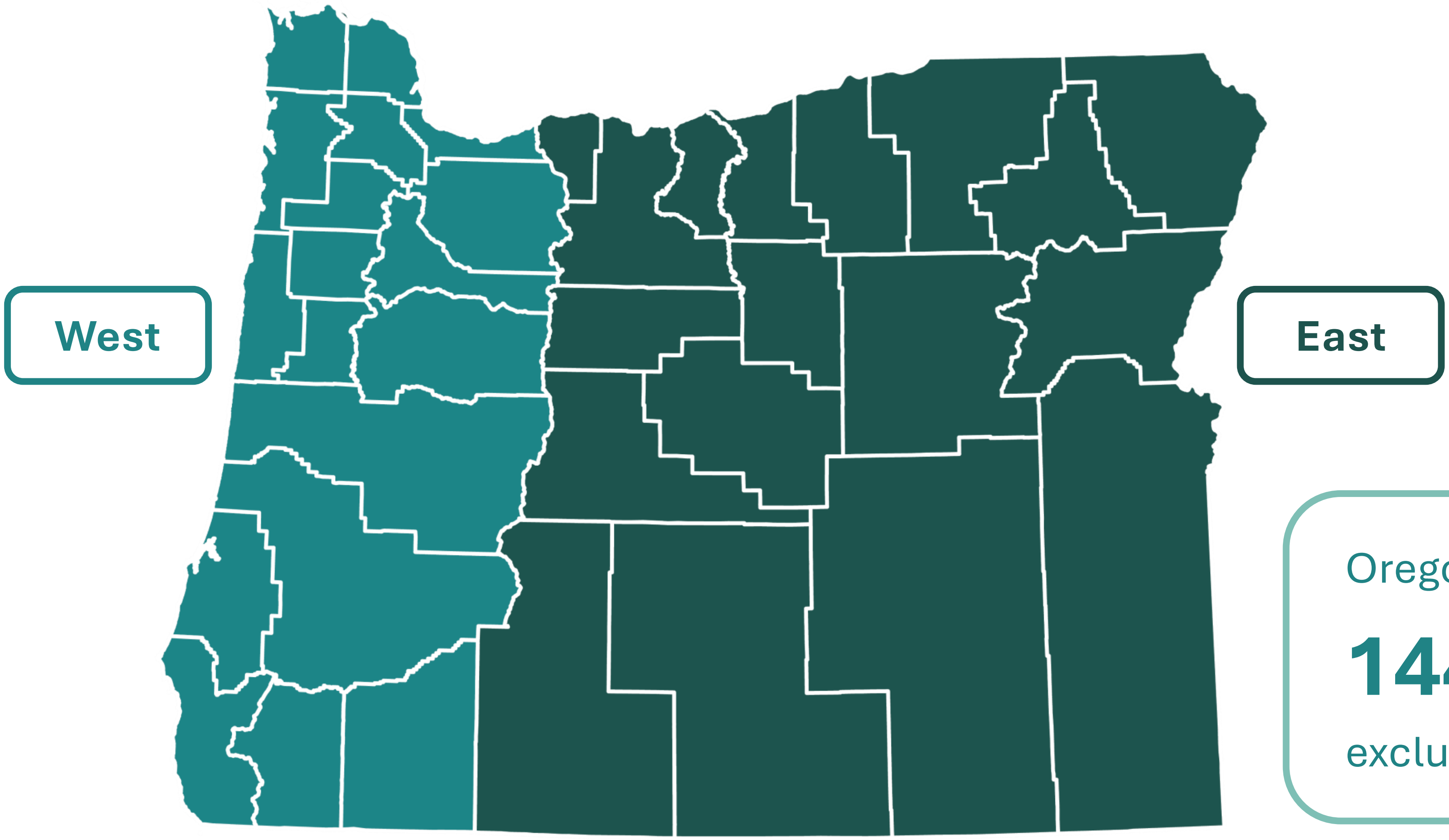
IT power, utilization, PUE, timing of new facilities, and demand-conversion assumptions.

Disclosure Rule

Single-facility counties are grouped as “Other Western Oregon” or “Other Eastern Oregon.”

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Oregon's Data Center Geographic Divide



Oregon has

144 total DCs

excluding decommissioned

Facilities Look Different Across The State

Operational

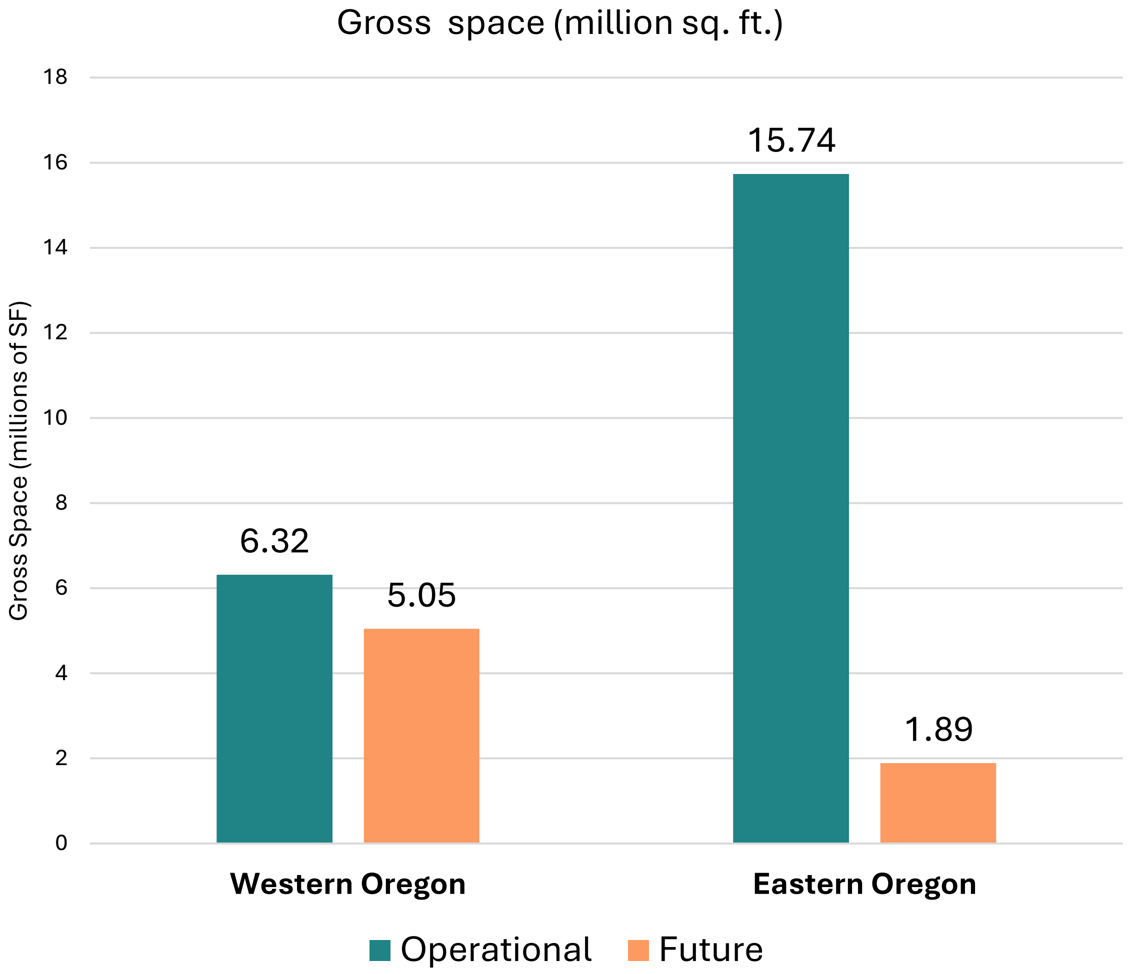
Total Operational: 111

WEST	EAST
41 facilities	**70 facilities**
6.32 million SF	15.74 million SF

Future

Total Operational: 32

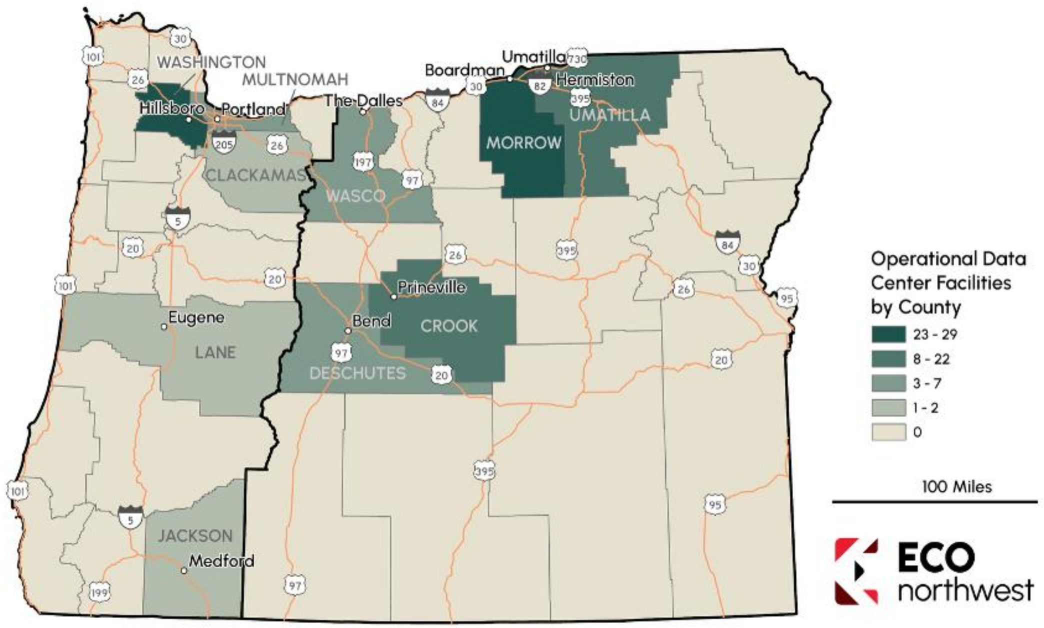
WEST	EAST
23 facilities	**9 facilities**
5.05 million SF	1.89 million SF



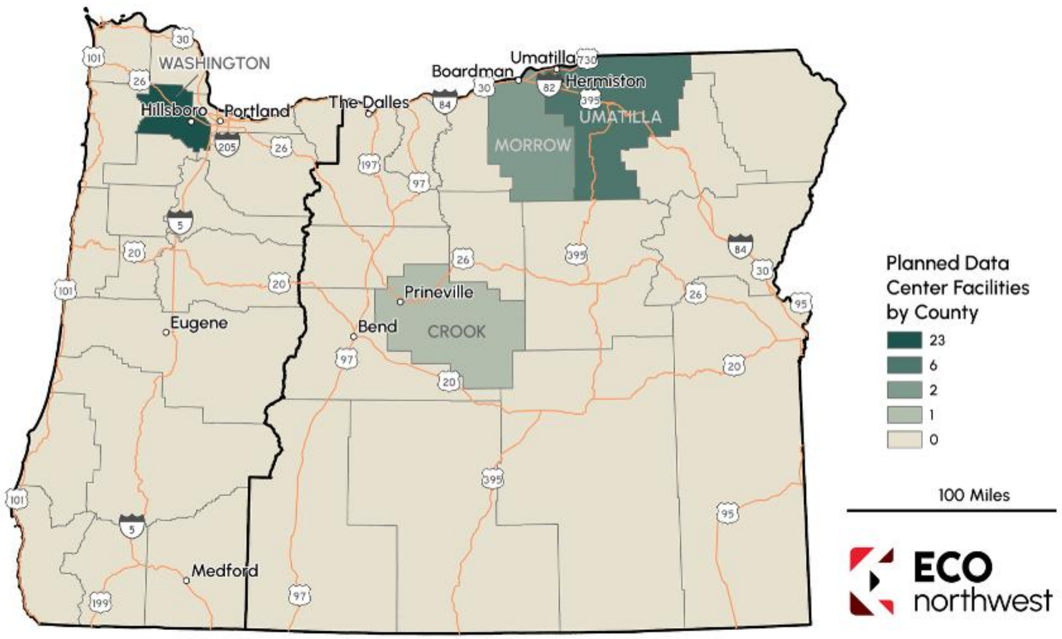
Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Facility Growth is Concentrated in the West

Oregon has a large installed base of data centers, with a meaningful pipeline still to come.



Operational DCs



Future DCs

Expected physical growth in the next five years:

West 80% **East 12%**

All results are preliminary and subject to refinement. Final results and supporting technical documentation will be provided in a future report.

Facility Types

Retail

Multi-tenant facilities serving several smaller customers. Usually smaller footprints and lower average power intensity.

Wholesale

Large blocks of space and power leased to major tenants. A key part of Oregon's current and future market.

Hyperscale

Very large facilities linked to cloud and AI-scale computing. These dominate Oregon's installed capacity.

Telco

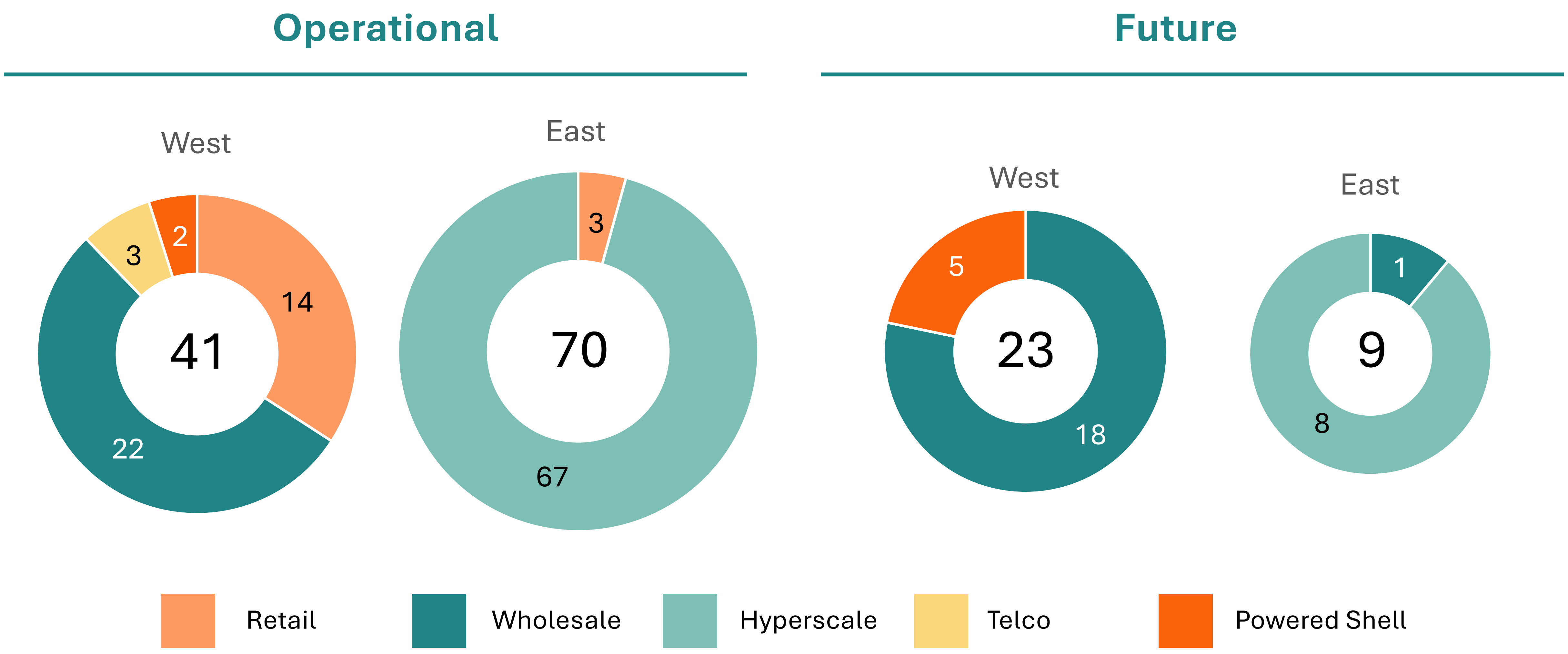
Facilities that support telecommunications and network exchange functions. Typically small in physical scale.

Powered Shell

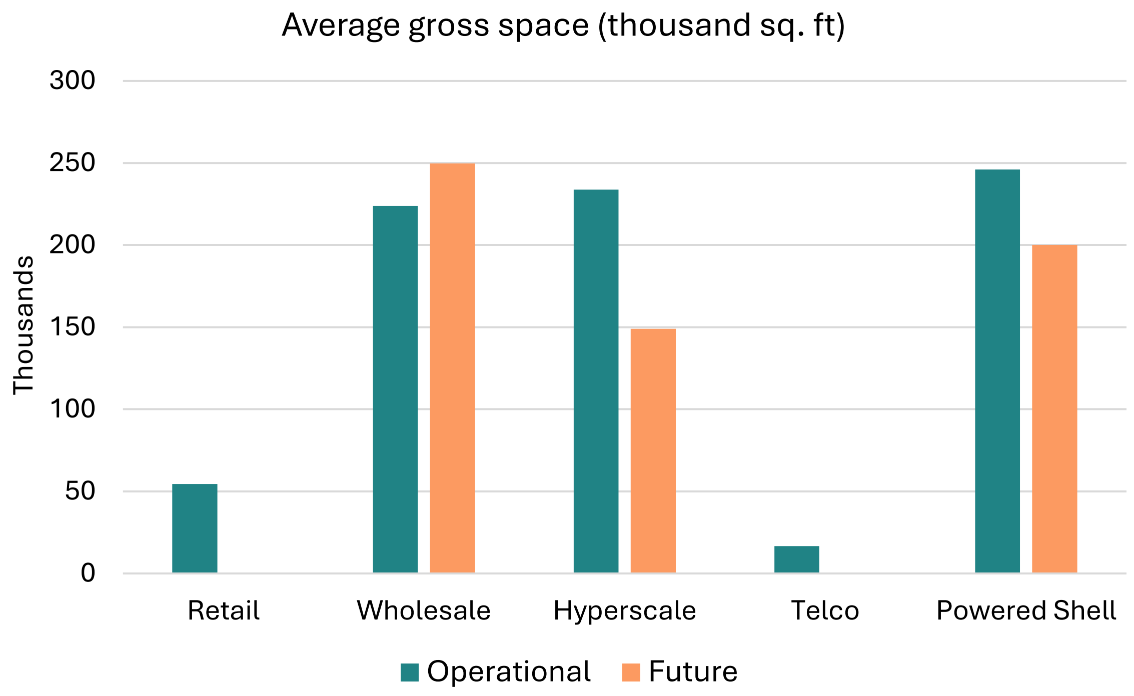
Buildings prepared for data center use, often with power and core infrastructure in place before full IT buildout.

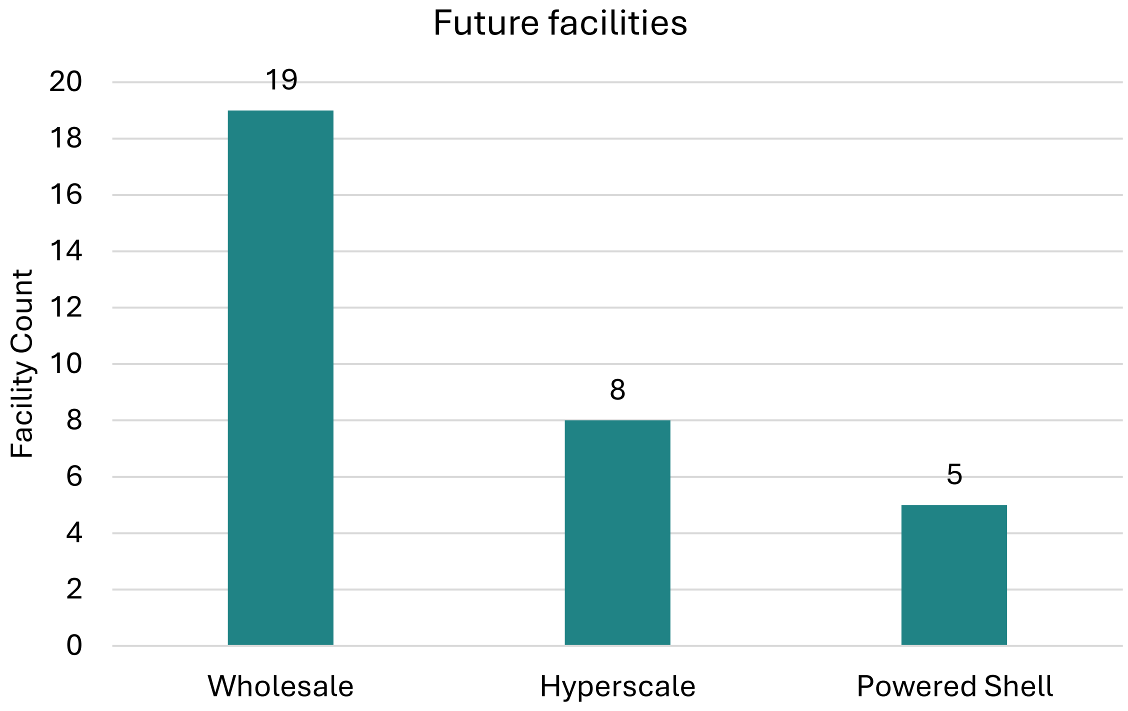
The shift toward hyperscale, wholesale, and powered shell facilities is one reason Oregon's data center footprint has become much more consequential.

Facility Types, continued



Data Center Types Help Explain The Scale Shift





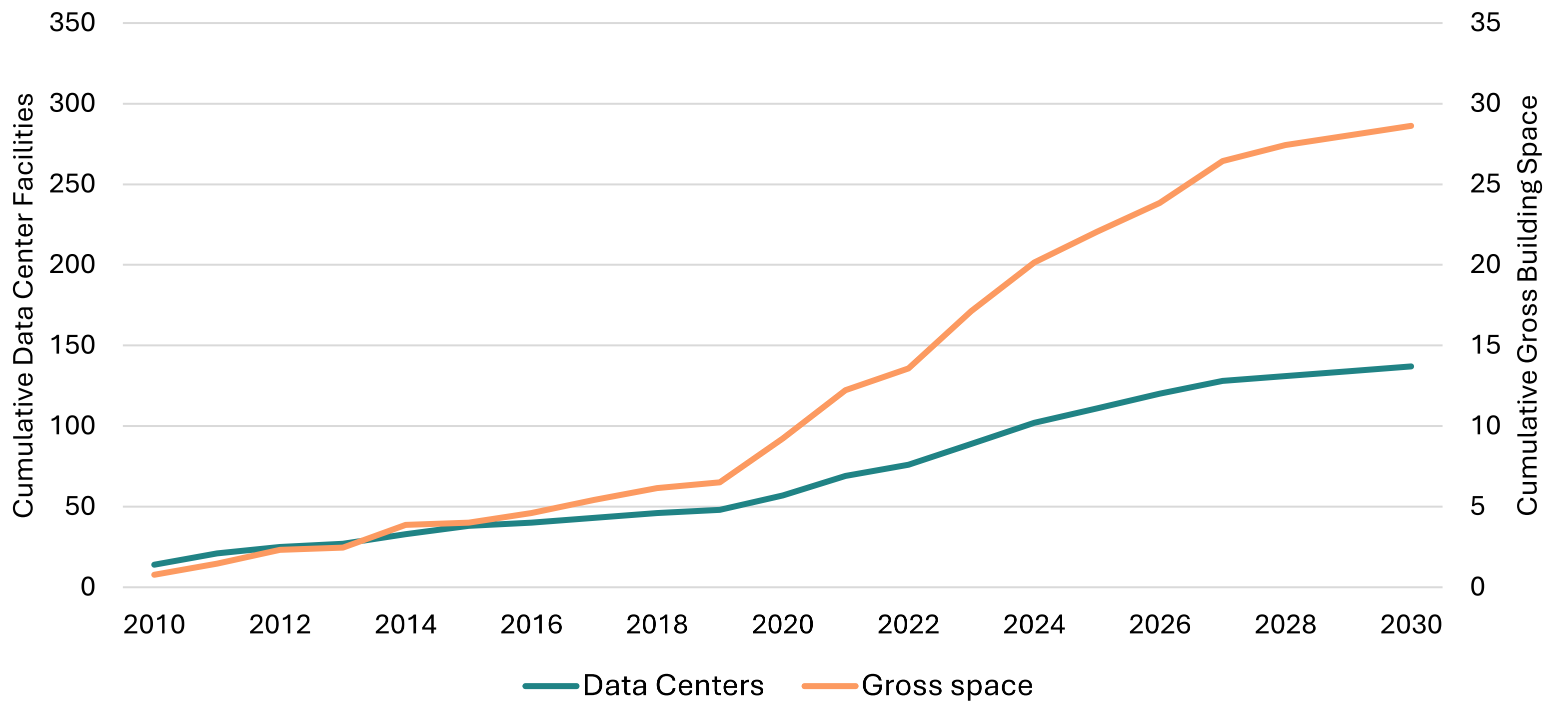
Wholesale, hyperscale, and powered shell facilities are dramatically larger than retail and telco facilities.

The near-term pipeline is dominated by wholesale, followed by hyperscale and powered shell facilities.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Why Relevance Increased:
Gross Building Space Grew Faster Than Facility Counts

Oregon did not become more exposed to data centers only because more facilities were added. It became more exposed because newer facilities were much larger.

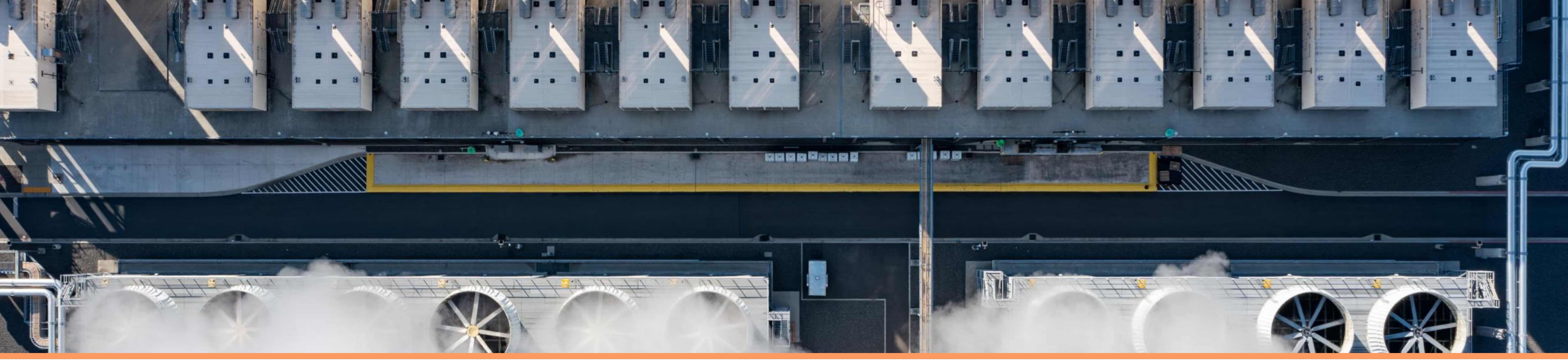


Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

How to read the figure

- The left axis tracks cumulative DC count.
- The right axis tracks cumulative gross building space.
- The gap widens after 2020: the building-space curve climbs faster than the count curve.

Larger facilities, not just more facilities, explain the change.



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The Economics of Oregon Data Centers

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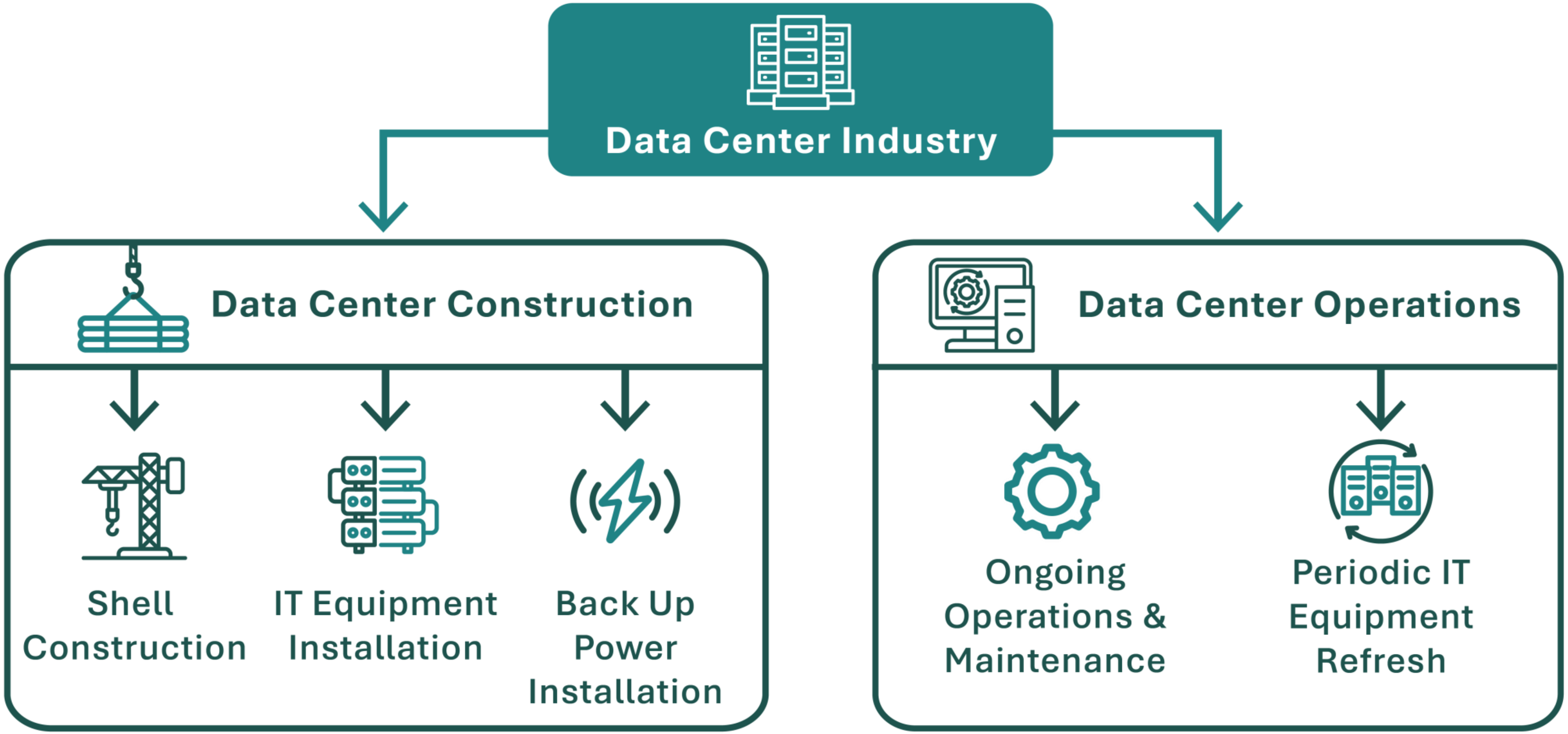
How Data Centers Generate Economic Activity Over Their Life Cycle



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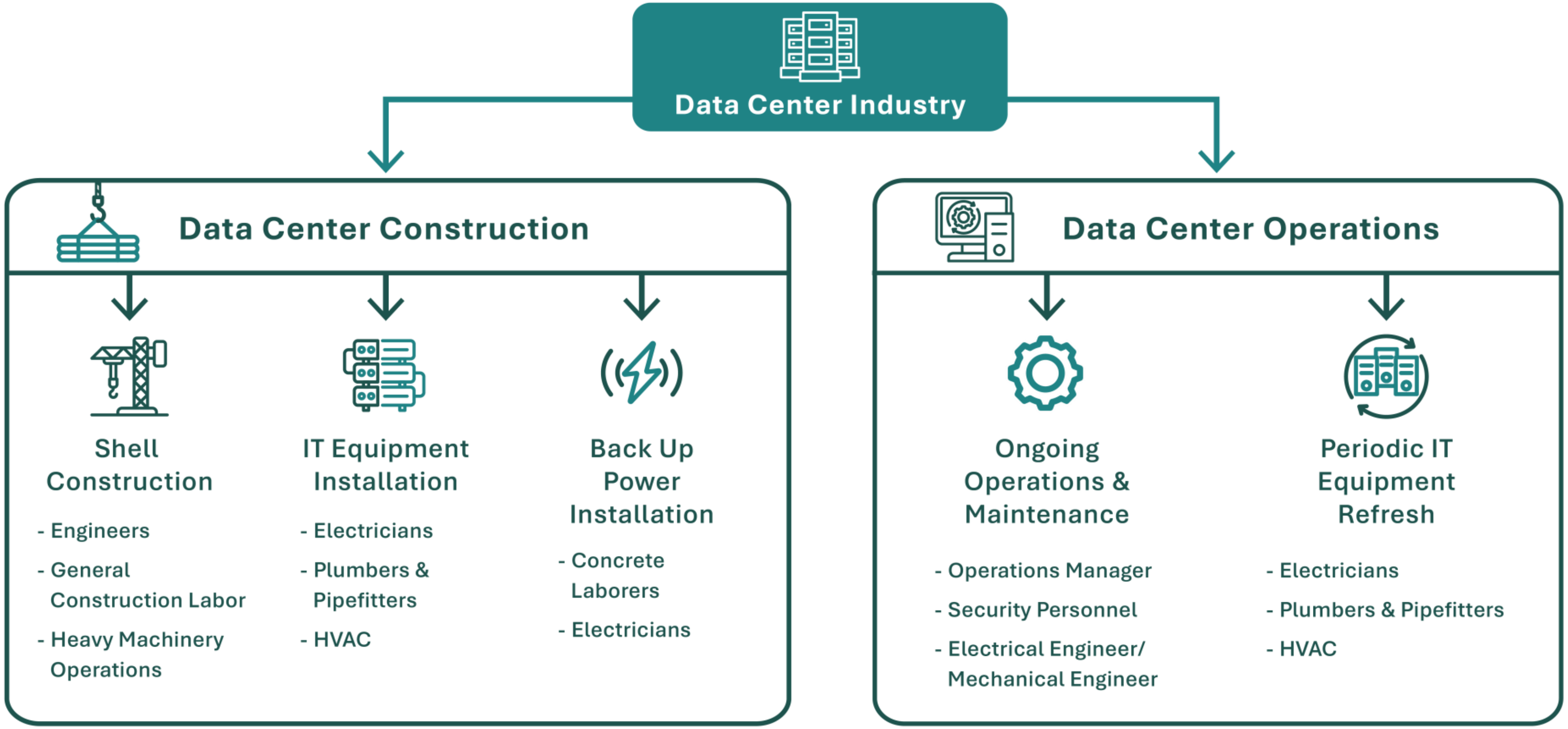
How Data Centers Support Employment Over Their Life Cycle



Jobs at a data centers include construction related employment and operational related employment at different times in the data center life cycle.

Data Center Employment is Not Defined by One Industry

Employment is concentrated in three data center industries

Data Processing Industry and Related Services

These businesses store, organize, and process data for customers. But do not necessarily own or operate data centers.

Computer System Design

These businesses design software, manages computer connections to software and cloud systems.

Telecommunications

These businesses provide phone, internet, and other communications services requiring data storage.

Operational Employment:

On-site Operators

NOT Contractors

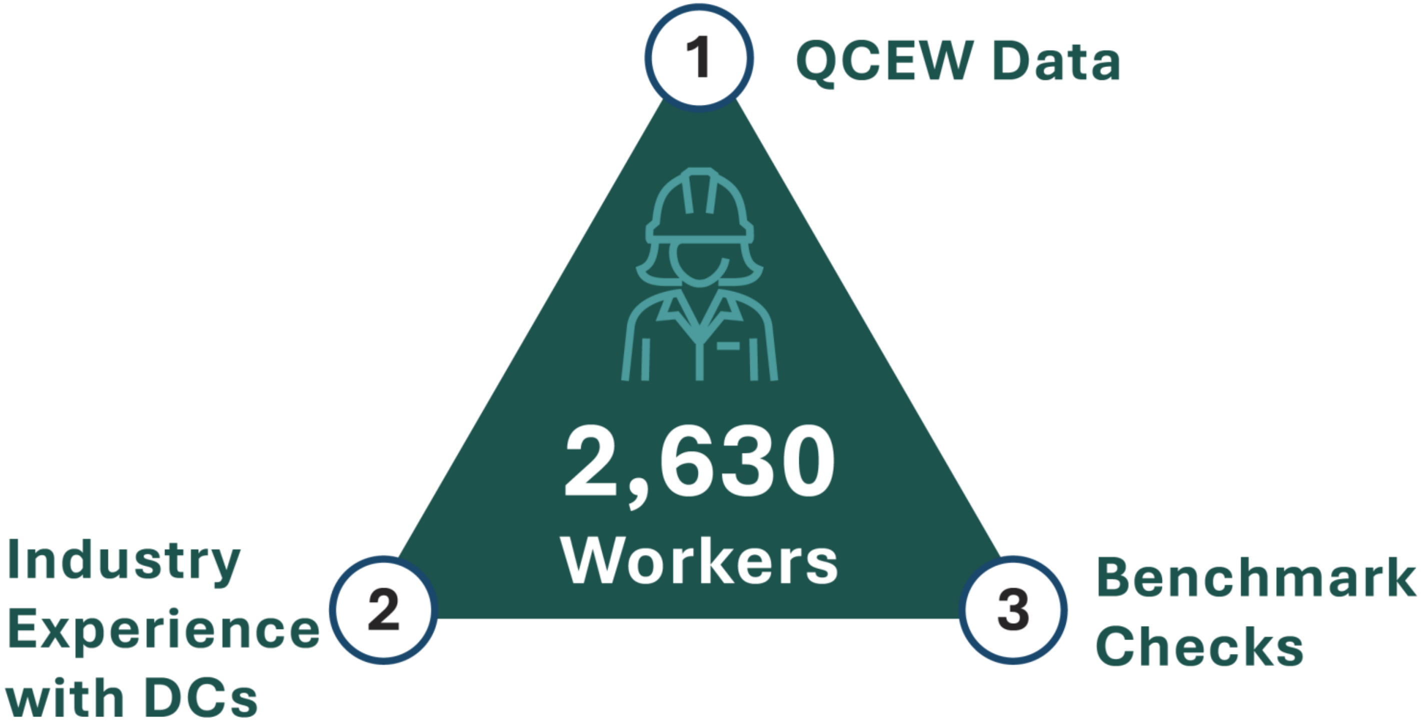
(captured separately through economic impact modeling)

NOT Temporary Construction Workers

NOT Corporate Staff

Operational Data Center Employment Was Estimated by Triangulating Multiple Sources

Verified Facility Information



QCEW is used as the primary estimate; the other methods test whether the result is plausible and internally consistent.

Source: OED QCEW, 2024; ECOnorthwest analysis.
Employment values rounded

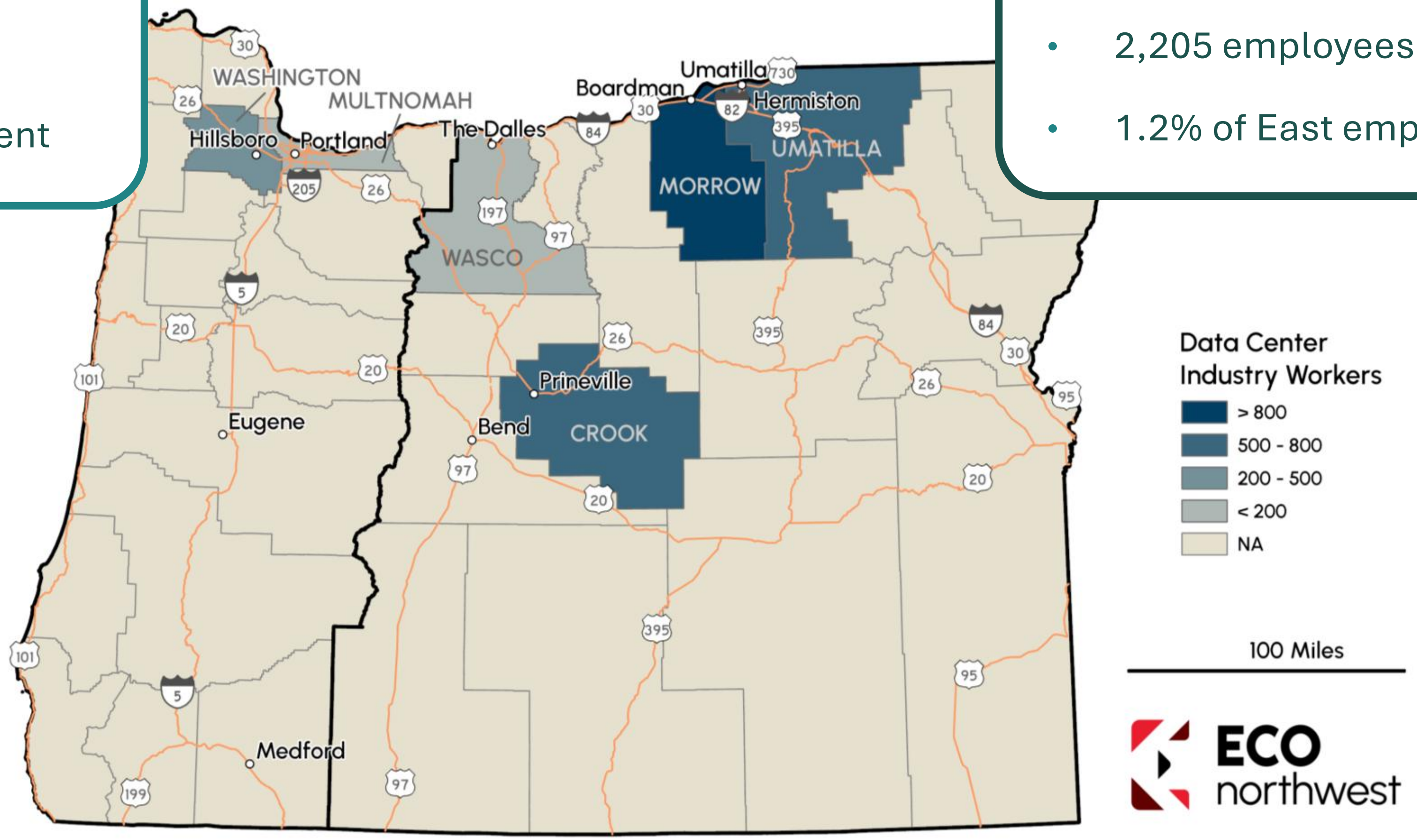
Operational Employment is Concentrated in Eastern Oregon

Western Oregon

- 425 employees
- 0.03% of West employment

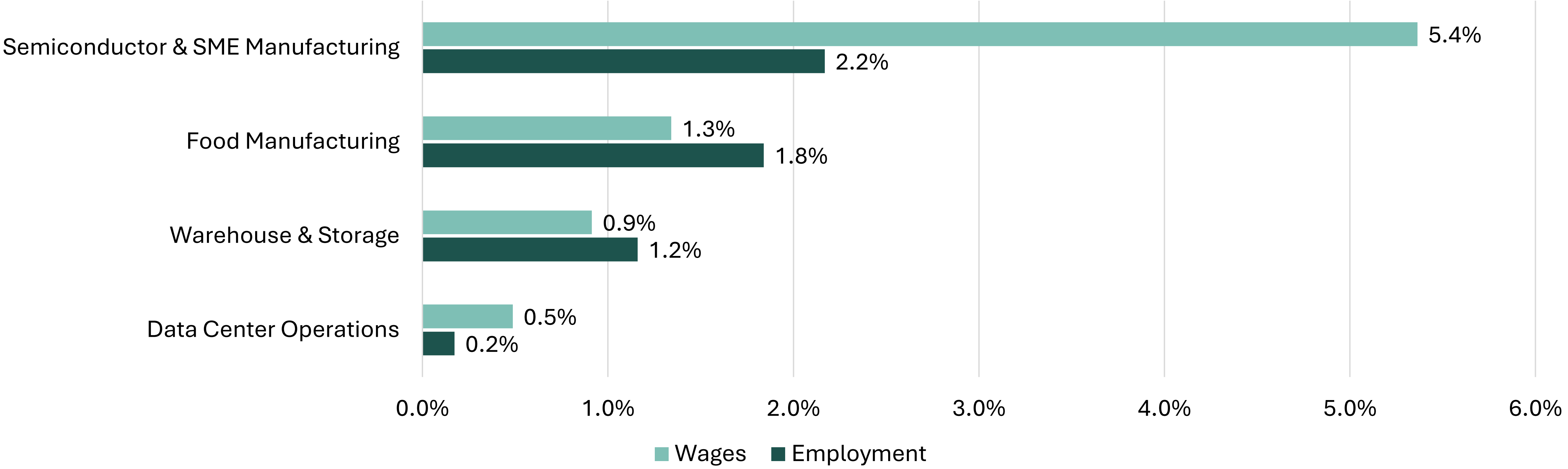
Eastern Oregon

- 2,205 employees
- 1.2% of East employment



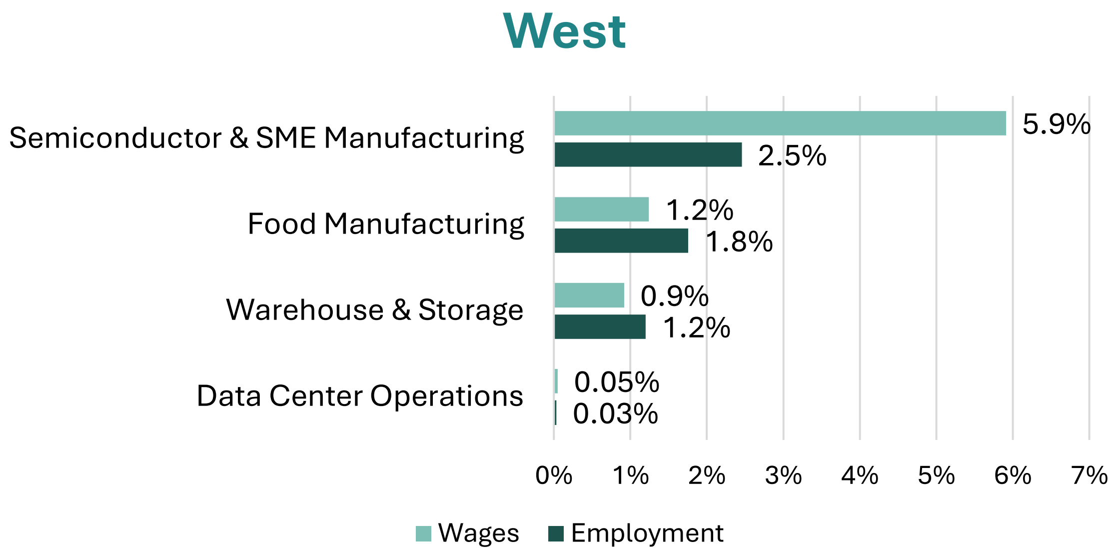
Source: OED QCEW, 2024; ECOnorthwest analysis. Preliminary draft.

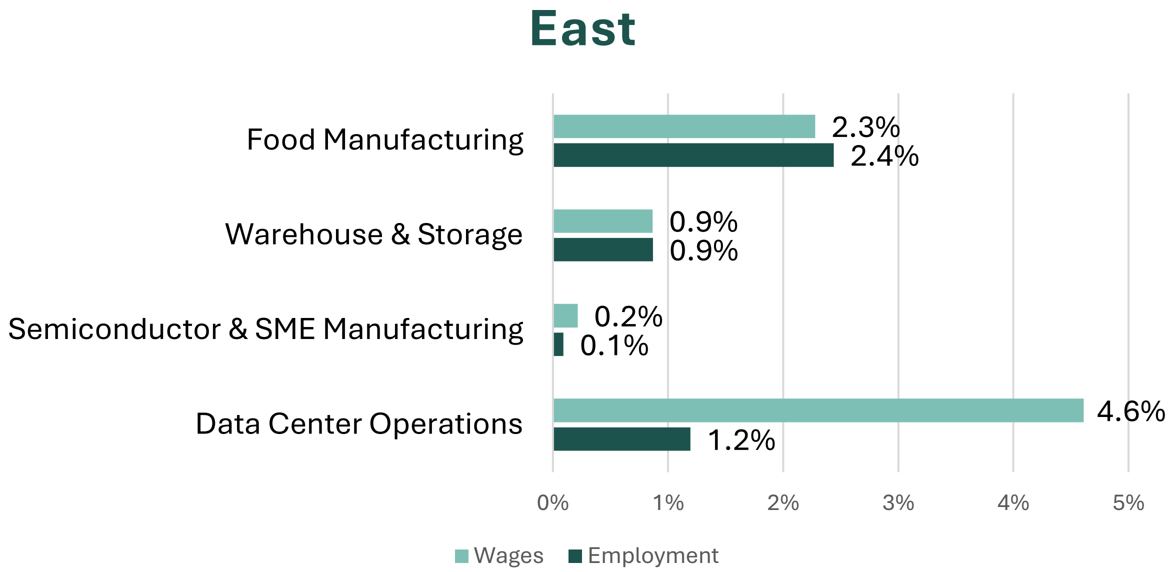
Data Centers Account for a Small Share of Statewide Employment and Wages



Estimated data center operational employment comprises a smaller share of statewide employment and wages compared with historically land intensive or incentivized industries.

Data Centers Account for a Larger Share of Employment and Wages in Eastern Oregon





West Example:

Washington County employment: ~0.09%

East Example:

Morrow County employment: ~15%

Estimated data center operations employment and wages contribute a meaningful share of Eastern Oregon jobs and wages.

Photo credit: Hrach Hovhannisyan/Shutterstock.com

Economic Contributions of Oregon Data Centers

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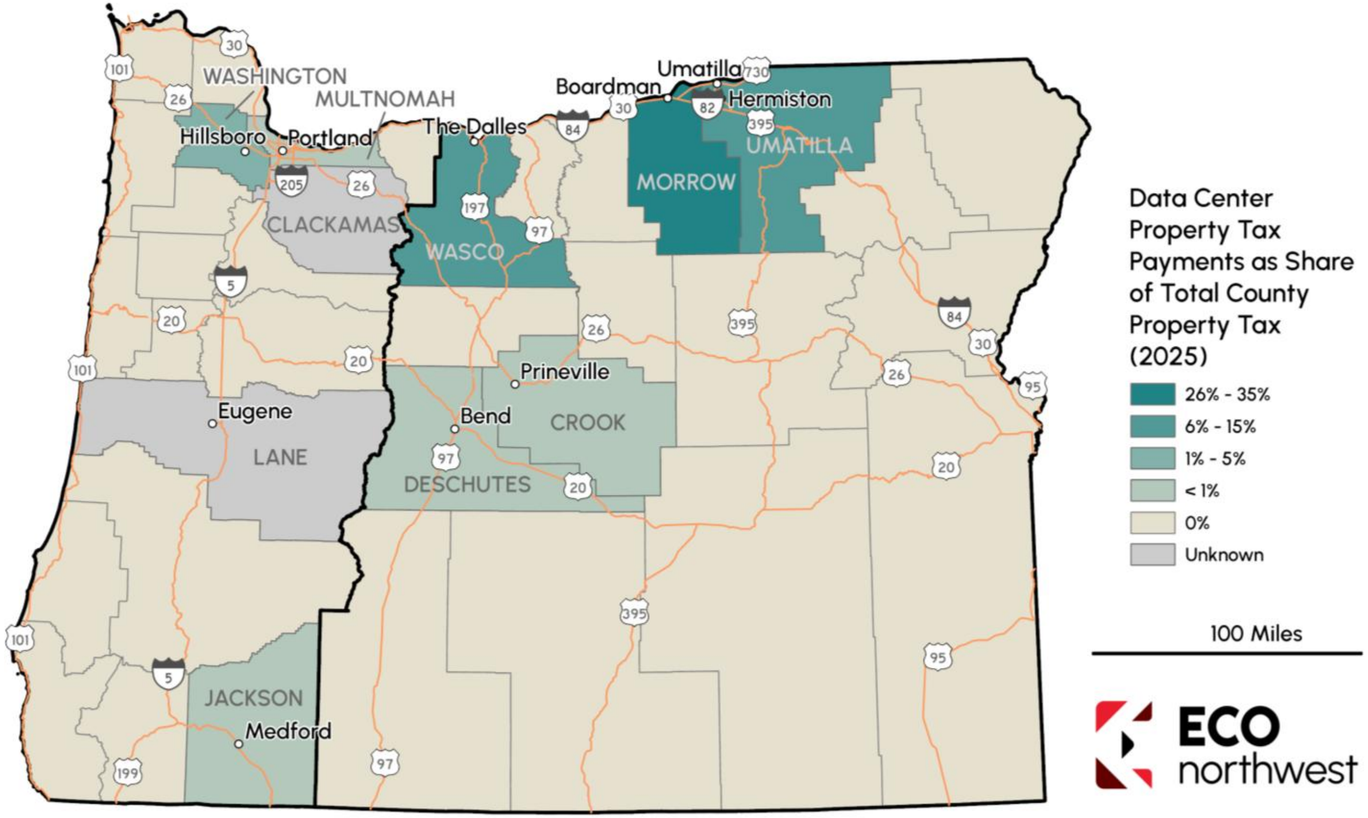
Data Centers Provide a Significant Share of Property Tax Revenue in Some Host Counties

West: $22.6M

Washington County

- $20.58 million collected on DCs
- ~1.2% of total tax collection



East: $37.6M

Morrow County

- $22.96 million collected on DCs
- ~32% of total tax collection

What's not included here:

Impact fees | School/student related fees | Any negotiated payments or infrastructure developments

All results are preliminary and subject to refinement. Final results and supporting technical documentation will be provided in a future report.

Data Centers Generate High Value Added Relative to Their Employment

Data Center Operations

DIRECT

- **2,630** Employment
- **$622M** Labor Income
- **$2.4B** Value Added

Statewide Impact of DC Operations and Other Industries

	Semiconductor & SME Manufacturing	Food Manufacturing	Warehouse & Storage	Data Center Operations
Employment	1.0%	1.2%	0.7%	**0.1%**
Labor Income	2.9%	1.0%	0.6%	**0.3%**
Value Added	3.2%	1.0%	0.4%	**0.7%**

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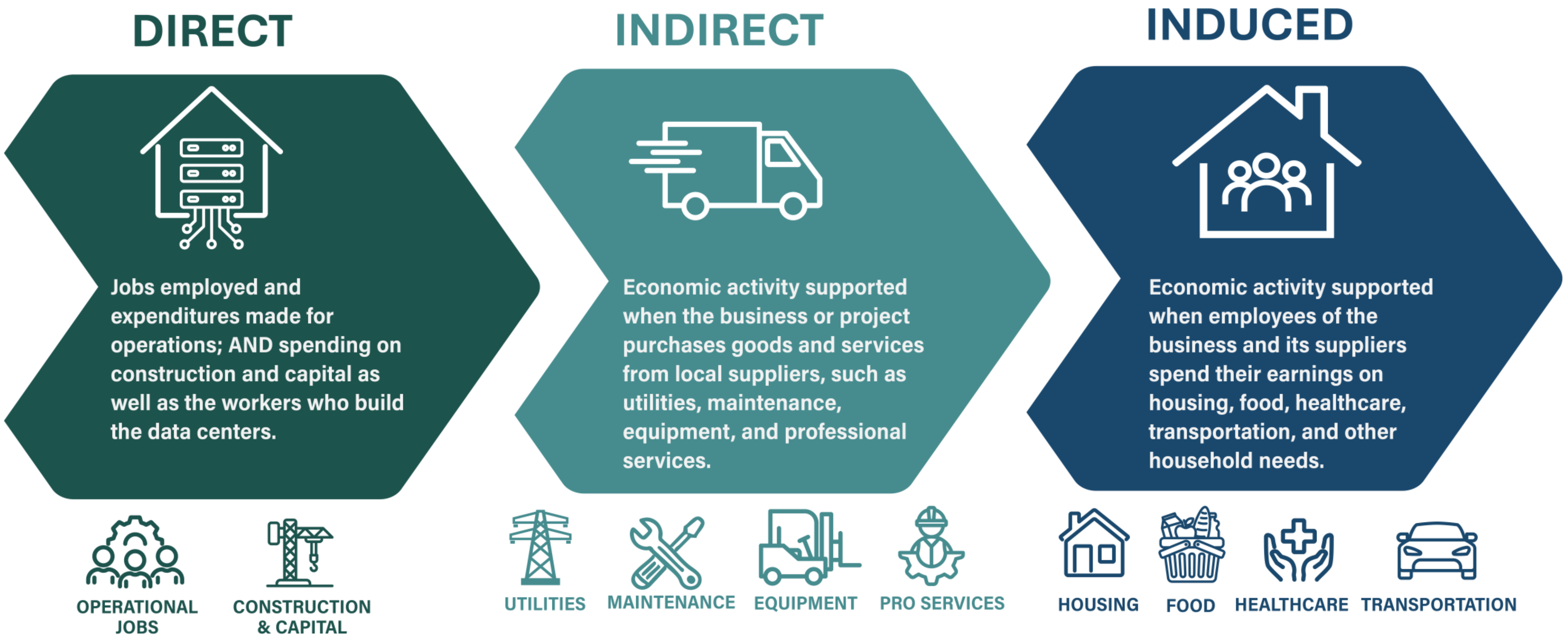
All results are preliminary and subject to refinement. Final results and supporting technical documentation will be provided in a future report.

Operational Spending
Supports Activity Throughout Oregon’s Economy

Multiplier Effects of Oregon’s Data Center Industry

Cascade of Direct, Indirect and Induced Impacts



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Current Data Center Operations Support an Estimated $3.5 Billion in Annual Economic Value

CONTRIBUTION TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED
Direct	2,630	$622M	$2.4B
Indirect	4,200	$335M	$687M
Induced	3,600	$216M	$393M
TOTAL	**10,400**	**$1.17B**	**$3.49B**

Data center operations support of 1.0% of economic activity in Oregon.

For every $1 dollar spent by data centers for operations, an additional $0.45 is supported elsewhere in the statewide economy.

Data source: IMPLAN, 2024; ECOnorthwest analysis. Preliminary draft
Note: Monetary values in millions of 2025 dollars.

Data Centers Have a Much Larger Economic Presence in Eastern Oregon

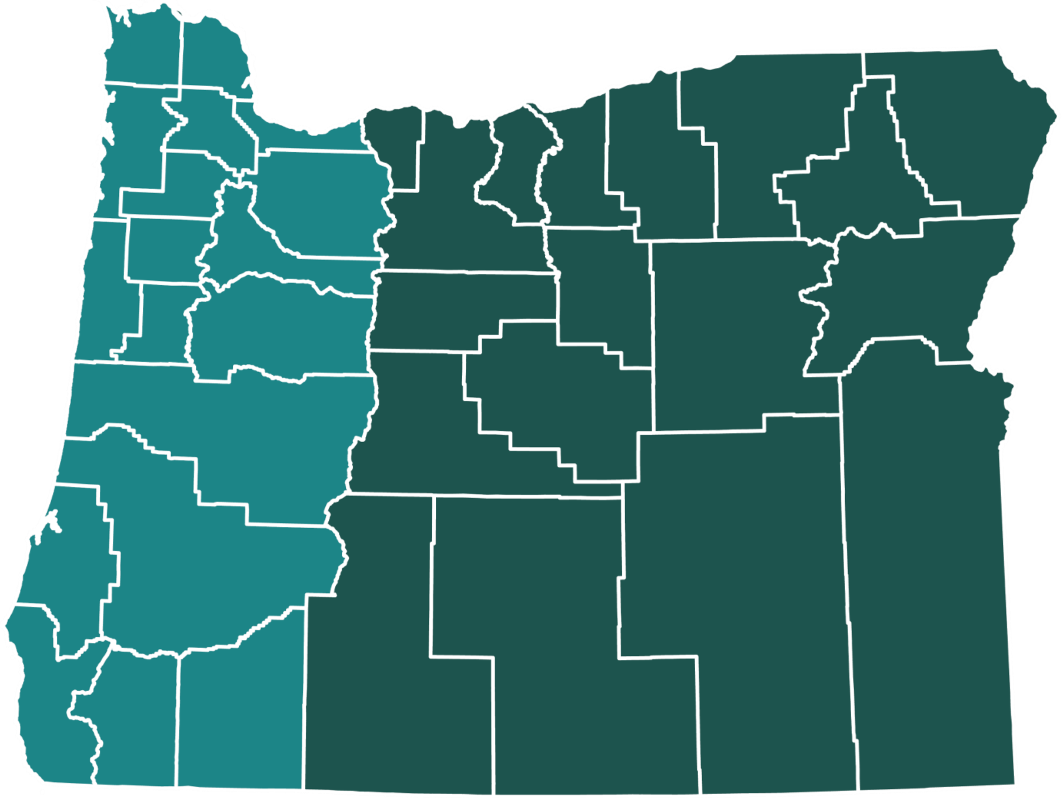
Across Oregon, data center operations support **TOTAL** regional economic contributions of:

Western Oregon

0.08%
Employment

0.09%
Labor Income

0.13%
Value Added



Eastern Oregon

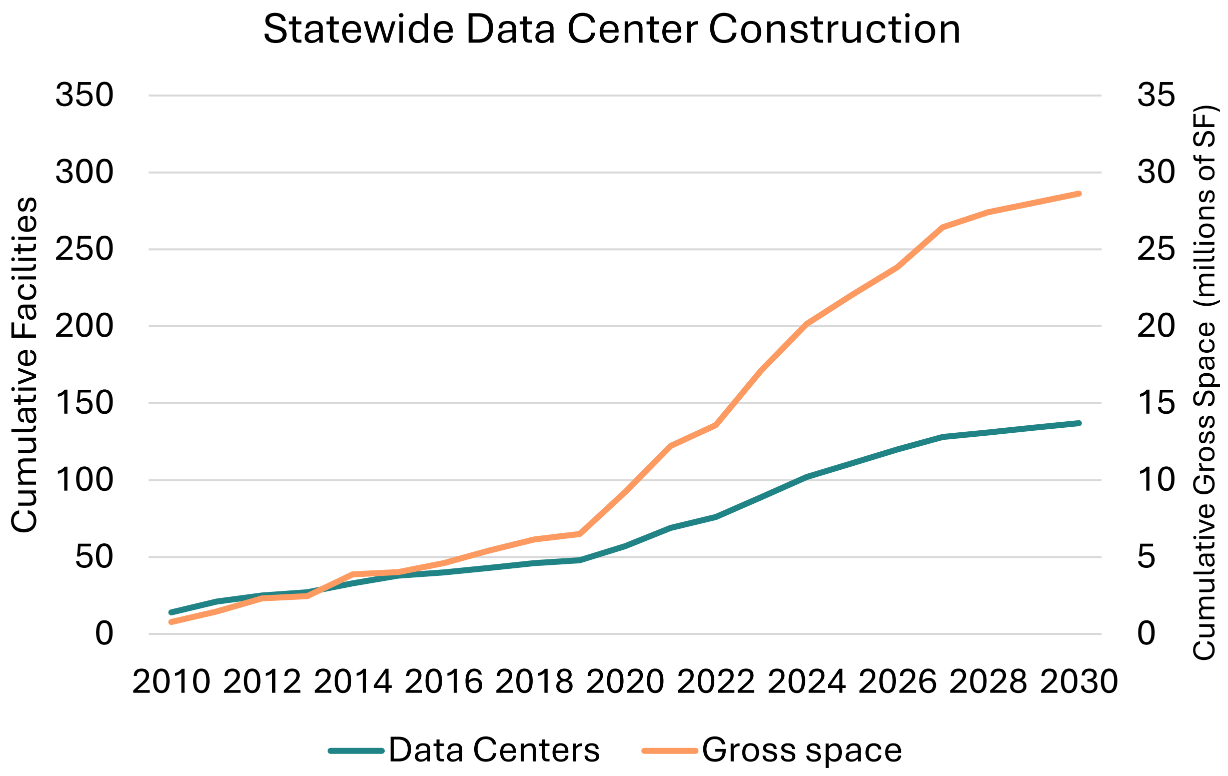
4.6%
Employment

4.4%
Labor Income

8.5%
Output

Data source: IMPLAN, 2024; ECOnorthwest analysis. Preliminary draft
Note: Monetary values in millions of 2025 dollars.

Successive Projects Have Made Data Center Construction Ongoing Activity



Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Recent Data Center Construction Has Supported Substantial Annual Economic Activity

CONTRIBUTION TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED
Direct	3,900	$980M	$1.1B
Indirect	2,200	$179M	$285M
Induced	4,400	$272M	$493M
TOTAL	**10,500**	**$1.43B**	**$1.87B**

Recent data center construction supports of 0.6% of total economic activity in Oregon and 5.9% of the construction industry within the State.

For every $1 dollar spent by data centers for operations, an additional $0.71 is supported elsewhere in the statewide economy.

Data source: IMPLAN, 2024; ECOnorthwest analysis. Preliminary draft.

Note: Monetary values in millions of 2025 dollars.

Construction Activity Has a Larger Relative Economic Role in Eastern Oregon

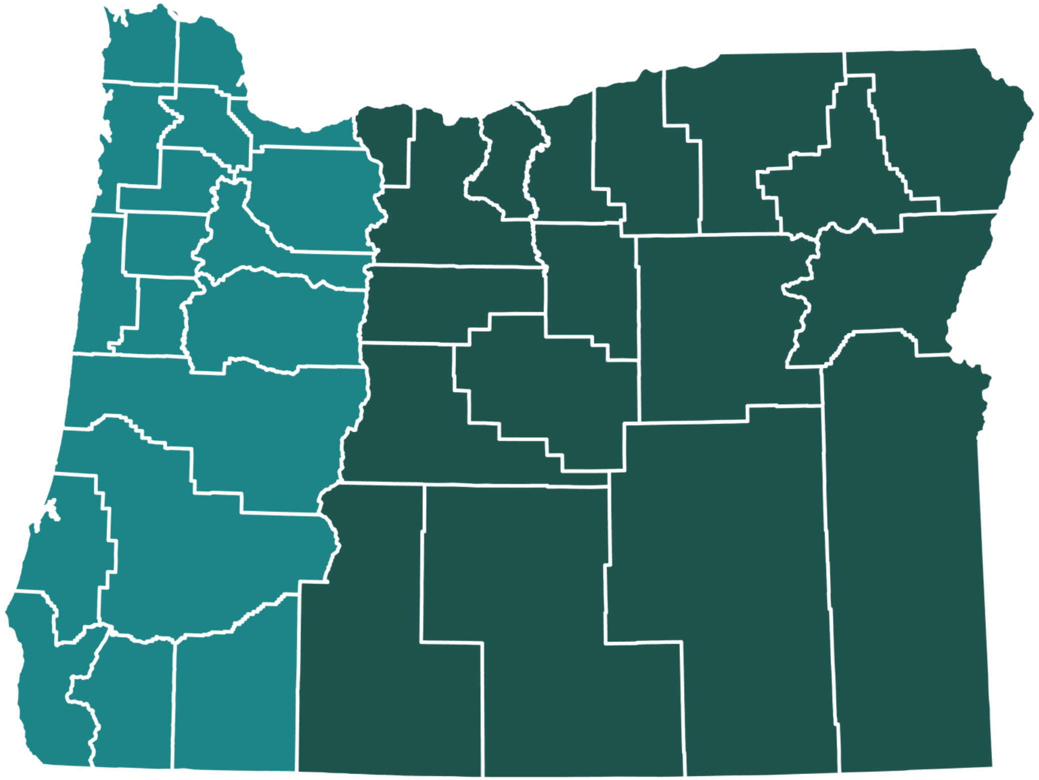
Annually, Oregon data center construction has supported
an average **TOTAL** regional economic contributions of:

Western Oregon

0.14%
Employment

0.22%
Labor Income

0.19%
Value Added



Eastern Oregon

2.1%
Employment

4.4%
Labor Income

3.6%
Value Added

Data source: IMPLAN, 2024; QCEW, 2024; UVA Weldon Cooper, 2025; ECOnorthwest analysis. Preliminary draft
Note: Monetary values in millions of 2025 dollars.

Operations and Construction Relative to Oregon's Economy

Oregon data center operations and construction **TOTAL** economic contributions as a share of statewide economic activity:

0.8%
Employment

1.2%
Labor Income

1.6%
Value Added

DIRECT	TOTAL
$3.49B	$5.35B

Almost one in every 100 jobs is related to data centers in Oregon.

All results are preliminary and subject to refinement. Final results and supporting technical documentation will be provided in a future report.

Future Economic Contributions Will Depend on Facility Type and Scale

Wholesale

60% of future projected facilities

30 average MWs (projected)

TOTAL economic contributions to the state:

	Construction	Operations
Employment	730	46
Labor Income	$95M	$4.2M
Value Added	$127M	$12.0M

Hyperscale

25% of future projected facilities

50 average MWs (projected)

TOTAL economic contributions to the state:

	Construction	Operations
Employment	1,200	209
Labor Income	$159M	$22.3M
Value Added	$212M	$58.2M

All results are preliminary and subject to refinement. Final results and supporting technical documentation will be provided in a future report.

Photo credit: Hrach Hovhannisyan/Shutterstock.com

Data Center Resource Use

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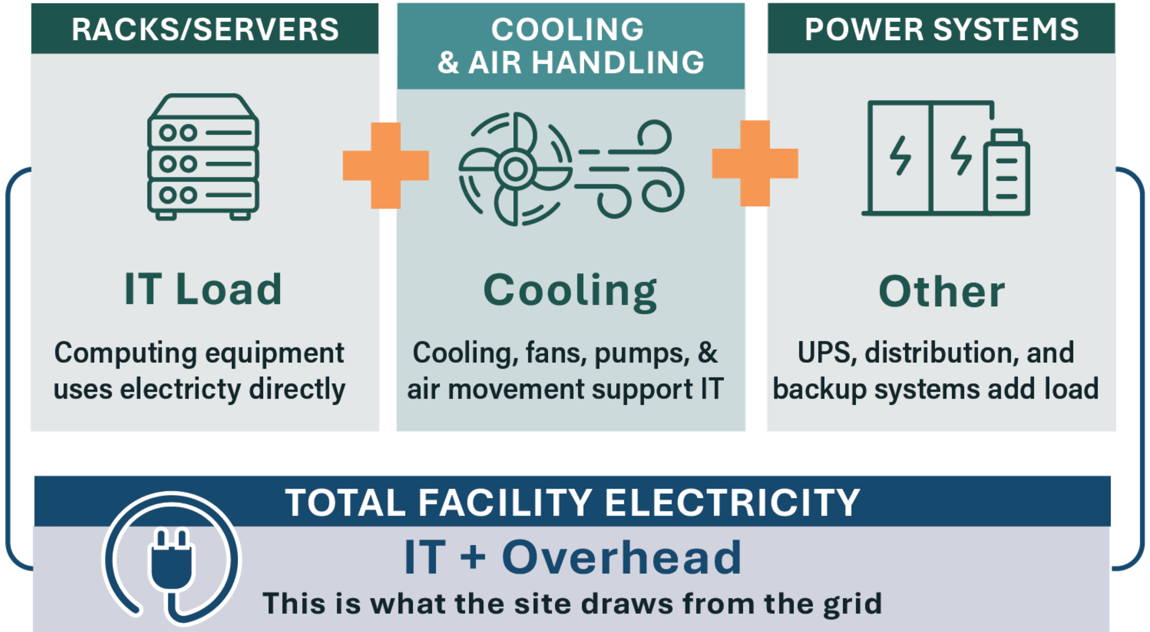
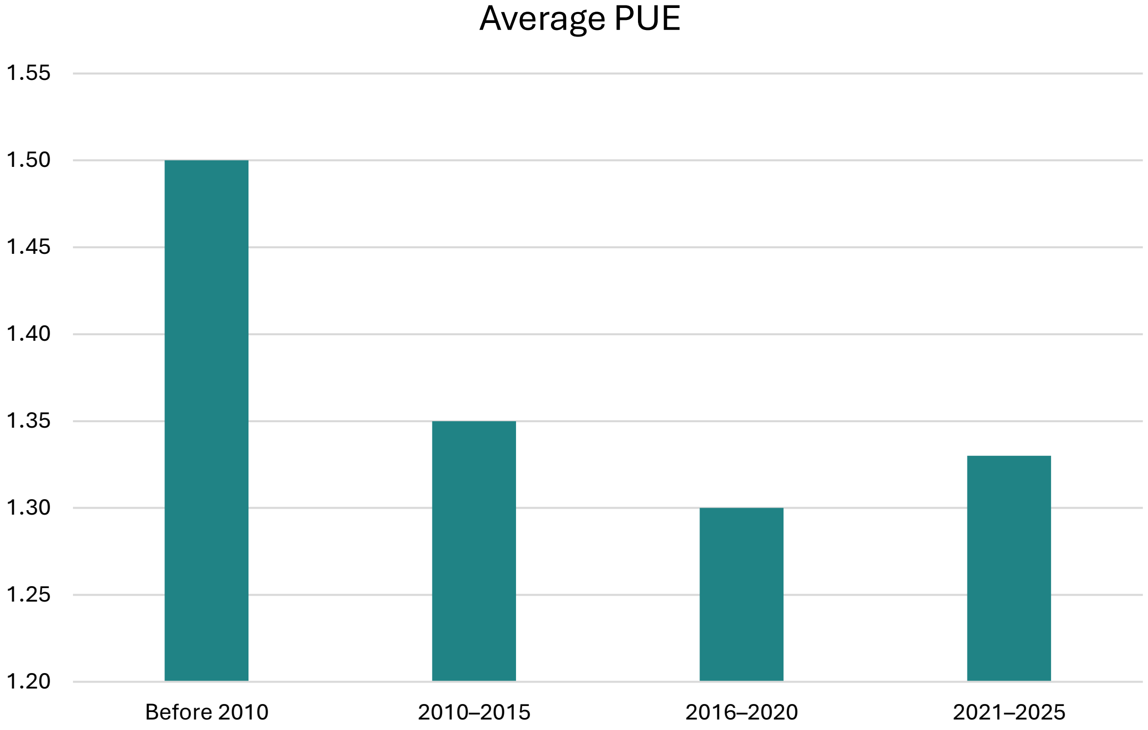
How a Data Center Uses Electricity: IT Load, Cooling, and PUE

Energy Use Inside a Data Center



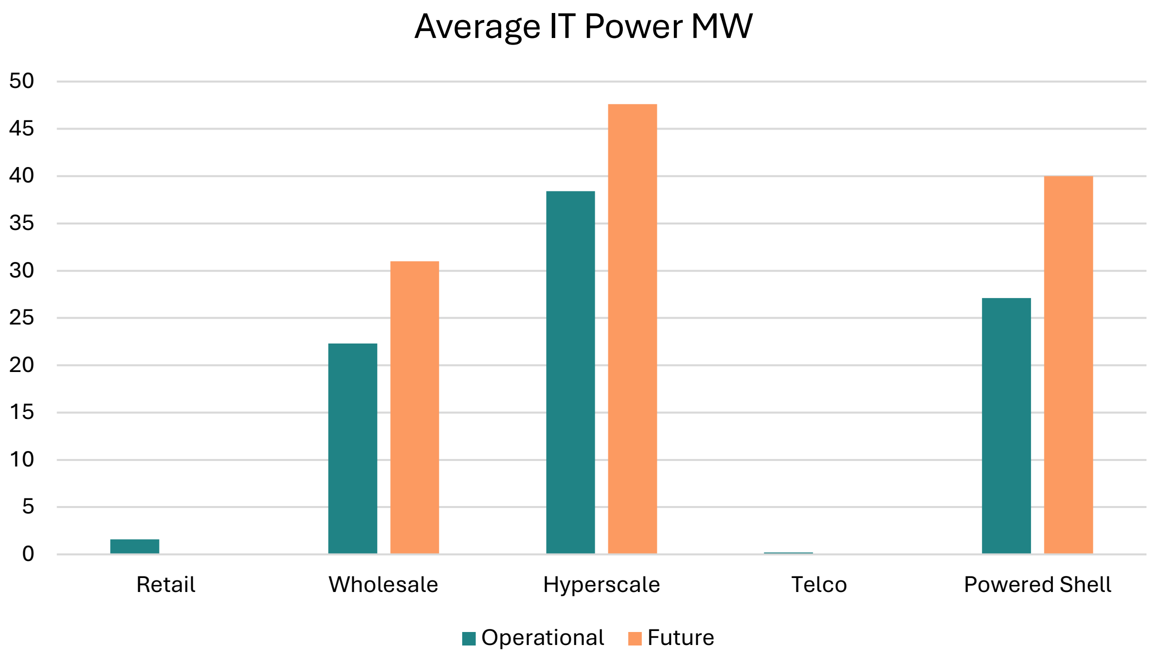


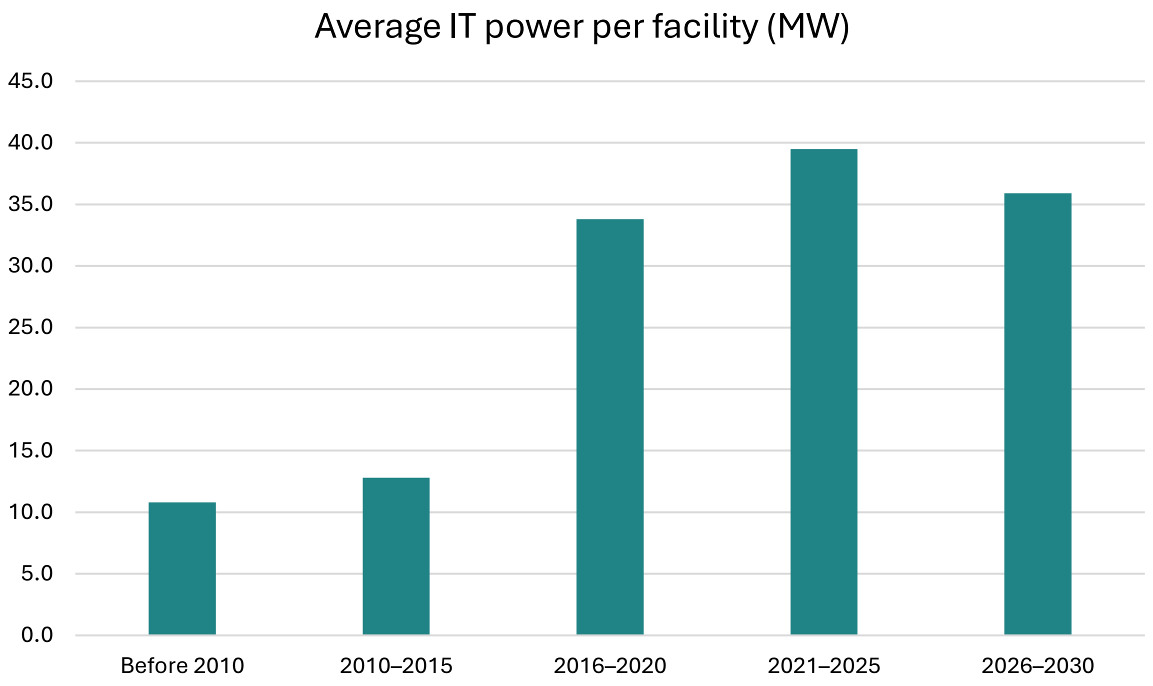
PUE = total facility energy ÷ IT energy. Lower PUE means relatively less overhead, not necessarily lower total consumption.

PUE has improved over time, which is good. But if facility size and IT capacity keep growing, total electricity use can still rise quickly.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Average Energy Requirements Are Increasing by Period and Type



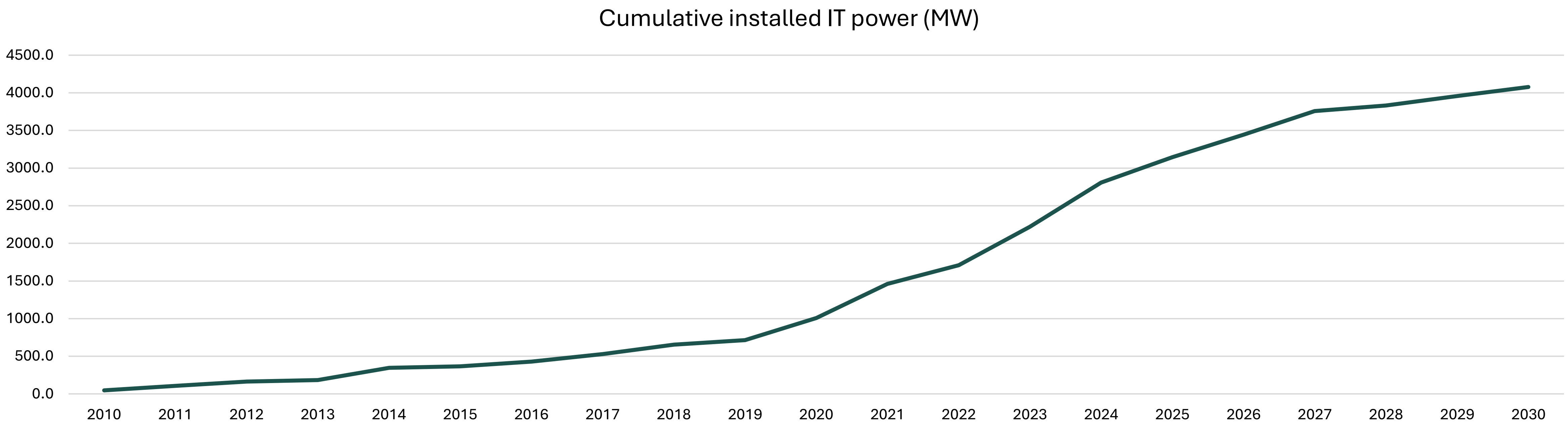


Average future hyperscale facilities (47.6 MW) use far more IT power than retail (1.6 MW) or telco (0.2 MW) facilities.

Facilities from 2021–2025 average more than three times the IT power of facilities from 2010–2015.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Installed IT Power:
Statewide Growth and Regional Concentration



Looking from 2010 to 2030 makes the acceleration after 2020 much easier to see.

Eastern Oregon holds most operational IT power; Western Oregon accounts for much of the identified 2026–2030 growth.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

From Power Requirements to Annual Electricity Demand

Conceptual Conversion

1. Installed IT Power

Start with the facility's power capacity.

2. Utilization

Adjust for how much of that capacity is actively used.

3. PUE

Account for cooling and other overhead beyond IT equipment.

4. Hours in a Year

Translate power into annual energy.

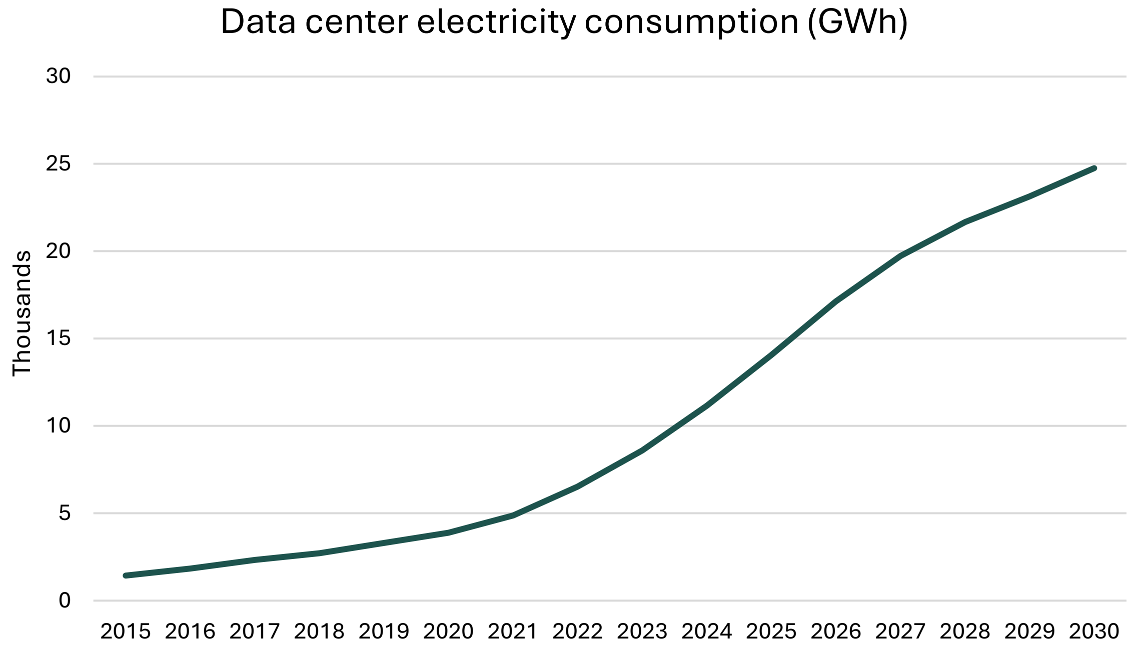
5. Load Factor

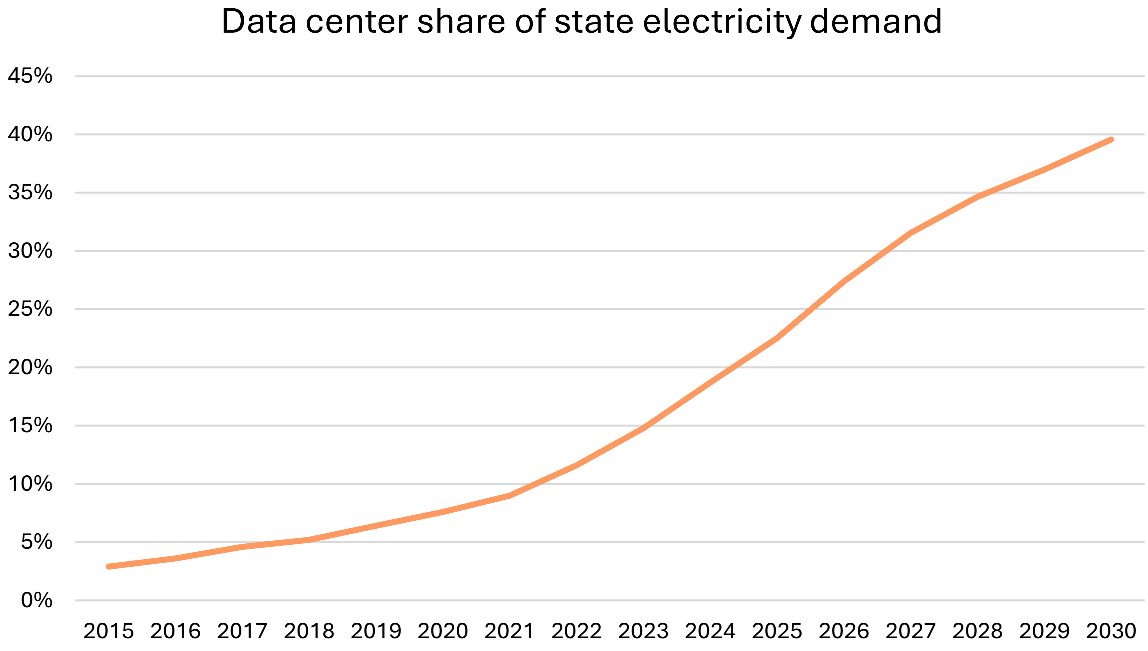
Avoid assuming full-capacity operation every hour.

This approach avoids overstating demand. It recognizes that facilities do not run at full capacity all the time, while still accounting for cooling and other support systems.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Electricity Demand Through 2030: Data Centers Become a Major Load





Estimated data center electricity demand rises from 14.0 TWh in 2025 to 24.8 TWh by 2030.

For 2026 onward, the right-hand chart compares data center demand with Oregon's electricity-demand level in 2025.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Water-energy Nexus: Three Scopes of Water Use

Scope 1

Direct water use on-site for cooling towers, humidification, and some operations.

Scope 2

Water used indirectly through the electricity system that supplies the data center.

Scope 3

Water embedded in upstream materials, construction, and supply chains.

Why Scope 2 Matters

Electricity can be water-intensive when the grid relies on thermoelectric generation with cooling systems, such as nuclear, coal, or some natural-gas plants. Wind and solar generally use much less operational water.

Water-Energy Nexus

Cooling choices affect direct water use, but the electricity mix also matters. Less water used locally can imply more energy usage and more water consumed directly through the energy system.

Bottom line: data center water use should be evaluated together with cooling technology and the generation mix that serves the load.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Questions?

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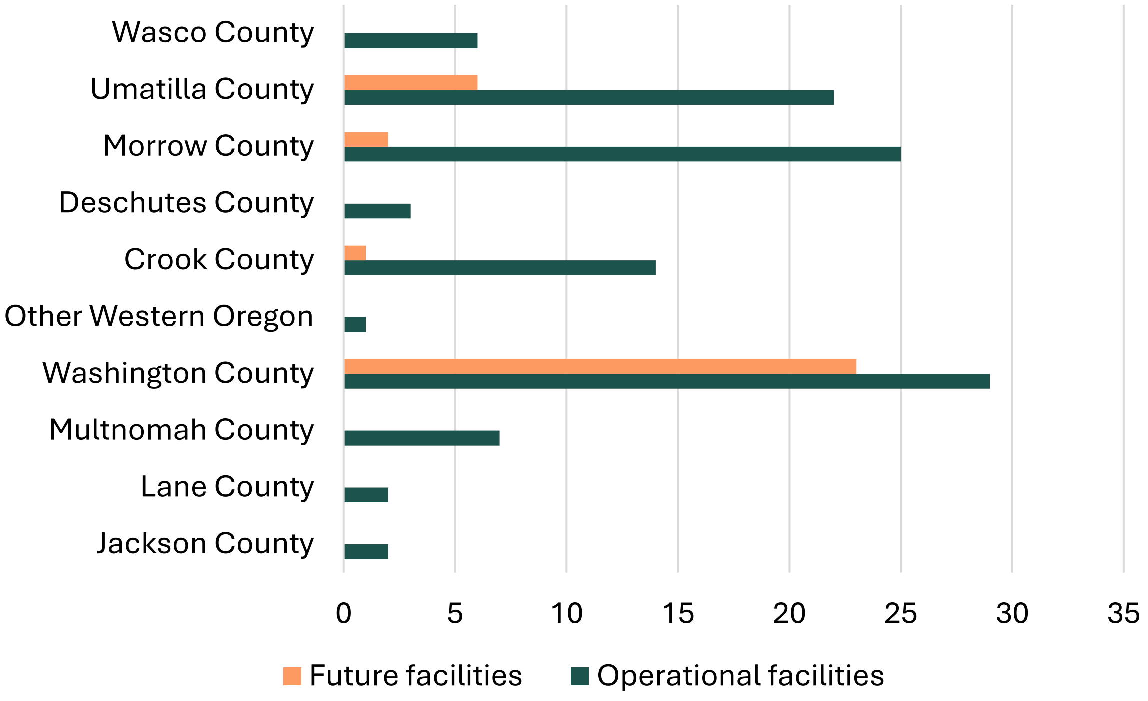
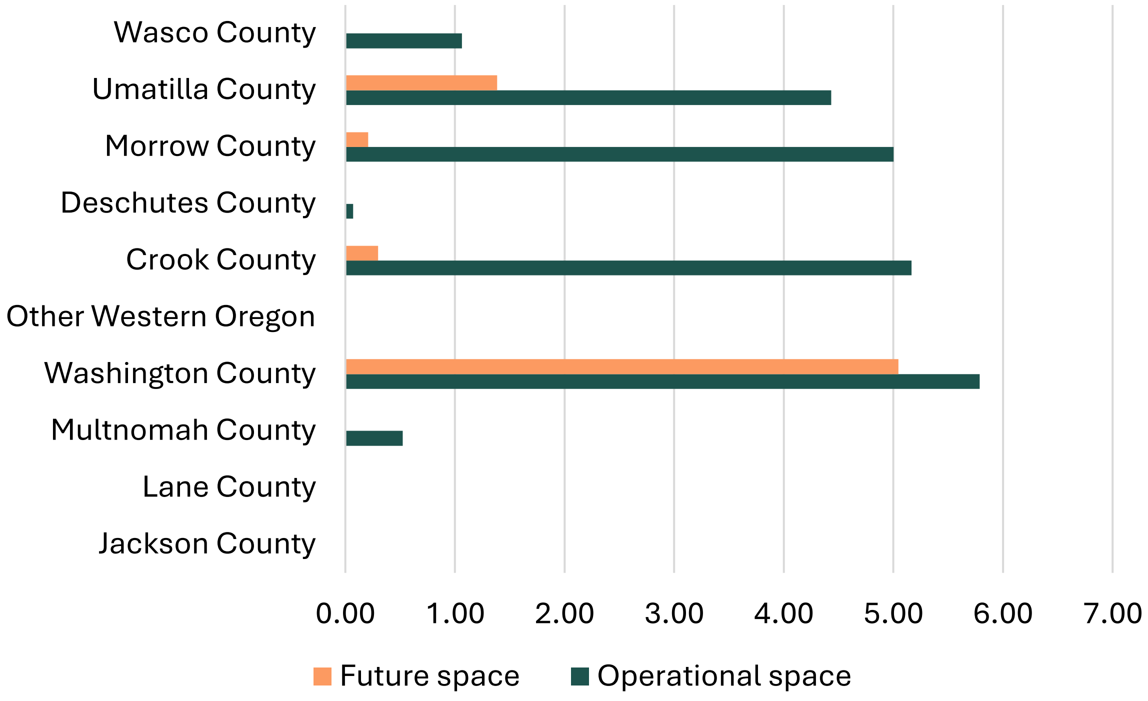
Appendix

County-level Concentration: Counts and Physical Footprint

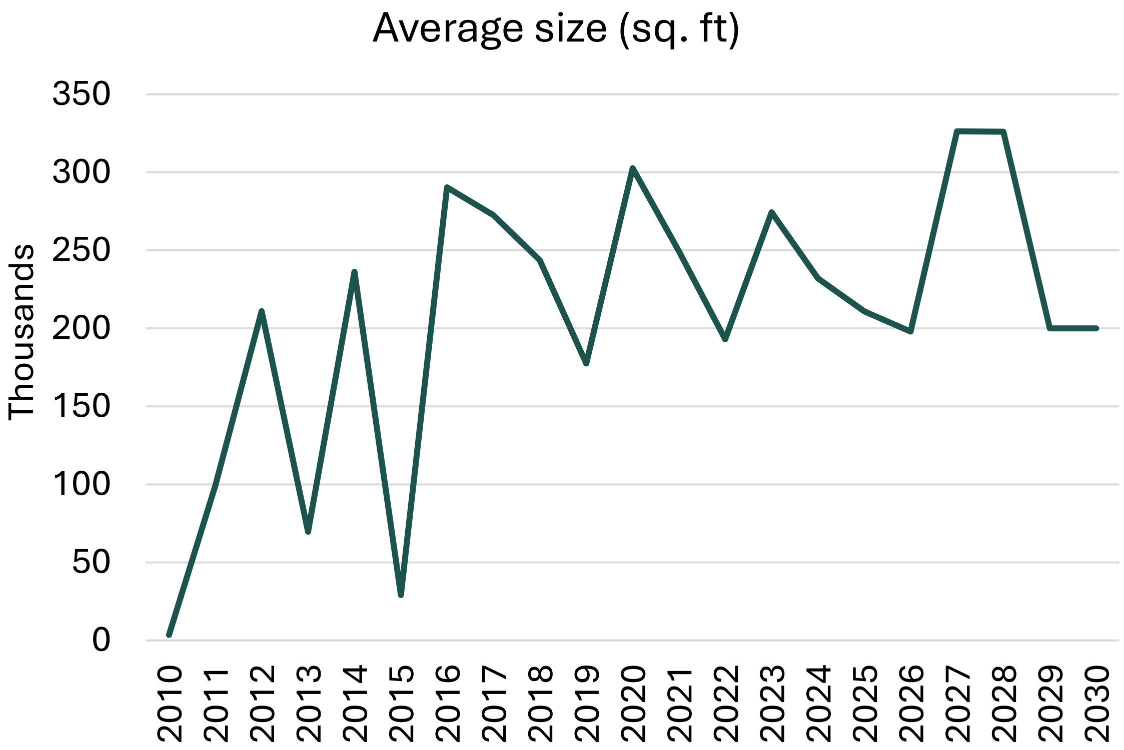


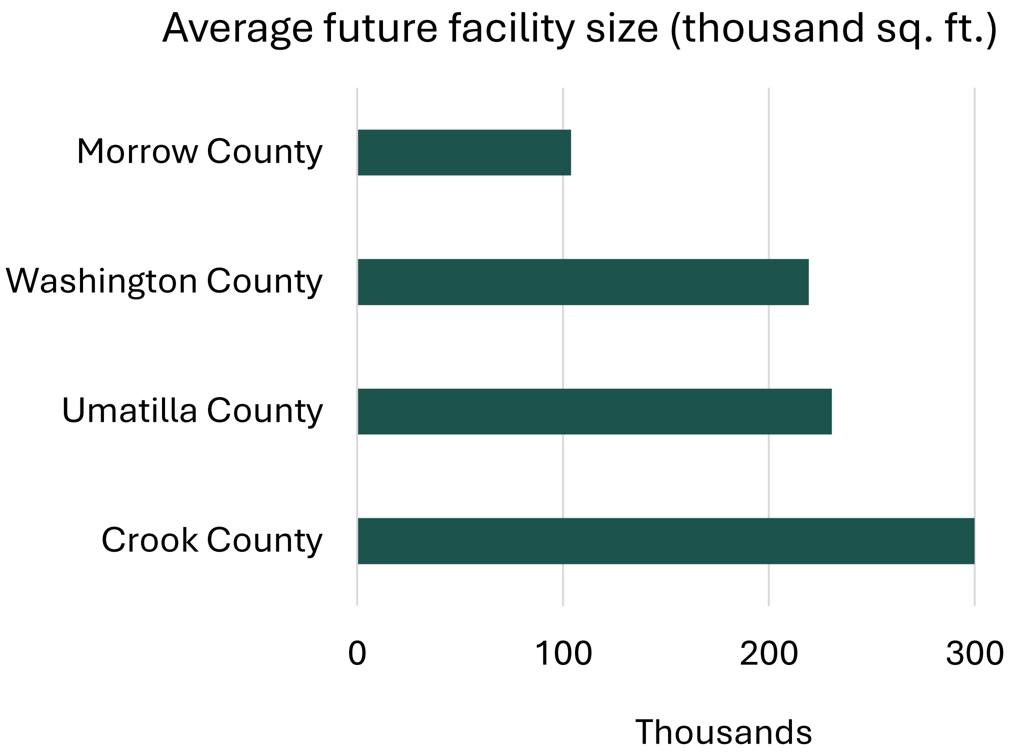


Washington county dominates the Western pipeline; Crook, Morrow, and Umatilla anchor Eastern Oregon's existing physical footprint.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Pipeline Size: Future Facilities Remain Large





Future facilities expected in 2027–2028 are the largest on average.

Crook and Umatilla show the largest average planned facilities; Washington has the largest total planned footprint.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.

Water Consumption, Cooling Technologies, and Context

How Water is Typically Used

Most direct water use is expected to be mediated through municipal systems rather than groundwater in current Oregon practice.

Water demand depends strongly on local cooling technology and site design but information is scarce.

Facility-level water use can differ widely even for similarly sized data centers.

Cooling Technologies

Air Cooling

Lowest direct water use

Evaporative Cooling

Lowest direct water use

Liquid/Direct-To-Chip

Can reduce server-side heat constraints

Water impacts require county- and utility-specific information. Technology matters, but so do local service arrangements and the electricity system behind the load.

Source: S&P Global 451 Research data; Weldon Cooper Center analysis. Preliminary draft.