

Duluth, MN-WI

Advanced industries employ

9,860

full-time workers. (2013)

These direct jobs supports an additional

7,890

indirect jobs in other industries in the region.

Advanced industries produce

\$2.7

billion dollars in output in the region.
(2013, 2005 Chained)

Advanced industries pay, on average

\$70,550

dollars per year (2013).

Advanced industries directly account for

7.3%

of all jobs in the region.

This employment share is

#92

among all small metros.

This accounts for

21.5%

of all output in the region (2013).

This compares to average pay of

\$39,570

for all industries (2013).

Advanced industry annual average growth, 2010-2013

JOBS

4.5%

2.7%

Duluth, MN-WI

U.S.

OUTPUT

6.3%

3.8%

Duluth, MN-WI

U.S.

What are Advanced Industries?

The Metropolitan Policy Program at Brookings defines advanced industries as those that: 1) Spend at least \$450 per worker per year on R&D and 2) employ at least 20 percent of their workforce in STEM-intensive occupations. The definition identifies 50 4-digit NAICS industries across the manufacturing, energy, and services sectors that together constitute the advanced industries super-sector.

Why do Advanced Industries Matter?

Advanced industries encompass the nation's "tech" sector at its broadest and most consequential. They represent a sizable economic anchor for the U.S. economy and have led the post-recession employment recovery. Their competitiveness and growth are prerequisites for any future broadly shared prosperity. As such, the sector encompasses the country's best shot at supporting innovative, inclusive, and sustainable growth. Advanced industries are present in nearly every U.S. region, but the sector's geography is uneven.

For More Information

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www.brookings.edu/advancedindustries

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DATA NOTES

All figures reflect Brookings analysis of data from Moody's Analytics.

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Twenty-Five Largest Advanced Industries (2013)

Industry 4-Digit NAICS Code	Industry Title	Industry Employment (2013)	Industry Location Quotient (LQ) † 2013	Industry Share of Total Advanced Industries Employment (2013)	Industry Employment Annual Growth 2010-2013	Industry Share of Total Advanced Industries Output (2013)	Industry Output Annual Growth 2010-2013
2122	Metal Ore Mining	3,130	74.01	31.7%	5.0%	43.3%	7.0%
5413	Architecture & Engineering	1,260	0.98	12.8%	11.3%	6.3%	12.1%
2211	Power Generation & Supply	1,220	3.23	12.3%	1.2%	21.3%	7.6%
5415	Computer Systems Design	420	0.26	4.2%	-8.3%	2.8%	-6.5%
3364	Aircraft Products & Parts	340	0.73	3.5%	-1.1%	4.2%	7.8%
3315	Foundries	310	2.59	3.1%	14.4%	0.9%	20.5%
3331	Agri., Constr., Mining Machinery	310	1.30	3.1%	-0.4%	1.7%	2.7%
3259	Misc. Chemicals	280	3.53	2.8%	3.3%	2.2%	2.7%
5416	Management Consulting	260	0.23	2.6%	4.1%	1.5%	4.0%
3339	General Purpose Machinery	210	0.85	2.1%	13.4%	0.8%	17.2%
3279	Stone & Mineral Products	200	3.04	2.0%	-2.8%	1.0%	-2.2%
3345	Precision Instruments	190	0.51	1.9%	23.4%	1.2%	27.7%
3241	Petroleum & Coal Products	160	1.53	1.7%	2.1%	1.8%	-10.6%
5182	Data Processing & Hosting	160	0.61	1.6%	20.1%	0.8%	13.3%
3391	Medical Equipment & Supplies	110	0.38	1.1%	41.7%	0.6%	38.4%
3399	Misc. Manufacturing	100	0.40	1.1%	42.4%	0.6%	40.5%
5174	Satellite Telecommunications	100	10.96	1.0%	-12.9%	0.6%	-1.1%
3344	Semiconductors	90	0.26	0.9%	-7.9%	0.5%	-3.1%
5417	R&D Services	80	0.14	0.9%	8.9%	0.6%	16.2%
3332	Industrial Machinery	80	0.82	0.8%	11.4%	0.4%	13.9%
3342	Communications Equipment	80	0.87	0.8%	33.4%	0.6%	36.7%
5152	Cable and Other Subscription Programming	80	1.20	0.8%	8.1%	1.3%	12.2%
3313	Aluminum Products	80	1.43	0.8%	29.3%	0.3%	35.7%
5172	Wireless Telecom Carriers	80	0.54	0.8%	-17.6%	0.8%	-16.8%
3369	Misc. Transportation Equipment	70	2.27	0.7%	0.5%	0.3%	8.8%
Advanced industries manufacturing		3,020	0.58	30.6%	6.6%	19.6%	6.0%
Advanced industries energy		4,340	7.16	44.0%	3.9%	64.6%	7.2%
Advanced industries services		2,500	0.42	25.4%	3.4%	15.8%	3.1%
ADVANCED INDUSTRIES TOTAL		9,860	0.84	100.0%	4.5%	100.0%	6.3%

† Location quotients are a measure of specialization for an industry using employment. A LQ of over 1 indicates that an industry employs more workers, as a share of total employment, than the nation as a whole.