

# A E A S

Australian Economic  
Advocacy Solutions



## Economic and Employment Contribution of the Australian Gas Industry Supply Chain: 2020-21





## Introduction

The importance of the Australian Gas Industry can only be fully understood when holistically considered across the entire value chain:

- Exploration;
- Extraction;
- Processing and supply;
- Manufacturing;
- Construction;
- Transport;
- Retail and wholesale; and
- Professional and technical services businesses

The project outlines the direct economic and employment contribution of the Gas Industry's extensive supply chain both upstream and downstream.

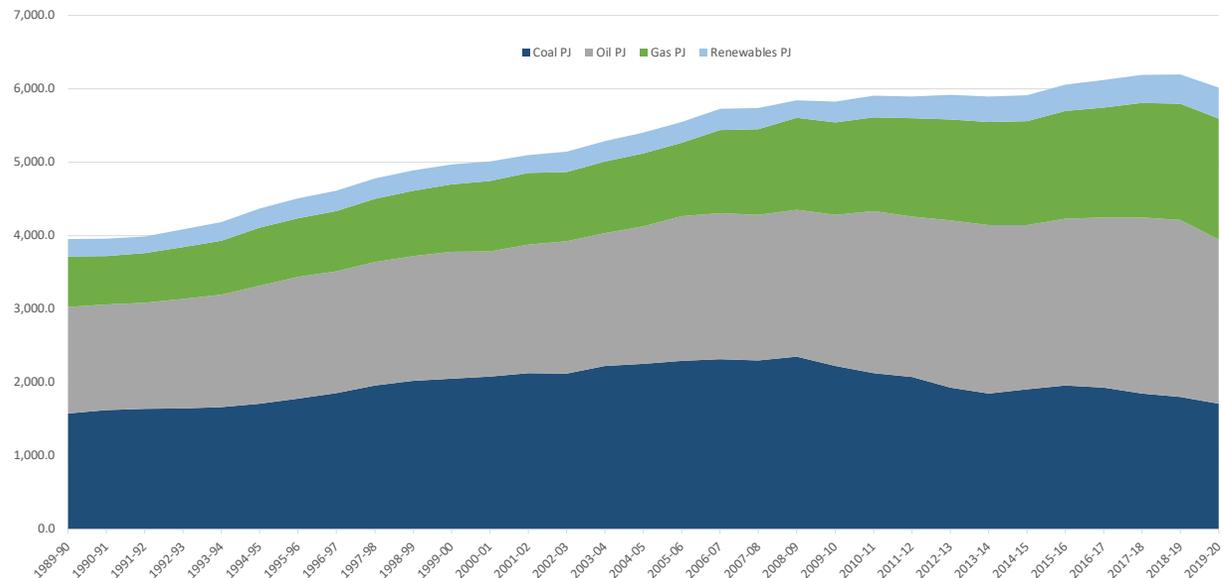
Designed to assist Australians to better understand how the gas Industry benefits their community and everyday living through (direct economic contribution) but also role it as an energy source for economic activity (enabled economic contribution).

The importance of gas to Australia as an energy source has increased over the past two decades and now comprises 27.8% of Australia's total energy consumption. This has steadily increased from only 17.4% in 1989-90.

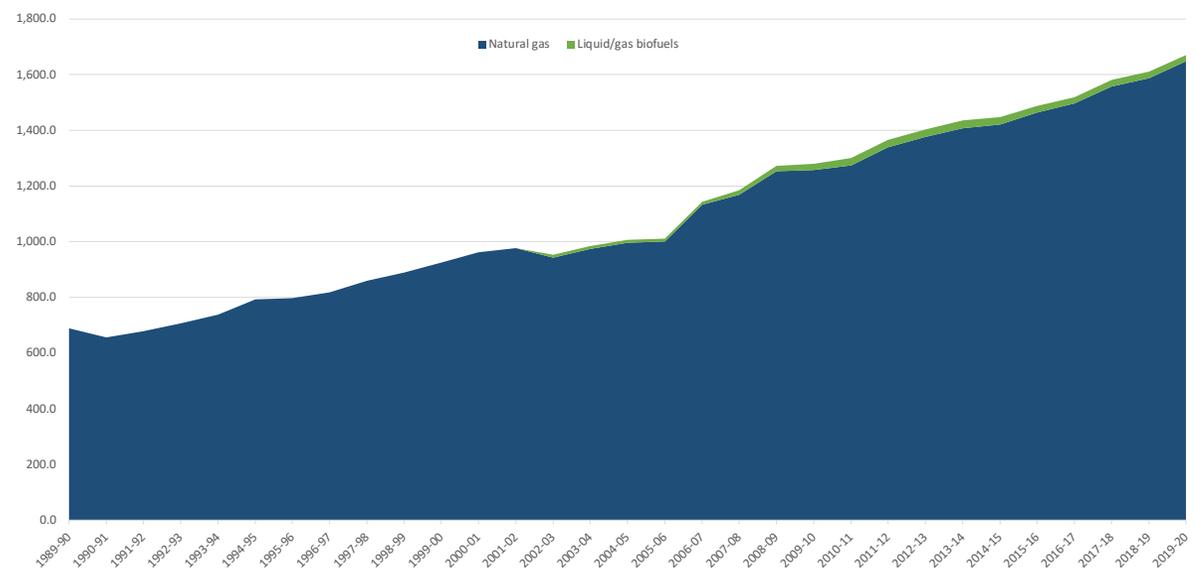
On average gas consumption over the past decade has grown by 2.5% each year and compares to average growth for all energy consumption of 0.3% .

Energy forecasts indicate that primary energy and gas demand will continue to grow to mid-century, in line with forecasted increases in population.

### Australian Energy Consumption – by fuel type (Petajoules)



### Australian Gas Consumption – by fuel type (Petajoules)



The main roles of gas vary by region.

In Victoria and Southern NSW, gas is essential in providing heating to households during winter. More than 80 per cent of homes in these regions are connected to the gas network and gas delivers more energy to homes than electricity.

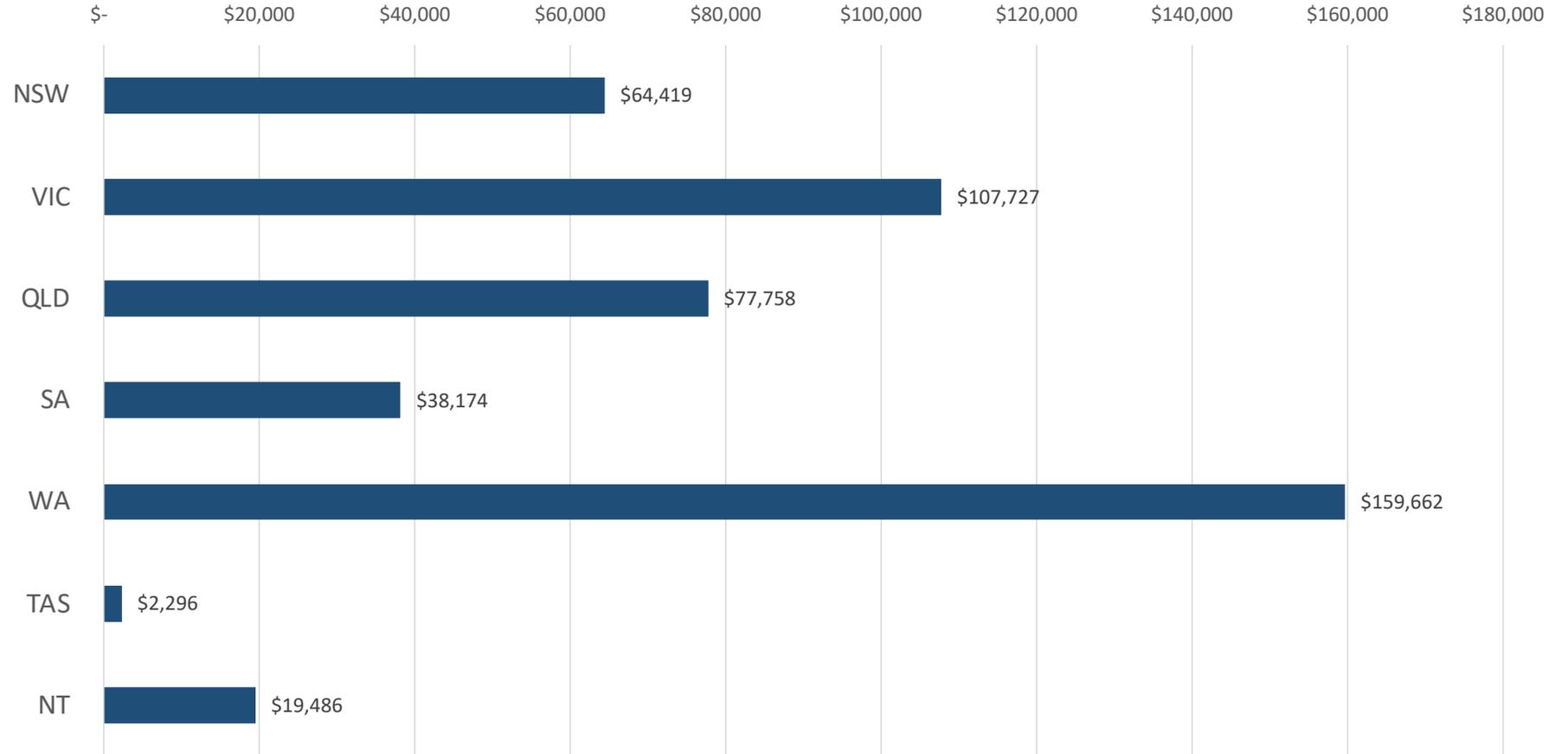
In South Australia, Western Australia and the Northern Territory, gas is essential for power generation. Almost all power in the Northern Territory is generated from gas.

In Queensland, Northern Territory and Western Australia, gas is important as an LNG export industry, providing many regional jobs and generating state and federal royalties and taxes that support many activities to benefit all Australians.

Gas Usage in Australia By Region

Region	Residential	Commercial	Industrial	Power Gen	Exports	Gas as % of Total Energy Consumption
NSW	✓✓	✓✓✓	✓✓✓	✓	NA	9.7%
VIC	✓✓✓	✓✓✓	✓✓	✓	NA	23.5%
QLD	✓	✓✓	✓✓✓	✓	✓✓✓	21.4%
SA	✓✓✓	✓✓✓	✓✓	✓✓✓	NA	54.6%
WA	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	35.2%
TAS	✓✓	✓	✓✓✓	✓✓	NA	7.2%
NT	✓✓	✓	✓✓	✓✓✓	✓✓✓	74.5%
Code:	✓✓✓ = essential contribution		✓✓ = major contribution		✓ = minor contribution	

## Enabled Economic Activity Utilising Gas as an Energy Source (\$ millions)



The industry, business and community's use of gas as an energy source provides significant enabled economic activity for Australia.

Estimates in 2019-20 of the enabled benefit are \$469.6 billion.

## Types of Business in the Australian Gas Industry Supply Segment

### Mining

- Gas, natural, extraction
- Natural gas extraction
- Petroleum gas extraction
- Gas Exploration
- Other Mining Support Services – including Cementing oil and gas well castings; Directional drilling and redrilling; Mining draining and pumping service; Oil and gas field support service

### Manufacturing

- Gas oil manufacturing
- Liquefied petroleum gas (LPG) manufacturing
- Industrial Gas Manufacturing including liquefied natural gas and hydrogen
- Pipe fittings, manufacturing
- Gas cylinder manufacturing
- Gas fittings and meter manufacturing
- Truck manufacturing
- Machinery and Equipment manufacturing
- Gas appliance manufacturing – including stoves, BBQ's, heating, fridges, airconditioner & compressors etc
- Gas compressor manufacturing
- Gas cutting and welding equipment manufacturing

### Electricity, Gas, Water and Waste Services

- Gas Supply - including Coal gas distribution through mains system; Fuel gas distribution through mains system; Liquefied petroleum gas distribution through mains system; Liquefied petroleum gas reforming for distribution through mains system; and Natural gas distribution through mains system
- Electricity Generation using mineral gas
- Other Electricity Generation including biofuels
- Electricity Transmission and Distribution
- Electricity Retailing

### Construction

- Non-Residential Building Construction eg buildings
- Pipeline construction
- Heavy and Civil Engineering Construction – non pipeline
- Gas plumbing – residential and non-residential

### Wholesale and Retail Trade

- Liquefied petroleum gas (LPG) (in bulk or in containers)
- Commercial Vehicle
- Gas plumbing and fittings
- Gas appliance retailing – including stoves, BBQ's, heating, fridges, airconditioner & compressors etc

### Transport, Postal and Warehousing

- Road Freight including bulk gas
- Rail Freight including bulk gas
- Shipping Freight including bulk gas
- Pipeline operations

### Professional, Scientific and Technical Services

- Scientific Research Services
- Engineering Design and Engineering Consulting Services – including architectural, surveying; Engineering design and consulting
- Legal and Accounting Services
- Advertising Services
- Management and consulting services
- Computer System Design and Related Services
- Communication Services
- Banking and Insurance Services
- Employment Services - including placement; recruitment and labour supply

### Other Services

- Automotive Repair and Maintenance
- Machinery and Equipment Repair and Maintenance

As a result of its domestic, commercial, industrial and export uses the Australian Gas Industry has a significant supply-chain both upstream and downstream with small businesses through to major international companies all supplying goods and services to create economic value from gas.

As at 30 June 2021 there were an estimated 46,833 businesses across:

- exploration
- extraction
- processing and supply manufacturing
- construction
- transport
- retail and wholesale and the professional and technical services businesses that also underpin the gas supply chain

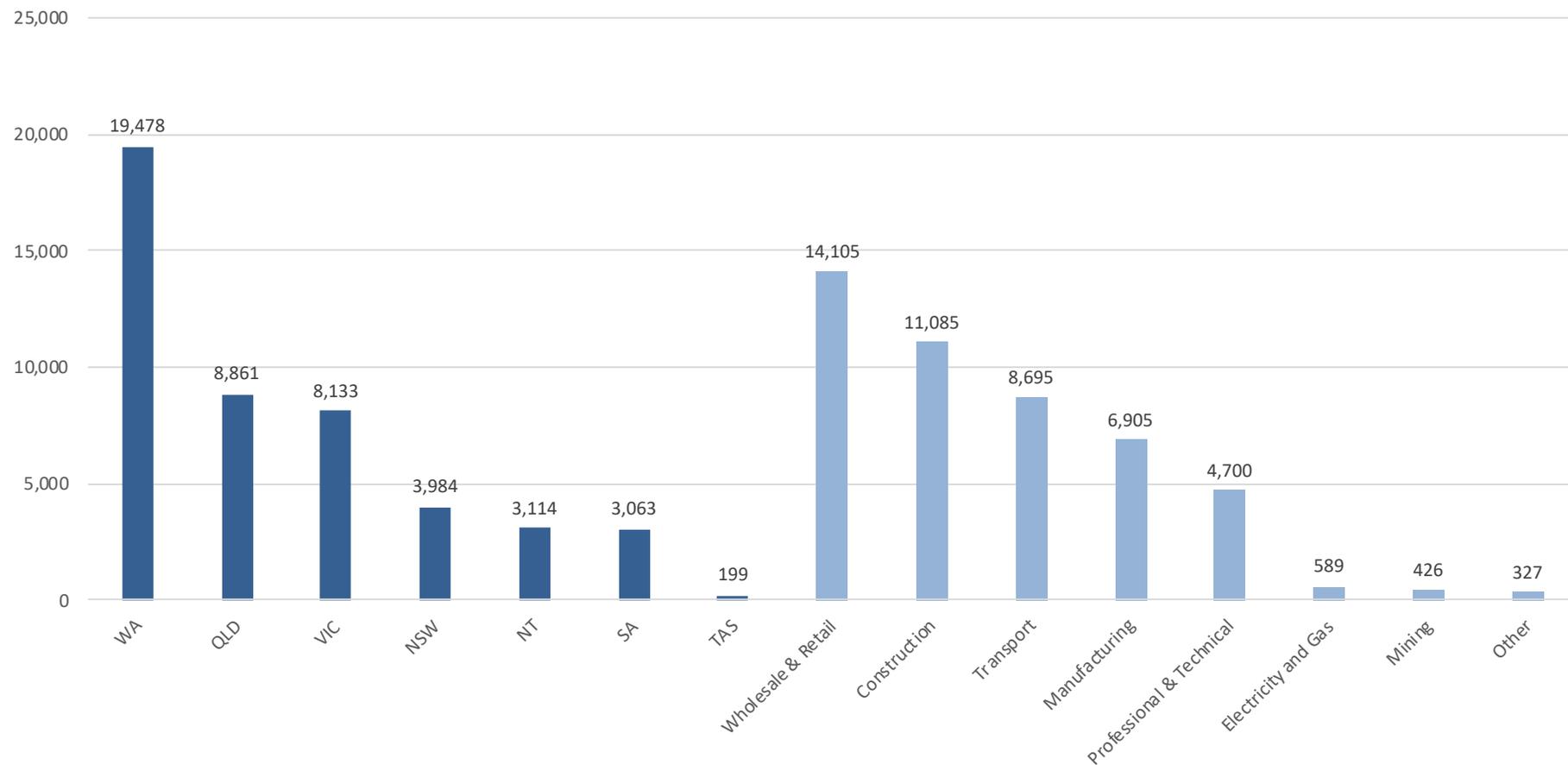
The most significant numbers of businesses operating are in the:

- Wholesale and retail (14,105)
- Construction (11,085) and
- Transport (8,695) segments.

By state: Western Australia (19,478) has the highest number of businesses in the gas industry supply chain followed by Queensland (8,861) and then Victoria (8,133).

Collectively the thousands of businesses in the supply chain are providing investment, job creation, regional development, export revenue and taxation receipts to government.

Estimated Number of Businesses Operating in Gas Industry Supply Chain as at 30 June 2021



## Methodology:

AEAS estimates detailed in this report were developed through an electronic Industry 'Census' questionnaire circulated by AGIT for completion by members of organisations including:

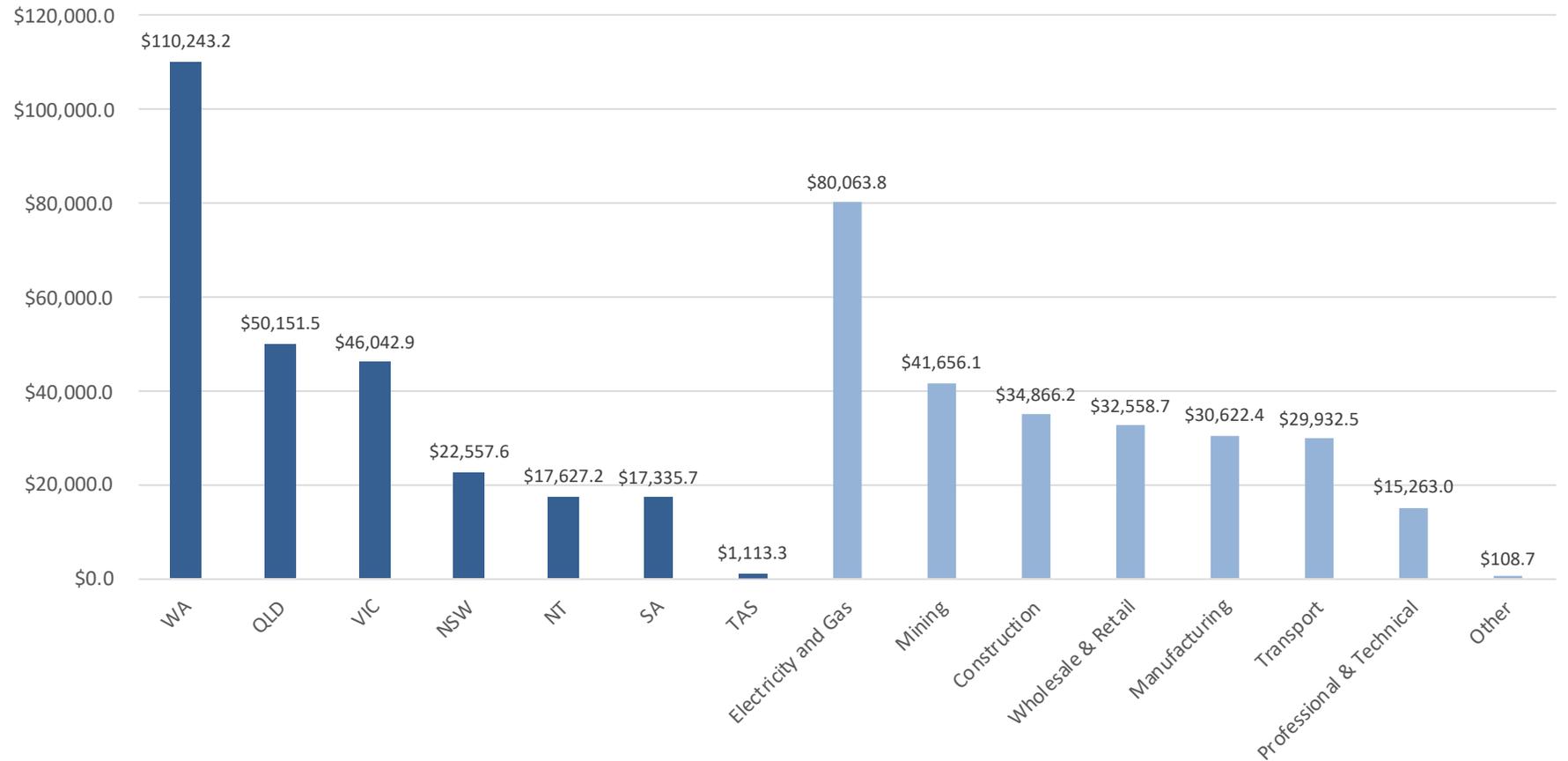
- Australian Pipelines and Gas Association;
- Australian Petroleum Production & Exploration Association;
- Energy Networks Australia;
- Gas Appliance Manufacturers Association of Australia; and
- Gas Energy Australia

Through this process produced credible and actual data on the direct employment and economic contribution of the supply chain across the following areas:

- The contribution the supply chain makes to Australian and State economies in industry value add;
- The number of direct jobs created by the supply chain;
- The value of wages and salaries paid by the supply chain;
- Level of investments made in Australia by the supply chain;
- The value of C/W, State and Local Government taxes, royalties and rates contributed by the supply chain;
- Total assets held by the supply chain in Australia.

Estimates are broken down by State and segment of the supply chain.

## Total Gas Industry Supply Chain Assets Under Management 2020-21 (\$ millions)



The Australian Gas Industry Supply Chain in 2020-21 had \$265 billion in assets under management across assets including:

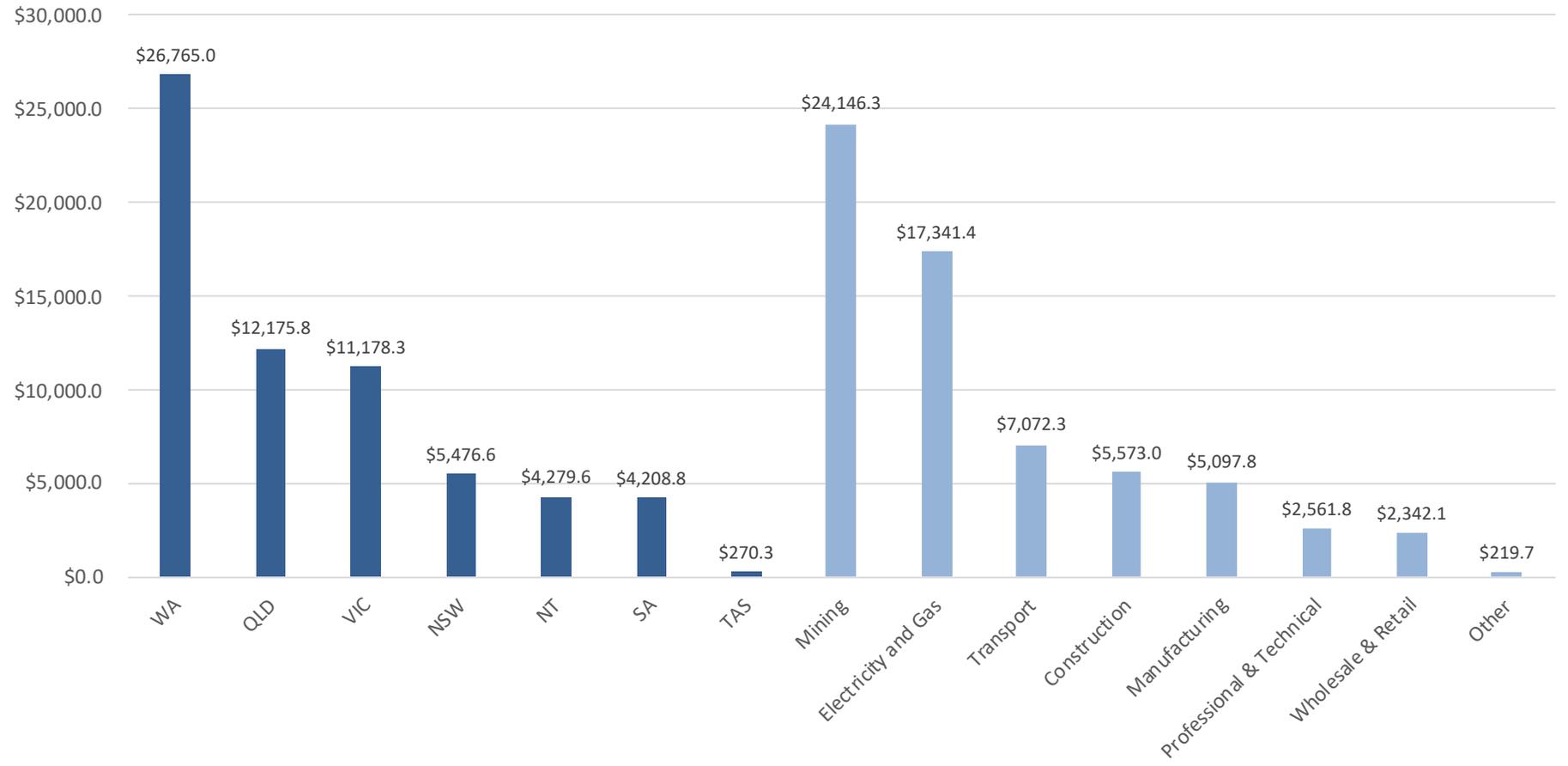
- Buildings;
- Pipelines;
- Refineries;
- Drilling equipment;
- Transport infrastructure;
- Heavy and light vehicles;
- Machinery and equipment;
- Funds.

The Australian Gas Industry Supply Chain in 2020-21 had sales in excess \$64.3 billion.

The largest sales segments were Mining (\$24.1 billion) and Electricity and Gas (\$17.3 billion). The largest markets were in Western Australia (\$26.8 billion), Queensland (\$12.2 billion) closely followed by Victoria (\$11.2 billion).

For every \$1 million in sales in the Australian Gas Industry Supply Chain 3 jobs are created and compares to the Australian industry average of 3.2 jobs for every \$1 million in sales.

### Total Gas Industry Supply Chain Turnover 2020-21 (\$ millions)



The Australian Gas Industry Supply Chain expenditure (excluding labour costs) in 2020-21 was \$27.4 billion creating further economic and employment opportunities for their respective supply chain businesses.

This is anticipated to create an additional 95,306 indirect jobs through indirect producer induced effects.

The Australian Gas Industry Supply Chain investment in its future and R&D is significant with over \$11.1 billion in capital expenditure in 2020-21.

This investment primarily occurred in Mining (\$4.7 billion) and Electricity and Gas (\$2.0 billion) and in Western Australia (\$4.6 billion) and Queensland (\$2.1 billion).

## Total Gas Industry Supply Chain Expenditure 2020-21

State		Value Chain Component	
	\$ millions		\$ millions
WA	\$11,400.0	Mining	\$14,524.9
QLD	\$5,186.1	Transport	\$3,538.2
VIC	\$4,761.2	Electricity and Gas	\$2,919.7
NSW	\$2,332.6	Manufacturing	\$2,863.9
NT	\$1,822.8	Construction	\$1,875.2
SA	\$1,792.6	Wholesale & Retail	\$1,014.9
TAS	\$115.1	Professional & Technical	\$538.5
		Other	\$135.3
AUS	\$27,410.5	TOTAL	\$27,410.5

## Total Gas Industry Supply Chain Capital Expenditure 2020-21

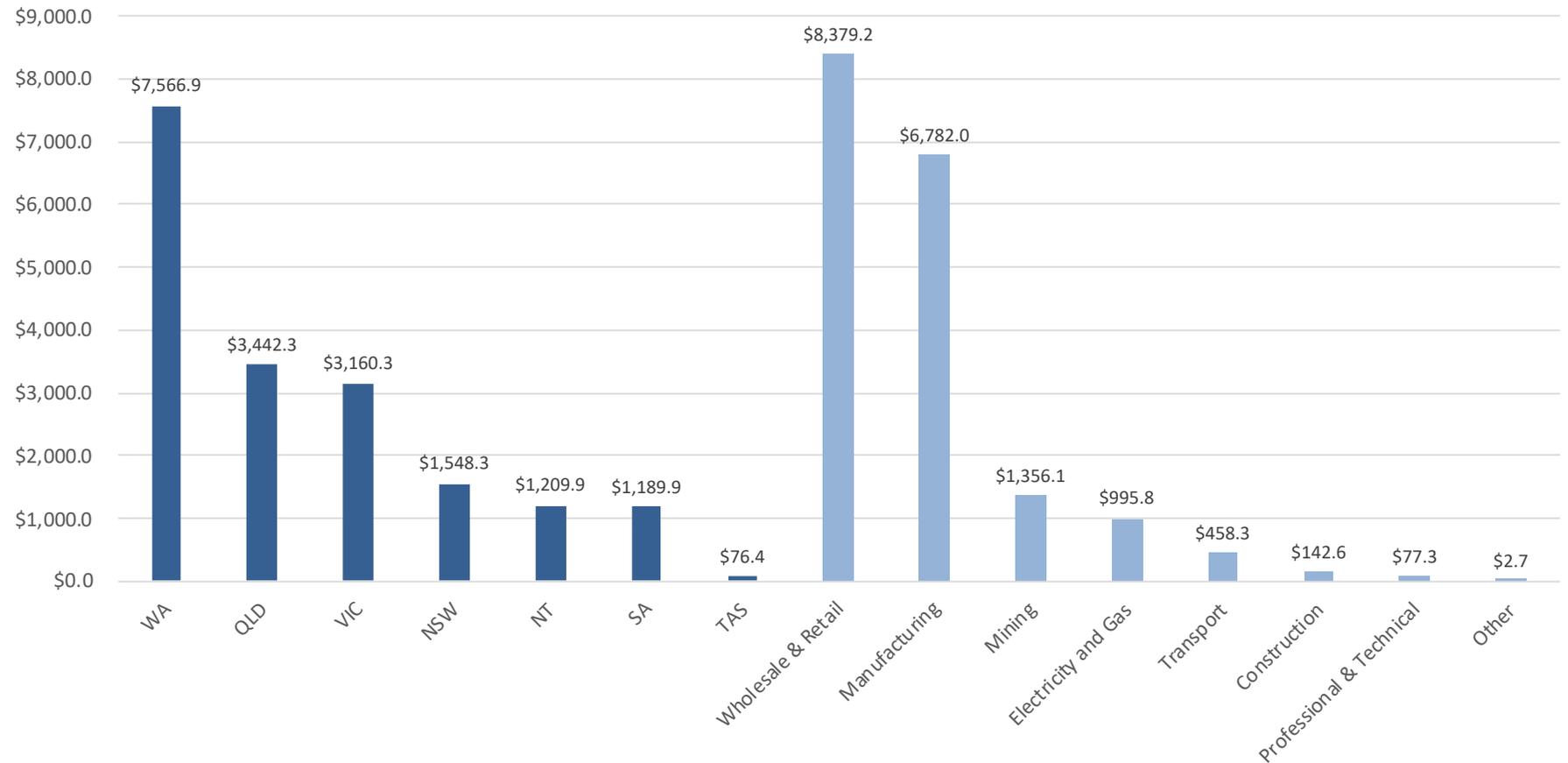
State		Value Chain Component	
	\$ millions		\$ millions
WA	\$4,639.2	Mining	\$4,724.8
QLD	\$2,110.5	Electricity and Gas	\$2,047.8
VIC	\$1,937.6	Transport	\$1,265.7
NSW	\$949.3	Construction	\$1,191.3
NT	\$741.8	Manufacturing	\$847.6
SA	\$729.5	Wholesale & Retail	\$538.7
TAS	\$46.8	Professional & Technical	\$493.2
		Other	\$45.7
AUS	\$11,154.6	TOTAL	\$11,154.6

The Australian Gas Industry Supply Chain is a major provider of Commonwealth, State and Local Government Taxes, Fees, Rates and Royalties contributing \$18.1 billion in receipts to the three tiers of government.

Providing frontline services such as hospitals, education, transport, roads and social infrastructure.

Commonwealth Taxes included company tax and GST, State Taxes included payroll tax, duties, land taxes and royalties and Local Government included rates.

## Total Gas Industry Supply Chain – C/W, State and Local Government Taxes, Fees, Rates and Royalties 2020-21 (\$ millions)



The Australian Gas Industry Supply Chain provided \$55.1 billion in direct value added to the Australian Economy.

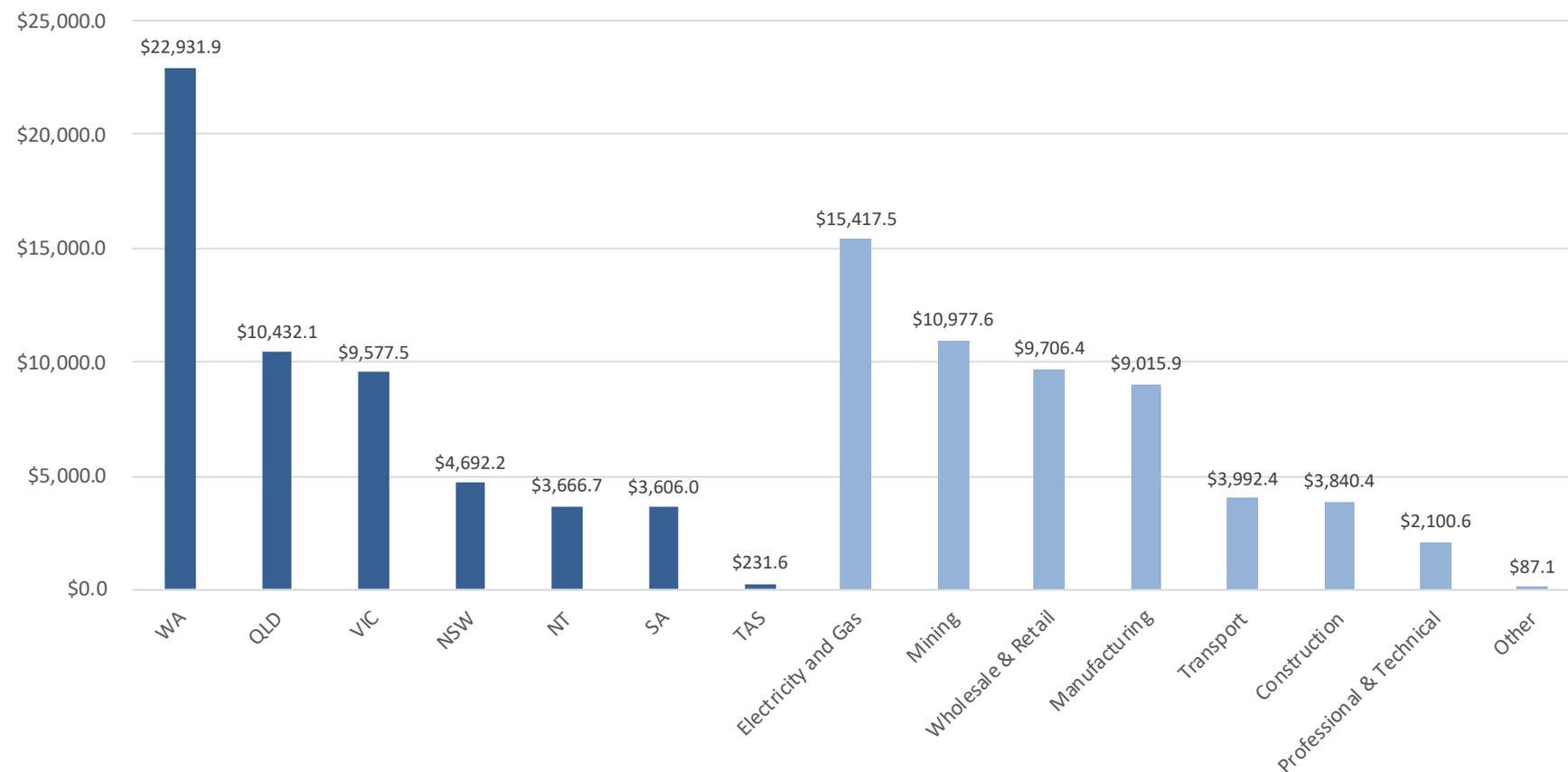
Value added for an industry is comprised of wages and salaries, gross operating surplus of business operating in the industry and indirect taxes.

It is the net contribution or value add that the industry provides to the economy.

The primary means of providing this value add to the economy was through the Mining (\$11 billion) and Electricity and Gas (\$15.4 billion) segments.

Western Australia (\$22.9 billion) and Queensland (\$10.4 billion) received the largest economic contributions from the gas industry supply chain.

## Industry Supply Chain Value Added 2020-21 (\$ millions)



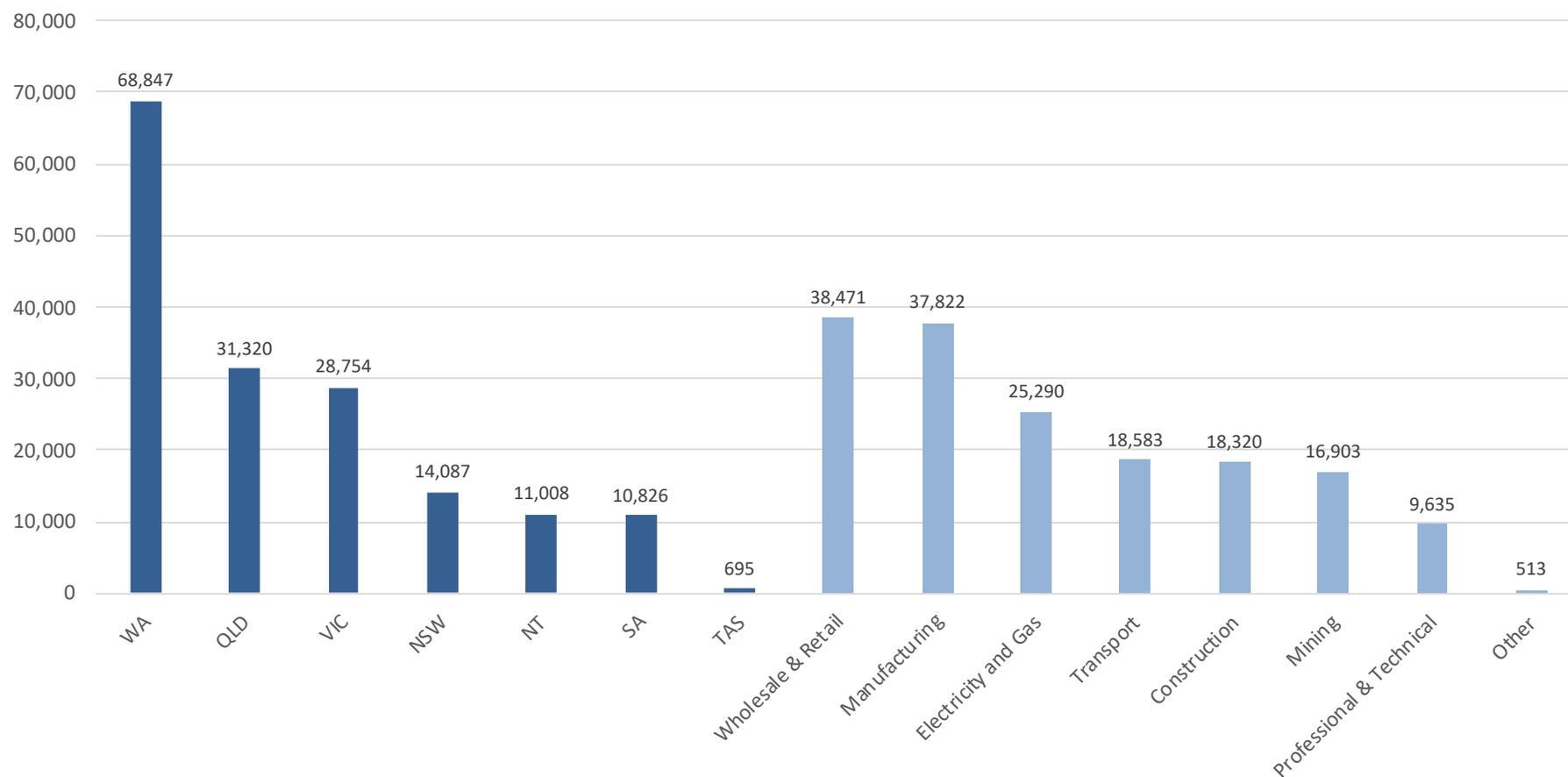
As at 30 June 2021 the Australian Gas Industry Supply Chain is estimated to provide 165,538 full time equivalent jobs.

The main employment segments of the supply chain were in manufacturing (37,822), wholesale and retail (38,471) and electricity and gas (25,290). Western Australia (68,847) had the largest concentration of gas industry supply chain employees followed by Queensland (31,320) and Victoria (28,754).

Very importantly the Australian Gas Industry Supply Chain provides an entry pathway into the workforce for 2,223 Australians in the form of apprenticeships and traineeships.

In addition 23,748 contractors are also engaged by the supply chain.

Gas Industry Supply Chain Full Time Equivalent Employees as at 30 June 2021

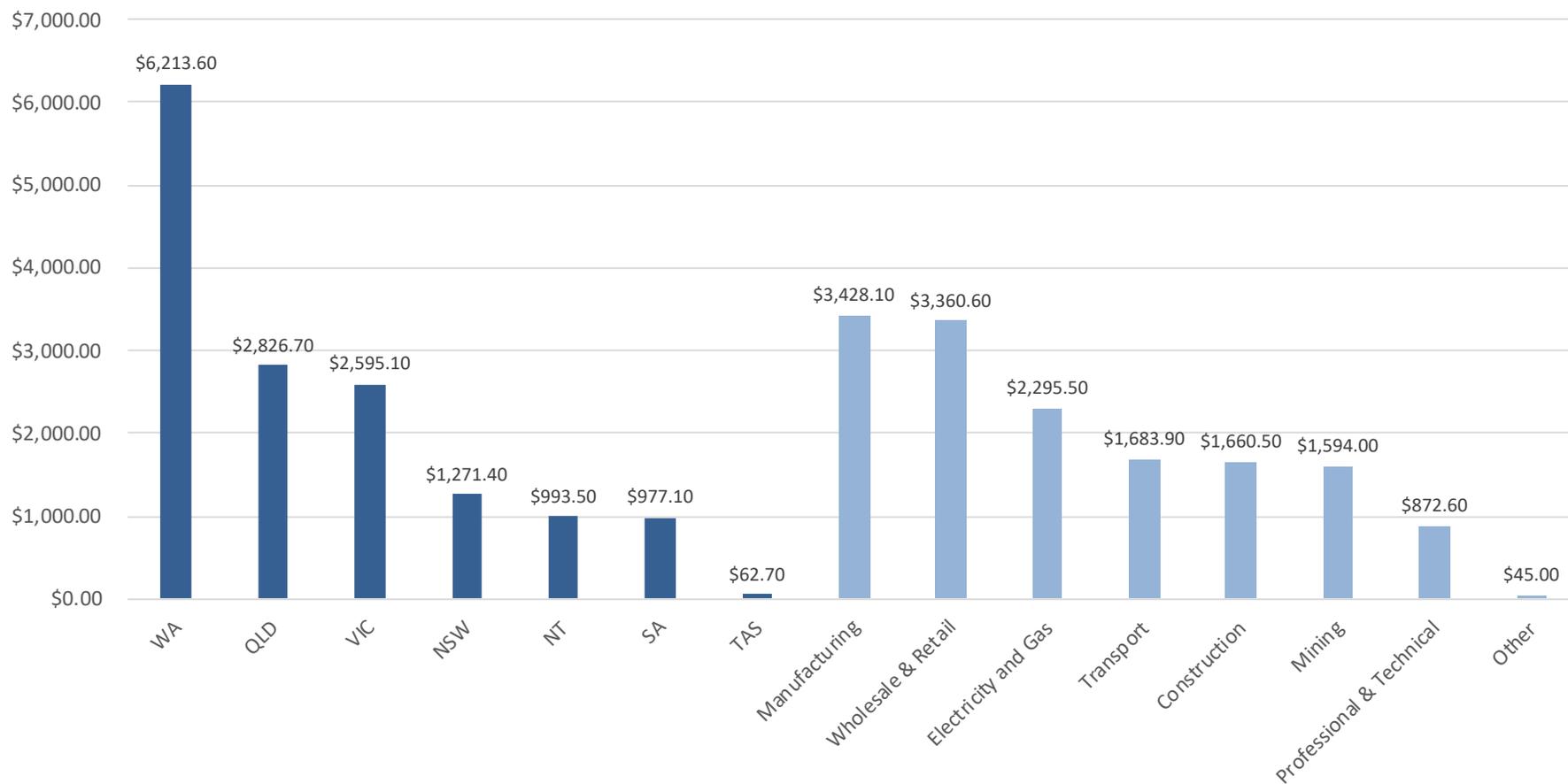


The Gas Industry Supply Chain is estimated to have provided in excess of \$14.9 billion in wage and salaries to Australians in 2020-21 thereby provided a livelihood for individual and family necessities and lifestyle.

The average salary provided to supply chain employees was \$90,200 and compares against Australian average annual earnings of \$67,902.

In addition the gas industry supply chain is estimated to be providing each year an additional \$1.5 billion in superannuation contributions to their employees futures.

### Total Gas Industry Supply Chain Wages and Salaries 2020-21 (\$ millions)



## Economic and Employment Benefit by Supply Chain Component:

Wholesale and Retail and Manufacturing are the two largest segments of the gas industry supply chain when it comes to number of employees, apprentices and trainees, contractors and wages paid to employees.

However, Mining and Electricity and Gas are easily the two largest segments in respect to turnover, industry value added and assets under management.

These two segments are also the largest providers of taxes, rates and royalties to the three tiers of government in Australia.

Gas Industry Supply Chain Human Resource Statistics – 30 June 2021

	FTEs	Apprentices and Trainees	Contractors	Wages \$ millions
Wholesale & Retail	38,471	356	2,667	\$3,360.6
Manufacturing	37,822	130	2,144	\$3,428.1
Electricity and Gas	25,290	536	8,068	\$2,295.5
Transport	18,583	320	520	\$1,683.9
Construction	18,320	336	1,061	\$1,660.5
Mining	16,903	337	8,657	\$1,594.0
Professional & Technical	9,635	191	580	\$872.6
Other	513	18	51	\$45.0
<b>TOTAL</b>	<b>165,538</b>	<b>2,223</b>	<b>23,748</b>	<b>\$14,940.2</b>

Gas Industry Supply Chain Key Data 2020-21

	Turnover \$ millions	Expenditures \$ millions	Taxes \$ millions	Industry Value Add \$ millions
Mining	\$24,146.3	\$14,524.9	\$1,356.1	\$10,977.6
Electricity and Gas	\$17,341.4	\$2,919.7	\$995.8	\$15,417.5
Transport	\$7,072.3	\$3,538.2	\$458.3	\$3,992.4
Construction	\$5,573.0	\$1,875.2	\$142.6	\$3,840.4
Manufacturing	\$5,097.8	\$2,863.9	\$6,782.0	\$9,015.9
Professional & Technical	\$2,561.8	\$538.5	\$77.3	\$2,100.6
Wholesale & Retail	\$2,342.1	\$1,014.9	\$8,379.2	\$9,706.4
Other	\$219.7	\$135.3	\$2.7	\$87.1
<b>TOTAL</b>	<b>\$64,354.3</b>	<b>\$27,410.5</b>	<b>\$18,194.1</b>	<b>\$55,138.0</b>

Gas Industry Supply Chain Investment and Assets 2020-21

	Capital Expenditure \$ millions	Assets Under Management \$ millions
Mining	\$4,724.8	\$41,656.1
Electricity and Gas	\$2,047.8	\$80,063.8
Transport	\$1,265.7	\$29,932.5
Construction	\$1,191.3	\$34,866.2
Manufacturing	\$847.6	\$30,622.4
Wholesale & Retail	\$538.7	\$32,558.7
Professional & Technical	\$493.2	\$15,263.0
Other	\$45.7	\$108.7
<b>TOTAL</b>	<b>\$11,154.6</b>	<b>\$265,071.4</b>

## Economic and Employment Benefit by State:

The general reliance of each state on gas for their energy needs as well as the supply chain for export markets generally determines the importance and contribution of the gas industry supply chain to that State.

Accordingly Western Australia and Queensland have the highest contribution of the gas industry supply chain to their respective labour markets and economies.

Gas Industry Supply Chain Human Resource Statistics – 30 June 2021

	FTEs	Apprentices and Trainees	Contractors	Wages (\$) \$ millions
WA	68,847	925	9,877	\$6,213.6
QLD	31,320	421	4,493	\$2,826.7
VIC	28,754	386	4,125	\$2,595.1
NSW	14,087	189	2,021	\$1,271.4
NT	11,008	148	1,579	\$993.5
SA	10,826	145	1,553	\$977.1
TAS	695	9	100	\$62.7
AUS	165,538	2,223	23,748	\$14,940.2

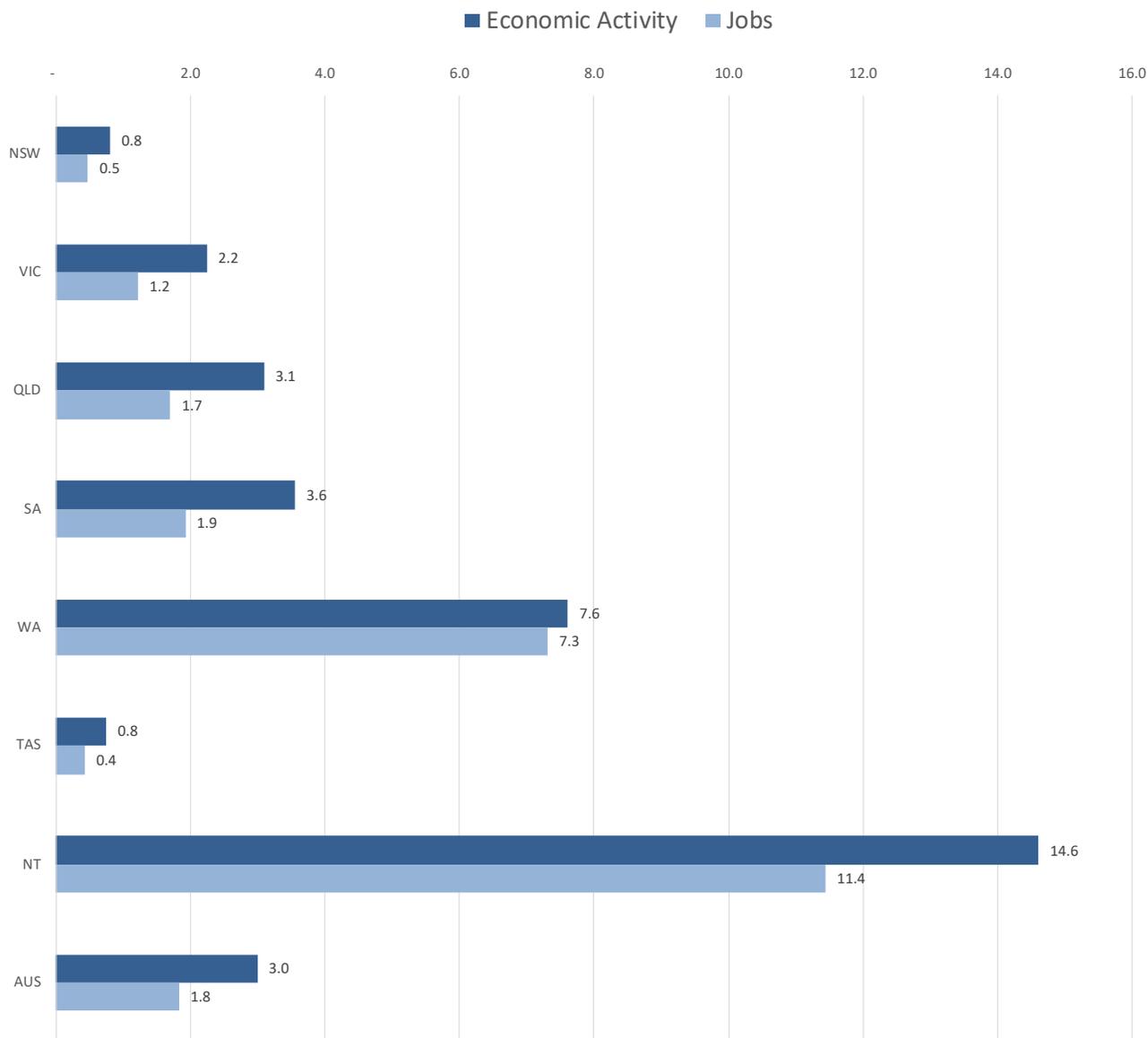
Gas Industry Supply Chain Key Data 2020-21

	Turnover \$ millions	Expenditures \$ millions	Taxes \$ millions	Industry Value Add \$ millions
WA	\$26,765.0	\$11,400.0	\$7,566.9	\$22,931.9
QLD	\$12,175.8	\$5,186.1	\$3,442.3	\$10,432.1
VIC	\$11,178.3	\$4,761.2	\$3,160.3	\$9,577.5
NSW	\$5,476.6	\$2,332.6	\$1,548.3	\$4,692.2
NT	\$4,279.6	\$1,822.8	\$1,209.9	\$3,666.7
SA	\$4,208.8	\$1,792.6	\$1,189.9	\$3,606.0
TAS	\$270.3	\$115.1	\$76.4	\$231.6
AUS	\$64,354.3	\$27,410.5	\$18,194.1	\$55,138.0

Gas Industry Supply Chain Investment and Assets 2020-21

	Capital Expenditure \$ millions	Assets Under Management \$ millions
WA	\$4,639.2	\$110,243.2
QLD	\$2,110.5	\$50,151.5
VIC	\$1,937.6	\$46,042.9
NSW	\$949.3	\$22,557.6
NT	\$741.8	\$17,627.2
SA	\$729.5	\$17,335.7
TAS	\$46.8	\$1,113.3
AUS	\$11,154.6	\$265,071.4

## Gas Industry Value Chain - Jobs Created every 100 Jobs & Cents in Every \$ of Economic Activity



The Australian Gas Industry Supply Chain directly provides 1.8 in every 100 jobs in Australia, that is for every 54 jobs that exist in the Australian economy, the gas industry supply chain provides one of those.

For the Northern Territory the gas industry supply chain is extremely important providing 11.4 jobs in every 100 jobs that exist and for Western Australia it is 7.3 jobs in every 100 jobs.

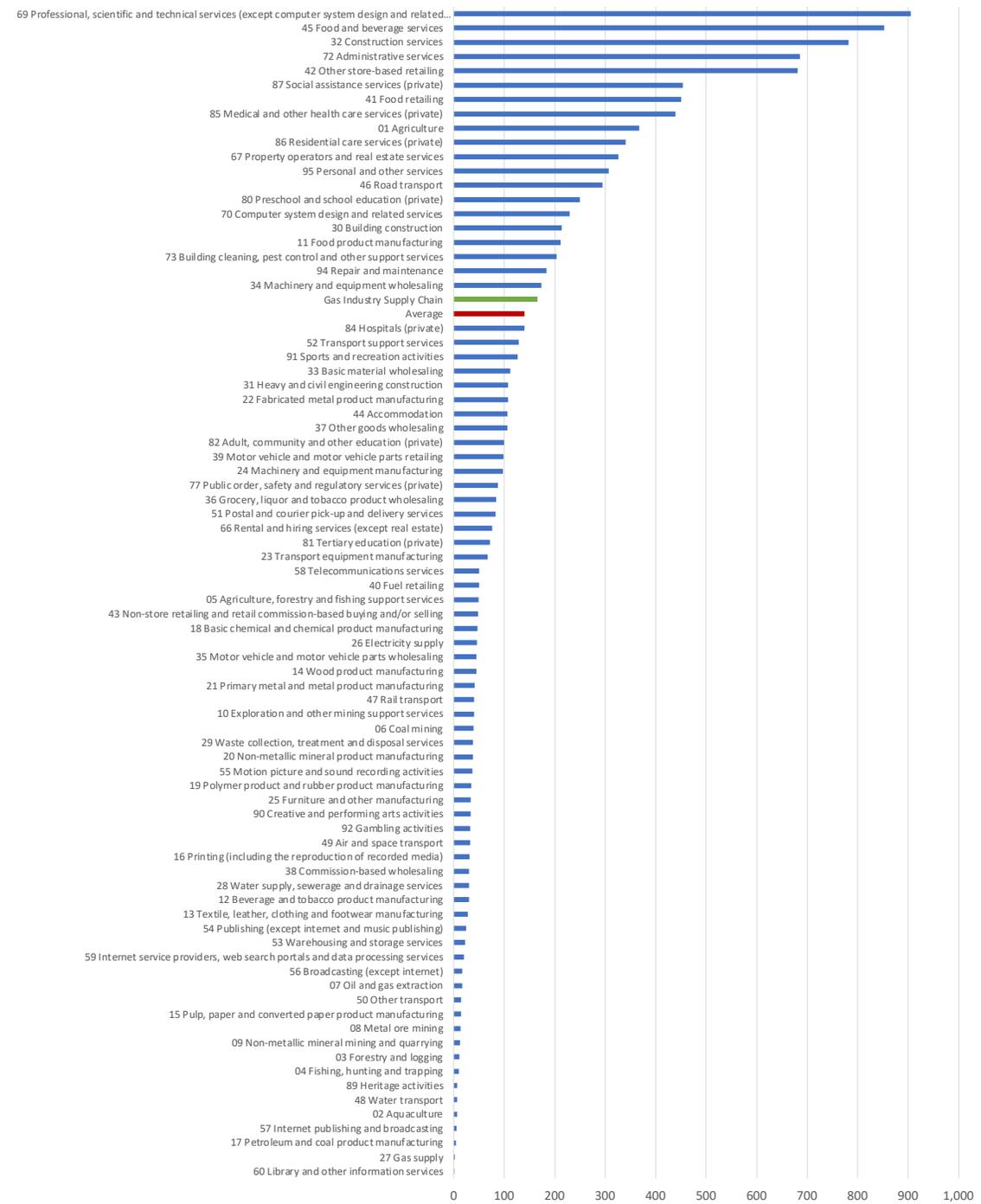
In addition, the Australian Gas Industry Supply Chain directly provides 3 cents in every dollar of economic activity in Australia.

Again for the Northern Territory (14.6 cents) and Western Australia (7.6 cents) the gas industry supply chain is providing for a significant amount of that economic activity in that State.

# Employment:

The Australian Gas Industry Supply Chain’s 165,538 jobs places it just above the Australian industry sector average employment (140,000 persons) indicating that in relative terms it is a large and important employer.

This places the Australia Gas Industry Supply Chain above other industry sectors such as private hospitals, accommodation, private tertiary education and telecommunications services to name a few.

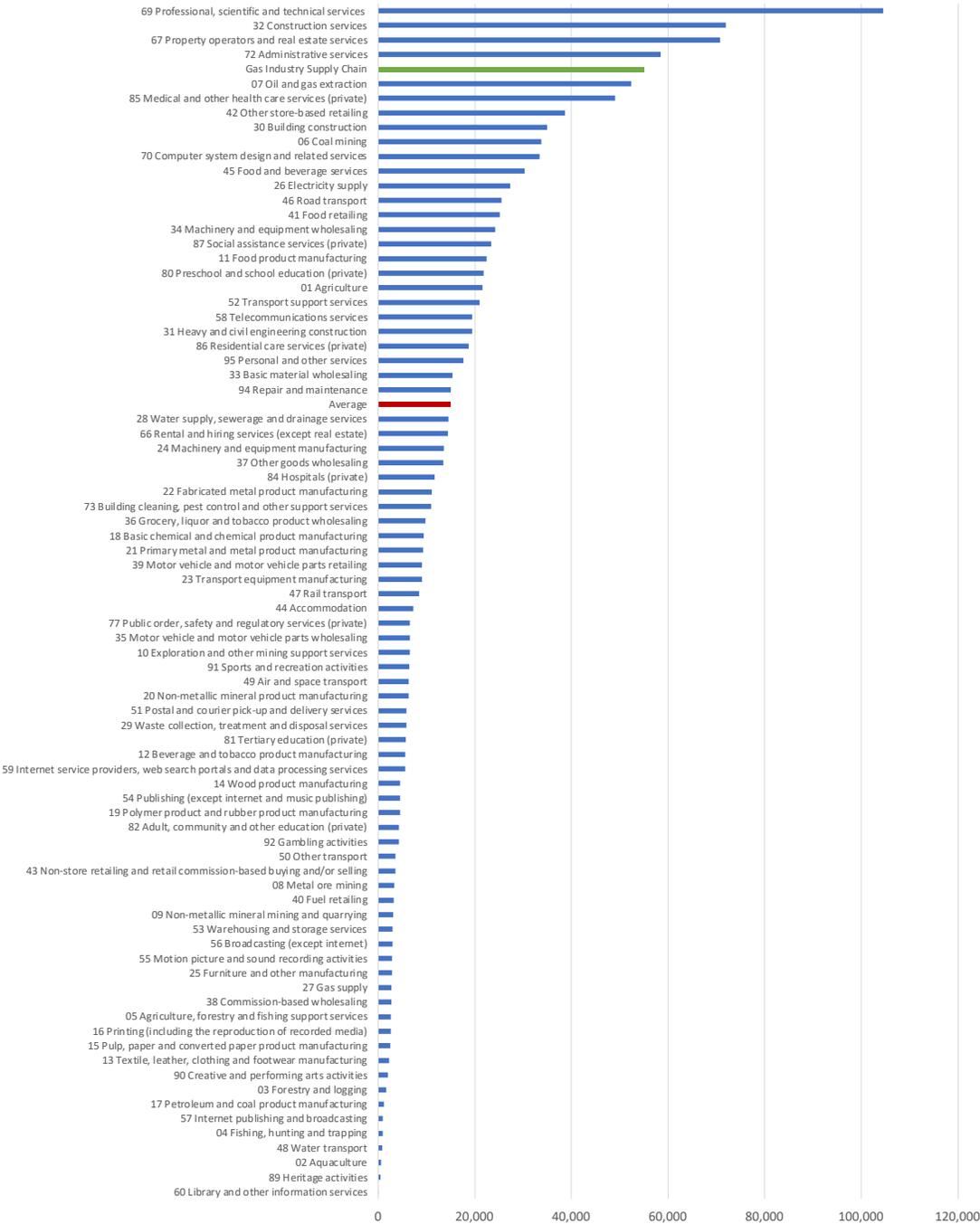


# Economic Activity:

In respect to direct economic contribution of each industry sector, the Australia Gas Industry Supply Chain is the fifth largest industry sector in Australia - contributing \$55.1 billion and compares against the Australian industry sector average contribution of \$14.9 billion.

This places the gas industry supply chain above other industry sectors such as:

- private health care;
- building construction;
- food retailing;
- road transport;
- Agriculture;
- telecommunication services;
- private hospital; and
- accommodation.

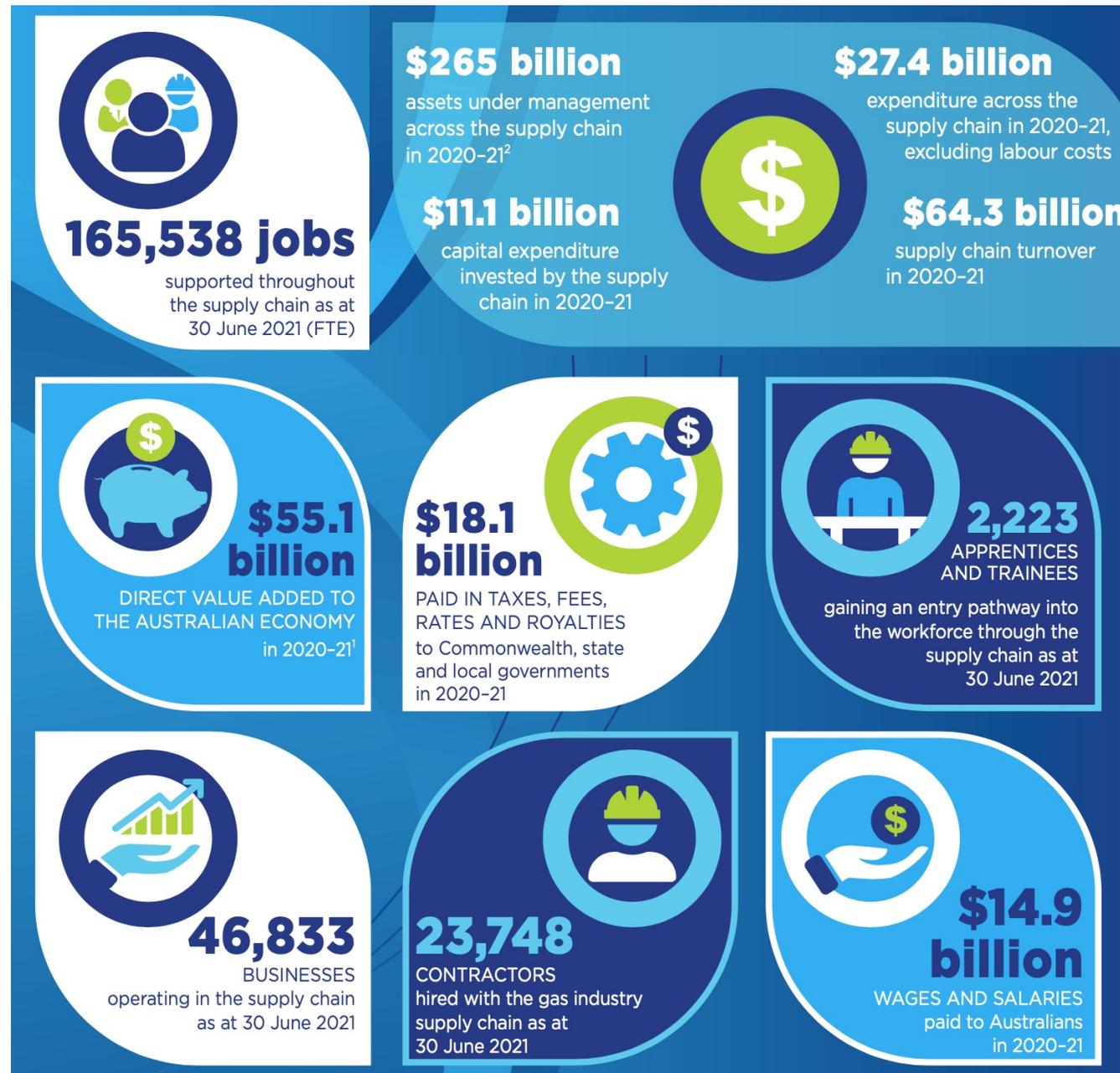


On the basis of jobs created and economic activity created the Australian Gas Industry Supply Chain is of major importance to the Australian economy and community.

However the Australian Gas Industry Supply Chain benefit is not only an economic one.

In regional areas, the gas industry acts as a foundation for prosperity across many townships due to supply chain spend and the livelihood provided to employees and their spend that this delivers to local businesses.

In short, the Australian Gas Industry Supply Chain represents a critical element for the viability for many regional communities.



Nick Behrens

Director

Australian Economic Advocacy Solutions

PO Box 847, Bulimba QLD 4171

Mobile 0448 034 355

[nickbehrens@qeas.com.au](mailto:nickbehrens@qeas.com.au)

[www.qeas.com.au](http://www.qeas.com.au)

ABN 57028574915

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