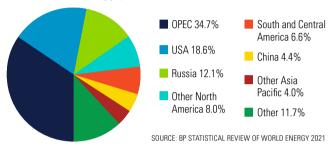


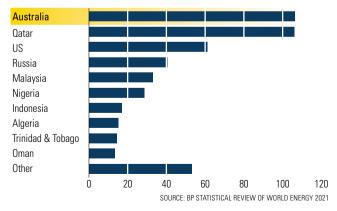
# World supply of oil and liquefied natural gas (LNG)

World oil supply averaged 88 million barrels a day in 2020, a decline of nearly 7%, or over 6.5 million barrels less a day compared to 2019.

#### Share of world oil supply 2020



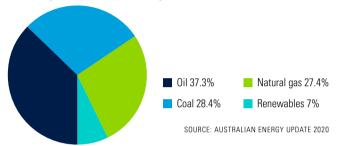
Top 10 LNG exporting countries 2020 (billion cubic metres)



## Energy use in Australia

In 2019–20, oil was again the largest energy source in Australia providing over 37% of all energy consumed. Natural gas increased to over 27% of primary energy. Coal fell to just over 28%. Renewables increased to 7% from 6.4% in 2018–19.

#### Share of primary energy consumption 2019-20



The effects of the COVID-19 pandemic waned over the course of 2021 with oil prices increasing as economies started to reopen and demand picked up. The WTI crude oil price averaged US\$68 in 2021, significantly higher than the average of US\$39 in 2020. The recent invasion of Ukraine by Russia has resulted in a sharp spike in the oil price as nations move to introduce sanctions on Russian exports resulting in a shortage of oil.

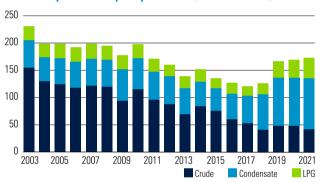
### Oil price (US\$ per barrel)



## Australian production petroleum liquids

Australian petroleum liquids production increased slightly in 2021 to 173 million barrels, up 2.2% on 2020 levels. 2021 production levels are still significantly lower than the 287 million barrels produced in 2000. The Australian economy is still recovering from the effects of the COVID-19 pandemic. The Northern Territory and Western Australia continue to be the largest producers of petroleum liquids.

#### Australian petroleum liquids production (millions of barrels)



SOURCE: APPEA PRODUCTION STATISTICS (UNTIL 2013), ENERGYQUEST (2014 ONWARDS)

#### **Production of petroleum liquids by state/territory** (millions of barrels)

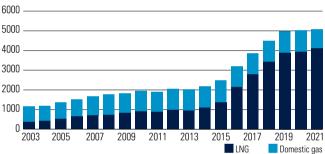
		Crude		Condensate		LPG
	2020	2021	2020	2021	2020	2021
New South Wales	_	-	_	-	_	-
Northern Territory	0.1	0.2	28.3	28.8	15.7	18.4
Queensland	-	_	_	-	0.1	-
South Australia	12.8	8.4	2.2	1.9	3.3	3.0
Tasmania	-	_	0.4	0.2	0.4	0.3
Victoria	3.0	1.8	6.7	7.4	8.0	8.4
Western Australia	32.1	31.3	50.4	54.8	5.4	7.6
Total	48.0	41.7	88.0	93.1	32.9	37.7

SOURCE: ENERGYQUEST. Note: includes production from Commonwealth waters adjacent to each state or territory and excludes production from the JPDA.

## Australian production natural gas

Australia's natural gas production (domestic use and LNG) increased in 2021 compared with 2020 albeit only slightly. The effects of the COVID-19 pandemic continue to influence the industry. However, when compared with 2019 numbers, in 2021 there were indications that the industry has begun to overcome the uncertainty that the pandemic ensued. In particular, LNG exports in 2021 are around 4% higher than in 2019. The industry is coming out of the pandemic.

#### Total domestic natural gas production and LNG exports (billion cubic feet)



SOURCE: APPEA PRODUCTION STATISTICS (UNTIL 2013), ENERGYQUEST (2014 ONWARDS)

### Production of natural gas by state/territory (billion cubic feet)

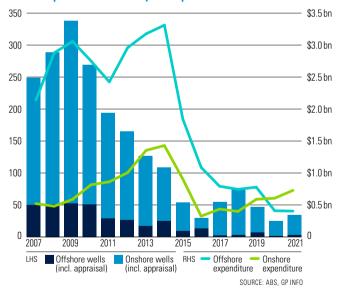
•	•					
	Conventional gas production		Coal seam gas		LNG exports	
	2020	2021	2020	2021	2020	2021
New South Wales	_	_	4.1	4.1	_	-
Northern Territory	494.1	456.4	_	-	448.8	413.3
Queensland	8.9	7.9	1,419.1	1,437.7	1,179.4	1,249.0
South Australia	110.1	98.8	_	-	_	-
Tasmania	10.5	6.6	-	-	_	-
Victoria	283.1	316.6	-	-	-	-
Western Australia	2,692.5	2,745.6	-	-	2,304.2	2,386.5
Total	3,599.2	3,631.9	1,423.3	1,441.8	3,932.5	4,048.8

SOURCE: ENERGYQUEST. Note: includes production from Commonwealth waters adjacent to each state or territory and excludes production from the JPDA.

## Petroleum exploration

Oil and gas exploration is vital for Australia's energy security. The sustainable growth of Australia's oil and gas industry depends on continuous exploration. Production cannot occur without first locating new resources and these cannot be discovered without drilling wells. Key variables driving exploration decisions include: available and prospective acreage; capital availability; exploration costs; and the ability to commercialise discovered resources. Internationally, annual global oil and gas discoveries in 2021, fell to their lowest level in 75 years.

#### Annual exploration well activity and expenditure



## Economic contribution: trade

Australia imports and exports significant quantities of petroleum and petroleum-related products. In 2020–21, Australia recorded a \$15.9 billion surplus in the trade of oil and gas—down from the record surplus of \$27.9 billion in 2019–20. LNG exports continue to make a significant contribution to Australia's economic growth. They have assisted Australia maintain its economic resilience in the face of COVID-19 related economic challenges. These figures do not reflect the impact on Australian exports from the recent Bussian invasion of Ukraine

#### Trade in oil, gas and petroleum products (A\$ billion)



#### Oil and gas imports and exports 2020-21 (A\$ billion)

	Exports	Imports
Crude	7.4	6.6
LNG	30.5	_
LPG	1.4	_
Products	0.4	19.0
Bunkers	1.8	-
Total	41.5	25.6

SOURCE: DEPARTMENT OF INDUSTRY, SCIENCE, ENERGY AND RESOURCES

### Economic contribution: taxation

The fiscal framework is a key factor shaping investment decisions in the oil and gas industry. Producers are confronted with an array of taxes, charges and fees covering petroleum activities. Fiscal imposts include resource taxes (the petroleum resource rent tax, petroleum royalties and production excise), company income tax and a wide variety of other taxes, fees and charges. All of these impact on investment and production decisions.

#### Industry taxes paid, profit (before) taxes, average realised price (A\$/bbl)

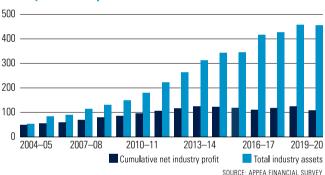


APPEA's 2019–20 Financial Survey, the 33rd instalment of the survey outlining the financial performance of the sector, showed the Australian industry's major tax, rents and royalty contributions of around \$5.35 billion. In the past decade, the industry paid more than \$64.4 billion to government, with contributions since 1985 totalling \$161 billion. After 2018–19's strong profit performance, 2019–20 saw an overall industry loss of \$9 billion, this was driven by a 10% drop in sales revenue. Some of this loss could be attributed to fall out from the COVID-19 pandemic.

## Industry investment

The Australian oil and gas industry has invested approximately \$473 billion in the Australian economy since 2010. Since APPEA's Financial Survey commenced in the mid-1980s, cumulative investment over the period has been almost four times greater than the industry's cumulative net profit. This investment will continue to deliver decades of cleaner energy, economic growth, exports and jobs for Australia.

#### Industry cumulative profits and investment (A\$ billion)



The economy is recovering from the effects of COVID-19 and the oil and gas industry has nearly A\$120 billion worth of projects in the pipeline.

LNG, gas, oil major projects investment pipeline (October 2020)

		2021		
	No. of projects	Range \$ billion	No. of projects	Range \$ billion
Publicly announced	23	40.5+	12	27.1+
Feasibility stage	19	75.7+	13	67.8+
Committed	10	19.7	12	22.4
Completed	2	0.9	3	0.1

SOURCE: DEPARTMENT OF INDUSTRY, SCIENCE, ENERGY AND RESOURCES.

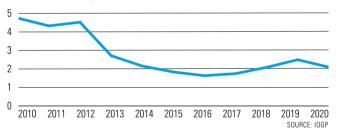
## Safety performance

The International Association of Oil & Gas Producers (IOGP) collects global safety performance data from both the onshore and offshore petroleum industry.

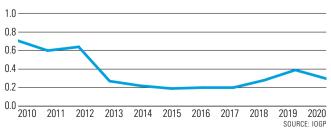
For 2020, the total recordable injury frequency rate (TRIFR)—the number of recordable injuries (fatalities + lost work day cases + restricted work day cases + medical treatment cases) per million hours worked was 2.02, down (16.5%) from 2019.

The lost time injury frequency rate (LTIFR)—the number of lost time injuries (fatalities + lost work day cases) per million hours worked was 0.29, down (25%) from 2019.

#### Australian TRIFR (per million hours worked)



### Australian LTIFR (per million hours worked)



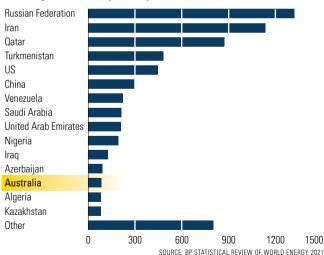
## Resources

#### Australia's estimated petroleum resources (petajoules)

	Conventional Gas	989	Tight Gas	Shale Gas	Total Gas	oii Oii	Condensate	LPG
Reserves	74,992	31,597	-	-	106,589	2,086	7,321	856
Contingent resources	121,140	26,652	803	7,596	156,191	3,576	8,630	565
All identified resources	196,132	58,249	803	7,596	262,780	5,662	15,951	1,421

SOURCE: GEOSCIENCE AUSTRALIA

#### Proved gas reserves by country and rank 2020 (trillion cubic feet)



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ENERGYOUEST

Level 30, 91 King William St. Adelaide SA 5000 T+61 8 8431 7903 www.energyguest.com.au

#### Head Office, Canberra

GPO Box 2201 Canberra ACT 2601 Phone: 02 6247 0960 canberra@appea.com.au

#### **Brishane**

PO Box 12052 George Street QLD 4003 brisbane@appea.com.au

#### Melbourne

Queen Street Melbourne VIC 3000 melbourne@appea.com.au

#### Perth

PO Box 7039 Cloisters Square WA 6850 perth@appea.com.au





CSG	coal seam gas
JPDA	Joint Petroleum Development Area zone in the Timor Sea
LNG	liquefied natural gas
LPG	liquefied petroleum gas
bcf	billion cubic feet
mmbbl	million barrels
PJ	petajoules
tcf	trillion cubic feet
	5

Front cover courtesy ExxonMobil PHOTOS: Back cover courtesy Origin Energy

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