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Fuel excise tax gap

How we estimate and reduce the fuel excise tax gap for 2020–21.

Last updated 30 October 2023

Latest estimate and trends



ATO action to reduce the gap



Methodology



Reliability



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Latest estimate and trends

Last updated 30 October 2023

For the 2021–22 year we estimate a net gap of 1.7% or \$297 million. In other words, we estimate that more than 98% of the 2021–22

theoretical fuel excise will be collected.

This gap forms part of our overall tax performance program. Find out more about the concept of **Australian tax gaps overview**.

Over the period from 2016–17 to 2021–22, the estimated net fuel excise tax gap has ranged between 1.3% and 3.2%.

The gap has historically been very low. At such low levels, we consider year-to-year volatility as statistical variation instead of signalling any underlying changes in compliance. At 1.7%, the latest estimate is within our confidence interval.

Table 1 shows 2016–17 to 2021–22 data for the:


- excise and duty reported
- amendments
- gross and net fuel excise gap estimates.

Table 1: Fuel excise tax gap, 2016–17 to 2021–22

Element	2016–17	2017–18	2018–19	2019–20	2020–21
Gross gap (\$m)	444	251	266	618	1,000
Amendments (\$m)	0	1	0	0	0
Net gap (\$m)	444	250	266	618	1,000
Excise and duty reported (\$m)	17,537	18,716	18,769	18,705	19,000
Theoretical liability (\$m)	17,982	18,966	19,035	19,322	19,500

Gross gap (%)	2.5	1.3	1.4	3.2	
Net gap (%)	2.5	1.3	1.4	3.2	

Figure 1: Net fuel excise tax gap as a percentage of total theoretical liability, 2016–17 to 2021–22

 Figure 1 shows the net gap in percentage terms, as outlined in Table 1.

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The fuel industry is regulated through licensing and permission regimes.

A small number of businesses contribute the majority of fuel excise revenue. We support our larger clients with client managers who provide help and assurance for Excise on fuel and petroleum products.

In the current environment, our key focus is on compliance with:

- timely lodgment
- payment
- reporting.

Our client managers monitor these obligations for the highest payers so they understand variations and can engage and assist where necessary.

We work with new entities entering the fuel market to ensure their controls and systems are appropriate. Our 'New to Excise' program assists them to understand and meet obligations.

Some factors increase the likelihood of errors being made, including:

- biannual indexation on all fuels (except aviation fuel)

- policy changes
- environmental factors such as COVID-19 and natural disasters.

We have early engagement strategies in place to detect and monitor impacts to obligations.

We focus our activities on early identification of compliance issues. Our compliance activities have not identified any new issues or areas for concern.

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Methodology

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We use a 5-step top-down method to estimate the fuel excise tax gap.

Step 1: Estimate the total volume available

We estimate the excisable volume available in this order:

1. Estimate the volume imported.
2. Add the volume produced in Australia.
3. Remove the volume exported from Australia.
4. Add the volume held in inventory at the end of the previous financial year.
5. Remove the volume held in inventory at the end of the current financial year.
6. Remove the volume not subject to excise.

Step 2: Estimate average excise rates each year

Next, we estimate the average excise rates by dividing actual revenue by actual volumes, after ensuring that there is no double-counting in the volume data.

Step 3: Estimate theoretical excise liability amounts

We multiply the total volume available by the average excise rate to calculate the total theoretical excise liability.

Step 4: Calculate the fuel excise tax net gap

We subtract ATO fuel excise revenue on an accrual basis using an economic transaction method (ETM) from the total theoretical excise liability to yield the net gap.

Step 5: Calculate the fuel excise tax gross gap

We calculate the tax gross gap by adding our compliance results to the net gap. We calculate the compliance outcomes by taking our compliance case results and allocating them to specific financial years on an accrual basis.

The total excise compliance outcomes are apportioned using the percentage of total excise revenue attributable to:

- petrol
- diesel
- ethanol
- biodiesel
- associated blends.

Summary of the estimation process

Table 2 shows the:

- methodology and dollar amounts for the steps used to estimate the tax gap
- percentage figures for the gross and net gaps.

Table 2: Applying the methodology – fuel excise tax gap

Step	Description	2016–17	2017–18	2018–19	2019–20
1 to 3	Total theoretical excise liability (\$m)	17,982	18,966	19,035	19,322
4.1	Less actual excise reported (\$m)	17,538	18,716	18,769	18,705
4.2	Equals fuel excise tax net gap (\$m)	444	250	266	618
5.1	Add compliance outcomes and taxpayer adjustments (\$m)	0	1	0	0
5.2	Equals fuel excise tax gross gap (\$m)	444	251	266	618
5.3	Gross gap (%)	2.5	1.3	1.4	3.2
5.4	Net gap (%)	2.5	1.3	1.4	3.2

Find more about our overall research methodology, data sources and analysis for **How we measure tax gaps**.

Limitations

Although the gap methodology is reliable, it does not account for variations due to:

- temperature correction
- timing
- certain adjustments.

There could be errors stemming from non-standard measurement practices for the volumes of fuel products. Given that the volumes of fuel products would vary with temperature, they should always be measured at 15 degrees Celsius to maintain a consistent benchmark. However, *Australian Petroleum Statistics* volumes may be measured at different temperatures. Survey respondents are not given instructions to correct fuel volumes to 15 degrees Celsius.

A timing difference could arise between when product sales data are reported for compilation in the *Australian Petroleum Statistics* and when excise data enters our systems.


Assumptions around related volumetric calculations may also have an impact.

Updates and revisions to previous estimates

Each year we refresh our estimates in line with the annual report. Changes from previously published estimates occur for a variety of reasons, including:

- improvements in methodology
- revisions to data
- additional information becoming available.

Figure 2: Current and previous published net fuel excise tax gap estimates, 2010–11 to 2021–22

Figure 2 depicts a graphical representation of the previously published estimates ranges.

The changes are set out in Table 3 and shown as a percentage.

Table 3: Current and previous published net fuel excise tax gap estimates (percentage), 2011–12 to 2021–22

	2011–12	2012–13	2013–14	2014–15	2015–16
2023 program	n/a	n/a	n/a	n/a	n/a
2022 program	n/a	n/a	n/a	n/a	2.8
2021 program	n/a	n/a	n/a	1.0	1.9
2020 program	n/a	n/a	2.1	1.0	1.9
2019 program	n/a	2.5	2.1	1.0	1.9
2018 program	0.6	2.5	2.1	1.0	1.9
2017 program	0.6	2.5	2.1	1.1	1.9
2016 program	0.5	2.4	2.2	0.8	n/a

Reliability


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We seek feedback and advice about how we estimate the gap from external and internal subject matter experts. Based on this advice, the reliability rating for this estimate is **high** (with a score of 21).

The main data source is an external survey of large-scale petroleum and diesel producers. Small producers are not covered through this survey, but their market share is negligible given the small number of participants in the fuel industry.

Our activities confirm high levels of compliance overall. However, assumptions around the volumetric calculations may have an impact. Although there are some reservations about the data, the methodology employed is robust.

Figure 3: Reliability rating scale from very low to very high – fuel excise tax gap

"Figure 3: This image shows a graph that represents the reliability rating for the current Fuel Excise tax gap estimate. The rating scale includes: - Very low which is a score between 0 and 10 - Low which is a score between 11 and 15 - Medium which is a score between 16 and 20 - High which is a score between 21 and 25 - Very high which is a score between 26 and 30. The graph shows the Fuel Excise tax gap estimate has a rating of 21, which is high."

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