



Tax Facts

A knowledge-based series by the
Tax and Transfer Policy Institute

How does the Petroleum Resource Rent Tax work and how does it apply to gas?

The Petroleum Resource Rent Tax (PRRT) is a tax on profits derived from the sale of Australian petroleum products, designated as “[marketable petroleum commodities](#)” (MPC). This includes: stabilised crude oil, sales gas, condensate, liquefied petroleum gas (LPG), ethane, shale oil, and any other product declared by regulation to be an MPC [[see our related Tax Fact #27 – “What is the Petroleum Resource Rent Tax”](#)]. How does the tax work in practice, especially regarding its complicated gas transfer pricing rules?

How does the PRRT work?

The PRRT is a resource rent tax, designed as a cash flow tax [[1](#)]. Economic rents are profits that exceed a normal, risk-adjusted return to investment, and taxes on rent are known to be very economically efficient [[see our Tax Fact #8 – “Good tax policy: Taxing economic rents”](#)]. For each company with a stake in one or more petroleum projects, the PRRT is levied on these projects individually. It applies to each project’s annual positive net cash flow. Negative cash flows are carried forward with interest, at an uplift rate.

The PRRT is an R-based (i.e. “real” based) tax, which means that cash flows related to financing, such as interest payments and interest received, are excluded from the base. Capital investments are expensed immediately, instead of over time through depreciation [[2](#)]. The PRRT rate is 40%.

The PRRT is sometimes referred to as a modified sectoral cash flow tax [[2](#)]. This is because it is “modified” from a true cash flow tax, which would require the government to refund tax losses. The modified design mitigates the revenue risk for government of a true cash flow tax.

A simplified example of how the PRRT works for an individual petroleum project is provided in Table 1, which is a modified version of the example given by Henry et al. (2009) [[3](#)]. The main simplifying assumption made in these calculations is an uplift rate set uniformly at 10%. In practice, there is a complex schedule of uplift rates [[2](#)].

This per-project nature of PRRT calculations, along with barriers to obtaining this level of data and the volatility of resource prices, makes it challenging for forecasters to accurately predict future PRRT receipts.

Table 1: PRRT - simplified example

Description	Item	Year 1	Year 2
Receipts	(1)	0	150
/less expenses	(2)	100	0
/less expenses carried forward from previous year	(3)	0	100
/less uplift (10% applied to prior year's expenses carried forward)	(4)	0	10
Net profit (item 1 less items 2, 3, 4)	(5)	-100	40
Taxable profit (0 if item 5 is negative)	(6)	0	40
Tax @ 40%	(7)	0	16
Expenses carried forward (value of item 5 if negative)	(8)	100	0

Note: This table does not outline any calculations to assign a transfer price to gas that is converted to liquefied natural gas (LNG) within an integrated project. For an LNG project, calculating a transfer price would be required to determine the value of the "receipts" item at line (1). These concepts are explained further below.

What is the taxing point? What is the transfer price?

The cash flow tax base is defined as receipts less expenditures for the activities required to get the natural resource to its "taxing point". The taxing point occurs either: (1) when the petroleum is sold; or (2) when it becomes an "excluded commodity", such as liquefied natural gas (LNG).

How does a natural resource become an "excluded commodity"? PRRT only applies to "upstream" activity, i.e. exploration and extraction. For gas to be exported, it must be converted to LNG after extraction so it can be stored and shipped. Conversion to LNG is a "midstream" or "downstream" process which adds value to the gas. As a result, assuming that the resource is being produced and processed by the same company (i.e. it is an "integrated" project), a "transfer price" must be calculated to capture the value of the resource at the taxing point, so that only upstream activity is taxed.

No transfer price is required for domestic gas, as it does not need to be converted to LNG. Similarly, oil and other petroleum commodities do not require transfer pricing since they do not require conversion. For these commodities, the sale price is the price at the taxing point (for the purposes of the PRRT).

How is the gas transfer price determined?

A transfer price needs to be assigned to gas that is converted to LNG to determine how much of the rent from the project can be attributed to the upstream gas resource (and is therefore subject to PRRT). The choice of gas transfer pricing methodology has a substantial effect on PRRT revenue, as 80% of Australia's gas is exported [\[4\]](#) and 87% of total petroleum energy produced in Australia comes from gas [\[5\]](#).

There are three methods of assigning a gas transfer price (GTP) outlined in the GTP regulations. In practice, the residual pricing method (RPM) is almost always used. The other two allowable methods are: advance pricing arrangement, where a price is agreed upon in advance between the Commissioner of Taxation and the taxpayer; and comparable uncontrolled price, where the transfer price is determined by finding a comparable uncontrolled transaction in similar circumstances [\[6\]](#).

The RPM price is the average of two measures – "cost-plus" and "netback" price. The cost-plus price is calculated as the operating and capital costs of extracting gas, plus a capital allowance of the long-term bond rate (LTBR) plus 7%. The netback price is calculated as the end price of processed LNG less operating and capital costs of the liquefaction process, including a capital allowance of LTBR plus 7% [\[7\]](#).

The cost-plus price can be interpreted as the minimum price at which the hypothetical upstream business would be willing to sell the extracted gas to the downstream business within the integrated project. The netback price can be interpreted as the maximum price the downstream business would be willing to pay for the unprocessed "upstream" petroleum product [\[8\]](#). The difference between these prices per unit of gas is the economic rent earned by the integrated project, as it is the return on the overall project that exceeds the return to investment required by

the producer. Setting the transfer price to be the midpoint of the cost-plus and netback price is equivalent to attributing half of the total rent to the upstream project. Therefore, half the estimated rent from the integrated project is subject to PRRT.

In situations where the netback price does not exceed the cost-plus price, the project is not profitable and there is no residual profit or rent. In this case, the GTP is set to be equal to the netback price. This would be unlikely to occur in practice.

The RPM splits the rent equally between upstream and downstream operations to reflect that there are contributions to the residual profit from both operations. While arbitrary, this was considered to be a fair assumption when the GTP regulations were introduced. The Callaghan Review of the PRRT in 2017 recommended that the GTP arrangements be reviewed, especially with regard to this assumption. Several stakeholders have argued that the RPM results in undervaluing upstream gas, and that the government should switch to a netback only pricing method [\[9\]](#).

The review of the GTP arrangements was completed in May 2023, and its primary recommendation was that gas should be more fairly valued by moving to a netback only pricing method, or alternatively, retaining the RPM and allocating a greater share of rent to the upstream operation [\[10\]](#). A third alternative of limiting the proportion of PRRT assessable income that can be offset by deductions to 90% for LNG projects was offered by Treasury, and this is the option that was taken up by the government, among other measures [\[11\]](#). This is expected to bring forward and ensure a minimal amount of PRRT revenue from LNG projects, although it does move away from the design of a rent tax. As at 2023, the package of announced reforms is expected to raise \$2.4b over the forward estimates (the current budget year and the following three years). By contrast, moving to a netback only method of pricing gas has been estimated to raise \$3-4b annually [\[12\]](#).

In our [Tax Fact #27 – “What is the Petroleum Resource Rent Tax?”](#), we outline further recommendations on how the PRRT could be improved. In particular, a resource rent tax (RRT), which would operate in a similar way to the PRRT, should be introduced on all mining.

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