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Submission: Petroleum Resource Rent Tax (PRRT): Review of the Gas Transfer Pricing arrangements

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This submission addresses issues raised by the Treasury consultation paper (April 2019) ‘Review of the Gas Transfer Pricing arrangements.’

1. Recommendation

This submission recommends replacing the current Residual Pricing Method (RPM)¹ used for calculating the gas transfer price for feedstock gas — by the ‘Net Back’ method alone. The RPM is a key causal factor to the problem of low PRRT revenues, and a change in method is required for remediation.

Feedstock gas is a marketable petroleum commodity² and the determination of its value (before it is processed into another form, such as LNG) is one of the critical elements for the PRRT liability calculation.

The PRRT is a profits-based tax, however it is still a form of ‘royalty’ levied on a producer — for the ‘stock’ of community-owned gas extracted. Accordingly, the regulation design needs to facilitate a return to the community.

¹ As prescribed in *Petroleum Resource Rent Tax Assessment Regulation 2015* (Cth), ss. 24, 28-30 (hereafter referred to as *PRRT Regulation 2015*).

² *Petroleum Resource Rent Tax Assessment Act 1987* (Cth), section 2E (hereafter referred to as *PRRTAA 1987*).

1.1 This recommendation to use the Net Back method, alone, to determine the gas transfer price is within the scope of the Treasury consultation objectives.³

1.2. The problem to date of *low revenues* raised by the PRRT is set to continue, as per the 2019 Federal Budget forecasts of low PRRT revenue⁴:

2017-2018 \$1.12 billion

2018-2019 \$1.15 bil.

2019-2020 \$1.4 bil.

2021 to 2023: \$1.4 bil. p/a.

1.3. The Treasury Gas Transfer Pricing consultation paper (April 2019) poses a range of questions, many of which concern distracting minutiae, such as third party access and tolling fee developments, asymmetry problems between upstream and downstream and the capital allowance rate etc.

The community as owners of petroleum resources, should not accept any recommendations from Treasury's review that might only fine-tune the *PRRT Regulation 2015*. In the context of energy justice,⁵ merely 'fine-tuning' would transgress both intra- and inter-generational equity. Further, government is accountable to ensure *PRRT Regulation 2015* facilitates enough tax revenue to fix environmental impacts, given the high carbon emissions from extraction and burning of gas.

³ My submission meets the consultation objectives of (1) options to improve transparency and reduce complexity in the way in which the rules operate, and (2) any other related matters.

⁴ Federal Budget 2019-20, < https://www.budget.gov.au/2019-20/content/bp1/download/bp1_bs4.pdf >.

⁵ The energy justice framework provides a decision-support tool for policy-makers to balance the energy trilemma of competing aims: economics (eg. energy pricing), politics (eg. energy security) and environment (eg. sustainability). See: Kraal Diane (2019) 'Petroleum industry tax incentives and energy policy implications: A comparison between Australia, Malaysia, Indonesia and Papua New Guinea', *Energy Policy*. Vol 126 (March): 212-222 <<https://doi.org/10.1016/j.enpol.2018.11.011>>.

1.4. That PRRT low revenues and the RPM are linked — is supported by the *Callaghan PRRT Review* (2017).⁶ The review identified the *PRRT Regulation 2015* as undervaluing ‘the return to the upstream business’ and thus reducing assessable PRRT receipts.⁷ This raises energy justice issues for the Australian community.

1.5. The PRRT submission by Boué (2017)⁸ to the Australian Senate inquiry into corporate tax avoidance, supports the contention about the need for still more substantive PRRT legislative changes to redress equity issues. Boué (2017, p.10) reports that ‘in terms of the tax contribution per barrel of oil produced, Australia and the UK are in a league of their own’ being significantly lower compared to the other jurisdictions eg. Denmark, the Netherlands and Norway.

1.6. In April 2019 the ABC reported on the 2018 gas revenue gap between Australia’s PRRT (\$1.2bil), Qatar (\$50.9bil), and Norway (\$19.5bil).⁹ These figures reveal significant differences in revenues, even taking into account dissimilar tax regimes and resource prospectivity.

1.7. My modelling of the recommended Net Back method has been published in a peer-reviewed academic journal.¹⁰ The RPM issues and implications are summarised below.

- The regulated Residual Pricing Method (RPM) requires the calculation of both the Cost Plus Method price and the Net Back method price.¹¹

⁶ Michael Callaghan, *Petroleum Resource Rent Tax Review. Final Report to Treasurer*, released 28 April 2017, < <https://treasury.gov.au/review/review-of-the-petroleum-resource-rent-tax> >.

⁷ Ibid., Callaghan (2017), p. 159.

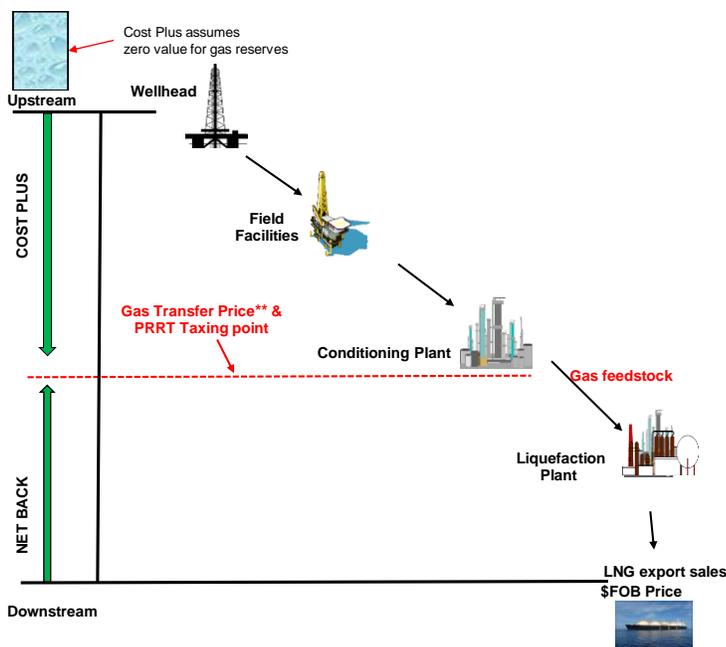
⁸ Submission by Juan Carlos Boué to the Australian Senate, < <https://www.aph.gov.au/DocumentStore.ashx?id=aa27f980-b24e-451f-b354-76487f21702b&subId=563105> >. See also Juan Carlos Boué (2018) *The UK North Sea as a Global Experiment in Neoliberal Resource Extraction: The British model of petroleum governance from 1970–2018*, Platform London and Public and Commercial Services Union, London.

⁹ ABC, “The Business”, Friday 12 April 2019 ‘The Shine is coming Off the Golden age of Gas’, < <https://www.abc.net.au/news/programs/the-business/2019-04-12/the-shine-is-coming-off-the-golden-age-of-gas/11020910> >.

¹⁰ Diane Kraal (2017) ‘Review of the Petroleum Resource Rent Tax: Implications from a case study of the Gorgon gas project’, *Federal Law Review*, Vol. 45 (2): 315-349.

¹¹ *PRRT Regulation 2015* (Cth), s. 30.

- However, the Cost Plus method only adds operating costs and augmented capital costs from the wellhead to the boundary of the liquefaction plant. It excludes the value of petroleum reservoir at the wellhead. Exploration costs are also excluded.¹² Then the costs are divided by volume of gas produced to derive price.
- The Net Back method takes the LNG export revenue from which is deducted operating costs and augmented capital costs, back to the boundary of the liquefaction plant. Then the result is divided by volume of gas produced to derive price.
- When the Cost Plus price is compared to the Net Back price, the former will almost always be lower. The regulated RPM then requires the Cost Plus and Net Back prices to be added and divided by two (to get an average price). The lower Cost Plus price will always lower the RPM average price; in part due to the exclusion of the rent from petroleum reservoir at the wellhead.



$$**RPM \text{ Gas Transfer Price} = \frac{\text{Upstream 'Cost Plus' \$price} + \text{Downstream 'Netback' \$price}}{2}$$

Figure 1. RPM Gas Transfer Pricing Method

¹² PRRT Regulation 2015 (Cth), s. 32 (a).

1.8. The Australian government (on behalf of the community-owners) allows a zero valuation of gas reserves at the wellhead under the Cost Plus method. It is certainly not the case in the United States where minerals below private land are acknowledged for their intrinsic value, and paid for promptly upon extraction. The governments of Queensland (onshore shale gas projects) and Western Australia (North West Shelf) have fortuitously kept their petroleum royalty system intact, when the Australian government's original intent from the 1980s was to replace production royalties solely with a profits-based resource rent tax system.¹³

Australia's zero valuation of its gas reserves, and the notion that economic rent is only given value by capital supplied and technical knowhow — is a construct. This construct might be traced back to the introduction of the PRRT in 1987 and possibly prior - to the 1977 Australian Labor Party platform on resource policy; or the Industry Assistance Commission (IAC) influence from their 1976 Fraser coalition government-commissioned inquiry into oil prices.¹⁴ Whether Australia's PRRT construct, can be linked to the UK frame of reference of 'zero' value for their petroleum reserves is a topic for future investigation.¹⁵

Economic literature acknowledges the intrinsic value of natural resources:

-Rents are attributable to past investments, or to factors of production (includes natural resources, such as gas) in temporarily fixed supply.¹⁶

¹³ Kraal D., (2016) *The Petroleum Resource Rent Tax: Overview of primary documents and literature leading to the 1987 legislation*, Tax and Transfer Policy Institute, Australian National University, Working Paper (non-HERDC). <<https://taxpolicy.crawford.anu.edu.au/publication/ttqi-working-papers/8697/petroleum-resource-rent-tax-overview-primary-documents-and>>.

¹⁴ Ibid., Kraal D., (2016), p. 2.

¹⁵ For a discussion on the contention that 'natural resource owners are characterised as having nothing of value to offer', see Boué (2018): 13.

¹⁶ IMF. 2012. *Fiscal Regimes for Extractive Industries: Design and implementation*. International Monetary Fund, Washington DC, p. 5.

-The community has a reasonable expectation that when some of its property is given to a private party, that party will pay its full value. The value of the mining lease being made available to a private party is the expected present value of the economic rent.¹⁷

-Economic rent includes three components: Ricardian rent on the known fixed in supply natural resource deposits; quasi-rents earned on short-term immobile inputs invested in exploration and lower production costs; and monopoly profits.¹⁸

1.9. Given it is outside the terms of reference for this Treasury inquiry to repeal the PRRT and reintroduce royalties, there should at least be more uniformity in Commonwealth taxation of petroleum resources. For example, the North West Shelf gas project uses the Net Back method for royalty calculation. The Net Back method should be adapted for the PRRT gas transfer pricing — from the LNG export sales point back to the PRRT taxing point.

The RPM clearly disadvantages the wider Australian community as the owners of gas resources. The flaws in the RPM have resulted in the Australian government missing out on millions of dollars in tax since the PRRT Regulations were first introduced in 2005.

No other country in the world uses the *PRRT Regulation 2015* ‘bespoke’ RPM method to determine a gas transfer price. My recent research empirically demonstrates that it is resource prospectivity, not tax concessions (such as the flawed and concessional RPM) that attract inward investment to a country.¹⁹

¹⁷ Garnaut, R (2010) Principles and Practice of Resource Rent Taxation. *Australian Economic Review*, 43 (4), p. 348.

¹⁸ Freebairn, J (2015) 'Reconsidering Royalty and Resource Rent Taxes for Australian Mining' 59 *Australian Journal of Agricultural and Resource Economics*, p. 588.

¹⁹ Kraal Diane (2019) ‘Petroleum industry tax incentives and energy policy implications: A comparison between Australia, Malaysia, Indonesia and Papua New Guinea’, *Energy Policy*. Vol 126 (March): 212-222 <<https://doi.org/10.1016/j.enpol.2018.11.011>>.

2. Treasury consultation paper (April 2019). Question 1: What principles should underpin the price of feedstock gas in vertically integrated operations going forward?

Response: I do not agree with the RPM principle that ‘outcomes should be assessed against economic efficiency criteria’ (Treasury Consultation Paper, p.4). It is an outdated 20th century principle that preferences the economics of a resource project, possibly originating from the UK *non-proprietary* model of oil and gas governance. Under the UK model, ‘investors name their price’ to extract resources,²⁰ and government entices capital inflow through tax concessions. Contrast the USA *proprietary* model of oil and gas governance. Under the USA model, mineral resources are seen as valuable and it is private investors that have to adapt accordingly.²¹

2.1. The 21st century expectation is that the evaluation of fossil fuel extraction projects should not just be based on economic principles. Economic imperatives must be in balance with the politics of energy and environmental concerns. This is referred to as energy justice. Some of the energy justice principles applicable to the pricing of gas feedstock, include: due process, transparency and accountability, sustainability, and intra-and inter-generational equity. There is emerging literature (e.g. the *Nature* journal) on energy justice, which embodies a just transition to a low carbon economy.²²

²⁰ Buoe (2018), p.22.

²¹ Ibid.

²² Energy justice literature includes: Benjamin Sovacool et al (2016) 'Energy Decisions Reframed as Justice and Ethical Concerns' 1 *Nature Energy* 1, available at <DOI: 10.1038/NENERGY.2016.24>; Diane Kraal (2019) 'Petroleum industry tax incentives and energy policy implications: A comparison between Australia, Malaysia, Indonesia and Papua New Guinea', *Energy Policy*. Vol 126 (March): 212-222; Raphael J Heffron and Darren McCauley (2015) 'Resolving society's energy trilemma through the Energy Justice Metric' 87 *Energy Policy* 168.; Raphael J Heffron and Darren McCauley (2017) 'The Concept of Energy Justice Across the Disciplines' 105 *Energy Policy* 658.; Simon Marsden (2017) 'The ‘Triangle’ of Australian Energy Law and Policy: Omissions, connections and evaluating environmental effects' 29 *Journal of Environmental Law* 475. Raphael J Heffron et al (2018) 'Balancing the energy trilemma through the Energy Justice Metric' 229 *Applied Energy* 1911.

2.2. In 1998 the reputationally-disgraced accounting firm, Arthur Andersen,²³ provided Government their commissioned report on PRRT gas transfer pricing for Australia’s burgeoning LNG industry.²⁴ The Arthur Andersen report cited no references and a bibliography was not provided. For decades the Australian government has bases its recommendations on the Arthur Andersen report (1998) for the design of the PRRT regulations. This has cost of billions of dollars in lost taxation revenue (according to my modelling).

For example, my modelling for Chevron’s Gorgon project over the period 2012 to 2030, shows results of only PRRT revenue of \$2.4 billion under the RPM, compared to \$4.5 billion under the recommended Net Back method, alone.²⁵

2.3. In the absence of an observable market price for gas, the Arthur Andersen report (1998) executive summary confidently recommended, inter alia:²⁶

The “residual price methodology” is a viable approach for setting a feedstock gas transfer price in an integrated gas to liquids project for the purposes of calculating secondary tax liability.

2.4. However within the body of that same Arthur Andersen report (1998) their view of the appropriateness of the RPM was less emphatic. They stated:²⁷

- In the context of establishing a gas transfer price between upstream and downstream operations it is difficult to determine a reliable mechanism for splitting the price based on the outcome of open market bargaining;

²³ . ‘Fall of Anderson’, *Chicago Tribune* (1 Sept 2002) < <https://www.chicagotribune.com/news/chi-0209010315sep01-story.html> >.

²⁴ Arthur Andersen (1998) ‘Gas Transfer Pricing Study, Parts 1 and 2. Report prepared for Department of Primary Industries and Energy’, Canberra

²⁵ Diane Kraal (2018) ‘Taxation and Pricing of Natural Gas: The Dutch transition to a gas market hub and lessons for Australia’s integrated gas projects’. Presentation at the 41st International Association of Energy Economists (IAEE) Conference, Groningen, The Netherlands, 10-13 June.

²⁶ Arthur Andersen (1998) Part 2, p. 5.

²⁷ Ibid., Arthur Andersen (1998) Part 2, p. 24.

- Obviously, there are a multitude of methods that could be used to split the residual price. None of the methods considered provides a systematic assessment of the relative values associated with the upstream and downstream activities; and
- In light of this situation any method is essentially arbitrary. In this regard it was considered that the most appropriate and potentially equitable solution is to split the residual price 50:50 between the upstream and downstream operations.

2.5. The Arthur Andersen report (1998) modelling shows the cost plus price as always less than the netback price; and the residual price 50:50 split drives the gas transfer price down further.²⁸ Industry members, were part of that closed committee of 1998, and there was no community representation. This accounts for the bias in selecting the RPM.

3. Treasury consultation paper (April 2019). Question 9: Comments are invited regarding whether exploration costs and a broader range of costs to develop a project to final investment decision should be included in upstream capital, and how this is best achieved to properly value the return to the upstream business.

Response: *PRRT Regulation 2015* excludes exploration and the petroleum reservoir value from the Cost Plus equation for the upstream business.

3.1. The Arthur Andersen report (1998) modelling assumes:

The risk associated with exploration activities are not a relevant concern for the upstream business (Treasury consultation paper, p.4).

I do not agree with the Arthur Andersen report's exploration assumption. Exclusion of exploration costs from the RPM has had the profound effect of reduced PRRT revenue. One could replicate the main PRRT legislation where exploration is deductible expenditure, and can be uplifted.²⁹

²⁸ Ibid., Arthur Andersen (1998), Part 2, p.41, Figure 7.

²⁹ *Petroleum Resource Rent Tax Assessment Act 1987* (Cth), s.37.

In terms of costs, my modelling results show capital allocation between upstream and downstream, and some excluded upstream costs (ie. petroleum reservoir value), are key variables affecting the RPM gas transfer price.³⁰

3.2. There is rent in the LNG price in the Net Back equation, but rent is not included in the Cost Plus equation. Indeed, the Arthur Andersen report (1998) noted upstream rents:

- It may be useful to distinguish between the concept of economic rent as a residual profit over the normal economic return associated with an activity (usually downstream value added activities) and resource rents which accrue to an activity from the intrinsic value of a finite resource, such as gas itself (associated with upstream activities). The distinction between these two concepts of rent are blurred and difficult to quantify in the case of an integrated gas to liquids project;³¹ and
- A return is ‘generated by any unique and valuable assets possessed by the participants’ [ie. value of the finite gas resource].³²

My view is that the only way to equitably value the gas transfer price is to use the Net Back method.³³ The value of proven petroleum reserves is an asset in a company’s balance sheet and the Net Back method captures the rent of the reserve.

4. Treasury consultation paper (April 2019). Question 11: What is the right proxy for determining a capital allowance rate?

Response: There is no literature that supports the RPM capital allowance rate of LTBR + 7%. It is an arbitrary figure. In line with the 1 July 2019 changes to the main *PRRTAA 1987* legislation, the capital allowance rate in the RPM could be lowered.

³⁰ See, Diane Kraal, (2017) ‘Review of the Petroleum Resource Rent Tax: Implications from a case study of the Gorgon gas project’, *Federal Law Review*, Vol. 45 (2): 315-349.

³¹ Arthur Andersen (1998), Part 2, p.10.

³² *Ibid.*, Arthur Andersen (1998), Part 2, p.23.

³³ For example, the North West Shelf gas project is required to use the Net Back method to determine the well-head value of gas sold.

4.1. My modelling results for Chevron’s Gorgon project showed low sensitivity to the RPM capital allowance rate, as the same rate is used for upstream and downstream; and the Cost Plus and Net Back prices move up or down in proportion.³⁴

4.2. Indeed, given the community has to wait so long for a return on its resources (the period between initial expenditure and substantial profits being earned) that the capital allowance rate should be zero.

5. Treasury consultation paper (April 2019). Question 14: How can the current profit split be changed to better allocate returns in circumstances where the price of the LNG resource is high?

Response: Each integrated gas project is different and I would not recommend case by case tailoring of profit split for gas transfer price purposes.

6. Treasury consultation paper (April 2019). Question 17: How can the RPM be altered to better reflect movements in gas price that also takes into account the risk of selling LNG into market?

Response: My modelling shows that LNG export gas price changes will affect the gas transfer price (via the net back equation).³⁵ For example, an LNG export gas price increase causes a gas transfer price increase, but it is proportionately less due to the 50:50 split. This is another RPM flaw that cannot be altered simply.

The Net Back method, only, approach would more correctly reflect LNG price changes in the gas transfer price.

The government has the responsibility (another energy justice principle) to manage mineral resources in the best interests of the community. The *PRRT Regulation 2015* should not be a tool to protect company profits by taking account of producer risk of selling LNG into the market.

³⁴ See, Diane Kraal, (2017) ‘Review of the Petroleum Resource Rent Tax: Implications from a case study of the Gorgon gas project’, *Federal Law Review*, Vol. 45 (2): 315-349.

³⁵ *Ibid.*, Diane Kraal, (2017).

7. Treasury consultation paper (April 2019). Question 18: Are there any reasons for retaining a differential treatment between the upstream and downstream in determining the RPM price?

Response: The *PRRT Regulation 2015* treatment of the Australian community bearing a disproportionately large share of downside risk from an integrated project if it makes a loss — is an example of heavy-handed, and the 1998 committee’s bias, in the already flawed RPM. Inter- and intra- generation equity is an energy justice principle.

8. Treasury consultation paper (April 2019). Question 19: Comments are invited on any revisions that would be beneficial to consider with regard to APAs.

Response: Advance Pricing Arrangements should be made transparent to the public, much like the Australian Tax Office ‘sanitised’ or highly summarised private rulings or interpretive decisions. Transparency is an energy justice principle.

9. Treasury consultation paper (April 2019). Question 22: Should businesses be required to publicly report on the price of gas at the taxing point?

Response: Yes, businesses should be required to publicly report on the price of gas at the taxing point, and show reasonable calculation details. Transparency is an energy justice principle.

I would be pleased to meet with Treasury to further discuss this submission.

Yours Sincerely

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