

## **Tax Working Group Public Submissions Information Release**

### **Release Document**

**September 2018**

**[taxworkinggroup.govt.nz/key-documents](http://taxworkinggroup.govt.nz/key-documents)**

Key to sections of the Official Information Act 1982 under which information has been withheld.

Certain information in this document has been withheld under one or more of the following sections of the Official Information Act, as applicable:

- [1] 9(2)(a) - to protect the privacy of natural persons, including deceased people;
- [2] 9(2)(k) - to prevent the disclosure of official information for improper gain or improper advantage.

Where information has been withheld, a numbered reference to the applicable section of the Official Information Act has been made, as listed above. For example, a [1] appearing where information has been withheld in a release document refers to section 9(2)(a).

In preparing this Information Release, the Treasury has considered the public interest considerations in section 9(1) of the Official Information Act.

Tax Working Group Secretariat  
PO Box 3724  
Wellington 6140  
via email: [submissions@taxworkinggroup.govt.nz](mailto:submissions@taxworkinggroup.govt.nz)

30 April 2018

### Future of Tax Submission

Mercury welcomes the opportunity to make a submission to the Tax Working Group (the Group) on its Future of Tax review. No part of our submission is confidential. We would welcome the opportunity to meet with the Group and the secretariat to discuss our points in greater detail. We have engaged the services of Sapere Research Group in providing advice on the contents of this submission.

#### Summary

Mercury would support greater clarity on the objectives for the Group's consideration of environmental taxes and whether the intention is to apply royalties or fees to water, and whether those royalties or fees would extend to non-consumptive uses such as hydro generation.

Hydro generation currently provides around a quarter of New Zealand's renewable primary energy supply.<sup>1</sup> Hydro will play an increasingly important role in providing flexibility to support the expansion of renewable electricity generation, which is required to meet the government's climate change and renewable electricity targets. As the recently released Productivity Commission *Low Emissions Economy*<sup>2</sup> draft report notes, renewable electricity will be crucial for enabling New Zealand to transition to a low carbon economy.

Renewable electricity will be needed to help transform the transport and process heat sectors of the economy from fossil fuel dependency to a reliance on the cleaner energy sources we are fortunate to have in abundance. As the electricity industry contemplates increasing degrees of intermittent renewables discretionary, flexible plant like hydro will become more important. The presence of any royalty that affects hydroelectricity and not other forms of electricity generation would shift the economics of future investment in favour of thermal plant. Such a shift would be contrary to the government's environmental objectives.

One of New Zealand's strengths is that, unlike other jurisdictions, we have a well-functioning electricity market without any distortionary taxes or subsidies on particular fuel types. While we would welcome further discussion, we are concerned that the application of a royalty that affects hydro electricity generation will operate as a wealth tax on investors due to the privatisation or partial privatisation of most hydro generation assets. Water ownership is also an issue. Any royalty on water use would be challenging to apply unless the current uncertainties around rights and interests in water are resolved.

International experience of resource rentals and environmental taxes suggests that it is difficult to design resource rentals in a manner that is both fair and does not result in unintended consequences.

---

<sup>1</sup> Ministry of Business, Innovation and Employment, *Renewables statistics*

<sup>2</sup> [www.productivity.govt.nz](http://www.productivity.govt.nz)

## Mercury Overview

Mercury is one of New Zealand's largest electricity generators and retailers providing energy services to homes, businesses and industrial consumers throughout the country. We have a long heritage in renewable energy in New Zealand serving about 1-in-5 homes and businesses under the Mercury brand and other speciality brands. We also have proven capability and technical expertise in smart metering services and solar. Our goal is to be the leading energy brand in New Zealand, inspiring our customers, owners and partners by delivering value, innovation and outstanding experiences.

Mercury operates nine hydrogeneration sites on the Waikato River and five geothermal stations in the Central North Island. We are a major employer, particularly in the regions where we have 270 highly skilled renewable energy professional staff located in offices in Hamilton, Rotorua and Taupo. We also have joint ventures with a number of Maori Land Trusts in geothermal power stations.

Mercury is highly committed to opportunities that deliver sustainable benefits to its customers, communities and the country. The long-lived nature of its assets has meant *kaitiakitanga*, or guardianship, of New Zealand's natural resources such as hydro and geothermal is a vital foundation for Mercury. We are in the privileged position to be able to support, through long term partnerships, a number of initiatives that maintain and enhance the environmental and social wellbeing of the communities within which we operate. Examples include our 20-year relationship with Rowing New Zealand, our support since 2004 for the Waikato River Trails Charitable Trust and the significant financial contribution Mercury provides annually to the Waikato Catchment Ecological Enhancement Trust to mitigate any effects on the environment from the operation of the Waikato Hydro System and invest in environmental enhancement projects<sup>3</sup>.

### Importance of renewable electricity to government's climate change objectives

Mercury has also long been a champion of leveraging New Zealand's 85% renewable electricity advantage further to provide real sustainability benefits for the country. The government has set a target to achieve 100% renewable electricity by 2035. We welcomed the recognition in the recent Productivity Commission report that greater electrification of transport and process heat are key opportunities in achieving the government's aspirations for a net carbon zero economy by 2050.

### New Zealand's strength is promoting the market and avoiding distortions

New Zealand's renewable advantage owes much to government, particularly for key economic and regulatory reforms that have been very principled in their intent. This was to ensure that the costs and risks associated with investment in generation infrastructure were not hidden in the government's accounts but were made transparent via the competitive market and managed on the balance sheets of corporatised entities.

Key to these reforms was the establishment of a competitive wholesale market for electricity generation which has enabled significant investment in renewable generation over the past two decades, particularly in geothermal generation (which has also created significant benefits for the regions and Maori economic development), as well the rationalisation of excess carbon intensive, thermal generation. The main achievement of the market has been to improve the so-called "merit order" of generation investment, meaning those projects that are economic are allocated capital and those that are no longer economic are retired.

Unlike in other jurisdictions, such as Australia and the UK, New Zealand has avoided distorting competitive market signals by attempting to pursue changing and at times conflicting policy objectives, such as the decarbonisation of electricity supply while shielding some elements of the sector from competition from renewable or other disruptive investments<sup>4</sup>. The resulting constant regulatory adjustments means a heightened prospect that changes are being made to the electricity sector in those jurisdictions to overcome the effects of previous regulations, at the risk of ever-

---

<sup>3</sup> <http://www.wceet.org.nz/>

<sup>4</sup> The promotion of renewable electricity targets versus relying on carbon pricing being a key example here



mounting distortions to sector performance. In such an environment, there would be little hope of converging to a stable set of regulations necessary to support long lived investments in renewable energy.

It is the lack of distortions in the New Zealand electricity market which has underpinned the substantial (several billion dollars) investment in generation from renewable energy sources in recent years. Creating a conducive environment for investment has, among other factors, led the International Energy Agency to recognise New Zealand as “a world leading example of a well-functioning electricity market that continues to work effectively”.<sup>5</sup> The electricity market arrangements are a major contributing factor to New Zealand’s top ten ranking by the World Energy Council in achieving a balance between environmental sustainability, energy equity and reliability outcomes<sup>6</sup>.

### **Hydro generation will play an essential role in achieving our climate change aspirations**

Looking forward, the role of the market and New Zealand’s flexible renewables will play an essential role in achieving the government’s climate change aspirations at least cost to the New Zealand economy. As the recent Productivity Commission report notes<sup>7</sup>, reducing carbon emissions across the economy will require significant investment in renewable electricity to meet demand from electric vehicles and for process heat currently met by fossil fuels. This renewable generation will increasingly be built from intermittent sources like wind which will need other significant sources of flexible generation that can quickly respond when wind, for example, is unavailable. This flexibility role will increasingly be filled by hydro generation. This is because the government’s recent ban of offshore oil and gas exploration means gas fired generation will become uneconomic. Gas fired generation is currently the only other major provider of substantial flexibility in the electricity system which is why it is included in all the Productivity Commission’s electricity supply scenarios out to 2050.

### **Greater clarity on motivation for environmental taxes would be of value**

Mercury’s main area of comment on the Group’s paper is the topic of environmental taxation. It was not clear from the background paper the main motivation for considering environmental taxes. The Group defines environmental taxes as “charges levied on tax bases that have a proven, specific negative impact on the environment”.<sup>8</sup> However, it also refers to resource royalties and economic rent taxes, which, rather than being motivated by environmental impacts, are intended to “ensure that the public gets a fair share of the profits generated from the use of the country’s resources”.<sup>9</sup> Mercury would support greater clarity on the objectives for the Group’s consideration of environmental taxes.

### **Hydro generation royalties would impact electricity prices**

A royalty will impact on electricity pricing. A royalty based on water used or electricity generated would impact on the decisions made by the hydroelectricity generator in the wholesale market. A royalty would increase the cost of generating from hydro resources and therefore flow through to retail prices by lifting the average wholesale purchase price of power. This would in turn impact on the merit order of future projects and increase the costs of hydro providing flexibility services to support the necessary expansion of renewable electricity generation to achieve the government’s climate change and renewable electricity targets.

The impact of a royalty on wholesale prices is driven by two main factors: the ability of hydroelectricity generators to pass through any royalty in market offers and the incentives a royalty creates for hydroelectricity generator to spill water rather than generate.

In terms of pass through, during those periods when a hydro generator is “marginal”, i.e., it is the price setter, in the wholesale market, it may have an ability to increase its marginal offer to recover the cost of any royalty. Hydro

---

<sup>5</sup> International Energy Agency Review of New Zealand (2017)

<https://www.iea.org/countries/membercountries/newzealand>

<sup>6</sup> <https://trilemma.worldenergy.org/>

<sup>7</sup> Refer footnote 2

<sup>8</sup> Tax Working Group *ibid*, page 49.

<sup>9</sup> Tax Working Group *ibid*, page 41.



generators will not always be marginal within the wholesale market and will share this role over the year with thermal plant<sup>10</sup>. Our analysis for the most recent three-year period indicated hydro generation has been the marginal plant approximately 80% of the time. Mercury would expect this figure could potentially increase with the progressive decommissioning of thermal plant (as has been the trend over the past 5-7 years), the government's recent ban on offshore oil and gas exploration materially impacting on future gas investment and the need for flexible hydro generation to support renewables expansion to achieve climate change and renewable electricity targets.

Royalties on hydroelectricity generation will also create incentives to spill water which will also impact on pricing. During periods when wholesale prices are low, and water in storage is plentiful, hydro operators have a high willingness to sell. It is not unusual to see prices close to \$0/MWh during times of high storage, especially when demand is low. Hydro operators close to their storage bounds have the choice to either generate, or spill the water. Currently, even at these very low prices, hydro operators would prefer to generate as much as possible rather than spill. However, if each unit of generation had a positive cost (of the amount of the royalty), rational generators would prefer to spill the water at wholesale prices lower than the unit cost of the royalty (rather than generate and incur the royalty). As a result, it would be reasonable to assume an increase in spill would occur and/or (more likely) the "floor" on wholesale prices would be approximately the cost of the royalty (converted into energy terms).

### **Rights and interests in water need to be resolved**

Royalties are designed to provide a fair return to the owner of a resource. A royalty imposed for a natural resource would involve a payment for a property right held by the Crown. For instance, the stated objective of the New Zealand royalty regime for minerals is to provide a "fair return to the Crown as owner of the resource" (see discussion of the royalty regime for minerals in Appendix One to this submission). However, the ownership of water in New Zealand is subject to intense debate. Before a royalty on water could be considered, it would be necessary to resolve Maori rights and interests in water. Mercury (as Mighty River Power) formally acknowledged Ngāti Tūwharetoa's ownership of the lakebed of Lake Taupō in a long-term agreement in respect to the storage of water<sup>11</sup>. However, the presumption remains that water is a commons resource in New Zealand under the stewardship of the Crown.

### **The New Zealand context differs from countries where royalties are applied**

We have researched how resource rentals, royalties, and environmental taxes are applied to water used in hydroelectricity generation in other parts of the World. We have identified schemes in several countries – mostly they consist of royalties and/or cost recovery fees. In contrast with these examples there are several features of the New Zealand environment which would make the application of a royalty to water used in hydroelectricity generation challenging and, we think, at odds with the established criteria identify by the Group for evaluating tax reform.<sup>12</sup> For example in the schemes we found in Canada, the United States, Brazil and elsewhere there is clarity as to the ownership of water and, the land surrounding the hydro dam and the royalty or tax was typically imposed prior to any privatisation of such assets. We would be happy to discuss this research in further detail with the Group.

### **Taxing hydro would distort renewable generation and increase the costs of decarbonisation**

Introducing a royalty on water used for hydroelectricity generation would impact on the electricity market in ways counter to the government's climate change and renewable energy objectives. As noted above, hydro generation will play an increasingly important role in providing flexibility to support the expansion of intermittent renewable generation to achieve a net carbon zero economy by 2050 and 100% renewable electricity by 2035. Increasing costs to hydro generation will make the costs to the economy higher and reduce the relative attractiveness to consumers and business of making investments in new technologies with material carbon reduction benefits to New Zealand like electric vehicles or process heat. The presence of any royalty that affects hydroelectricity and not other forms of

---

<sup>10</sup> Hydro generation is the largest source of generation in New Zealand providing 57% of generation in 2017 according to MBIE statistics. <http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/statistics/electricity>

<sup>11</sup> <https://issuu.com/mercurynz/docs/tuwharetoa-and-mighty-river-power-r>

<sup>12</sup> Tax Working Group, op cit, page 5.



electricity generation would shift the economics of future investment in favour of thermal plant. Such a shift would be contrary to the Government's environmental objectives.

Most commentators expect ongoing investments to maximise the potential of existing hydroelectrical plant, to replace equipment as it ages, as well as some new small-scale hydroelectricity generation plant<sup>13</sup>. Given the recent government decision to ban new oil and gas exploration and coal for electricity generation, there is also potential to consider larger scale deep hydro storage projects to improve resilience to periodic dry years that longer term will not be able to be achieved by thermal generation options.

### **Wealth tax on investors in renewable hydro-generation**

Royalties applying to minerals in New Zealand are known to investors prior to committing to investments. Hence, the stream of future royalty payments are part of the costs of the project, and expected returns are assessed after factoring in the royalty payments.

In the case of hydroelectricity generation, the major schemes have already been completed, with very long asset lives (well in excess of 100 years). The government has partially privatised its remaining interest in hydroelectricity generation (incorporated within Mercury, Meridian, and Genesis Energy) via the Mixed Ownership Model (MOM), having earlier sold Contact Energy. The other significant hydroelectricity generator, Trustpower, is privately owned.

Mercury notes that an assumed value of future profits was reflected in the listing price of the of Mixed Ownership Model (MOM) companies at time of the Initial Public Offering (IPO). In this regard the public, via the Crown as their representative, can be seen to have received compensation from usage of hydro resources by those companies for electricity generation from the proceeds of the IPO process.

A royalty imposed after investments have been made would have a similar impact to any other form of tax (such as a wealth tax) levied on an existing investment; it would reduce the value of that investment. However, unlike a wealth tax, a royalty on hydroelectricity generation would tax the wealth of a small subset of population – those who had invested in firms operating renewable hydroelectricity generation. It is not evident to Mercury, how a tax targeted on just those investors (including the Crown) could improve the structure, fairness or balance of the tax system.

### **Consideration of other taxation approaches**

Mercury recognises that royalties are only one of the approaches that are considered in scope of the review and that might be applied to hydrogeneration assets. We provide further commentary on resource economic rent taxes and environmental taxes in Appendix Two of this submission. In summary economic rent taxes have proven very hard to achieve internationally (and have never been applied to hydrogeneration assets to our knowledge) and domestically. Environmental taxes can be a blunt instrument and like royalties run the risk of increasing electricity costs without providing social welfare gains above for example the requirements of specific consenting regimes.

### **Conclusion**

Mercury supports greater clarity being provided as to the objective for the Group's consideration of environmental taxes and their application to non-consumptive uses. The unintended consequences of applying any form of taxation to hydro generation require careful consideration considering the government's climate change and renewable electricity ambitions, the unresolved issue of rights and interests in water and the impacts on investors in existing hydrogeneration infrastructure. We encourage the Group to engage with the Productivity Commission on its recent report on transitioning to a low-emissions economy.

Mercury would be happy to discuss directly with the Group on any aspect of our submission. Please contact Nick Wilson at [nick.wilson@mercury.co.nz](mailto:nick.wilson@mercury.co.nz) or 09 580 3623.

---

<sup>13</sup> See for example Energy Efficiency & Conservation Authority, *Hydroelectricity*, Available at: <https://www.eeca.govt.nz/energy-use-in-new-zealand/renewable-energy-resources/hydroelectricity/>



Yours sincerely \_\_\_\_\_

[1]

Nick Wilson  
**Manager Regulatory and Government Affairs**





# Appendix One: Royalties and resource rentals on natural resources in New Zealand

## Objectives for royalty regimes

In 2012 the government reviewed the minerals royalty regime. The objectives that were established for the review would likely be similar to the objectives that would be established to consider a royalty regime for water (and the objectives were the same as those applied to review royalties for petroleum earlier). They are therefore included here.

The review, summarised in the Regulatory Impact Statement, used four key objectives. Namely, New Zealand's royalty and fiscal regime for minerals should:

- (a) Provide a fair return to the Crown as owner of the resource: This objective was weighted far more heavily than the other three objectives for the purposes of the review as it is a key part of the purpose statement to the Act under proposed amendments.
- (b) Be neutral and non-distortionary: The system should not have the effect that developments that are economic before a royalty is applied become uneconomic after the application of a royalty.
- (c) Provide appropriate risk-sharing between private investment and the Crown: The objective relates to the need to balance the interests of the Crown and those of miners.
- (d) Be simple to administer for both the Crown and industry: Unit-base royalties<sup>14</sup> are administratively simpler than revenue-based royalties, which are in turn simpler than profits-based and hybrid-based royalties.

The Regulatory Impact Statement states that the Ministry of Business, Innovation and Employment does not favour unit-based royalties for minerals and petroleum because they are “economically inefficient” and “do not take account either the market value of the mineral resource or the costs of extraction and production” (see, Regulatory Impact Statement for Mineral Royalties, 2012).

The Ministry does not favour resource rent royalties on the basis that “it fails to provide a guaranteed return to the Crown at the outset of production (and therefore it fails to meet the fair financial return objective)”. It is also administrative complexity, both for miners and the Crown. This led the Ministry to focus on AVR, APR or a hybrid of AVR/APR royalty options.

## How royalties are applied

The Crown Minerals Act 1991 sets out the broad legislative framework for the issuing of permits to prospect, explore and mine Crown-owned minerals within New Zealand.

Crown-owned minerals include petroleum, gold, silver and uranium, and all minerals on or under Crown land. In some cases, the Crown also has rights to certain minerals in some private land.

The regime is made up of the Crown Minerals Act 1991 (the Act), minerals programmes, and associated regulations. The Act establishes the framework for issuing and managing permits.

The Crown owns about half of the in-ground coal, metallic and non-metallic minerals, industrial rocks and building stones in New Zealand – either by right or because they are in Crown-owned land. These resources are collectively referred to as the ‘Crown mineral estate’.

---

<sup>14</sup> Unit-based royalties apply a specified price to be paid on the tonnage produced.





The Crown automatically owns all petroleum, gold, silver, and uranium in New Zealand and has rights to all minerals in the Exclusive Economic Zone (EEZ) - offshore between 12 and 200 nautical miles (nm) - and the Extended Continental Shelf (ECS - when the shelf extends beyond the EEZ out to a maximum of 350 nautical miles).

Permit holders may have an obligation to file and pay royalty returns and these are detailed within the appropriate Petroleum Programmes or Regulations.

New permits granted since 24 May 2013 are subject to pay royalties under the Crown Minerals (Royalties for Petroleum) Regulations 2013.

Many current permit holders operate under a past royalty regime.

Permits granted under a previous minerals programme continue to pay royalties based on those programmes.

### **Minerals (i.e. coal, gold and rock, sand and gravel) royalties**

Crown Minerals (Royalties for Minerals Other than Petroleum) Regulations 2013 covers royalties and royalty reports on mining permits. (Permits granted before these regulations fall under the minerals programme at the time).

Crown Minerals (Minerals other than Petroleum) Regulations 2007 covers requirements and procedures for permit applications, permit changes applications, royalty returns and payments, reporting to the Crown on prospecting and exploration and lodging core and samples with the Crown. These were amended on 24 May 2013.

Crown Minerals (Minerals Fees) Regulations 2016 covers fees payable for Minerals and Coal under the Crown Minerals Act 1991.

Extractors must pay:

1. An application fee for a prospecting permit
2. A royalty. The details of the royalty are below in box 1.
3. An annual fee for exploration rights. The details of the annual fees are below in box 2.

#### **Box 1 Crown minerals royalties (under the Crown Minerals (Royalties for Minerals Other than Petroleum) Regulations 2013)**

13 Royalty payable for Tier 1 permits

- (1) The holder of a Tier 1 exploration or mining permit for coal must pay an ad valorem royalty of 2% of the net sales revenue of the coal obtained under the permit if the accounting profits of the permit holder for the coal for the reporting period are less than or equal to \$5 million.
- (2) The holder of a Tier 1 exploration or mining permit for gold must pay an ad valorem royalty of 2% of the net sales revenue of the gold obtained under the permit if the accounting profits of the permit holder for the gold for the reporting period are less than or equal to \$2 million.
- (3) The holder of an exploration or a mining permit for underground coal gasification must pay the higher of—
  - (a) an ad valorem royalty of 1% of the net sales revenue of the products obtained under the permit; and
  - (b) an accounting profits royalty of 10% of the accounting profits, or provisional accounting profits, as the case may be, of the products obtained under the permit.
- (4) In any other case, the holder of a Tier 1 exploration or mining permit must pay the higher of—
  - (a) an ad valorem royalty of 2% of the net sales revenue of the minerals obtained under the permit; and
  - (b) an accounting profits royalty of 10% of the accounting profits, or provisional accounting profits, as the case may be, of the minerals obtained under the permit.
- (5) A royalty payable under this regulation is payable for each reporting period.

14 Royalty payable for Tier 2 permits

- (1) The holder of a Tier 2 exploration or mining permit for coal must pay royalties in accordance with regulation 13(1).

...



- (3) In any other case, the holder of a Tier 2 exploration or mining permit must pay an ad valorem royalty of 1% of the net sales revenues of the minerals obtained under the permit.
- (4) A royalty payable under this regulation is payable for each reporting period.

15 Royalty rate for minerals specified in Schedule 2

(1) For the purposes of regulation 14(2) (c), the chief executive must calculate the rate of royalty for each mineral specified in Schedule 2 in accordance with this regulation and using the following formula:

$$r = s \times (1 + (\text{PPIx} \div \text{PPI13} - 1))$$

where—

r is the rate of royalty

s is the rate specified in the second column of Schedule 2

PPIx is the PPI for the final quarter of the reporting period immediately preceding the reporting period for which the rate is being calculated

PPI13 is the PPI for the final quarter of the 2013 reporting period.

(2) The calculation must be rounded to the nearest cent.

(3) The calculation must be made annually at the close of each reporting period.

(4) The rates, as amended by each calculation, take effect for the following reporting period.

(5) As soon as practicable after calculating the rates, the chief executive must notify in the Gazette—

(a) each rate for the reporting year to which the calculation relates; and

(b) the difference between that rate and the corresponding rate in the immediately preceding reporting period.

(6) The first calculation must be made at the close of the 2014 reporting period to take effect for the 2015 reporting period.

Subpart 2—How to calculate net sales revenues, gross sales revenues, accounting profits, and allowable APR deductions

<http://www.legislation.govt.nz/regulation/public/2013/0206/latest/whole.html#DLM5211613>

**Box 2. Crown Minerals exploration fee (under the Crown Minerals (Minerals Fees) Regulations 2016)**

7 Annual fee payable under onshore prospecting permit

The annual fee payable under an onshore prospecting permit is the greater of—

(a) \$54.80 per square kilometre or part of a square kilometre; and

(b) \$1,400.

8 Annual fee payable under offshore prospecting permit

The annual fee payable under an offshore prospecting permit is the greater of—

(a) \$3.11 per square kilometre or part of a square kilometre; and

(b) \$1,400.

9 Annual fee payable under onshore exploration permit

The annual fee payable under an onshore exploration permit or an extension of the duration of the permit under section 35A or 36 of the Act is the greater of—

(a) \$311.30 per square kilometre or part of a square kilometre; and

(b) \$1,400.

10 Annual fee payable under offshore exploration permit

The annual fee payable under an offshore exploration permit or an extension of the duration of the permit under section 35A or 36 of the Act is the greater of—

(a) \$9.33 per square kilometre or part of a square kilometre; and

(b) \$1,400.

11 Annual fee payable under onshore mining permit

(1) The annual fee payable under a Tier 1 onshore mining permit is the greater of—



- (a) \$1,790 per square kilometre or part of a square kilometre; and
- (b) \$1,400.
- (2) The annual fee payable under a Tier 2 onshore mining permit is the greater of—
  - (a) \$1,790 per square kilometre or part of a square kilometre; and
  - (b) \$1,000.

12 Annual fee payable under offshore mining permit

The annual fee payable under an offshore mining permit is the greater of—

- (a) \$88.89 per square kilometre or part of a square kilometre; and
- (b) \$1,400.

## Petroleum royalties

Crown Minerals (Royalties for Petroleum) Regulations 2013 cover royalties and royalty reports for petroleum mining permits granted after 24 May 2013.

Crown Minerals (Petroleum) Regulations 2007 specify reporting requirements for permit/licence holders. These were last amended on 24 May 2013.

Crown Minerals (Petroleum Fees) Regulations 2016 covers fees payable for petroleum under the Crown Minerals Act 1991.

Extractors must pay:

1. An application fee and a bond of \$250,000 for a prospecting permit
2. A royalty. The details of the royalty are below in box 3.
3. An annual fee for exploration rights. The details of the annual fees are below in box 4.

### Box 3 Royalties for petroleum (under the Crown Minerals (Royalties for Petroleum) Regulations 2013)

13 Royalty payable under exploration permit

- (1) The holder of an exploration permit must pay an ad valorem royalty of 5% of the net sales revenues of the petroleum obtained under the permit.
- (2) The royalty is payable for each reporting period.

14 Royalty payable under mining permit

- (1) The holder of a mining permit must pay the higher of—
  - (a) an ad valorem royalty of 5% of the net sales revenues of the petroleum obtained under the permit; and
  - (b) an accounting profits royalty of 20% of the accounting profits, or provisional accounting profits, as the case may be, of the petroleum obtained under the permit.
- (2) Despite subclause (1), permit holders with a net sales revenue of less than the prescribed threshold in a reporting period must pay an ad valorem royalty of 5% of the net sales revenues of the petroleum obtained under the permit.
- (3) A royalty payable under this regulation is payable for each reporting period.
- (4) The prescribed threshold under subclause (2) is—
  - (a) the amount determined by the Minister by notice in the Gazette; or
  - (b) in the absence of an amount determined under paragraph (a), \$1 million.
- (5) A prescribed threshold determined in accordance with subclause (4)(a) takes effect from the beginning of the calendar year following the year in which the amount is gazetted.

15 Royalty payable on underground gas storage facility

- (1) The holder of a mining permit that includes an underground gas storage facility must pay a one-off ad valorem royalty of 5% of the estimated value of the original gas in the underground gas storage facility if any of the gas that is injected into the facility is mined from land outside the area of the permit.
- (2) The royalty must be paid—



- (a) at the time the permit is granted, if the permit includes the facility at that time; or
- (b) at the time the permit is amended, if the permit is amended after its granting to include an underground gas storage facility.
- (3) The royalty must be paid as a lump sum, with the estimated value of the original gas based on the value at the time that the royalty must be paid.
- (4) The holder of a mining permit that includes an underground gas storage facility must also pay, for each reporting period, an ad valorem royalty of 5% of the sales value of any liquid petroleum extracted from the underground gas storage facility.
- (5) In this regulation, original gas means the economically recoverable gas in an underground gas storage facility before injection of gas from another permit area. The amount and value of the original gas must be determined by an independent expert who has specialist knowledge in reserves estimation and who is acceptable to the Minister.

Subpart 2—How to calculate net sales revenues, gross sales revenues, accounting profits, and allowable APR deductions

Full text here: <http://www.legislation.govt.nz/regulation/public/2013/0126/latest/whole.html#DLM5156983>

#### **Box 4 Annual fee payable under prospecting permits (under the Crown Minerals (Petroleum Fees) Regulations 2016)**

##### 7 Annual fee payable under prospecting permits

- (1) The annual fee payable under a prospecting permit (other than a non-exclusive prospecting permit) is \$0.87 per square kilometre or part of a square kilometre.
- (2) The annual fee payable under a non-exclusive prospecting permit is \$43,478.26.

##### 8 Annual fee payable under exploration permits

The annual fee payable under an exploration permit or an extension of the duration of the permit under section 35A of the Act is the greater of—

- (a) \$10.55 per square kilometre or part of a square kilometre; and
- (b) \$9,000.

##### 9 Annual fee payable under mining permits

- (1) The annual fee payable under a mining permit is the greater of—
  - (a) \$121 per square kilometre or part of a square kilometre; and
  - (b) \$15,000.
- (2) However, if a mining permit covers an area of less than 0.1 square kilometres, the annual fee payable under the permit is \$1,400.



## Appendix 2 Challenges of applying taxes to water used for hydro generation

### Economic rent taxes very hard to achieve

Conceptually, an economic rent would be earned by the owners of hydroelectricity generation assets where the competitively determined electricity price exceeds the marginal cost of producing the hydroelectric power (adjusted to reflect the full opportunity cost of the factors of production employed<sup>15</sup>). In other words, the rent-estimation task involves estimating the cost savings -from a full-cost perspective- from including the hydro site within an electricity generation system. (World Bank, 2010).

In practice, estimating rents from hydroelectricity generation would be very complex. Following the Australian Henry Review if an economic rent tax was sought there might be a preference for a cash flow tax. As explained in Box 5, Under a cash flow tax, a firm is taxed on any net positive cash flow from its business before interest and dividends. When a new investment is made, this is deductible, and any revenue from it is taxable.

There would be several difficulties to overcome in implementing such a tax. A key objection is that if applied to existing assets, the tax amounts to an expropriation of some of the value of the property without compensation. This argument does not apply to new generation plant, but as noted above, major new investments in hydroelectricity generation are not expected to be consented. While investors should not expect that an existing investment would never be taxed by a sovereign government, investors in hydroelectricity generation are likely to be concerned if they are singled out for higher taxation relative to investors in other assets.

Such a proposal would likely create sovereign risk issues for all investment (in the sense that the business community begins to view itself as vulnerable to additional, unexpected taxes and therefore increases its risk premium). Certainly, this was the experience in Australia with the Henry Review proposals.

A final objection to applying an economic rent tax to hydro electricity generation is that enforcement would be difficult. This is because electricity generators typically operate a combination of generation sources (the hydroelectricity generators also operate wind generation, and some operate geothermal and thermal plant), and are vertically integrated with retail. These factors mean there is low visibility of 'rents', if any exist, which can be attributed to hydroelectricity generation. An economic rent tax would require high administrative costs to prepare separate accounts and detailed internal transfer pricing rules to establish the profit and/or cashflow attributed to hydro generation plant.

#### Box 5 Forms of resource rent taxes

There are many forms of resource rent taxation, with variations based on deductibility of expenses or treatment of negative cash flows. The cash flow tax is topical because it featured in the Australian Henry Review.<sup>16</sup> In this form of tax, a firm is taxed on any net positive cash flow from its business before interest and dividends. When an investment is made, this is deductible, and any revenue is taxable. What this means is that in a simple example with an economic rent tax at a 30% rate, the government funds 30% of the investment (by way of tax deductions) and the government receives 30% of the return on the investment. The government through the economic rent tax becomes an equity partner in the firm fronting up the tax rate percentage of the investment and receiving the same percentage of return. On the basis that the return is super profits (the high return generated by economic rents), the government shares in such rents.

<sup>15</sup> The opportunity cost would include the factors of production employed to generate and transmit electricity produced using the least-cost alternative, including the cost of capital.

<sup>16</sup> The Australia's Future Tax System Review, informally known as the Henry Tax Review was commissioned by the Rudd government in 2008 and published in 2010. The review was intended to guide tax system reforms over the next 10 to 20 years.



In contrast, under an income tax the government does not front up with any of the cost of investment (this is non-deductible capital) but shares in the tax rate percentage of the profits. In not meeting any of the investment costs but sharing the profits, the post-tax return on investment is lower than the pre-tax return discouraging investment and causing an economic cost.

The Australian Henry Review identified three mechanisms for a cash flow tax:

1. A “Brown” tax – the government meets the tax rate proportion of every investment and shares the same percentage of the revenue.
2. A “Arnaut and Clunies Ross” tax – the government does not contribute a share of the upfront investment costs but provides deductions (indexed by say WACC) to offset against future revenue so that the investing firm is indifferent about when it receives the government share of the investment.
3. An “Allowance for Corporate Capital” or “ACC” tax – losses are shared by the government only on an amortisation basis but these losses are still uplifted by a factor to keep the investing firm indifferent as to the timing of the government investment contribution.

The Henry Review preferred the ACC on the basis that it would make tax revenue less volatile than the other options.

The main issue with a cash flow tax is that it can only apply in theory to new investments since to keep it neutral the government must contribute its proportion of the investment costs. The Henry Review proposed applying the cash flow tax (ACC) to existing investments as well as new and this became the main criticism of the Resources Super Profits Tax (RSPT) they recommended. (The decision to apply the tax to existing resource permits became highly controversial. The controversy regarding the RSPT was such that an “ad war” between the government and mining interests began in May 2010<sup>17</sup> and continued until the downfall of Prime Minister Kevin Rudd in June 2010<sup>18</sup>).

### Similar proposals never quite got off the ground

The example of coastal space highlights some of the practical difficulties with applying taxes to resources like water. While there is the ability to charge for the occupation of coastal space under section 64 of the Resource Management Act 1991, charging has never been put into effect.<sup>19</sup> Some commentators say this is because of objections to the idea of charging for the use of unimproved space and difficulties in establishing an appropriate charge. There was also an incentives problem: Councils were put in charge of establishing and implementing the charging regime, but the revenues raised were to go into a central pool of funds. Also, prior to the introduction of the Foreshore and Seabed Act 2004 there was uncertainty over ownership of coastal space.

The legislative regime was also unclear. These charges were initially thought to be rentals by some councils (for example, Auckland council, which set out to value the space in the coastal marine area as if it were being rented). The Act, however, requires that revenue collected by a Regional Council from a coastal occupation charge “must be used only for the purpose of promoting the sustainable management of the coastal marine area.” This establishes it as a cost recovery regime not a rental regime.

### Environmental taxes

Hydroelectric generation schemes are not unique from other forms of land use such towns and farms and roads that have impacted on the landscape. These costs have been incurred.

An environmental tax can only lead to better outcomes if it changes future behaviour in a way that advances environmental objectives. In concept, activities that would result in additional social costs should face higher taxes to discourage that activity, and lower taxes, or a subsidy, should apply to activities that have social benefits.

<sup>17</sup> News.com.au. “Kevin Rudd defends mining ads”, 29 May 2010.

<sup>18</sup> Money.ninemsn.com.au (AAP). “Mining stocks soar as RSPT ads axed”, 24 June 2010.

<sup>19</sup> From 1 October 2014 all regional councils are required to amend their regional coastal plans and either introduce a charging regime or to state in their plans that no charging regime would be imposed.



Our advisers Sapere have not been able to identify a social welfare improving behaviour change by an existing hydroelectricity generator for which a tax (or a subsidy) would be better policy instrument to encourage. Hydroelectricity generation operations are subject to detailed resource consents, and these consents can and do address such issues as limiting storage lake levels, providing for river flushes and otherwise controlling operations to achieve environmental objectives.

By comparison, a tax can be a blunt instrument and would risk raising the cost of hydroelectricity generation in the merit order (discussed in earlier in our submission) and thereby running counter to other environmental objectives, such as achieving greenhouse gas reductions.

