

Office of State Revenue

Petroleum and Gas (Royalty) Regulation 2004

Position Paper Measurement of petroleum

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Relevant legislation

Petroleum and Gas (Production and Safety) Act 2004 (PG Act)

Petroleum and Gas (Royalty) Regulation 2004 (the Regulation)

Purpose of paper

1. This paper provides guidance on the views of the Commissioner of State Revenue (the Commissioner) on the measurement of volumes of petroleum produced for the purposes of petroleum royalty under the PG Act and the Regulation from 1 October 2020.

Background

2. From 1 October 2020 petroleum royalty is payable on the volume of petroleum produced by a petroleum producer (producer) during a royalty return period (return period) that is liable for petroleum royalty. The royalty payable by a producer is dependent on the type of petroleum produced and the basis on which the average sales price for the royalty rate is determined for the producer.
3. For calculating petroleum royalty liability for a producer for a return period, there are therefore three principal matters to be determined:
 - (a) the total liable volume of petroleum produced by the producer during the period
 - (b) the classification of the liable volume of petroleum as liquid petroleum, project gas, supply gas or domestic gas
 - (c) the petroleum royalty rate applicable for each petroleum type.
4. This position paper addresses the measurement of the liable volume of petroleum.
5. Separate position papers have also been issued dealing with the classification of petroleum, determination of petroleum royalty rates and the application of chapter 6 of the Regulation to swap arrangements.

Preliminary issues

6. Unless a contrary intention appears, words and expressions used in this paper have the same meaning as in the PG Act and the Regulation. In particular, *meter* has the meaning given by s.631 of the PG Act, which includes:
 - (a) a measuring device (such as a positive displacement meter, turbine meter or orifice metering) and its ancillary equipment (such as a flow computer)
 - (b) a measurement method (such as, for a disposal of incidental coal seam gas in ventilation air from an underground coal mine, an estimation of flow rates and sampling of methane content measurements).

Legislative framework

7. The PG Act requires a producer to:
 - (a) pay petroleum royalty for petroleum that the producer produces¹
 - (b) lodge royalty returns in relation to such petroleum.²
8. A producer includes:
 - (a) for petroleum produced from a petroleum tenure under the PG Act or the *Petroleum Act 1923* (the 1923 Act)³—the petroleum tenure holder who produces it or for whom it is produced
 - (b) for petroleum that is incidental coal seam gas mined under s.318CM of the *Mineral Resources Act 1989*—the coal or oil shale mining lease holder who mines it or for whom it is mined
 - (c) for petroleum that is coal seam gas mined under a mineral hydrocarbon mining lease—the coal or oil shale mining lease holder who mines it or for whom it is mined.⁴
9. A producer also includes a person who has applied to, and been approved by, the Commissioner to be taken to be a petroleum producer for petroleum royalty purposes in relation to a stated amount of petroleum produced as part of a particular petroleum operation.⁵
10. Petroleum is *produced* when it is:
 - (a) recovered to ground level from a natural underground reservoir in which it has been contained or
 - (b) released to ground level from a natural underground reservoir from which it is extracted.⁶
11. Petroleum royalty is calculated, and obligations such as royalty return lodgement are imposed, on the basis of petroleum operations, rather than on the basis of individual wells or petroleum tenures.⁷
12. Petroleum royalty for a petroleum operation is payable on the volume of petroleum produced by the producer from that petroleum operation during a royalty return period (produced petroleum) that is not exempt from petroleum royalty.⁸

Basis of volume measurement

13. The measurement of petroleum is relevant in determining, for a royalty return period, the volume of produced petroleum that is:
 - (a) subject to petroleum royalty (liable petroleum) or
 - (b) exempt from petroleum royalty (exempt petroleum).

¹ Section 590(1) of the PG Act

² Section 592A(1) of the PG Act

³ An authority to prospect or a petroleum lease granted under the relevant Act: s.18(3) of the PG Act and s.2 of the 1923 Act (definition of '1923 Act petroleum tenure')

⁴ Schedule 2 of the PG Act, definition of 'petroleum producer'

⁵ Chapter 6, Part 6 of the Regulation

⁶ Section 15(1) of the PG Act

⁷ Lodgement on the basis of petroleum operations is pursuant to an administrative arrangement.

⁸ Sections 145, 148A, 148F and 148K of the PG Act

14. In many instances, petroleum operation infrastructure is designed to transport petroleum from each well located on a petroleum tenure in the operation to one or more central points, where it is comingled with petroleum from other wells in the operation, and potentially with petroleum purchased by the producer or sourced from one or more of the producer's other petroleum operations.
15. Except in relation to certain flared or vented petroleum⁹, for petroleum royalty purposes a producer will generally only be required to measure total volumes of petroleum at the petroleum operation level (i.e. not at the well or petroleum tenure level).
16. Despite paragraph 15, a producer is required to maintain adequate records to support the total volumes included in a royalty return, including well-specific data where relevant (for example, in relation to the exemption for production testing¹⁰).
17. Where a particular meter measures petroleum produced from several petroleum operations, a producer must take appropriate steps to ensure that correct volumes are attributed to each operation for petroleum royalty purposes.

Units of volume measurement

18. For the purposes of petroleum royalty calculation:
 - (a) gas volumes are to be converted to gigajoules
 - (b) liquid petroleum volumes are to be converted to barrels.¹¹
19. Where a producer measures petroleum in units other than those referred to in paragraph 18:
 - (a) the producer must convert the units into gigajoules or barrels (as appropriate) for petroleum royalty calculation purposes using a consistent, reasonable conversion factor each royalty return period
 - (b) keep records to support the conversion.

Measurement obligations under the PG Act

20. The PG Act requires a producer to ensure that certain petroleum is measured by a meter, at the times and in the way prescribed under the Petroleum and Gas (General Provisions) Regulation 2017 (the General Provisions Regulation). Such petroleum includes:
 - (a) petroleum the producer produces
 - (b) any of the petroleum that is used in the production of petroleum from a particular petroleum tenure, 1923 Act petroleum tenure or mining tenement on which the petroleum was produced or processed
 - (c) any of the petroleum produced that is flared or vented by or for the producer
 - (d) any of the petroleum produced that the producer, or someone else for the producer, injects into a natural underground reservoir in Queensland
 - (e) any of the petroleum produced, the property in which passes from the producer
 - (f) any of the petroleum produced that passes through another stage in its production or processing that the producer is given a notice is a stage at which the petroleum must be measured.¹²

⁹ Sections 591(1)(f) and 591A of the PG Act

¹⁰ Section 591A of the PG Act

¹¹ Section 143 of the Regulation

¹² Section 801 of the PG Act

21. The measurement obligations referred to in paragraph 20 do not apply to petroleum that is:
 - (a) unavoidably lost before it can be measured or
 - (b) lost or used as part of normal operations for instrumentation, purging, blowdown or similar activities.¹³
22. The PG Act and the General Provisions Regulation prescribe certain requirements in relation to, and error tolerances for, a meter that is used to:
 - (a) measure, at custody transfer points, petroleum for supply or transport by pipeline
 - (b) work out petroleum royalty or
 - (c) comply with the measurement requirements referred to in paragraph 20.¹⁴

Measurement of volume of produced petroleum

23. The PG Act does not prescribe any particular method by which a producer is required to measure the volume of produced petroleum for petroleum royalty purposes. Accordingly, a producer should determine an appropriate methodology for measuring that volume to an appropriate degree of accuracy for determining petroleum royalty liability.
24. A producer should use a consistent, reasonable method for measuring the volume of produced petroleum for each royalty return period.
25. As noted above, the PG Act imposes obligations in relation to meters for measuring the volumes of produced petroleum and certain types of exempt petroleum, noting that the PG Act definition of 'meter' extends beyond physical meters.
26. The Commissioner acknowledges that a meter at the wellhead may, in addition to measuring petroleum, unavoidably measure volumes of matter other than petroleum (such as water¹⁵ or impurities). However, a measurement taken from a meter at a point in the petroleum production chain after the removal of water and impurities:
 - (a) will not include the volume of produced petroleum that has not reached that meter (such as petroleum produced and then stored during the royalty return period)
 - (b) could potentially include the volume of petroleum that was not produced by the producer from the petroleum operation for which the producer is determining its petroleum royalty liability (such as petroleum produced by the producer from a different petroleum operation, or purchased by the producer).
27. Given this, the Commissioner considers it reasonable for a producer to measure the volume of produced petroleum for a royalty return period using the following method (the add-back method):
 - (a) Identify (in accordance with paragraph 28) a meter in the petroleum production chain after each wellhead at which the volume of petroleum (excluding other matter, such as water or impurities) can be measured to within the tolerances required by the PG Act and the General Provisions Regulation (the relevant meter).
 - (b) Determine (in accordance with paragraphs 29 and 30) the total volume (measured volume) of petroleum that passed all relevant meters during the royalty return period (measured petroleum).

¹³ Section 801(2A) of the PG Act

¹⁴ See s.629 and Chapter 8 generally of the PG Act and Part 6 of the Regulation.

¹⁵ Section 10(3)(g) of the PG Act states that 'petroleum', as that term is used in the PG Act and the Regulation, does not include water.

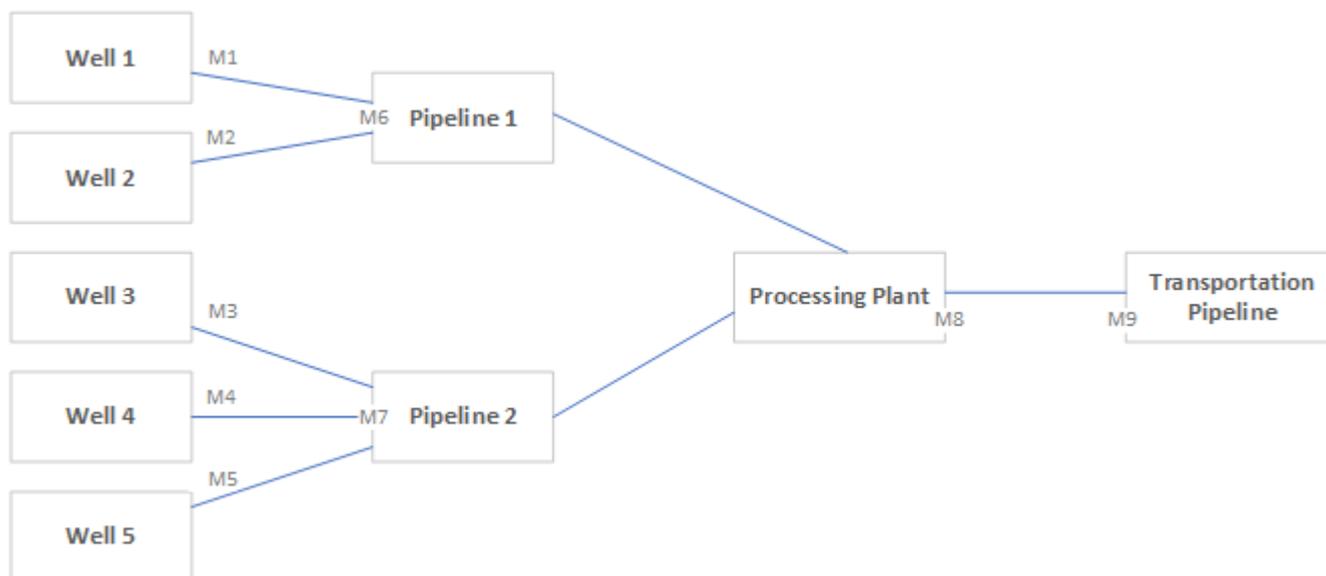
- (c) Determine (in accordance with paragraphs 29 and 32) the total volume (additional produced volume) of produced petroleum that was produced during the royalty return period but was not measured by the relevant meters (additional produced petroleum).
- (d) Determine (in accordance with paragraphs 29 and 33) the total volume (non-produced volume) of petroleum that passed all relevant meters during the royalty return period that was not produced petroleum (non-produced petroleum).
- (e) Add the measured volume to the additional produced volume, and then subtract the non-produced volume, to measure the volume of produced petroleum.

28. In relation to the identification of a relevant meter:

- (a) depending on the petroleum operation and the type of petroleum produced, potential locations for a relevant meter could include the point at which custody of petroleum is transferred from the producer (custody transfer point), an entry to a pipeline network, or an exit from a petroleum processing facility
- (b) a petroleum operation may potentially have multiple meters that meet the criteria to be a relevant meter
- (c) where the petroleum from a particular wellhead passes multiple meters that meet the criteria to be a relevant meter:
 - (i) the producer must select one of those meters to be the relevant meter for petroleum produced from that wellhead
 - (ii) the same meter should be used as the relevant meter for petroleum produced from that wellhead each return period
- (d) it does not matter whether the petroleum passing a relevant meter is liable petroleum or exempt petroleum
- (e) the Commissioner would generally not be satisfied with the accuracy and completeness of a measurement of the volume of produced petroleum for a royalty return period using the add-back method if a meter that meets the criteria to be a relevant meter does not exist at a point in the petroleum production chain at or before the custody transfer point.

Example 1

ABC Co produces CSG in an operation, Alpha Operation, containing five wells, which feed into two pipelines which in turn feed into a processing facility as follows.



Physical meters exist at each point indicated in the above diagram, denoted by 'M'. The custody transfer point for CSG sold by ABC Co from the Alpha Operation is at the entry to the transportation pipeline (i.e. Meter M9 is at the custody transfer point).

Meters M1, M2, M3, M4 and M5 (at the wellhead of the wells) and Meters M6 and M7 (at the entry to the pipelines feeding into the processing plant) measure a mix of petroleum and other matter. Meters M8 (at the exit of the processing facility) and M9 (at the custody transfer point) measure petroleum (excluding other matter) to an error tolerance of $\pm 0.5\%$, which is within the error tolerances prescribed by the PG Act and the General Provisions Regulation.

ABC Co can select either Meter M8 or M9 to be the relevant meter for petroleum produced from each of Wells 1 to 5, so selects Meter M8. Although it meets the criteria to be a relevant meter, Meter M9 will not be the relevant meter for petroleum produced from those wells, so the volume of petroleum measured by Meter M9 is not taken into account in the add-back method.

Example 2

Same facts as Example 1, but Meters M6 and M7 can measure petroleum (excluding other matter) to within the legislated error tolerances.

ABC can select Meter M6, M8 or M9 to be the relevant meter for petroleum produced from each of Wells 1 and 2, and Meter M7, M8 or M9 to be the relevant meter for petroleum produced from each of Wells 3, 4 and 5.

29. As the nature and extent of data available to a producer in respect of measured petroleum, additional produced petroleum and non-produced petroleum (each, a measurement category) may differ, including due to differences in any meters used, the Commissioner acknowledges that a producer may use different methods for measuring the volume:

- (a) in each measurement category or
- (b) of different types of petroleum in each measurement category¹⁶

for a royalty return period. However, a producer should use a consistent, reasonable method for determining such volumes for each period.

¹⁶ For example, the volume of additional produced petroleum that is unavoidably lost prior to measurement would necessarily need to be estimated. See also Example 4.

30. Given the accuracy of a relevant meter, the Commissioner expects that:
- (a) relevant meters will be the principal source of data used by a producer when determining the measured volume for a royalty return period
 - (b) where the producer does not use data from relevant meters without alteration when determining the measured volume, the producer should be able to justify such non-usage or alteration of metered data.

Example 3

Same facts as Example 1.

During the March 2022 return period, meter M8 measures 100,000 GJ of gas.

The measured volume for the period is 100,000 GJ.

31. Additional produced petroleum includes, but is not limited to, produced petroleum that is:
- (a) unavoidably lost
 - (b) used
 - (c) flared or vented or
 - (d) stored in the same period in which it is produced
- prior to being measured by a relevant meter.
32. In relation to determining the additional produced volume:
- (a) because:
 - (i) each petroleum operation is different in its structure, including in relation to the nature and scope of activities that may occur prior to a relevant meter for the petroleum operation
 - (ii) for any given petroleum operation, the relative proportion of the additional produced volume to the measured volume may change each royalty return period due to differing activities of the producer each period
- the Commissioner does not consider it:
- (iii) possible to provide a benchmark or other guidance as to a percentage 'gross up' that the Commissioner will consider appropriate for a producer to apply to the measured volume for a particular royalty return period to determine the additional produced volume for the period or
 - (iv) appropriate for a producer to determine the additional produced volume every royalty return period as a fixed percentage of the measured volume for the period, unless the producer can demonstrate how such an approach can appropriately cater for changes in the producer's activities each period
- (b) where the producer uses production allocation or other software (including an algorithm that takes into account variables such as the measured volume) to determine the whole or a part of the additional produced volume, the producer must be able to demonstrate to the Commissioner upon request the process by which the additional produced volume is determined to allow the Commissioner to consider the accuracy or completeness of such measurement¹⁷

¹⁷ See discussion commencing at paragraph 39 in relation to measurement by the Commissioner.

- (c) where additional produced petroleum has been measured by a meter other than a relevant meter but the producer does not use that measurement without alteration when determining the additional produced volume, the Commissioner will expect the producer to be able to justify such non-usage or alteration of metered data.

Example 4

Same facts as Example 3.

Gas-powered pumps are used at Wells 1 and 2, using gas sourced from those wells. No physical meters exist to measure the volume of gas diverted to power those pumps. Wells 3, 4 and 5 do not use gas-powered pumps.

During the March 2022 return period:

- a physical flaring meter at the entry to Pipeline 2 measures 1,700 GJ being flared following a planned shutdown of the pipeline for routine maintenance
- a quantity of gas is vented at the entry to Pipeline 1, but is unable to be accurately measured using a physical meter.

In determining the additional produced volume for the March 2022 return period, ABC Co must take into account the gas used in the pumps at Wells 1 and 2, the gas flared at Pipeline 2 and the gas vented at Pipeline 1.

In the absence of physical meters, ABC Co calculates that 500 GJ of gas was used in the pumps at Wells 1 and 2 during the period, having regard to (amongst other things) the horsepower of the pumps and the number of hours for which the pumps operated during the period.

For the gas flared at Pipeline 2, ABC Co is aware that the physical flaring meter is significantly past its due date for routine calibration and that as a result there are likely to be issues with its accuracy. Taking into account ABC Co's prior knowledge of the meter's inaccuracy following a previous delay with routine calibration, and other information, ABC Co calculates the volume of gas flared at Pipeline 2 as 1,850 GJ.

Using a method involving an estimation of flow rates and sampling of methane content measurements, cross-referenced with other data, ABC Co calculates that 300 GJ of gas was vented at Pipeline 1 during the period.

33. In relation to determining the non-produced volume:

- (a) non-produced petroleum includes, but is not limited to, petroleum that is:
- (i) purchased by the producer from another petroleum producer or a reseller for a petroleum producer or
 - (ii) produced from a different petroleum operation operated by the producer
- and comingled with produced petroleum at a point in the petroleum production chain before a relevant meter
- (b) the producer must determine on a reasonable basis how much of the measured petroleum is non-produced petroleum
- (c) where non-produced petroleum has been measured by a meter at a point in the petroleum production chain before a relevant meter but the producer does not use that measurement without alteration when determining the non-produced volume, the Commissioner will expect the producer to be able to justify such non-usage or alteration of metered data.

Example 5

Same facts as Example 4.

During the March 2022 return period, ABC Co purchases 10,000 GJ of gas from DEF Co, an unrelated producer (the purchased gas). The purchased gas is processed through the processing plant in Alpha Operation, and is included in the 100,000 GJ of gas measured by Meter M8.

As the purchased gas is comingled with the gas produced from Wells 1, 2, 3, 4 and 5 before Meter M8, the 10,000 GJ of purchased gas is non-produced petroleum.

Example 6

Same facts as Example 5.

For the March 2022 return period, the volume of produced petroleum using the add-back method is 92,650 GJ (100,000 GJ measured petroleum plus 2,650 GJ of additional produced petroleum, less 10,000 GJ of non-produced petroleum).

34. As noted in paragraph 23, the PGA does not prescribe the way in which the volume of produced petroleum is to be measured for petroleum royalty purposes. It is therefore open to a producer to use a method other than the add-back method to determine the produced volume where the producer considers that will accurately reflect the produced volume to enable petroleum royalty liability to be properly determined.¹⁸

Measurement of volumes of liable petroleum and exempt petroleum

35. As with produced petroleum:
- (a) in the absence of particular methods being prescribed by the PG Act, a producer is entitled to determine appropriate methods to measure the total volume of liable petroleum or exempt petroleum for a royalty return period
 - (b) the method chosen for measuring liable petroleum or exempt petroleum should be reasonable and used consistently each royalty return period.
36. Given the nature of the activities involving exempt petroleum, and that such activities may occur prior to a relevant meter, the Commissioner acknowledges that a producer's methods may differ for measuring the volume of:
- (a) exempt petroleum for a royalty return period, compared to the volume of liable petroleum for the period or
 - (b) different types of exempt petroleum for a royalty return period (for example, petroleum used in the production of petroleum¹⁹ may be measured differently to petroleum that is vented in the course of production testing²⁰).
37. As all produced petroleum that is not exempt petroleum is liable petroleum, the Commissioner considers it is reasonable for a producer to measure the volume of liable petroleum for a royalty return period by deducting the volume of exempt petroleum from the produced volume (as opposed to measuring the volume of liable petroleum as a separate exercise).

Example 7

Same facts as Example 6.

The volume of exempt petroleum for the March 2022 return period is 500 GJ, being the volume of gas used for powering the pumps at Wells 1 and 2.

ABC Co. calculates the liable volume as 92,150 GJ (being 92,650 GJ of produced petroleum less the 500GJ of exempt petroleum).

38. It is open to a producer to use a method other than that described in paragraph 37 (the calculated liable volume method) to measure the volume of liable petroleum where the producer considers that will properly determine the producer's petroleum royalty liability.²¹

¹⁸ See paragraph 42 in relation to the consequences of the producer using the add-back method appropriately.

¹⁹ See s.591(1)(b) of the PG Act.

²⁰ See s.591A of the PG Act.

²¹ See paragraph 43 in relation to the consequences of the producer using the calculated liable volume method appropriately.

Measurement by the Commissioner

39. Where a producer is required to provide a measurement of petroleum for a royalty return and either:
- (a) the measurement of the petroleum is not given to the Commissioner or
 - (b) the Commissioner is not satisfied about the accuracy or completeness of the measurement of the petroleum that is given
- the Commissioner may decide the measurement.²²
40. For this purpose:
- (a) *completeness* refers to whether all petroleum that is required to be measured has been measured
 - (b) *accuracy* refers to whether the particular petroleum that has been measured has been measured at an appropriate volume.
41. In assessing the accuracy or completeness of the measurement of particular petroleum given to the Commissioner by a producer (whether in a royalty return or separately, such as in the course of an investigation) the Commissioner will have regard to factors including, but not limited to:
- (a) the extent to which any such measurement had been in accordance with guidance provided by the Commissioner (such as a Public Ruling or other publication)
 - (b) the extent to which the producer had relied on available meters (whether or not pursuant to a requirement of the PG Act)
 - (c) the nature, extent and reasonableness of:
 - (i) any modifications made by the producer to any measurement made by a meter including, but not limited to, adding that measurement to, or subtracting it from, one or more other measurements
 - (ii) any conversion factor used in converting measurements of petroleum into gigajoules or barrels (as appropriate)
 - (d) where the producer used information other than measurements made by a meter, the nature, extent and reasonableness of that other information
 - (e) where the producer used the add-back method to determine the volume of produced petroleum, the extent to which the producer had regard to the matters mentioned in paragraphs 28 to 33
 - (f) where the producer used a method other than the add-back method to determine the volume of produced petroleum, the reasonableness of that method, including any assumptions made by the producer and the ability of that method to appropriately reflect the particular circumstances for the return period
 - (g) the extent to which a measurement accords with other information known by or available to the Commissioner (for example, public announcements by the producer as to production milestones).

²² Section 592 of the PG Act

Example 8

Same facts as Example 7.

The Commissioner undertakes a review of ABC Co's royalty returns for a number of return periods, including the March 2022 and June 2022 periods.

ABC Co's royalty return for the June 2022 return period states that the produced volume for the period was 96,000 GJ, so the total produced volume reported to the Commissioner in those returns is 188,650 GJ.

As an initial step in the review, the Commissioner compares this to the volume included in the production report for the period 1 January 2022 – 30 June 2022 given by ABC Co to the Department of Natural Resources, Mines and Energy (DNRME). That production report states that 198,650 GJ of gas was produced from the Alpha Operation during the period.

In response to the Commissioner's enquiry about the discrepancy, ABC Co advised the Commissioner that a transcription error occurred when completing the DNRME production report and provides a copy of correspondence sent to DNRME advising of the error. The Commissioner is satisfied with the explanation and evidence in this regard, and continues with the review.

Example 9

Same facts as Example 8.

During May 2022, a flow monitoring device indicated a change of pressure in Pipeline 2. Identification of a leak, and repair and testing, took 10 days.

ABC Co advises the Commissioner that it did not use the add-back method to determine the produced volume for the June 2022 period, as it developed an alternative method to be used in that and subsequent return periods whereby the volume of gas flared, vented or used for pump operation is determined as a fixed percentage of the volume measured at Meter M8.

In reviewing the method, the Commissioner identifies that the method is premised on steady-state production from the wells in Alpha Operation, and does not appropriately deal with circumstances such as the loss of petroleum from the Pipeline 2 leak. The Commissioner is not satisfied that the measurement of the produced volume as determined under the method is complete, as that measurement does not reflect petroleum produced during the return period but lost from the leak. This is the case even though the produced volume recorded in the royalty return is consistent with the production data ultimately given to DNRME for the period 1 January 2022 – 30 June 2022 (after DNRME is notified of the transcription error).

Accordingly, the Commissioner proceeds to decide the measurement of the produced volume for the June 2022 return period.

42. Where a producer uses the add-back method appropriately (i.e. the Commissioner is satisfied with the way in which the measured volume, additional produced volume and non-produced volume are determined for a royalty return period, having regard to the matters set out in paragraphs 28 to 33), the Commissioner would be satisfied with the accuracy and completeness of the measurement of the volume of produced petroleum for the period and would not seek to decide the measurement.

Example 10

Same facts as Example 9.

ABC Co advises the Commissioner that the add-back method was used in determining the produced volume for the March 2022 period. Following clarification of the discrepancy with volumes reported to DNRME, the Commissioner reviews the components of the calculation, including the basis on which the volumes of gas used in production and flared and vented gas were determined, and is satisfied with the way in which ABC has calculated the produced volume, additional produced volume and non-produced volume.

The Commissioner therefore accepts ABC Co's measurement of 92,650 GJ of produced petroleum for the March 2022 return period, and does not determine the produced volume under s.592 of the PG Act.

43. Similarly, where a producer uses the calculated liable volume method appropriately (i.e. the Commissioner is satisfied with the way in which the volume of produced petroleum and the volume of exempt petroleum are determined for a royalty return period), the Commissioner would be satisfied with the accuracy and completeness of the measurement of the volume of liable petroleum for the period and would not seek to decide the measurement.

44. Although it is not a pre-requisite to the exercise of the Commissioner's power to decide a measurement, the Commissioner will generally make enquiries of the producer in either of the circumstances mentioned in paragraph 39 before deciding the measurement.
45. In deciding a measurement, the Commissioner may have regard to a range of information, including data obtained from one or more sources including, but not limited to:
 - (a) other publicly-available documents or publications issued by the producer (such as investor presentations or annual financial reports)
 - (b) Commonwealth and/or other Queensland Government departments
 - (c) providers of services such as pipeline transportation or petroleum processing
 - (d) customers of the producer
 - (e) other third party information providers.
46. As royalty return lodgement obligations for each royalty return period are separate and discrete obligations, the failure by a producer to provide a satisfactory measurement of petroleum to the Commissioner for a particular royalty return period only allows the Commissioner to decide the measurement for the relevant petroleum for that period. Put differently, where the Commissioner has decided the measurement for particular petroleum for a particular royalty return period, the Commissioner cannot decide the measurement for particular petroleum in a subsequent royalty return period unless a circumstance in paragraph 39 occurs in that subsequent period.
47. A producer who is dissatisfied with a measurement of petroleum made by the Commissioner may object against an assessment or reassessment of petroleum royalty based on that measurement (subject to the requirements of the *Taxation Administration Act 2001*).