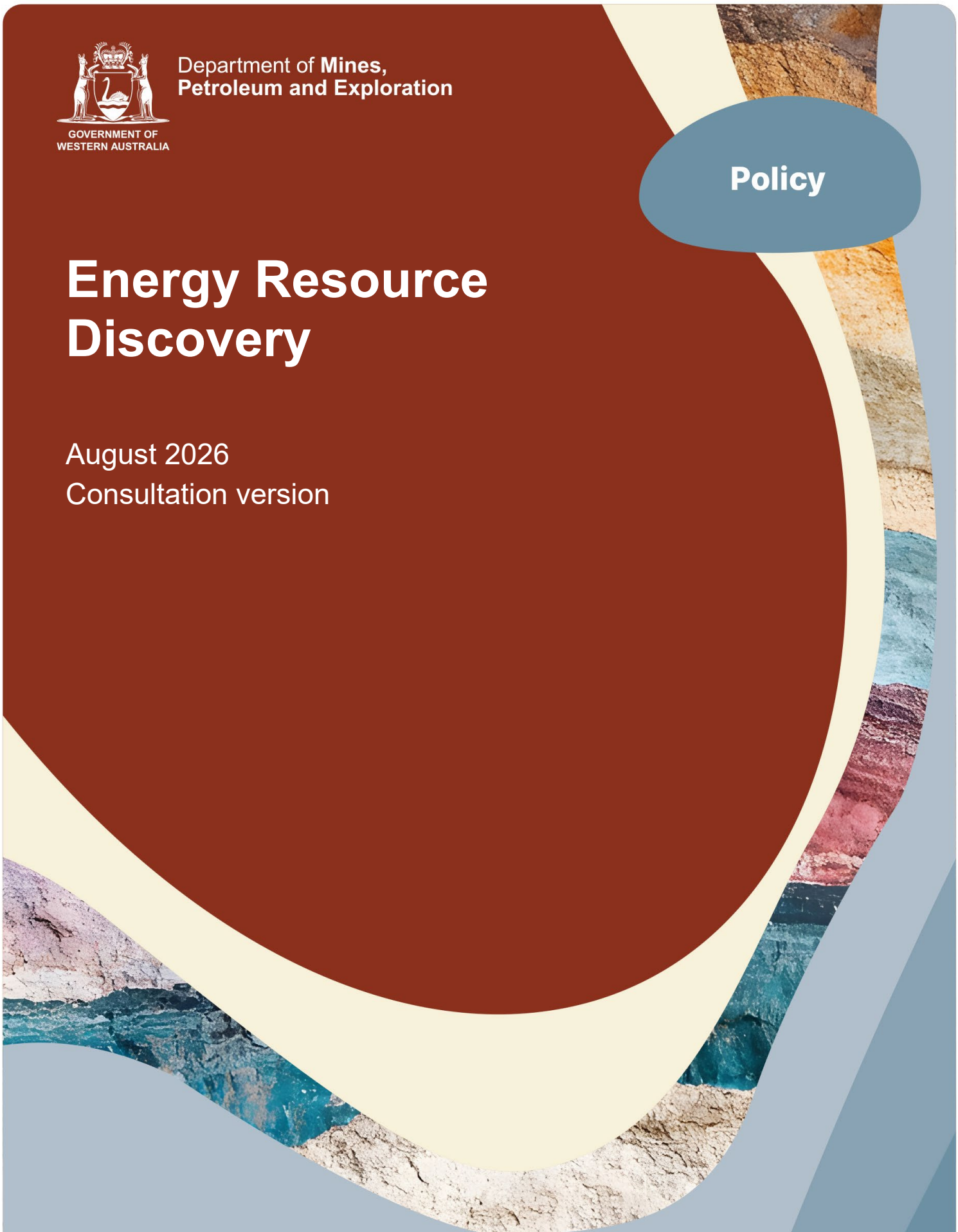
GOVERNMENT OF WESTERN AUSTRALIA

Department of **Mines, Petroleum and Exploration**

Policy

Energy Resource Discovery

August 2026
Consultation version



Document Hierarchy

Legislation	*Petroleum, Geothermal Energy and Greenhouse Gas Storage Act 1967* *Petroleum and Greenhouse Gas Storage (Submerged Lands) Act 1982* Petroleum, Geothermal Energy and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2015 Petroleum and Greenhouse Gas Storage (Submerged Lands) (Resource Management and Administration) Regulations 2015
Policy	This document

Version History

Version	Date	Changes
1	2015	Initial Publication
2	August 2026	Updated to reflect amendments introduced by the *Petroleum Legislation Amendment Act 2024*

Table of Contents

1. Purpose

This policy sets out the Department of Mines, Petroleum and Exploration's (DMPE) position of what constitutes a discovery of petroleum, regulated substances (including hydrogen and helium), geothermal energy resources, a potential greenhouse gas (GHG) storage formation or a potential GHG injection site under the *Petroleum, Geothermal Energy and Greenhouse Gas Act 1967* (PGEGGSA) and the *Petroleum and Greenhouse Gas Storage (Submerged Lands) Act 1982* (PGGS(SL)A), collectively referred to as "the Acts".

The purpose of this policy is to provide clarity and consistency for title holders regarding their statutory obligations to notify the Minister of a discovery, the timing of such notifications and the information required to be submitted following a discovery. The policy establishes the technical and regulatory criteria that apply when determining whether a discovery has occurred and outlines the reporting requirements that support compliance with the relevant Acts and regulations.

By defining discovery thresholds and notification requirements across petroleum, regulated substances, geothermal energy resources and GHG storage activities, this policy promotes consistent regulatory decision-making, timely reporting and effective administration of Western Australia's petroleum, geothermal and greenhouse gas storage resource management framework. It also ensures that discoveries are identified and reported irrespective of the resource type for which a title is granted, including discoveries made incidentally during exploration or appraisal activities for other resources.

2. Objectives

DMPE is responsible for regulating petroleum, geothermal energy and greenhouse gas storage under the PGEGGSA and PGGS(SL)A. Under the Acts, the Minister for Mines, Petroleum and Exploration must be immediately informed of any discovery, and within a period of three (3) calendar days after the date of the discovery, be furnished with the particulars of the discovery in writing.

The discovery of petroleum, a regulated substance, geothermal energy resources, a potential GHG storage formation or a potential GHG injection site must be notified to the Minister, irrespective of the resource type to which the title relates. This notification obligation includes any discovery made as an incidental consequence of drilling operations for other resource types.

In particular, sections 44, 48J and 54AA of the PGEGGSA and sections 34, 38J and 53A of the PGGS(SL)A, require the registered holder of a permit, drilling reservation, retention lease, production licence or injection licence to inform the Minister of the discovery of petroleum, a regulated substance, geothermal energy resources, a potential GHG storage formation or potential GHG injection site.

Hydrogen and helium are prescribed regulated substances under regulation 4(2) of the Petroleum, Geothermal Energy and Greenhouse Gas Storage (Resource Management

and Administration) Regulations 2015 and the Petroleum and Greenhouse Gas Storage (Submerged Lands) (Resource Management and Administration) Regulations 2015, collectively referred to as “RMAR”.

3. Definition of discovery

The definitions of discovery provided in this policy do not depend on the amount of recoverable resource, storage capacity or injectivity. The definitions are for the purposes of compliance with the Acts and are independent of other reporting requirements, such as announcements made on a stock exchange.

3.1. Petroleum and regulated substances

DMPE defines a petroleum discovery as the initial recovery of hydrocarbons from a wellbore to the surface demonstrating the presence of a new discrete accumulation of petroleum.

A helium discovery is defined as the initial recovery of helium, in a free and mobile phase capable of flowing to the wellbore under controlled conditions, supported by quantitative analysis and evidence of geological containment sufficient for accumulation and preservation of the gas.

A hydrogen discovery is defined as the initial recovery of naturally occurring molecular hydrogen, in a free and mobile phase capable of flowing to a wellbore under controlled conditions, with reasonable grounds to support that the hydrogen originates from geological processes at concentrations significantly above background levels, verified through quantitative analysis and is not attributable to atmospheric, drilling-related, or transient contamination.

Examples of a new discovery may include recovery from:

- a single resource pool, which has not previously been notified to the Minister;
- more than one resource pool, in which case multiple notifications of discovery are required; or
- a well that penetrates a separate fault block from a known discovery, where available well data indicates that the pool is within a separate pressure compartment in the same formation as the known discovery.

If it can be demonstrated that separate resources pools have been encountered in the same well at different stages of operations, then each discovery needs to be notified separately to the Minister but may be reported in the same correspondence.

In the context of the definition of discovery, recovery is defined as the retrieval of a resource to the surface from a known depth and identified geologic formation penetrated by a well, in sufficient quantities and quality, and free from contamination, to allow analysis of its composition. Samples taken from soil gas, shallow probes or the atmosphere are considered insufficient to establish a discovery.

Note that a discovery may be ascertained from a drill stem test (DST), well test or from other recovery methods, such as a repeat formation tester (RFT) or modular formation dynamics tester (MDT). If the initial recovery was made from a DST or a well test, the Minister should be informed immediately after the completion of the DST or well test operation (date of discovery). In the case of a downhole sample, such as MDT or RFT, the discovery is considered to have occurred at the time the compositional analysis, whether at the well site or from a laboratory, becomes available to the title holder (date of discovery) and the Minister must be immediately informed at this time.

While wireline or other logs are not sufficient to establish a discovery, they may contribute supporting evidence when combined with recovered formation fluid samples or other direct recovery methods. Shows, including bleeding gas or residual oil observed in cuttings, cores, or sidewall cores; minor to moderate fluorescence; indications of petroleum or regulated substances in mud logs; and trip gas or connection gas, do not, in isolation, constitute a discovery.

DMPE's definition of a petroleum discovery is consistent with Geoscience Australia's classification[1] of hydrocarbon shows, at level 3 and above.

3.2. Geothermal energy resources[2,3]

A geothermal energy resources discovery is established when a well test, with sustained flow to the surface, demonstrates the presence of a geothermal reservoir with sufficient subsurface temperature, flow rate, enthalpy, reservoir permeability and fluid characteristics to support the potential for sustainable heat extraction. The discovery is considered to have occurred at the time the well test operation has been completed, and the Minister must be immediately informed.

For an advanced geothermal system (closed-loop), a discovery is established when sufficient subsurface information has been acquired to provide a reliable assessment of thermal energy and to demonstrate favourable conditions for sustainable heat extraction in a closed-loop system. In this situation, the discovery is considered to have occurred at the time the title holder becomes aware of this information, and the Minister must be immediately informed.

Note that recovery of geothermal energy from the geothermal resource area is required for a permittee to nominate blocks as a location.

3.3. Potential GHG storage formation or potential GHG injection site

The discovery of a potential GHG storage formation or potential GHG injection site is established through the results of a well injectivity or a production test made for the purpose of estimating GHG injectivity. The well data, supported by other key subsurface

[1] Vocabularies for Geoscience Australia Geological Databases 2022

[2] Australian Energy Resource Assessment - Geothermal Energy

[3] Australian Geothermal Association - Publications

data, should provide sufficient technical evidence to demonstrate injectivity, potential storage capacity and likely containment integrity.

The discovery is considered to have occurred at the time the well injectivity or production test operation has been completed, and the Minister must be immediately informed.

4. Reporting of discovery

Under the Acts, the Minister must be immediately informed of any discovery, and within a period of three (3) calendar days after the date of the discovery the title holder must provide the particulars of the discovery in writing.

Both notifications of discovery should be sent by email to petroleum.reports@dmpe.wa.gov.au as soon as a discovery has been ascertained.

4.1. Petroleum, regulated substances and geothermal energy

For the purpose of ensuring regulatory consistency and a common understanding of the State's petroleum, regulated substances and geothermal energy resources, the particulars for each discovery that must be submitted in writing to the Minister are set out in the guidelines to the RMAR as follows:

- the date of the discovery;
- well name;
- title;
- graticular block location of the well;
- how the discovery was defined (e.g. logs and well test);
- depth and thickness of discovery; and
- any physical and chemical properties of the petroleum, regulated substance or geothermal energy that are known.

Additional information to be provided for geothermal discoveries includes:

- available downhole or surface temperature data; and
- well test results showing sustained flow with stable temperature.

A discovery assessment report (DAR) is required under Part 4 of the RMAR (regulations 34–36). Under regulation 36, the registered holder must provide a discovery assessment report to the Minister within 90 calendar days after the date of the discovery, or within another period authorised by the Minister. Under regulation 35, the Minister may request additional information from the registered holder for inclusion in the discovery assessment report within seven (7) calendar days of receiving the particulars of a discovery of petroleum, regulated substance or geothermal energy resources.

Where multiple discoveries are made at the same time, the required DAR information for each resource pool can be submitted as a composite report.

The DAR should be sent within 90 days of the date of the discovery by email to petroleum.reports@dmpe.wa.gov.au.

4.2. Potential GHG storage formation or potential GHG injection site

The particulars required in writing for a discovery of a potential GHG storage formation and potential GHG injection site are as follows:

- the date of discovery;
- well name;
- title;
- graticular block location of the well;
- how the discovery was defined (e.g. well injection test);
- depth, thickness and stratigraphic unit of the primary seal as penetrated by well;
- depth, thickness and stratigraphic unit of the intended storage formation as penetrated by well;
- type of injected fluid (e.g. air, water, CO_2);
- amount of injected fluid;
- rate of injection; and
- other relevant details of well injectivity test (e.g. duration, pressure).

Regulations 34–36 of the RMAR do not apply to a discovery of a potential GHG storage formation or a potential GHG injection site. As such, a DAR is not required for these types of discoveries.

5. Other matters

Other matters that should be considered in relation to a notification of discovery of petroleum, regulated substance or geothermal energy resources are outlined in Table 1.

Table 1. Summary of regulatory requirements by resource type

Process	Resource type		
	Petroleum or regulated substance	Geothermal energy resources	Greenhouse gas storage
Notification of discovery	Applicable (irrespective of resource type of the title)	Applicable (irrespective of resource type of the title)	Applicable (irrespective of resource type of the title)
Discovery Assessment Report (DAR)	Applicable	Applicable	Not applicable
Annual Assessment Report (AAR)	Applicable	Applicable	Applicable
Nomination or application for declaration	Declaration of Location (DoL)	Declaration of Location (DoL)	Declaration of identified GHG Storage Formation (DoSF)
Relevant requirements for declaration	Recovery of petroleum or regulated substance to the surface	Recovery of geothermal energy to the surface	Fundamental suitability determinants and spatial extent

Process	Resource type		
	Petroleum or regulated substance	Geothermal energy resources	Greenhouse gas storage
Title holders able to make a nomination or application for declaration	• Petroleum permittee • Holder of petroleum drilling reservation	• Geothermal permittee • Holder of geothermal drilling reservation	• GHG permittee • Holder of a GHG drilling reservation • GHG lessee • GHG injection licensee • Petroleum or geothermal lessee • Petroleum or geothermal licensee
Powers of the Minister to require a nomination or application for a declaration	Applicable	Applicable	Not applicable
Key approval* for recovery or GHG injection operation	Field Management Plan (FMP)	Geothermal Energy Recovery Development Plan (GERDP)	Approved Site Plan (SP)

**Other additional approvals are needed as per the Act and relevant regulations*

6. Compliance and enforcement

The notification of discovery requirements set out in this policy reflects statutory obligations under the *Acts.* Title holders are responsible for ensuring that discoveries are reported in accordance with the applicable legislative requirements and prescribed timeframes.

Failure to comply with discovery notification and reporting obligations may constitute a breach of the relevant Act or regulations and may result in compliance or enforcement action by the Minister or DMPE. Such actions may include the exercise of statutory powers available under the legislation, including requests for additional information, regulatory directions, prosecution for offences, or consideration of compliance history in future regulatory decisions.

Title holders should refer to the applicable provisions of the Acts and the RMAR for the specific offence, penalty and compliance provisions that may apply.

7. Definitions

For the purposes of this document:

date of discovery means the date that a DST or well test has been completed or the analysis of the downhole sample is made available to the title holder.

geothermal title means a geothermal exploration permit, geothermal drilling reservation, geothermal retention lease, geothermal production licence, geothermal special prospecting authority or geothermal access authority.

GHG title means a GHG exploration permit, GHG drilling reservation, GHG retention lease or GHG injection licence.

petroleum title means a petroleum exploration permit, petroleum drilling reservation, petroleum retention lease, petroleum production licence, petroleum special prospecting authority or petroleum access authority.

potential GHG injection site means a place that is a suitable place to make a well or wells to inject a greenhouse gas substance into a part of a geological formation (PGEGGSA s.5 or PGGS(SL)A s.4).

potential GHG storage formation is a part of a geological formation that is suitable for the permanent storage of a greenhouse gas substance injected into that part (PGEGGSA s.6B(1) or PGGS(SL)A s.4A(1)).

recovery means petroleum must be brought to the surface from a known depth and geologic formation, in sufficient quantities for compositional analysis.

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