



**Australian Government**

**Department of Industry, Science,  
Energy and Resources**

**Geoscience Australia**

# Oil and Gas Exploration and Production in the Beetaloo Basin

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Department of Industry, Science, Energy and Resources and  
Geoscience Australia Joint Submission

9 July 2021

## Introduction

Thank you for the opportunity for the Department of Industry, Science, Energy and Resources and Geoscience Australia (GA) to jointly respond to the Senate Environment and Communications References Committee's inquiry into oil and gas exploration and production in the Beetaloo Basin.

The Department provides advice and implements a number of Australian Government policy and programs relating to industry, science, emissions reductions, energy, and resources. The Department's remit also includes AusIndustry and Business Grants Hub, the Australian Government's central administration agency for grants to Australian businesses. The Department is leading the development and implementation on a number of measures which form part of the Australian Government's Gas-Fired Recovery. This includes the Beetaloo Strategic Basin Plan (**Attachment A**), and its key initiatives, including the Beetaloo Cooperative Drilling Program (BCDP).

GA is the national public sector geoscience organisation. Our purpose is to be the trusted source of information on Australia's geology and geography for government, industry and community decision making and contribute to a safer, more prosperous and well-informed Australia. GA supports evidence-based decisions through information, advice and services for a strong economy, resilient society and sustainable environment.

Developing the Beetaloo Sub-basin (the Beetaloo) presents a significant opportunity to increase gas supply, create jobs and drive significant economic growth in the Northern Territory (NT) and Australia. The Department and GA therefore welcome the opportunity to submit a joint submission and respond to the inquiry's terms of reference:

*Oil and gas exploration and production in the Beetaloo Basin, with particular reference to the Industry Research and Development (Beetaloo Cooperative Drilling Program) Instrument 2021, which provides public money for oil and gas corporations.*

The joint submission outlines how the Beetaloo Strategic Basin Plan, and its key initiatives, including the BCDP, aim to accelerate exploration and development of the Beetaloo. The submission highlights the Beetaloo's potential as a world-class gas resource, with resource estimates and analysis provided by GA. It examines the policy intent of the Beetaloo Strategic Basin Plan, and the BCDP, including analysis of the Beetaloo Cooperative Drilling Program Grant Opportunity Guidelines (**Attachment B**) and the program's governance arrangements. By accelerating the development timeline, the Government is helping to realise the economic benefits associated with Beetaloo development, sooner. These actions are helping to seize the opportunities of the Beetaloo, to benefit the Northern Territory and Australia more broadly.

Reflecting the Australian Government's commitment to meet our emissions targets, the submission also notes the importance of emissions management in the Beetaloo and the ongoing work between the Australian and NT Governments to manage emissions from onshore gas developments.

## Developing Australia's untapped gas resources will help to re-establish a strong economy

On 15 September 2020, the Prime Minister announced the Australian Government's Gas-Fired Recovery as a key pillar in the Government's economic agenda. The Gas-Fired Recovery is designed to help re-establish a strong economy by ensuring Australian gas is working for all Australians, through ensuring domestic users have access to internationally competitive prices, and securing supply.

The Gas-Fired Recovery Plan focuses on three overarching actions: unlocking supply, delivering an efficient pipeline and transportation market, and empowering gas customers.

A key aspect of the commitment to unlock new sources of gas supply is the \$28.3 million Strategic Basin Plans Program, announced in the 2020-21 Budget. Strategic Basin Plans will accelerate development in strategically important gas basins, by identifying the resource opportunities present and how the Government can help to coordinate and optimise development.

The Beetaloo Strategic Basin Plan, aims to unlock the potential, and accelerate development, of the Beetaloo in the Northern Territory (NT). The Beetaloo was chosen as the first location for a Strategic Basin Plan to capitalise on existing industry momentum and the \$8.4 million commitment made in the 2019-20 Budget to undertake detailed analysis to identify investment options to fast-track development in the Beetaloo. This analysis comprised of:

- Independent economic and engineering analysis, undertaken by Deloitte (November 2020), to assess the steps needed to develop the Beetaloo's resources efficiently, and identify opportunities and challenges facing development and the domestic use of the gas (available at [https://www.industry.gov.au/sites/default/files/2021-05/beetaloo\\_sub-basin\\_gas\\_development\\_study.pdf](https://www.industry.gov.au/sites/default/files/2021-05/beetaloo_sub-basin_gas_development_study.pdf)).<sup>1</sup>
- The Geological and Bioregional Assessment (GBA) Program, bringing total funding to \$35.4 million, the GBA commenced in 2017. The GBA program was delivered by the Department of Agriculture, Water and Environment, CSIRO, GA, and Bureau of Meteorology, and assessed the potential impacts of shale and tight gas development on water and the environment in the Beetaloo.
- Ongoing work under the Beetaloo Aboriginal Economic Development Strategy, to ensure the Aboriginal Peoples of the Barkly Region and the NT will benefit significantly from the development of the Beetaloo gas resources.

In addition to this analysis, the Department considered pre-existing research and other studies related to the Beetaloo, including reports commissioned as part of the NT Government's independent inquiry. The Beetaloo Strategic Basin Plan, and the broader Strategic Basin Plans Program, complements the other Gas-Fired Recovery actions to support efficient transportation of affordable and reliable gas to where it is needed. This includes the *National Gas Infrastructure Plan (NGIP)*.

The Interim NGIP, released on 7 May 2021, identifies priority infrastructure developments to alleviate forecast southern gas supply shortfalls in the near-term. The first full NGIP, to be released in late 2021, will consider the timing and combination of investment required out to 2040 to deliver

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<sup>1</sup> Deloitte Touch Tohmatsu (2020), Report on the Development of the Beetaloo Sub-basin

adequate gas supply at least cost to the east coast gas market, which will include consideration of the role of the Beetaloo.

The Australian Government is building a robust and competitive gas industry that will allow both gas producers and users to thrive, with lower prices and lower emissions benefiting all Australians.

## The Beetaloo has the potential to be a world-class gas province

The Beetaloo is a depositional centre, or sub-basin, within the much larger Proterozoic greater McArthur Basin which spreads over a large portion of the Northern Territory and extends under the Arafura Sea to the north. It is a Mesoproterozoic basin<sup>2</sup> (older than most hydrocarbon producing basins), and is overlain by younger sedimentary basins.

### Overview of the Beetaloo's hydrocarbon prospectivity

The Beetaloo is prospective for unconventional hydrocarbons<sup>3</sup> and is estimated to contain significant technically recoverable unconventional petroleum resources across a number of resource plays. Plays most likely to be developed in the next decade include shale plays in the Kyalla Formation and the Amungee Member of the Velkerri Formation, along with a tight sandstone play in the Hayfield sandstone member of the Hayfield mudstone.

The Amungee Member of the Velkerri Formation is potentially prospective for either liquids-rich or dry gas over most of the Beetaloo's extent. The Kyalla Formation liquids-rich gas play and the Hayfield sandstone member liquids-rich gas/oil play are likely to be restricted to the central part of the eastern Beetaloo. The mapped depth and extent of these plays inform where the plays are most likely to be present within the region and inform the likely development scenarios<sup>4</sup>. Liquids-rich gas resources are currently more favourable to develop from an economic perspective, as if present in sufficient volumes, these liquids could provide additional revenue streams for producers. If and how an unconventional play is developed will be dependent on its economic viability, along with other cultural and environmental considerations.

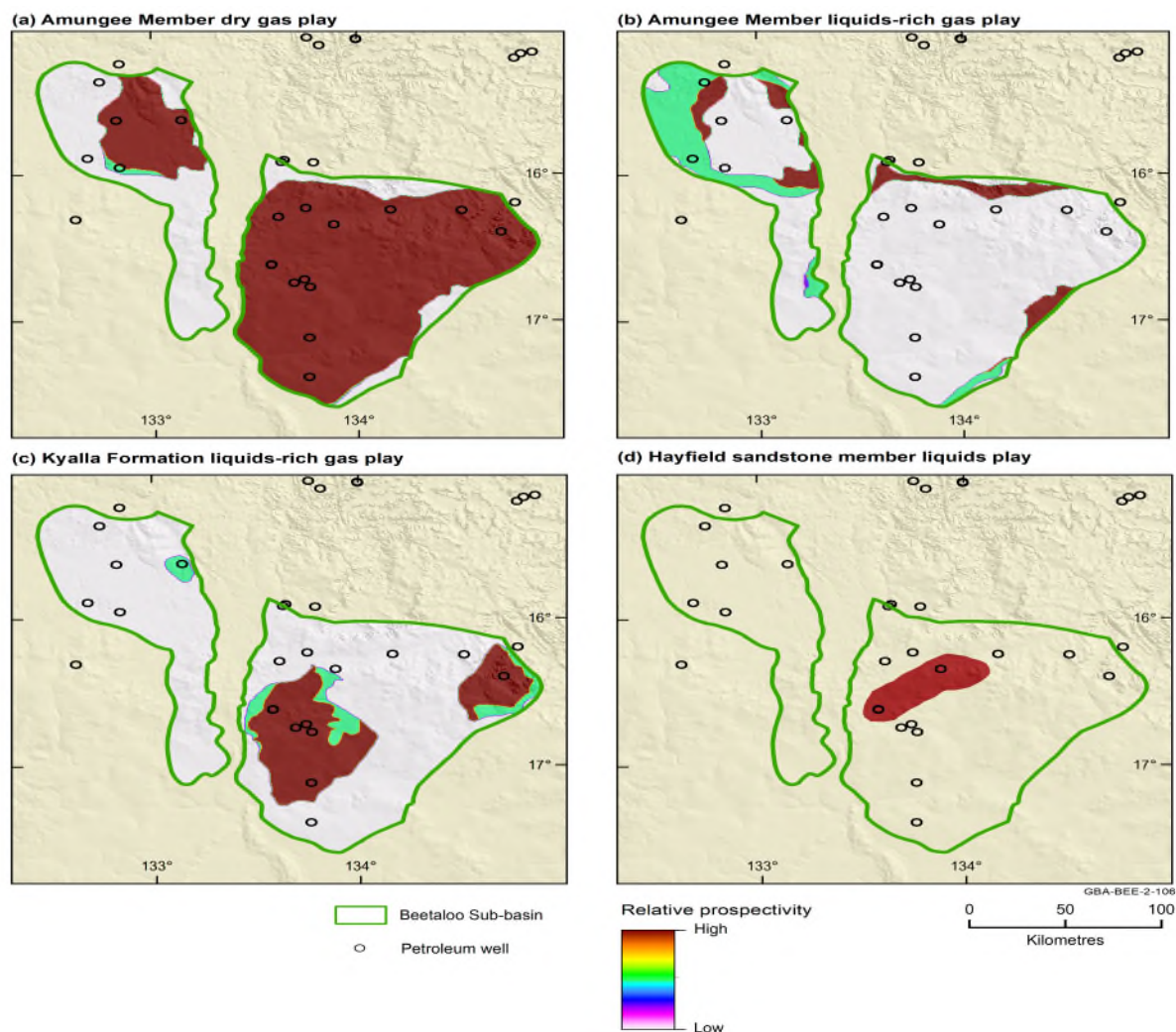
The relative prospectivity of the Beetaloo, as established for the selected unconventional plays, is illustrated in Figure 1. Since GA undertook and published the relative prospectivity assessment of the Beetaloo in 2020, new data has become available that maps the extent of the prospective Velkerri Formation further east. This data, acquired under the Australian Government's *Exploring for the Future* program, enabled GA to better understand the eastern extent of the Beetaloo where there has been a recent gas discovery. This discovery adds to previously reported resources, all of which are presented in Table 1.

<sup>2</sup> Orr ML, Bernardel G, Owens RJ, Hall LS, Skeers N, Reese B and Woods M (2020) Geology of the Beetaloo GBA region. Technical appendix for the Geological and Bioregional Assessment: Stage 2. Department of the Environment and Energy, Bureau of Meteorology, CSIRO and Geoscience Australia, Australia.

<sup>3</sup> Hall LS, Wang L, Bailey AHE, Orr ML, Owens R, Jarrett AJM, Lech ME, Skeers N, Reese, B and Woods M (2020) Petroleum prospectivity of the Beetaloo Sub-basin. Technical appendix for the Geological and Bioregional Assessment Program: Stage 2. Department of the Environment and Energy, Bureau of Meteorology, CSIRO and Geoscience Australia, Australia.

<sup>4</sup> Huddleston-Holmes CR, Frery E, Wilkes P, Bailey AHE, Bernardel G, Brandon C, Buchanan S, Cook SB, Crosbie RS, Evans T, Golding L, Gonzalez Dda, Gunning ME, Hall LS, Henderson B, Herr A, Holland K, Jarrett A, Kear J, Kirby J, Lech M, Lewis S, Macfarlane C, Martinez J, Northover S, Murray J, O'Grady A, Orr ML, Owens R, Pavey C, Post D, Sundaram B, Rachakonda P, Raiber M, Ransley T, Tetreault-Campbell S and Wang L (2020) Geological and environmental baseline assessment for the Beetaloo GBA region. Geological and Bioregional Assessment Program: Stage 2. Department of the Environment and Energy, Bureau of Meteorology, CSIRO and Geoscience Australia, Australia.

**Figure 1** Relative prospectivity of selected unconventional resources in the Beetaloo.



## Exploration activity in the Beetaloo

Exploration for hydrocarbons in the greater McArthur Basin, which includes the Beetaloo Sub-basin, began in the 1960s. An increase in exploration activity was seen in the mid-2000s in line with increased international interest in unconventional resources. This increased interest was driven by advances in technology that enable extraction of gas and oil from low permeability formations that had been previously considered non-commercial.

Exploration halted in September 2016 when the NT Government introduced a moratorium on unconventional gas development in the NT, establishing an independent inquiry to investigate the environmental, social and economic risks and impacts of hydraulic fracturing in the NT. The Scientific Inquiry into Hydraulic Fracturing in the NT concluded that any challenges and risks associated with unconventional gas development could be mitigated to an acceptable level by implementing recommended safeguards. The moratorium was subsequently lifted in April 2018 and exploration for petroleum resources resumed in the Beetaloo.

Across 2019 and 2020 there has been progress by industry on understanding both the Kyalla and Velkerri formations and their ability to produce commercial quantities of hydrocarbons. These exploration and appraisal activities reduce uncertainty in the amount of resources (gas in place) and their recoverability, bringing production from the Beetaloo closer.

Drilling activities in the Beetaloo have increased over the past year as companies test production rates and evaluate the potential commerciality of shale gas resources. In October 2020, Santos and Tamboran Resources announced a gas discovery from the Tanumbirini 1 vertical well drilled in EP 161. Gas flowed at initial rates of 1.2 million cubic feet per day from the Velkerri Formation before settling down to 0.4 million cubic feet per day<sup>5</sup>. Tamboran began drilling the first horizontal well in EP 161, Tanumbirini 2H, in May 2021, which will be hydraulically fracture stimulated across the Mid-Velkerri B shale before undertaking extended flow tests<sup>6</sup>.

Empire Energy announced a resource upgrade in February 2021 for the Velkerri Formation in EP 187 following assessment of results from the Carpentaria 1 vertical well drilled in September and October 2020. On 28 June 2021, Empire Energy announced a gas discovery from Carpentaria 1 after production testing in the Velkerri Formation flowed gas to the surface at a rate of 0.37 million cubic feet per day over a 72 hour test period, with an instantaneous peak rate of >1.6 million cubic feet per day.<sup>7</sup> These initial vertical flow rates indicate potential for commercial hydrocarbon production in future horizontal wells. Empire Energy is now preparing for drilling and completion of its first horizontal appraisal well later in 2021.

Falcon Oil and Gas and Origin Energy announced in January 2021 a gas discovery in the Kyalla Formation following drilling and production testing of the Kyalla 117 N2-1H ST2 horizontal well. Gas flowed at rates of 0.4 – 0.6 million cubic feet per day over 17 hours during production testing<sup>8</sup>. Initial analysis suggests liquid-rich gas with <1% CO<sub>2</sub>. Falcon Oil and Gas are planning to drill a vertical well later this year, Velkerri 76, to test the deeper Velkerri Formation.

## Resource estimates and possible development of the Beetaloo

Gas resources are reported as best estimate of reserves (2P) and best estimate of contingent resources (2C) using the SPE-Petroleum Resources Management System<sup>9</sup>. Reserves are commercially recoverable petroleum in known accumulations, of which 2P reserves are the best estimate (the sum of Proved plus Probable Reserves). Given the stage of exploration in the Beetaloo, no 2P reserves have been established. Further appraisal activities, including production tests, will provide operators with the necessary confidence to establish 2P reserves. This is an essential step to establish commercially viable resources. Large scale investment to develop the Beetaloo is unlikely to occur before 2P reserves can be established in the Beetaloo.

Contingent resources are potentially recoverable amounts of petroleum in known accumulations, of which 2C contingent resources are the best estimate. Contingent resources are not yet considered to be commercially recoverable due to one or more technical, commercial or other factors. The Beetaloo 2C contingent resources are estimated as 6.6 Tcf for unconventional gas based on Origin and Empire's reporting. A number of companies including Santos are yet to book any resource estimates reflecting the stage of their exploration efforts. Australia's total gas production in 2018-19 was 5,498 PJ (4.89 Tcf)<sup>10</sup>. Currently no contingent resource estimates have been booked for other unconventional hydrocarbons (oil and condensate) across the Basin which reflects the very early stage of exploration.

<sup>5</sup> Tamboran Resources, 2020. Tamboran Resources Ltd press release, 22 October 2020 'Positive Results of Vertical Frac and Gas Flow Tests in the Beetaloo Basin'.

<sup>6</sup> Tamboran Resources, 2021. Tamboran Resources Ltd press release, 11 May 2021 'Tamboran Announces Spud of Tanumbirini #2H on EP 161'.

<sup>7</sup> Empire Energy, 2021b. Strong Carpentaria-1 Flow Rates. ASX Release 20210628.

<sup>8</sup> Falcon Oil and Gas, 2021. Falcon Oil and Gas Press Release, 19 January 2021 'Notification of Discovery – Kyalla 117 N2-1H ST2'.

<sup>9</sup> <https://www.spe.org/industry/docs/PRMS-Guide-for-Non-Technical-Users-2007.pdf>

<sup>10</sup> <https://www.ga.gov.au/digital-publication/aecr2021>

Estimates of hydrocarbons in place, such as oil in place and gas in place, indicate the total quantity of hydrocarbons existing originally in naturally occurring reservoirs. Table 1 contains published contingent resource estimates and regional best estimates (P50) of original hydrocarbons in place for the Beetaloo. Estimates may vary due to the information available at the time of publication and differing approaches to calculation due to the data availability over time. More recent estimates will be more accurate as there is more and better data used in their calculation. The NT Geological Survey estimates provide an overview of potential gas and oil in place across the entire Beetaloo.

**Table 1** Identified contingent (2C) gas resources and original hydrocarbon in place estimates in the Beetaloo

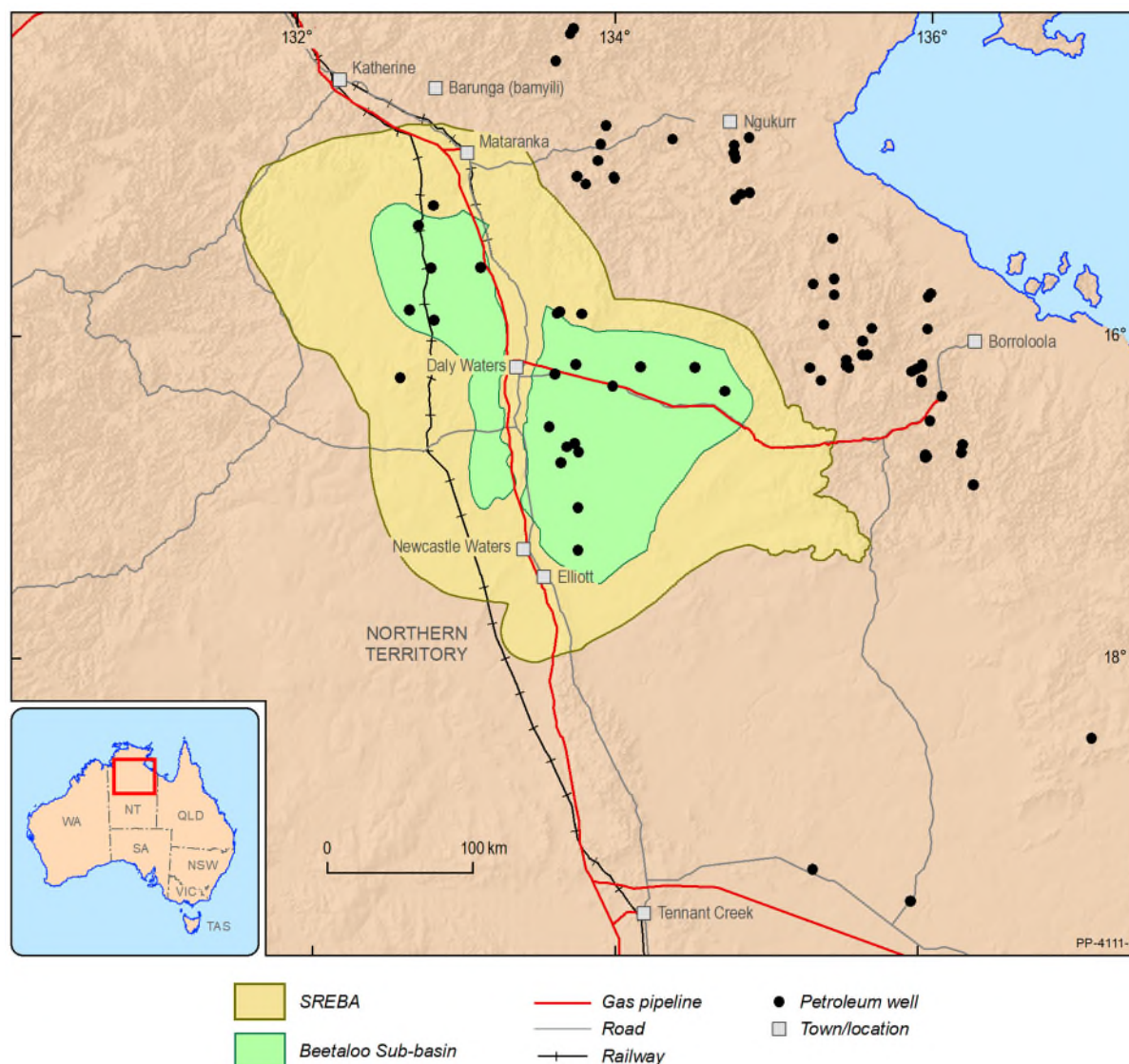
Source	Area	Interval	Area (km <sup>2</sup> )	Gas	Gas	Oil	Reference
				2C Resources (Tcf)	Estimated P50 original in place (Tcf)	Estimated P50 original in place (MMbbl)	
Origin Energy	EP76, EP98, EP117	Velkerri B Shale	1,968	6.6	61	-	Origin Energy (2017)
Empire Energy	EP187	Velkerri Formation	3.5	0.041	-	-	Empire Energy (2021)
NTGS	Beetaloo and Broadmere sub-basins	middle Velkerri Formation - Amungee Member	36,300	-	202	96	Weatherford Laboratories (2017)
NTGS	Beetaloo and Broadmere sub-basins	Kyalla Formation	36,300	-	-	772	Weatherford Laboratories (2017)

NTGS = Northern Territory Geological Survey. Tcf = trillion cubic feet. MMbbl = million barrels.

## Unlocking the Beetaloo: The Beetaloo Strategic Basin Plan

On 14 January 2021, the Australian Government released *Unlocking the Beetaloo: The Beetaloo Strategic Basin Plan (Attachment A)*<sup>11</sup>. The Beetaloo Strategic Basin Plan is the Australian Government's strategy for accelerating exploration and development of the Beetaloo (Figure 2).

**Figure 2** Beetaloo Sub-basin and associated major infrastructure



Developing the Beetaloo presents a significant opportunity to drive economic growth and job creation in the NT, and Australia more broadly. Deloitte's *Report on the Development of the Beetaloo Sub-basin*, commissioned by the Department of Industry, Science, Energy and Resources, projects that under a high development scenario, development in the Beetaloo could produce over 6,000 jobs by 2040<sup>12</sup>. Economic activity could increase between \$18.0 billion and \$36.8 billion over the same period. In addition to its capacity to deliver cheaper and more reliable gas for Australian

<sup>11</sup> Australian Government (2021), *Unlocking the Beetaloo: The Beetaloo Strategic Basin Plan*, <https://www.industry.gov.au/data-and-publications/unlocking-the-beetaloo-the-beetaloo-strategic-basin-plan>

<sup>12</sup> Deloitte Touch Tohmatsu (2020), *Report on the Development of the Beetaloo Sub-basin*

households and industry, the Beetaloo may also provide an additional source of gas for liquefied natural gas export facilities and spur significant downstream manufacturing opportunities.

Through the Beetaloo Strategic Basin Plan, the Australian Government is acting to realise these opportunities, and the full potential of the Beetaloo, as soon as possible. The Beetaloo Plan draws on targeted economic, engineering and scientific studies commissioned by the Australian Government, as part of the \$8.4 million commitment in 2019-20.

The Beetaloo Strategic Basin Plan is acting to bring forward investment decisions, increase economic benefits, and coordinate lowest-cost outcomes in a responsible manner that benefits local communities and the broader public. It establishes a flexible strategy that will accelerate characterisation of the resource and ensure that the Australian Government can respond to the Beetaloo's evolving commercial conditions.

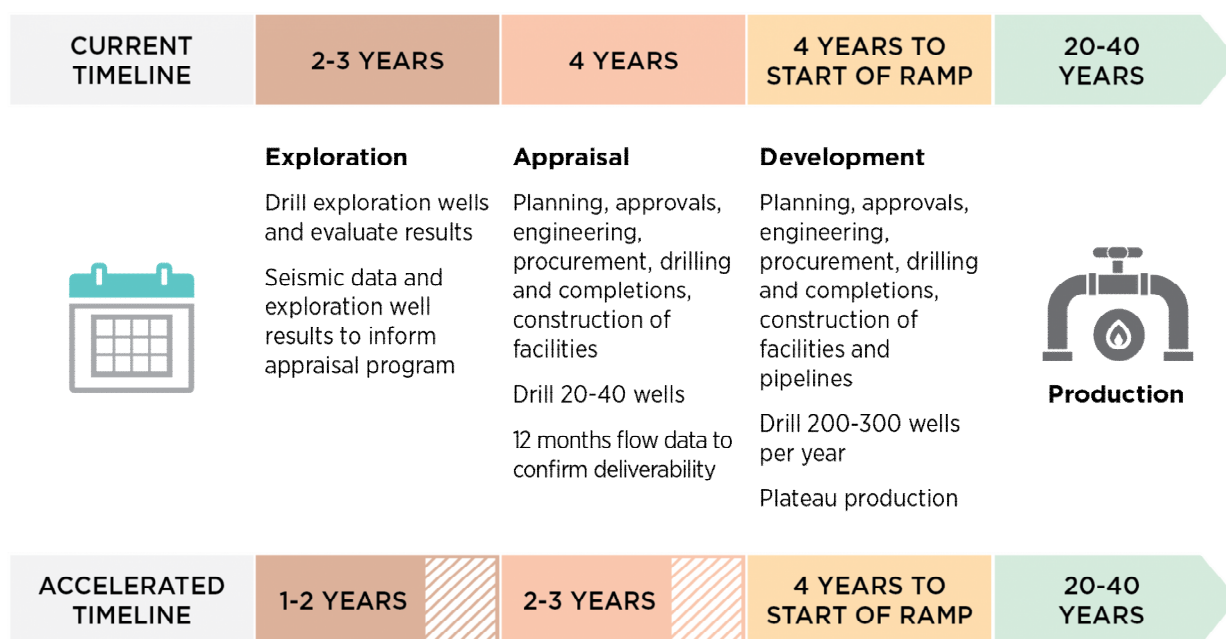
The Beetaloo Strategic Plan identifies an accelerated pathway to development for the Beetaloo. It identifies key actions that the Australian Government will take to harness the potential of the Beetaloo, realising opportunities sooner, as well as a series of areas where ongoing work is required. While immediate actions and ongoing work are not uniformly spread, the Beetaloo Strategic Basin Plan identifies four key activity streams:

1. Developing a comprehensive understanding of the geology, production capability and likely development scenario of petroleum plays in the Beetaloo.
2. Developing infrastructure of the right capacity to efficiently meet the requirements of all producers and communities in the broader Beetaloo region.
3. Establishing a robust and proportionate regulatory regime that effectively mitigates environmental, social and heritage risks.
4. Ensuring that the benefits associated with development are maximised for local communities, Territorians and the Australian public more generally.

Many areas of work depend on the potential scale of the commercial development scenario, which will become clearer as companies advance their exploration and appraisal efforts. For instance, efficient infrastructure requirements for processing and transportation of gas are heavily dependent on required capacity, which depends on quantity of gas and flow rates.

For this reason, and in order to bring forward development, the Australian Government's approach is to accelerate these first stages of development (Figure 3). To achieve this, the immediate priority must be to address the remaining uncertainties of the Beetaloo's resources through further exploration as soon as possible. The initial focus of the Beetaloo Strategic Basin Plan is to drive industry to complete exploration and activities sooner. Increased confidence in resource estimates will support earlier and enhanced investment decisions, and ensure the greatest commercial success for the Beetaloo.

**Figure 3** Expected impact of the Beetaloo Strategic Basin Plan on the timing of Beetaloo gas development



To accelerate exploration in the Beetaloo, the Australian Government established the \$50 million Beetaloo Cooperative Drilling Program (BCDP). The BCDP is designed to encourage investment by incentivising drilling in the Beetaloo by providing a time-limited, co-funded grant opportunity. Further details on the BCDP are provided in the next section.

To support the objectives of the Beetaloo Strategic Basin Plan, and to ensuring the safe, sustainable development of the Beetaloo, the Australian Government has made a number of other funding commitments, including:

- \$173.6 million Roads of Strategic Importance (ROSI) corridor covering the Beetaloo, the Northern Territory Gas Industry Roads Upgrades. Investing in common use infrastructure like roads will reduce production costs and deliver maximum, widespread benefits.
- \$2.2 million in funding to support the Northern Land Council in providing better services to, and helping to empower Traditional Owners to make informed decisions about development in the Beetaloo.

The Australian Government's actions in the Beetaloo are helping to harness this significant opportunity, to the benefit of local Northern Territorians and the wider Australian community.

# Accelerating Exploration with the Beetaloo Cooperative Drilling Program

## Program Design

The Beetaloo Cooperative Drilling Program (BCDP) was developed to encourage and facilitate gas exploration in the Beetaloo. The program achieves this by creating a time limited, co-funded grant opportunity that is designed to generate several additional wells in the Beetaloo. By generating additional wells, the program seeks to improve resource characterisation in the Beetaloo and bring forward the establishment of 2P resources and economic recovery rates required to generate certainty for any future large scale investment.

The BCDP is providing grants of between \$750,000 and \$7.5 million, up to a total of \$50 million, to gas companies to support exploration that occurs before 30 December 2022. The program is expected to deliver approximately 10 additional exploration wells in the Beetaloo by end of 2022.

The BCDP is designed to operate on a first come first served basis. The limited pool of funding is expected to drive competition among petroleum permit or licence holders in the Beetaloo, operating in conjunction with the eligibility criteria to establish a de facto competitive process. The design also ensures the grants avoid duplicating existing industry activity or activity that might have occurred without support from the grant.

## Legislative Basis

Section 33 of the *Industry Research and Development Act 1986* (the IR&D Act) provides a mechanism for the Minister to prescribe programs in relation to industry, innovation, science or research, including in relation to the expenditure of Commonwealth money under such programs.

The *Industry Research and Development (Beetaloo Cooperative Drilling Program) Instrument 2021* (the Legislative Instrument), made under section 33 of the IR&D Act, provides legislative authority for Commonwealth spending under the Beetaloo Cooperative Drilling Program.

The statutory framework provided by section 33 of the IR&D Act enables a level of flexibility to provide authority for Commonwealth spending activities in relation to industry, innovation, science and research programs. This allows the Government to respond quickly and appropriately to the need to implement innovative ideas and pilot programs on an ongoing basis and as opportunities arise. Prescribing programs in legislative instruments provides transparency and parliamentary oversight of Government programs and spending activities, whilst reducing administrative burden on the Commonwealth.

Funding authorised by the Legislative Instrument comes from Program 1.3: Supporting a Strong Resources Sector, Outcome 1, as set out in the Portfolio Additional Estimates Statements 2020-21, Industry, Science, Energy and Resources Portfolio<sup>13</sup>.

## Program Operation

Applications for the BCDP opened on 18 May 2021. The Beetaloo Cooperative Drilling Program Grant Opportunity Guidelines (the guidelines, **Attachment B**), and templates for application documents, including accountants declaration, Board of CEO approval letter, and sample grant agreement are available on [business.gov.au](https://business.gov.au). The guidelines establish a framework for the administration of the

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<sup>13</sup> <https://www.industry.gov.au/sites/default/files/2021-02/2020-21-department-of-industry-science-energy-and-resources-paes.pdf>

BCDP, including eligibility criteria, application assessment criteria, governance arrangements and decision making frameworks.

Applicants will complete the application form, addressing all the eligibility and assessment criteria in order for the application to be considered. Applications will be first reviewed against eligibility criteria. Non-eligible applicants will be notified at this stage. Eligible applications are assessed against the assessment criteria by an assessment committee based on the merits of each application. This advice is provided to the decision maker, in this case the Minister for Resources and Water, who will decide which applications are successful. Since the BCDP opened in May 2021, a number of applications have been received.

Eligible applicants will be advised of the outcome of their application, and grant program administrators will enter into a grant agreement with successful applicants. The grant agreement is a legally binding grant agreement with the Commonwealth, which will state:

- the maximum grant amount to be paid,
- the proportion of eligible expenditure covered by the grant (grant percentage)
- the financial contribution provided by the recipient or a third party.

The grant agreement must be signed by both the recipient and the Commonwealth before any payments will be made.

Grant recipients will undertake their activities as established under their grant agreement, with the recipient's process and making payments monitored. The Business Grants Hub, who are the program's administrators, evaluate the specific grant activity and grant opportunity as a whole.

On 7 July 2021, the Minister for Resources and Water Keith Pitt announced the first three grants awarded under the BCDP. These grants were provided to Imperial Oil & Gas Limited and total up to \$21 million, with the exact amount subject to finalising eligible project expenditure. These grants will support three new exploration wells in the company's EP187 exploration zone. Further applications are being considered in accordance with the established application evaluation processes.

## Eligibility Criteria

To be eligible to apply for the BCDP, applicants must have an Australian Business Number (ABN) and be an entity incorporated in Australia and a trading corporation, where their trading activities:

- form a sufficiently significant proportion of the corporation's overall activities as to merit it being described as a trading corporation; or
- are a substantial and not merely peripheral activity of the corporation.

Joint applications are acceptable. Additionally,

- The applicant must hold the relevant exploration permit, or retention permit, as well as having commenced all relevant approval processes to commence onshore petroleum exploration in the Northern Territory.
- Provide a letter that, if successful they will commence work within three months of entering into the grant agreement.
- Demonstrate that the project proposal is either in addition to their current work program or has been accelerated by at least 90 calendar days if it was previously planned.
- Demonstrate that work must be completed by the end of the 2022 calendar year.

The guidelines provide a non-exhaustive list of eligible expenses and identify a series of activities that cannot be supported by BCDP.

Applicants can only submit an application while the funding round remains open and there is available funding. Applicants must submit an application per well and can submit a maximum of three applications.

## Assessment Criteria

The assessment criteria are a prescriptive list of requirements that each application must meet to the satisfaction of an independent assessment committee. Applicants will only be considered for a grant if they can satisfactorily demonstrate that their proposed project meets all of the three criteria:

### 1. The extent to which the applicant's project contributes to understanding of petroleum resource prospects in the Beetaloo, including:

- The amount of exploration and appraisal activities an applicant plans to undertake and the timeframe of the project
- how the applicant's project will expand the understanding of petroleum resources in the Beetaloo region prior to the end of the 2022 calendar year and how this understanding will impact upon future likelihood of resource production
- that the project; will be delivered at least 90 calendar days earlier than would otherwise would have occurred in the absence of grant funding, or will be delivered in addition to your work program activities. Internal decisions, announced plans, and work plans disclosed to the NT Government must be outlined.

### 2. The applicant's capacity, capability and resources to deliver the project, including:

- The applicant's track record managing similar projects and access to personnel with the right skills and experience, including management and technical staff
- access, or future access to, any infrastructure, capital equipment, technology, intellectual property and required regulatory or other approvals
- the level of technical risk associated with the project and how these risks will be mitigated
- a credible project plan and budget.

### 3. Impact of the grant funding on the applicant's project, including:

- how the grant will impact an applicant's project in terms of size, scale, timing, return on investment and project payback period
- the total additional investment the grant will create.

## Governance and Decision Making Framework

The governance and decision making surrounding successful and unsuccessful applications follows a three stage process.

Stage 1, The Business Grants Hub conducts preliminary eligibility checks and if eligible refers applications to the independent assessment committee.

Stage 2, the independent assessment committee makes an assessment against assessment criteria.

The current iteration of the assessment committee is made up of a representative from the Department, a representative of GA, and an expert advisor with key industry and NT Government operational knowledge. A representative from the Business Grants Hub attends these meetings.

The role of the committee is to evaluate whether an eligible application meets established assessment criteria. Given the non-competitive, first-come-first-served nature of the grant opportunity, the committee makes their determinations by concluding whether responses are satisfactory or unsatisfactory.

Applications will only be considered for a grant if they can satisfactorily demonstrate that the nominated exploration project meets all of the assessment and eligibility criteria. After considering the applications, the independent assessment committee will make recommendations and the department will prepare advice to the Minister regarding those applications suitable for funding.

Stage 3, the Minister as the final decision maker agrees which grants to approve.

The Minister for Resources decides which grants to approve taking into account the application assessment and the availability of grant funds. The Minister's decision is final in all matters, including:

- the grant approval
- the grant funding to be awarded
- any conditions attached to the offer of grant funding.

The Minister will not approve funding if there is insufficient program funds available across relevant financial years for the program.

## Notification and review of outcomes

Both successful and unsuccessful applicants will be informed in writing. Unsuccessful applicants have an opportunity to discuss the outcome with the Department, and can submit a new application for the same or similar project, provided the Program is still open. The determinative processes outlined in the three stages are accompanied by an enquiry and feedback process for applicants that were unsuccessful in receiving a grant. As such, an external merits review does not apply to decisions about the provision of grants under the Program.

Persons who are otherwise affected by decisions or who have complaints about the BCDP have recourse to the Department. The Department investigates any complaints in accordance with its complaints policy and procedures. If a person is not satisfied with the way the Department handles the complaint, they may lodge a complaint with the Commonwealth Ombudsman.

Finally, successful applicants enter into a grant agreement with the Business Grants Hub who administer the ongoing delivery of the grant with consideration of the agreement and any conditions attached to the offer by the Minister.

## Conflict of Interest Process

As part of the application for the BCDP, applicants are obliged to declare any perceived or existing conflicts of interests or confirm that, to the best of their knowledge, there is no conflict of interest. A conflict of interest, or perceived conflict of interest may arise, if the Department, any member of the independent assessment committee or advisor and/or the applicant or any of their personnel:

- has a professional, commercial or personal relationship with a party who is able to influence the application selection process, such as an Australian Government officer or member of an external panel
- has a relationship with or interest in, an organisation, which is likely to interfere with or restrict the applicants from carrying out the proposed activities fairly and independently or

- has a relationship with, or interest in, an organisation from which they will receive personal gain because the organisation receives a grant under the grant program/ grant opportunity.

If applicants, later identify an actual, apparent, or perceived conflict of interest, they must inform the Department in writing immediately. Committee members and other officials involved in the decision making process must also declare any conflicts of interest, as set out in the Australian Public Service Code of Conduct (Section 13(7))<sup>7</sup> of the Public Service Act 1999 (Cth).

## Other initiatives supporting the safe and sustainable development of the Beetaloo

The Department and GA, have, and continue to be involved in a number of other initiatives working to ensure the safe, efficient and sustainable development of the Beetaloo.

GA partnered with the Department of Agriculture, Water and Environment's Geological and Bioregional Assessment (GBA) Program to provide information to help assess the environmental impacts of shale and tight gas development in the Beetaloo. For Stage 2 of the GBA Program, the geological and environmental baseline assessment for the Beetaloo GBA region, GA contributed technical analysis and assessments explaining the geological setting, tectonic evolution, depositional environments, assessment of the relative prospectivity of the Beetaloo, and assessment of the groundwater resources and structural and stratigraphic framework of the Beetaloo GBA region<sup>14</sup>. The outcomes of this technical analysis are reflected earlier in the submission covering the Beetaloo's hydrocarbon prospectivity.

Beyond the GBA Program, GA has ongoing passive seismic monitoring, to establish further baseline information, at 10 locations across the Beetaloo. This information will be used by GA, the public and other organisations to build knowledge about potential human-induced seismic activity in the region that may be associated with hydrocarbon extraction activities such as hydraulic fracturing.

The Australian Government also continues to invest in the CSIRO's Gas Industry Social and Environmental Research Alliance (GISERA), which provides independent research on the social, economic and environmental impacts of Australia's onshore gas industry including the safe and responsible use of hydraulic fracturing. Of the funds committed as at 30 June 2020, Beetaloo related projects received \$1.6 million with more to be allocated by GISERA until end June 2024.

The Australian Government is committed to the Paris Agreement and ambitious climate action. The Australian Government notes the NT Government's commitment to implement Recommendation 9.8 of the Pepper Inquiry and the voluntary emissions reduction targets adopted by major oil and gas producers interested in developing the Beetaloo. The Australian Government will continue to work with the NT Government and producers to help support the implementation of the NT Government's commitment to manage emissions from onshore gas developments. This includes measures already underway to grow participation under the Emissions Reduction Fund, including a new carbon capture and storage method, which could directly reduce emissions from future projects and will increase the supply of domestic carbon offsets.

Major gas developments are also covered by the Safeguard Mechanism, which limits the emissions from Australia's largest emitters and provides a framework for emitters to measure, report and

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<sup>14</sup> Evans TJ, Radke BM, Martinez J, Buchanan S, Cook SB, Raiber M, Ransley TR, Lai ECS, Skeers N, Woods M, Evenden C, Cassel R and Dunn B (2020) Hydrogeology of the Beetaloo GBA region. Technical appendix for the Geological and Bioregional Assessment: Stage 2. Department of the Environment and Energy, Bureau of Meteorology, CSIRO and Geoscience Australia, Australia.

manage their emissions. The Australian Government is developing a crediting mechanism, as recommended by the King Review<sup>15</sup>, which will support Safeguard Mechanism facilities to reduce their energy consumption and emissions while improving productivity and international competitiveness. Through the 2021-22 Budget, the Government committed \$279.9 million to establish the crediting mechanism and support investment in transformative abatement projects.

## Closing Statement

Developing the Beetaloo presents a tremendous opportunity to drive job creation, stimulate economic growth and increase gas supply, to the benefit of Northern Territory and Australia. The Australian Government's actions in the Beetaloo, including administering the Beetaloo Cooperative Drilling Program, will help to harness this opportunity, and ensure the benefits associated with development are realised as soon as possible.

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<sup>15</sup> King G *et al.* (2020) Report of the Expert Panel examining additional sources of low cost abatement  
<https://www.industry.gov.au/data-and-publications/examining-additional-sources-of-low-cost-abatement-expert-panel-report>

## List of Abbreviations

Abbreviation	Definition
BCDP	Beetaloo Cooperative Drilling Program
Beetaloo	Beetaloo Sub-basin
Department	Department of Industry, Science, Energy and Resources
GA	Geoscience Australia
GBA	Geological and Bioregional Assessment Program
GISERA	Gas Industry Social and Environmental Research Alliance
guidelines	Beetaloo Cooperative Drilling Program Grant Opportunity Guidelines
NGIP	<i>National Gas Infrastructure Plan</i>
NT	Northern Territory
Pepper Inquiry	Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the NT
SREBA	Strategic Regional Environmental and Baseline Assessment

## List of Attachments

Attachment	Title
A	<a href="#">The Beetaloo Strategic Basin Plan</a>
B	<a href="#">Beetaloo Cooperative Drilling Program Grant Opportunity Guidelines</a>