

# **Jemena Northern Gas Pipeline Pty Ltd**

## **Northern Gas Pipeline**

### **Draft Environmental Impact Statement**

#### **CHAPTER 1 - INTRODUCTION**

Public

August 2016



## Contents

1. Introduction.....	1-1
1.1 EIS structure.....	1-2
1.2 Title of proposed action.....	1-3
1.3 Project overview .....	1-3
1.4 Proponent.....	1-5
1.4.1 Company overview .....	1-5
1.4.2 Contact details.....	1-6
1.5 Health, Safety, Environment and Community.....	1-6
1.5.1 Jemena’s commitment to NGP Project safety & environment .....	1-6
1.5.2 Jemena’s environmental history.....	1-7
1.5.3 Jemena’s commitment to the NGP Project communities.....	1-7
1.6 Project History & Context.....	1-10
1.6.1 Justification.....	1-10
1.6.2 Competitive process .....	1-11
1.6.3 Feasibility.....	1-11
1.6.4 Relationship to other developments in region .....	1-11
1.6.5 Consequences of the Project not proceeding.....	1-11
1.7 Standards, Codes of Practice and Guidelines.....	1-12
1.8 Environmental assessment process.....	1-12
1.8.1 Northern Territory .....	1-12
1.8.2 Queensland .....	1-13
1.8.3 Commonwealth.....	1-13
1.8.4 Process and Timelines.....	1-13
1.9 Ecologically Sustainable Development .....	1-15
1.9.1 Precautionary principle .....	1-15
1.9.2 Inter-generational equity .....	1-15
1.9.3 Biodiversity principle .....	1-16
1.9.4 Integration principle .....	1-16

## Figures

Figure 1-1. Location of NGP in relation to other pipelines in Australia .....	1-4
Figure 1-2. Jemena's Environmental Policy .....	1-9
Figure 1-3. Northern Territory and Commonwealth environmental assessment and approvals processes .....	1-14

## 1. INTRODUCTION

Jemena Northern Gas Pipeline Pty Ltd (Jemena) was selected by the Northern Territory Government to construct and operate a high pressure, underground gas pipeline connecting the existing Amadeus Gas Pipeline (AGP), near Tennant Creek in the Northern Territory (NT), to the Carpentaria Gas Pipeline (CGP), near Mount Isa in Queensland. The Project is referred to as the Northern Gas Pipeline (NGP)<sup>1</sup> (the Project)

Jemena was selected to develop the Project by the Northern Territory Government following a competitive tender process in 2015. During the tender process, Jemena completed a comprehensive desktop assessment of the proposed alignment and adopted an avoidance approach aimed at minimising environmental, cultural heritage, and landholder impacts. The pipeline alignment selection optimised these aspects and established a strong starting point for planning and approvals works in 2016. The submission of this EIS is a culmination of almost two years of investigation and planning works.

Construction is currently scheduled to commence in early 2017 with the pipeline system planned to be operational in 2018. The exact timing is dependent on a number of factors including the timeliness of the required approvals, access agreements with relevant stakeholders and weather conditions. The Project has been granted Major Project status by the Northern Territory Government, providing for whole of government coordination of the approvals processes.

This Environmental Impact Statement (EIS) has been prepared to support key Northern Territory and Commonwealth (*Cth*) environmental approvals required under the Environmental Assessment Act (EA Act) (*NT*) and the Environment Protection and Biodiversity Conservation Act 1999 (*Cth*) (EPBC Act). The purpose of the EIS is to provide the Northern Territory Environment Protection Authority (NT EPA) and Commonwealth Government Department of the Environment (DoE) with sufficient information to allow a comprehensive environmental assessment of the Project.

This EIS addresses the matters set out in the Terms of Reference (ToR) (Appendix A) which were finalised by the NT EPA in consultation with the DoE. The ToR takes into account stakeholder and public comments received during a public comment period held between 27 November and 11 December 2015.

The Queensland portion of the Project has obtained environmental approvals required under the Environmental Protection Act 1994 (*Qld*). Accordingly, the assessment of environmental impacts in Queensland (presented in the EIS) is confined to Matters of National Environmental Significance (MNES) protected under the EPBC Act. The MNES relevant to the NGP Project are threatened species protected under sections 18 and 18A of the EPBC Act, which are nominated as ‘controlling provisions’ in the Notification of Referral Decision and Designated Proponent issued to Jemena by DoE (Appendix B).

The purpose of this chapter is to introduce the EIS document structure and present the following information requested in section 2.1 of the EIS ToR:

- The title of the proposed action
- Overview of the Project (location and details)
- Proponent details, including company environmental, social and health and safety record (as requested in section 2.4 of the EIS ToR)
- National, State and/or Territory standards, codes of practice and guidelines relevant to the Project
- The history and current status of the Project, including the consequences of not proceeding with the action.

<sup>1</sup> previously referred to as North East Gas Interconnector (NEGI)

This chapter also summarises the environmental assessment process applicable to the NGP Project and how the Project complies with and contributes to the principles and objectives of Ecologically Sustainable Development (ESD), consistent with the National Strategy for ESD (as requested in section 2.6 of the EIS ToR).

## 1.1 EIS STRUCTURE

This EIS is structured into a series of chapters, with each chapter broadly corresponding to the main headings of the EIS ToR. The EIS contains a number of appendices, which are typically technical documents, prepared by suitably qualified individuals, which provide context and/or background to the EIS chapters. A cross-reference table, which indicates where each item from the ToR is addressed, can be found in Appendix C.

The structure and content of the EIS is summarised below.

**Chapter 1** gives a broad introduction to both the Project and Jemena as the Proponent of the proposed action. The relevant legislation and approvals required for the Project to proceed are outlined in **Chapter 2**. **Chapter 3** presents a detailed description of the Project components. This chapter includes details of proposed land clearing, the temporary and permanent facilities to be constructed, and the Project phases and schedule. Stakeholder engagement for this Project is described in **Chapter 4**. **Chapter 5** gives an overview of the approach taken to risk assessment, which is applied in **Chapters 6 to 11** for various environmental components, namely:

- Chapter 6 Biodiversity
- Chapter 7 Water
- Chapter 8 Historic and Cultural Heritage
- Chapter 9 Socio-economic Aspects
- Chapter 10 Human Health & Safety
- Chapter 11 Air, Noise and Vibration

The chapters above describe the key features of the existing environment and assess the nature and intensity of the potential impacts of the Project with reference to technical supporting documents in the appendices. Mitigation strategies to reduce the potential impacts are outlined and, for each environmental component, an overall conclusion is drawn in relation to potential for the Project to cause significant impact.

An assessment of MNES protected under the EPBC Act is presented in **Chapter 12**. This Chapter describes the threatened species which may fall within the terms of the EPBC Act with reference to relevant field survey and desktop information presented in the appendices. The potential for the Project to cause significant impact to threatened species and communities is assessed with reference to the EPBC Act Significant Impact Guidelines 1.1 – Matters of National Environmental Significance (Commonwealth of Australia 2013).

**Chapter 13** (Environmental Management Plan) is an environmental management framework collated from the environmental management actions and monitoring and reporting requirements outlined in the various chapters of the EIS. Chapter 13 describes Jemena's approach to environmental management in as much detail as is practicable given the current stage of Project planning. This allows the NT EPA, DoE and other stakeholders to assess the extent to which the management framework is likely to be effective in reducing environmental risks.

**Chapter 14** (Commitments) summarises the commitments made throughout the EIS. These commitments have been put in place to mitigate and monitor environmental impacts.

**Chapter 15** (References) presents the documents referred to throughout the EIS main document.

## 1.2 TITLE OF PROPOSED ACTION

---

The Project and hence Proposed Action, is referred to as the Northern Gas Pipeline (NGP).

## 1.3 PROJECT OVERVIEW

---

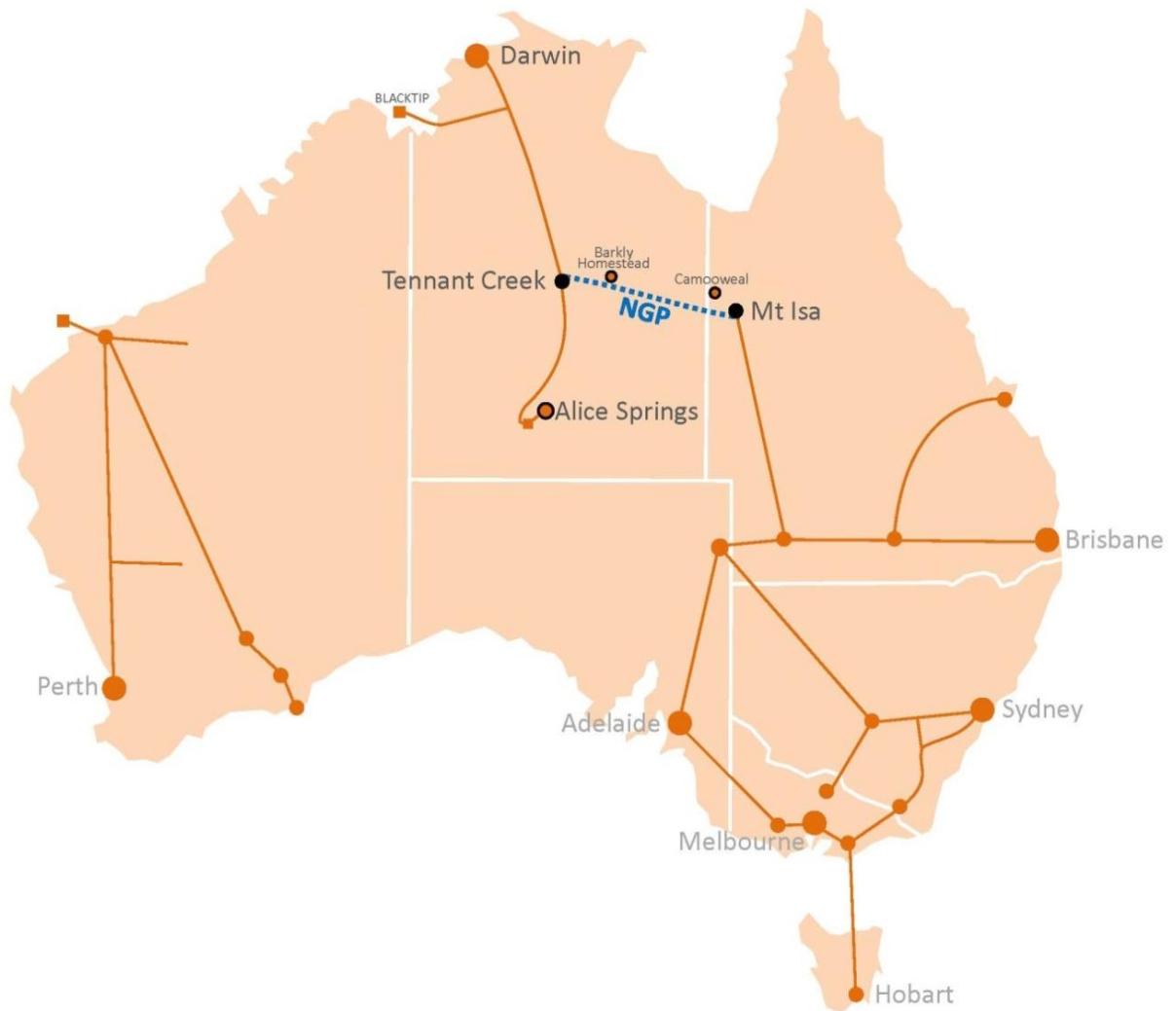
The NGP Project will comprise a high pressure, underground gas pipeline (approximately 622 kilometres in length) and associated above-ground facilities. The pipeline will connect the existing Amadeus Gas Pipeline (AGP) at the Warrego Compressor Station in the Northern Territory (NT) to the existing Carpentaria Gas Pipeline (CGP) at Mount Isa in Queensland (Qld). Figure 1-1 provides an overview of the location of the NGP in relation to existing gas pipelines within Australia.

The pipeline will extend from Warrego, approximately 45 km north-west of Tennant Creek (NT), across the Northern Territory/Queensland border and connect to the existing Carpentaria Gas Pipeline, at a location approximately 7 km south-west of Mount Isa (Queensland). Approximately 457 km of the pipeline will be in the Northern Territory and 165 km in Queensland. Compressor stations will be located at each end of the pipeline, with additional nitrogen removal facilities at the Warrego end; other above-ground facilities will comprise mainline valves (MLV) and cathodic protection stations (CP) located at intervals along the pipeline.

The temporary construction footprint will comprise a 30 metre construction Right of Way (ROW) within which pipeline installation activities will occur; additional laydown/works areas, access tracks and turn-around points, construction camps and water storage dams are also required. Following completion of construction activities, disturbed areas not required for operational activities will be progressively restored to their pre-construction land-use/condition. The Project operational footprint will comprise of compressor stations at Warrego and Mount Isa, MLVs and CP stations along the pipeline, tracks required to access permanent facilities access and tracks/dams which landholders request be retained for their use.

The Project area is located across two Local Government Areas (LGAs) - Barkly Regional Council in the Northern Territory and Mount Isa City Council in Queensland. The majority of land traversed by the proposed pipeline route is remote and sparsely populated. It is semi-arid pastoral land used for grazing cattle. Parcels of Crown land, Aboriginal-owned land, and land subject to native title claims are also traversed. In the Northern Territory, Jemena has undertaken significant engagement with landholders, land council's, native title representative bodies, road and railway authorities, leaseholders, governments, local councils and a wide range of other stakeholders (refer Chapter 4).

A detailed description of the location of the Project and its main components is provided in Chapter 2 Project Description.



**Figure 1-1. Location of NGP in relation to other pipelines in Australia**

## 1.4 PROPONENT

The NGP will be owned and operated by Jemena Northern Gas Pipeline Pty Ltd (Jemena).

Jemena Northern Gas Pipeline Pty Ltd is the Project Proponent for the purpose of this EIS.

### 1.4.1 COMPANY OVERVIEW

Jemena is an Australian infrastructure company which builds, owns and maintains a combination of major electricity, gas and water assets. In summary Jemena:

- Operates nationally
- Manages more than \$9 billion worth of Australian utilities assets
- Specialises in both the transmission and distribution of electricity and gas
- Delivers innovative infrastructure solutions that support the vital daily electricity, gas and water needs of millions of Australians

Jemena Pty Ltd and Jemena Northern Gas Pipeline Pty Ltd are wholly owned subsidiaries of State Grid Corporation of China and Singapore Power (SGSP) (Australia) Assets Pty Ltd. Jemena is backed by the strong resources of its shareholders.

Jemena's energy transmission and distribution assets include:

- The Eastern Gas Pipeline (EGP) – this 797 km long, high pressure gas pipeline links the Gippsland Basin in Victoria with New South Wales (NSW), supplying more than half the gas consumed in NSW. There are four compressor stations, two in Victoria (Longford, East Gippsland) and two in New South Wales (Mila and Michelago)
- The Queensland Gas Pipeline (QGP) – this 627 km long, high pressure gas pipeline links the Wallumbilla gas hub in south central Queensland to large industrial gas users in Gladstone and Rockhampton. It has two mid-line compressor stations at Rolleston and Banana
- The VicHub – this pipeline interconnect facility, situated at the Longford Compressor Station, enables gas to flow bi-directionally between the Eastern Gas Pipeline and the Victorian gas transmission system
- The Colongra Gas Storage and Transmission facility
- The Jemena Gas Network (JGN) – distributes natural gas to 1.2 million homes and businesses in Sydney, Newcastle, the Central Coast and Wollongong and more than 20 country centres
- The Jemena Electricity Network (JEN) – distributes electricity to more than 320,000 customer sites in an area of over 950 square kilometres of north-west greater Melbourne

As described above, the Jemena portfolio includes a number of significant gas transmission and distribution assets which demonstrates the company's capability to safely operate assets comparable to the NGP. Jemena also has demonstrated strong capability and experience in gas project delivery including the following recent projects:

- The expansion of the EGP in 2016. The installation of two new midline compressor stations at East Gippsland and Michelago, plus additional delivery facilities at Wilton. This increased the capacity of the EGP allowing it to transport approximately 22 PJ of additional gas each year.



- The expansion of the QGP in 2015. This included the installation of a duplicate 35 km section of 400 millimetre diameter pipeline (known as “looping”) between the Arcadia Valley MLV and Rolleston Compressor Station and developed surface facilities at both sites. These works allowed the pipeline to transport approximately 4 PJ of additional gas each year, enhancing transmission and storage capacity to improve the resilience of the pipeline infrastructure.
- The first expansion of the QGP was completed in 2010 and involved the addition of two midline compressor stations at Rolleston and Banana and the installation of a duplicate 113 km section of 400 millimetre diameter pipeline of looping between Oombabeer and Callide. This expanded the QGP’s capacity by approximately 26 PJ of gas per year to meet the growing industrial demand for natural gas.
- The expansion of the EGP between 2008 and 2010 included the installation of the Mila Compressor Station in 2008 (which increased the capacity of the line by 15 per cent) and the installation of a fourth compressor at Longford Compressor Station in 2010
- Construction of the Colongra Lateral Pipeline in 2009. Jemena designed and constructed the 9 km long pipeline of 42 inch diameter. The Colongra Lateral Pipeline was constructed to deliver gas to a 600 MW gas-fired peaking power station with the capacity to store enough gas to for the power station to run at full capacity for five hours.

#### 1.4.2 CONTACT DETAILS

Jemena Northern Gas Pipeline Pty Ltd (ABN 12 607 928 790)

Head office: Level 16, 567 Collins Street, Melbourne VIC 3000

PO Box 16182, Melbourne VIC 3000

Ph 1300 578 515; Fax (03) 9173 7516; Email [NGP.Enquiry@jemena.com.au](mailto:NGP.Enquiry@jemena.com.au)

Web [www.jemena.com.au](http://www.jemena.com.au)

### 1.5 HEALTH, SAFETY, ENVIRONMENT AND COMMUNITY

Jemena is committed to protecting the health and safety of people and communities, and to best-practice environmental management. This value is reflected in the Jemena Health, Safety, Environment and Quality (HSEQ) Strategy and shared by everyone at every level of Jemena through their commitment to and responsibility for their own safety and the safety of those around them as well as the application of environmentally sound work practices.

Jemena’s leadership team is actively engaged in the HSEQ program and works with other employees as members of the Jemena HSE Council which has primary responsibility for the implementation and maintenance of an effective Health Safety & Environment Management System (HSEMS).

#### 1.5.1 JEMENA’S COMMITMENT TO NGP PROJECT SAFETY & ENVIRONMENT

Environmental sustainability and safety of Jemena’s customers, contractors, staff, their families and the communities in which the company operates are core values for Jemena and the NGP Project.

Jemena’s Health, Safety and Environment requirements are managed through the company’s HSEMS. The system comprises a hierarchy of policies, standards and procedures, supported by corporate and

business unit management systems, which define the philosophy, strategy and compliance requirements for effective HSE management. Jemena's Environmental Policy outlines its commitments to environmental management, and is provided in Figure 1-2.

Jemena has appointed a construction contractor to undertake the construction of the NGP Project. The construction contractor is responsible for providing and implementing a Construction Health and Safety Management Plan (CHSMP) and Construction Environment Management Plan (CEMP) which meet or exceed the requirements of the Jemena Health, Safety and Environment Management System. The construction contractor's CHSMP, CEMP and other plans, as identified during the Construction Risk Assessment process, will be submitted for review and approval by Jemena prior to the commencement of work. The construction contractor will also provide and implement all supporting documentation such as work instructions, procedures, forms, Safe Work Method Statements (SWMS) and registers necessary for the works.

Jemena will engage appropriately qualified personnel and provide adequate resources to ensure all NGP construction activities are conducted in accordance with Jemena's HSEMS, the construction contractor's management plans and in full compliance with all legislative requirements.

### 1.5.2 JEMENA'S ENVIRONMENTAL HISTORY

As detailed in Section 1.4.1, Jemena have experience delivering gas transmission and distribution assets. The table below lists recent examples of environmental approvals obtained and the approving authorities:

State	Authority	Documentation	Date Issued
Queensland	Department of Environment and Heritage Protection	Application to amend environment Authority (#EPPG00652013)	09/06/2016
New South Wales	Office of Environment and Heritage	Section 95(2) Application For Licence To Harm Threatened Species, Populations, Ecological Communities or to Damage Their Habitats (#C0000900)	26/02/2015
Victoria	Department of Environment, Land, Water and Planning	Flora and Fauna Guarantee Act Permit (#1/15/15/0008)	24/02/2015
New South Wales	Office of Environment and Heritage	Aboriginal Heritage Impact Permit (#C0000781)	19/12/2014

There are no proceedings against the proponent or person proposing to take the action under Commonwealth, State or Territory law for the protection of the environment.

### 1.5.3 JEMENA'S COMMITMENT TO THE NGP PROJECT COMMUNITIES

Jemena has worked closely with communities and businesses along the proposed route for the NGP since May 2015 and that engagement continues. Jemena intends to maximise local and Indigenous participation in the delivery and ongoing maintenance of the NGP. Where possible, Jemena aims to staff ongoing operations and maintenance teams from local workforces at Tennant Creek and Mount Isa.

To ensure remote communities in the Barkly and Mount Isa regions benefit from the Project in the long-term, Jemena is also investing in a variety of social and economic development initiatives including training programs, Gas Operator Training Program, and a social enterprise in Tennant Creek. These initiatives focus on creating positive social outcomes and long term legacy benefits.

Details of Jemena's engagement with stakeholders are provided in Chapter 4 of this EIS. The Project's commitment to local participation, including programs designed to maximise the social and economic opportunities will provide for the local community, is discussed in Chapter 9.

# Environmental Policy

Jemena is committed to reducing its environmental footprint.

In delivering on this commitment it is the policy of Jemena to:

1. Comply with all relevant legal and other environmental requirements and provide employees and contractors with the necessary training and tools to maintain its assets in compliance to such requirements.
2. Conduct its business in a way that employees and contractors understand and ensure that they are accountable, for Jemena's environmental performance in their day to day activities.
3. Facilitate continual improvement in environmental performance and prevent pollution by establishing and maintaining an appropriate Environmental Management System and related documents for all assets.
4. Identify and minimise risk by continually assessing, controlling and monitoring our environmental aspects and impacts.
5. Utilise its knowledge and expertise by supporting and pursuing strategies and projects that reduce our impact on the environment as well as providing customers with the necessary tools and information to understand and better manage their environmental impacts.
6. Identify, set and monitor realistic environmental performance measures and communicate them to all employees and stakeholders.
7. Actively engage with customers, government and other stakeholders to recognise and respond to all environmental concerns.

It is a requirement that all employees, contractors and visitors comply with the requirements of this policy and our Environmental Management standards at all times.



Paul Adams  
Managing Director  
Jemena Limited  
August 2015

## 1.6 PROJECT HISTORY & CONTEXT

The NGP Project was initiated by the Northern Territory Government, with the goal of facilitating the strong and sustainable development of the Northern Territory's gas sector by providing a link to new and growing demand in the eastern gas market. The Northern Territory Government has given the NGP 'Major Project' status, which is given to projects which are significant, complex and have strategic impact.

Jemena was selected to develop the Project by the Northern Territory Government following a competitive tender process in 2015. During the tender process, Jemena completed a comprehensive desktop assessment of the proposed alignment and adopted an avoidance approach aimed at minimising environmental, cultural heritage, and landholder impacts. The alignment selection optimised these aspects and established a strong starting point for planning and approvals works in 2016. The submission of this EIS is a culmination of almost two years of investigation and planning works.

The Office of Major Projects, Infrastructure and Investment within the Department of the Chief Minister is responsible for initiating, coordinating and facilitating the delivery of major projects in the Northern Territory. The efficient delivery of major projects has benefits for the Northern Territory and the complicated nature of such projects often requires whole-of-government coordination.

### 1.6.1 JUSTIFICATION

The NGP Project will deliver a range of benefits to the Northern Territory, northern Australia and the broader Australian economy, by:

- stimulating gas exploration and production in the Northern Territory by opening up a new market for Northern Territory gas — promoting economic and infrastructure development opportunities and extensive employment opportunities in regional and remote areas
- providing a new source of competitively-priced gas to customers with growing needs in the eastern Australian gas market
- promoting economic and infrastructure development in regional areas through the construction of the Project itself and through Jemena's training and local industry capacity building initiatives
- providing a platform for Jemena's longer-term plan to facilitate the direct delivery of Northern Territory gas to Wallumbilla by introducing additional gas and competition into a key gas trading location in Australia's eastern and northern gas markets.

The Council of Australian Governments' (COAG) Energy Council supports the work of the Northern Territory Government to foster the connection of Australia's northern and eastern gas markets. COAG previously stated that "connecting these gas markets is the next step to developing a national gas grid and will contribute to the development of a more national and competitive domestic gas market, helping to improve supply security."<sup>2</sup>

The Project will contribute to the achievement of the Australian Government's vision for the energy sector, as outlined in its Energy White Paper, for a competitively priced and reliable energy supply to households, businesses and international markets through competition and the more productive use of energy and investment.<sup>3</sup>

<sup>2</sup> COAG, Communique of 38<sup>th</sup> Meeting, 10 October 2014, p 4.

<sup>3</sup> Australian Government, Energy White Paper 2015.

### 1.6.2 COMPETITIVE PROCESS

The Northern Territory Government led a competitive, three-stage tender process to appoint a private-sector developer to the Project. From a final shortlist of four, Jemena was selected as the successful proponent based on a range of assessment criteria, including cost to the Territory, risk management approach, proposal deliverability, approach to local industry participation and broader economic benefits of the Project.

### 1.6.3 FEASIBILITY

The NGP has been sized to match the Northern Territory's stated current surplus gas production. Gas in the Northern Territory is currently produced from two sources:

- the offshore conventional Blacktip gas field in the Bonaparte Basin — currently the Northern Territory's primary supply source
- the onshore conventional Mereenie and Palm Valley gas fields in the Amadeus Basin.

At a high level, Central Petroleum and Santos have 232 PJ of proven and probable (2P) gas reserves and ENI has 860 PJ of proven and probable (2P) gas to supply the Power and Water Corporation (PWC) gas transport agreement and the Northern Territory's demand (22 PJ p.a.). This is sufficient to supply the NGP and Northern Territory demand for 21 years.

The NGP will encourage the efficient use of gas transportation services throughout Australia's eastern gas market, and seek to minimise the delivered price of gas to customers in the face of tightening market conditions. As existing conventional sources of gas decline, domestic users in the eastern gas market are seeking competitively-priced supply and delivery point flexibility to manage their energy needs.

The NGP will facilitate this by allowing users in the northern half of the eastern market to access more gas from northern sources (including the Northern Territory), freeing up more gas from southern sources to supply customers in southern states. Queensland gas previously shipped to Mount Isa can be redirected to other customers in the eastern market who are seeking to recontract supply. In addition to providing more supply to the eastern gas market, this will reduce the need to transport gas over long distances across multiple pipelines, providing additional downward pressure on delivered gas prices for customers.

### 1.6.4 RELATIONSHIP TO OTHER DEVELOPMENTS IN REGION

Building the NGP will allow for the commercialisation of existing Northern Territory gas reserves by providing a pipeline to transport gas to the east coast gas market at a competitive market cost. The NGP will be the lowest cost transporter of gas to Mount Isa. Mount Isa's gas consumption is approximately 30 to 35 PJ/per annum with demand largely determined by the needs of two primary customers. Based on Jemena's NGP design, up to 90 TJ per day of Northern Territory gas will be able to flow south from Mount Isa through the CGP to the Ballera gas processing facility.

### 1.6.5 CONSEQUENCES OF THE PROJECT NOT PROCEEDING

The Project not proceeding would be detrimental to the interests of the Northern Territory and the broader Australian economy for the following reasons:

- there will be lost opportunities for Northern Territory businesses and lost economic and social benefits in regional and remote areas
- the NGP link would open the market for Northern Territory producers to move gas to the Eastern states at a cost competitive tariff. Not proceeding will hamper the Northern Territory

gas production development, which is a key aspect of the economic development plan of the Territory

- not developing the NGP will hamper the development of a national gas grid and stop this additional source of competition in Australia's northern and eastern gas transportation markets
- a possible improvement in domestic gas supply security would be halted
- the sale of the Northern Territory Government's contracted gas would not proceed
- the platform to build a new pipeline linking the Northern Territory directly with the Wallumbilla gas supply hub, introducing a new source of liquidity and competition into a key trading location and contributing to the achievement of the COAG Energy Council's Gas Market Vision<sup>4</sup>, would be hampered

## 1.7 STANDARDS, CODES OF PRACTICE AND GUIDELINES

The overarching standard that applies to the pipeline industry in Australia is *AS 2885.0-2008 Pipelines – Gas and liquid petroleum*. This Standard was developed by a working group from both industry and government. The Australian Pipeline and Gas Association (APGA) and its members continue to actively participate in the design, review and development of the national Standard for gas and liquid petroleum high-pressure pipelines by participating as members and associates on Standards Australia development committees.

AS 2885.0-2008 relates to design, construction, testing, operations and maintenance of gas and petroleum pipelines which operate at pressures in excess of 1,050 kPa, and is the primary Standard applicable to design and operation of the NGP.

The *APGA Code of Environmental Practice – Onshore Pipelines 2013* is recognised nationally by all State and Territory governments and is used by other infrastructure industries as a guide to environment and heritage management during planning and construction. The Code of Practice provides industry tested standards applied through the various phases of project planning, design, construction, operation and decommissioning. The NGP Project will reference the APGA Code of Practice as the industry best-practice standard for environmental management, and specific aspects of the code have been referred to throughout this EIS as relevant.

Chapter 3 of this EIS provides an overview of the Commonwealth, Northern Territory and Queensland legislation, guidelines and standards applicable to key aspects of the Project.

## 1.8 ENVIRONMENTAL ASSESSMENT PROCESS

The NGP traverses three jurisdictions with responsibilities for environmental assessment and approvals: Northern Territory, Queensland and Commonwealth. The sections below outline the approvals required and current status of approvals in each jurisdiction.

### 1.8.1 NORTHERN TERRITORY

Jemena submitted a Notice of Intent (NoI) for the NGP Project to the NT EPA in September 2015. The NT EPA determined that the Northern Territory portion of the Project required assessment under the Environmental Assessment Act (EA Act) (NT) at the level of an EIS.

<sup>4</sup> COAG Energy Council, Australian Gas market Vision, December 2014.



In order to ensure that potential environmental, social and economic impacts are adequately investigated, the NT EPA directed Jemena to prepare an EIS addressing the matters set out in the ToR issued in December 2015 (refer Appendix A).

## 1.8.2 QUEENSLAND

Jemena applied to the Queensland Department of Environment and Heritage Protection (DEHP) for an Environmental Authority (EA) for the Queensland component of the NGP Project. An EA was issued in December 2015 under Chapter 5 of the Environmental Protection Act 1994 (EP Act) (*Q/d*). The Project does not require further environmental assessment pursuant to the EP Act, however Jemena is required to comply with all conditions of the EA, which include the requirement for on-ground confirmation of biodiversity values and assessment of significant residual impacts in accordance with the Environmental Offsets Act 2014 (*Q/d*), prior to commencement of construction.

Prior to a Pipeline Licence being issued, the current EA requires amendment to reflect changes to the Project which have occurred since the EA was issued. The Project description provided in this EIS reflects the current Project design; the EA will be amended consistent with this design detail. The amendment will also reflect the findings of environmental field surveys undertaken along the Queensland section of the pipeline route to assess 'biodiversity values'. The EA amendment application will be made following submission of the EIS and a new EA is expected to be issued by September 2016.

Given the Project did not trigger the requirement for an EIS under Queensland legislation, the assessment and approval of this EIS has no bearing on environmental approvals required under the EP Act (*Q/d*).

## 1.8.3 COMMONWEALTH

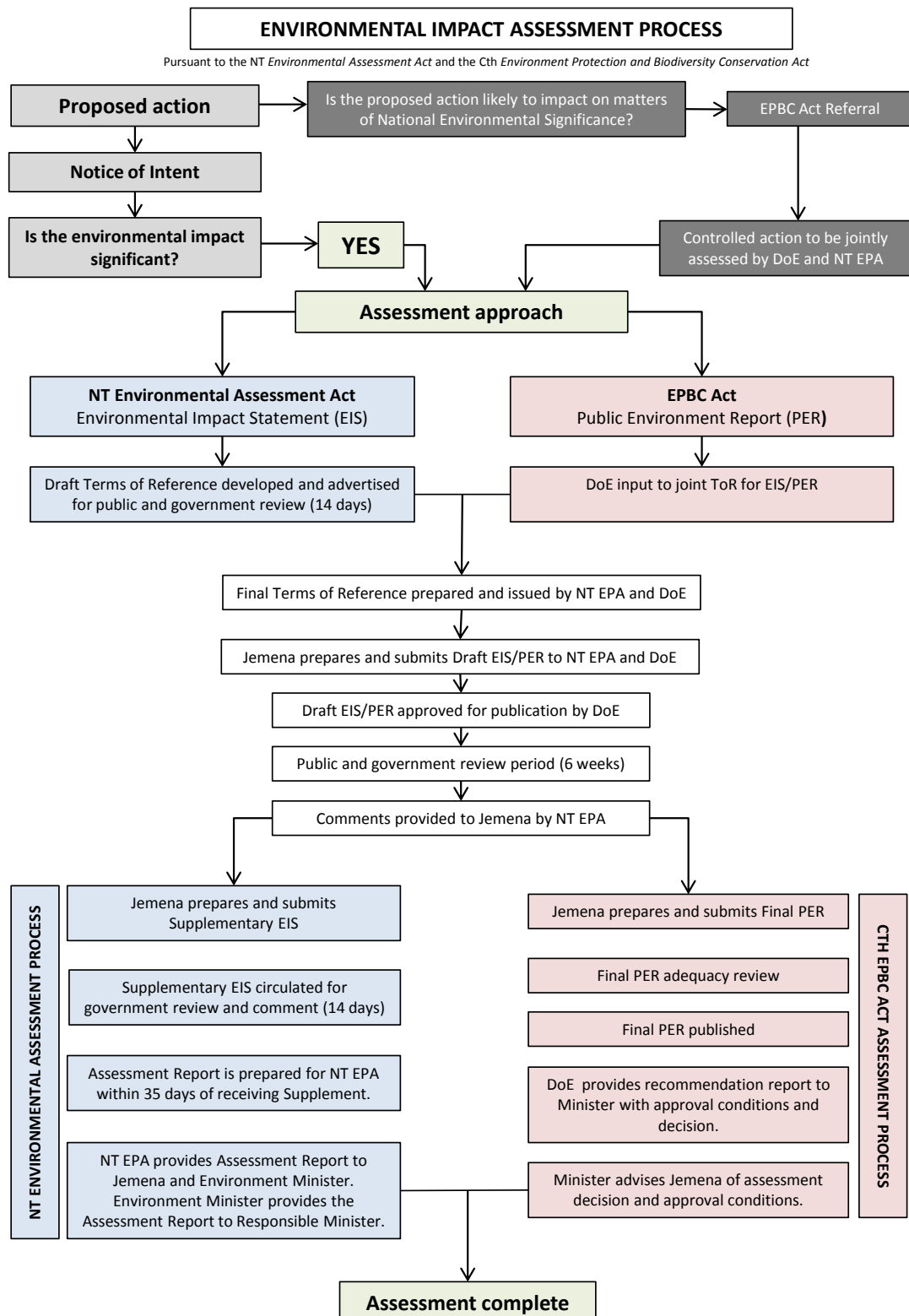
Jemena referred the proposed action to the Commonwealth Department of Environment (DoE) for consideration under the EPBC Act. The delegate to the Commonwealth Minister for the Environment determined in December 2015 that the Project is a 'controlled action' which required assessment and approval under the EPBC Act by a Public Environment Report (PER). The matters of national environmental significance are listed threatened species and communities (sections 18 & 18A).

As sections of the NGP Project fall within Queensland, the proposed action cannot be assessed under the EPBC Act Assessment Bilateral Agreement between the Australian and Northern Territory governments. However, it is the intention of the NT EPA and the DoE to assess the proposed action collaboratively. As a result, the EIS ToR outlines matters to be addressed in accordance with Clause 8 of the Northern Territory Environmental Assessment Administrative Procedures and to meet the requirements as provided for in Chapter 4, Part 8, Division 5 of the EPBC Act.

## 1.8.4 PROCESS AND TIMELINES

The key stages of the environmental assessment, approvals and associated timelines are shown in Figure 1-3. This Draft EIS has been approved for publication by DoE. In accordance with the EIS ToR, the document will be available to the public for a period of six weeks. During this time the public and other stakeholders may provide comments to the NT EPA, which will subsequently be provided to Jemena to address in the Supplementary EIS/Final PER.





**Figure 1-3. Northern Territory and Commonwealth environmental assessment and approvals processes**

## 1.9 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Section 2.6 of the EIS ToR requires that the Proponent demonstrate how it complies with and contributes to the principles and objectives of Ecologically Sustainable Development (ESD).

ESD is defined in the *National Strategy for Ecologically Sustainable Development* (ESDSC 1992) as 'development which aims to meet the needs of Australians today, while conserving ecosystems for the benefit of future generations'. The three main facets of ESD which require consideration when assessing potential impacts of development are economic, social and environmental.

The *Code of Environmental Practice – Onshore Pipelines* (APIA 2013) states the pipeline industry is in a unique position within the infrastructure and energy sectors to give due consideration to ESD. As pipelines are, in the vast majority of cases, buried infrastructure, the industry has the opportunity to minimise environmental and social impacts in ways not available to other forms of infrastructure. The Code provides the guidance to facilitate adequate consideration of ESD.

The NT EPA (2010) refers to five guiding principles when assessing potential impacts of a project in relation to ESD. These guiding principles are individually defined and discussed below to identify how they relate to, and have been addressed by, the NGP Project and throughout this EIS.

### 1.9.1 PRECAUTIONARY PRINCIPLE

The precautionary principle states that:

*Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.*

To gain an understanding of the existing environment and potential impacts, targeted ecological surveys were performed within the construction footprint and areas which may be impacted by the Project. Additionally, the location of the pipeline alignment and ancillary infrastructure was informed by ecological considerations such as proximity to sensitive ecosystems, significant waterways and/or threatened species habitat. Where impacts cannot be avoided through (for example) realignment of the pipeline, suitable mitigation measures will be implemented in accordance with the management framework described in Chapter 13 of this EIS.

There are some aspects of the Project for which detailed design information was not available at the time of this EIS preparation, however these will be addressed through further ground-based surveys and detailed design work prior to commencement of construction. Where relevant, uncertainty is acknowledged within this EIS and further studies or investigations are committed to, thus applying the precautionary principle.

An example of where the precautionary principle is being applied is weeds; whilst a desktop review was used to identify the types of weeds likely to be present within the Project footprint, the location and extent of weed infestations is currently unknown. For this reason, it cannot be concluded at this stage that there will be no residual impact associated with weeds; further ground-based surveys will be undertaken, and weed risks reviewed and mitigated as required in accordance with the framework established in Chapter 13 of this EIS.

### 1.9.2 INTER-GENERATIONAL EQUITY

Inter-generational equity is defined as:

*The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.*

This EIS concludes that the Project is unlikely to have any residual significant impacts on the environment. The construction timeframe is short (pipeline construction expected to be less than one year) and all areas which are not required to be accessed long-term will be progressively reinstated and rehabilitated. This will allow for the existing land uses (such as cattle grazing) to continue for the majority of the Project area. The Project does not require large amounts of water during the operational phase, will not be disposing any waste products on site, and therefore does not contribute to resource depletion or legacy contamination issues that would impact on future generations.

Route selection, Project design and construction methods are being developed in consultation with landholders and other stakeholders to minimise impacts on those people and communities potentially most affected by Project activities (refer Chapter 4 of this EIS).

### 1.9.3 BIODIVERSITY PRINCIPLE

The biodiversity principle is defined as:

*The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.*

During the Project's early planning phase the route selection was based on a number of criteria, one of which was avoiding ecologically significant areas. All national parks, significant wetlands and Sites of Conservation Significance have been avoided in the current Project area.

Targeted threatened species surveys were conducted within the Project area to determine where impacts to biodiversity may occur, and to assess requirements for mitigation of impacts. The surveys were used to inform the Project's Biodiversity Management Plan (refer Chapter 6 of this EIS), which establishes the key measures to be implemented to reduce risks to biodiversity to an acceptable level. Further, the Project environmental management framework, provided in Chapter 13 of this EIS, provides considerations for all aspects relevant to conservation of biodiversity and ecological integrity including weeds, water, erosion and sediment control and biodiversity.

#### 1.9.3.1 Valuation principle

The valuation principle:

*...includes recognition of the principles that the costs of environmental externalities should be internalised and that the polluter should bear the costs associated with environmental pollution.*

This EIS concludes that pollution of the environment caused by the Project is a low risk, subject to implementation of the mitigation measures detailed in Chapter 13 of this EIS. As the construction footprint is progressively rehabilitated following completion of the construction phase, unlike other major industrial projects, there is unlikely to be legacy of pollution of soil, land or water.

The Project's greenhouse gas emissions were calculated and are reportable under the National Greenhouse and Energy Reporting scheme.

### 1.9.4 INTEGRATION PRINCIPLE

*Decision-making processes should effectively integrate both long-term and short-term economic, social, environmental and equitable considerations.*

While the construction is short, the NGP is a long-term project which aims to provide future economic opportunities for the Northern Territory and to ensure that infrastructure is available to accommodate future

development. The majority of the environmental and social impacts associated with the Project are short-term and related only to the construction phase. As the majority of the construction footprint will be progressively reinstated and rehabilitated, long-term environmental impacts are expected to be confined to the relatively small operational footprint around the compressor stations and pipeline facilities. The construction phase of the Project will require a significant workforce, which will have short-term employment benefits for the region and local businesses.

