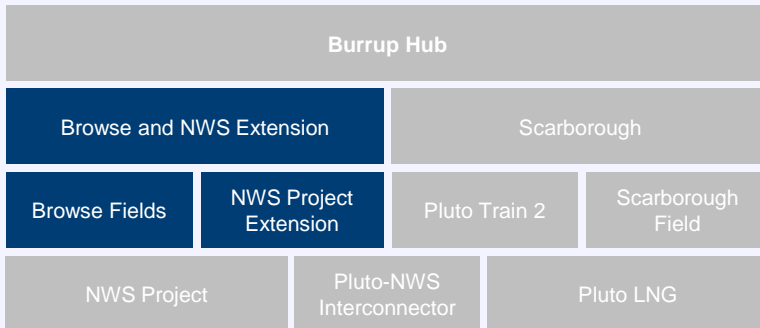


# Browse and North West Shelf Extension

**ECONOMIC IMPACT  
ASSESSMENT**  
JUNE 2019

## DEVELOPMENT MAP



## PROJECT OVERVIEW

### Browse to North West Shelf

Woodside Energy Ltd (Woodside) as Operator on behalf of the Browse Joint Venture is proposing to develop the Brecknock, Calliance and Torosa fields located approximately 425 km north of Broome in the offshore Browse Basin. Hydrocarbon resources in these fields are predominantly gas and estimated to contain 13.9 trillion cubic feet of dry gas and 390 million barrels of condensate (100%, 2C). The proposed Browse to North West Shelf development concept includes two floating production storage and offloading (FPSO) facilities that will deliver gas through an approximately 900 km pipeline to a proposed expansion of the existing North West Shelf infrastructure, with condensate expected to be exported at the FPSO facilities.

### North West Shelf Project Extension

Woodside Energy Ltd (Woodside) as Operator on behalf of the North West Shelf Joint Venture, proposes the ongoing operation of the North West Shelf Project to enable the long-term processing of third-party gas and fluids and North West Shelf Joint Venture field resources through the North West Shelf Project facilities until around 2070.

This summary report has been independently prepared by ACIL Allen Consulting for Woodside to provide a high level overview of the estimated direct and indirect economic impacts of Browse and North West Shelf Extension on the Australian and Western Australian economies, and the regional economies of the City of Karratha and the Shire of Broome, over the life of the projects. The results include the economic impacts related to the combined projects which include developing the Browse fields and processing via North West Shelf Project infrastructure and the North West Shelf Project Extension.

## ESTIMATED PROJECT PRODUCTION



**LNG: 2,021 MMBOE**

**Domestic gas: 300 MMBOE**



**Condensate: 390 MMBOE**

**LPG: 62 MMBOE**

*Average annual LNG production is equivalent to over 20% of WA's projected LNG exports*

*Average annual domestic gas production is enough to generate electricity to power over 800,000 WA homes each year from the proposed Project*

# Direct contribution

The proposed Browse and North West Shelf Extension are expected to result in a significant **direct** contribution to the Australian economy through capital and operational spending, employment, taxation and royalty payments, and exports. The majority of these direct impacts will be realised in Western Australia including in the Pilbara and the Kimberley regions. A summary of the **direct** impacts of the proposed projects are set out below.

Capital expenditure of **\$36 billion** in Western Australia between **2019-2063**



...including **\$27.3 billion** on the proposed Browse project and **\$8.6 billion** on the NWS Extension



...including over **\$1 billion** in Karratha and Broome

## Peak construction

workforce of over **1,800 jobs** in 2024



...or on average **700 jobs** per annum between 2019 and 2063

Around **720 operations jobs** will be created or sustained on average during operations



...including up to **320 jobs** in the Karratha region during operations

**\$493 million** of annual average operational expenditure in Western Australia

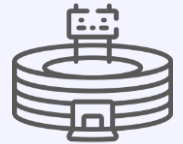


...including **\$15 million** of spend per annum for **Broome** logistics support activities

Almost **\$63 billion** of total taxation and royalty payments estimated to be directly paid as a result of the proposed Project



Proposed capital expenditure from the proposed Browse and NWS Extension is equivalent to the construction costs of 23 Optus Stadiums



**x23**

Businesses in **Karratha** will on average benefit from over **\$50 million per annum** of direct localised spending required to operate the proposed Browse and NWS Extension



The annual average operational spend of the proposed development is equivalent to the average annual retail spending of 38,000 Western Australian residents each year



**38,000**

# Economic impacts

The proposed Browse and North West Shelf Extension are expected to deliver significant long term benefits across Australia over the life of the projects. The estimated economic impact of the projects are presented below in the form of the **direct and indirect** impacts to incomes, output, and full time equivalent (FTE) jobs at a regional, state and national level, as well as the estimated direct and indirect tax and royalty payments generated as a result of the projects. It is estimated the projects will...

Boost the Gross Domestic Product of Australia by  
**\$289 billion**  
between 2019-2063



Larger than the total output produced by the Western Australian economy in 2017-18

...of which 99% will be in Western Australia

Increase the real incomes of Australian residents by  
**\$249 billion**  
between 2019-2063



The boost to national incomes is equivalent to 2 times the total incomes earned in Western Australia in 2017-18

...of which over **\$15.6 billion** will be retained in Karratha, and a further **\$3.3 billion** in Broome

Create an average of more than  
**2,700 jobs**  
per annum nationally between 2019-2063



Equivalent to the employment created by more than 450 new small businesses each year

...with almost **1,400 jobs** created in Karratha and Broome

Generate direct taxation and royalty payments to the Commonwealth and State Governments of

**\$63 billion**

between 2019-2063, and indirect taxation payments of

**\$30 billion**



Average annual tax payments of **\$2.1 billion** could construct over 140 km of national highway every year between 2019-2063





Image courtesy of Woodside

## Assumptions

The economic impact assessment has been undertaken on the assumption that joint venture and regulatory approvals are obtained and commercial agreements finalised.

The study period for the economic impact assessment is 2019-2063.

All results presented are for the total share of the development and therefore include the Woodside share as well as joint venture share. Only the Woodside operated assets are included in this report.

All values are reported in real Australian dollars (2018). Production values are reported in millions of barrels of oil equivalent (MMBOE).

All estimated construction and operation spending data for each proposed development has been supplied by Woodside and publicly available information. Capital expenditure includes initial construction costs, ongoing capital costs and end of life abandonment costs.

A flat \$86.66 (USD\$65) per barrel price for oil has been assumed, with prices for LNG, LPG and Condensate benchmarked to this.

Reported direct taxation and royalty payments paid by Woodside and its joint venture participants include all Company Taxation, Petroleum Resources Rent Taxation (PRRT), Payroll Taxation, development specific royalty payments, Condensate Excise, and carbon payments.

## Methodology

Economic impacts have been estimated using ACIL Allen's proprietary computable general equilibrium model *Tasman Global*.

Economic impacts include the direct and indirect (or flow on) impacts of each proposed development / project by Woodside and its relevant joint venture participants. The indirect impact is a result of changes in demand in other industries from the initial impact created from the construction and operation of the developments. Economic impacts are reported in terms of:

### Gross product or real economic output

A measure of the size of an economy or the output generated by an economy over a period of time.

### Real income

A measure of the welfare of residents in an economy through their ability to purchase goods and services and to accumulate wealth.

### Real employment (jobs)

The number of net full time equivalent job years created as a result of a project. Real employment creation is the direct and indirect (flow on) employment as a result of a project. Real employment is measured in full time equivalent (FTE) job years which is equivalent to the employment of one person on a full time basis for one year.

### Total taxation

The direct taxation paid by the development as well as the indirect taxation created as a result of additional economic activity resulting from the development.

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