



HERBERT  
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Application for revocation and  
substitution of Authorisations  
AA1000396-1 and AA1000396-2  
under s 91C(1) of the  
*Competition and Consumer Act  
2010 (Cth)*

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Co-ordinated scheduling of maintenance for Western  
Australia and Northern Territory LNG projects

**PUBLIC VERSION**

10 August 2022



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## 1 Executive Summary

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### 1.1 Existing Authorisation

On 2 March 2018, the Australian Competition and Consumer Commission (**ACCC**) granted conditional authorisation to Chevron Australia Pty Ltd (**Chevron**),<sup>1</sup> INPEX Operations Australia Pty Ltd (**INPEX**),<sup>2</sup> Shell Australia Pty Ltd (**Shell**)<sup>3</sup> and Woodside Energy Ltd (**Woodside**)<sup>4</sup> (together, the **Applicants**) for a period of five years commencing on 24 March 2018 (**Existing Authorisation**).

The Applicants have either developed, are developing or expanding, or may in the future develop or expand, liquefied natural gas (**LNG**) and associated facilities, located onshore and offshore (each an **LNG Facility**). The LNG Facilities form part of the Gorgon, Wheatstone, Ichthys, Prelude, North West Shelf (**NWS**) and Pluto LNG projects, each of which involves the subsea extraction of natural gas, its processing and conversion to LNG for export (**LNG Projects**).<sup>5</sup>

The Existing Authorisation was granted to allow the Applicants to confer about, and exchange information necessary for the sequencing and timing of scheduled maintenance at each of the LNG Facilities, thereby minimising LNG downtimes caused by maintenance works occurring concurrently at the LNG Facilities. The Applicants submitted, and the ACCC accepted at the time the Existing Authorisation was sought, that the relevant conduct described at section 5.1 (**Authorised Conduct**) was necessary because maintenance at the LNG Facilities is highly complicated and costly, requiring a significant number of highly skilled maintenance technicians (who are in limited supply).

The relevant condition is set out at Attachment A to the Existing Authorisation (**Condition**) and requires the Parties (except Shell) to publish Maintenance Information (as defined in paragraph 2 of the Condition) as soon as is practicable after, but within two business days of, disclosure of that information to another Applicant, and to ensure that the information published continues to accurately reflect the Applicants' reasonable expectations about scheduled maintenance activities.

### 1.2 Application for revocation and substitution

The Applicants request that the ACCC revoke the Existing Authorisation because it is due to expire on 24 March 2023. The Applicants seek to substitute the Existing Authorisation with new authorisations on substantially the same terms as the Existing Authorisation.

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<sup>1</sup> Chevron Australia Pty Ltd (ABN 29 086 197 757) as the operator of the Gorgon and Wheatstone LNG Projects in Western Australia.

<sup>2</sup> INPEX Operations Australia Pty Ltd (ABN 48 150 217 262) as the delegated operator of the Ichthys LNG Project in Western Australia and the Northern Territory.

<sup>3</sup> Shell Australia Pty Ltd (ABN 14 009 663 576) as the operator of the Prelude Floating LNG Project in Western Australia.

<sup>4</sup> Woodside Energy Ltd (ABN 63 005 482 986) as the operator of the North West Shelf LNG Project (**NWS**) and Woodside Burrup Pty Ltd (ABN 20 120 237 416) (**WBPL**) as the operator of the Pluto LNG Project (including the proposed Pluto LNG Train 2 and expanded project facilities under construction) in Western Australia.

<sup>5</sup> Note: Two of the Applicants (Chevron and Woodside) supply gas produced by their LNG Facilities in Western Australia to the Western Australian gas supply market. In each case, the infrastructure and facilities operated to produce gas for supply as domgas can be operated independently from the LNG Facilities.



### Authorisation Length

The Applicants submit that re-authorisation of the Authorised Conduct should be granted for a further period of 10 years, until March 2033.

In the period since the Existing Authorisation was granted the Western Australian gas market has evolved, with a number of demand and supply projects being announced and progressed (including final investment decisions on Scarborough LNG and Pluto LNG Train 2 and completion of the NWS Interconnector between the NWS Project and Pluto Project), new supply to the domestic gas market (including from Wheatstone and Pluto Projects), industry participant consolidation and the domestic market becoming more finely balanced.<sup>6</sup> In the Northern Territory, supply projects have also been announced (including a final investment decision on the Barossa Gas Project) and there have been changes to supply (including to the Darwin LNG Facility). As set out in further detail at section 5.6, these developments have not been accompanied by any changes to the maintenance requirements of LNG facilities in Australia's North West Region or regulation of the LNG industry in Australia's North West region that would cause re-authorisation to be inappropriate.

In fact, the benefits associated with the Authorised Conduct are greater now than at the time of the Existing Authorisation. The COVID-19 pandemic has impacted the availability and number of skilled workers who have the training and expertise to perform maintenance activities on LNG facilities. In particular, the COVID-19 pandemic and consequential closure of State borders has resulted in skilled workers with the expertise to perform maintenance activities on LNG facilities leaving the industry in search of alternative work opportunities. Maintenance shutdowns require a significant number of highly skilled maintenance technicians, including specialist Original Equipment Manufacturer (**OEM**) maintenance personnel, who are experienced in servicing the relevant equipment. Consequently, re-authorisation under the terms sought and for a period of 10 years will assist the Applicants to address resourcing constraints going forward. A longer authorisation period will provide the Applicants with certainty that they will have the opportunity to engage skilled contractors to support their maintenance campaigns.

### Condition

The Applicants submit that the Condition should cease to apply as part of the requested re-authorisation. The circumstances expected to eventuate (the development and commencement of a gas trading hub or Short Term Trading Market (**STTM**) in Western Australia) and lead to an information asymmetry have not arisen, and the Applicants are not aware of any evidence from the Existing Authorisation period that suggest they will arise, and the necessary direct impact of the proposed conduct on the market for the supply or acquisition of domestic gas (**domgas**) in the Northern Territory or Western Australia does not exist so as to justify a reporting condition being imposed. Further, the Applicants are already required to report scheduled maintenance work to the AEMO well in advance of such work taking place and AEMO makes such information public.<sup>7</sup>

### Conclusion

In the period since the Existing Authorisation was granted in March 2018, nothing has arisen with respect to the operation of the LNG industry in Australia's North West region

<sup>6</sup> See, for example: AEMO, *2019 Western Australia Gas Statement of Opportunities*: [https://aemo.com.au/-/media/Files/Gas/National\\_Planning\\_and\\_Forecasting/WA\\_GSOO/2019/WA-Gas-Statement-of-Opportunities---December-2019.pdf](https://aemo.com.au/-/media/Files/Gas/National_Planning_and_Forecasting/WA_GSOO/2019/WA-Gas-Statement-of-Opportunities---December-2019.pdf); AEMO, *2021 Western Australia Gas Statement of Opportunities*: [https://aemo.com.au/-/media/files/gas/national\\_planning\\_and\\_forecasting/wa\\_gsoo/2021/wa-gas-statement-of-opportunities-gsoo-report.pdf?la=en](https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/wa_gsoo/2021/wa-gas-statement-of-opportunities-gsoo-report.pdf?la=en).

<sup>7</sup> Under rules made under the *Gas Services Information Regulations 2012*, market participants must report to AEMO all planned maintenance that will impact the capacity of their operated assets for publication on the Gas Bulletin Board of WA: <https://gbbwa.aemo.com.au/#home>.



that would cause re-authorisation to be inappropriate. The benefits associated with the Authorised Conduct have eventuated under the Existing Authorisation, will continue going forward and outweigh any detriments.

## 2 Applicants

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### 2.1 Details of the applicants for revocation and substitution

This application for revocation and substitution (**Application**) is made on a joint basis. The Applicants are operators for LNG Projects.

Applicant (name and ACN)	Address (registered office) and telephone number
Chevron Australia Pty Ltd (ACN 086 197 757) as the operator of the Gorgon and Wheatstone LNG Projects in Western Australia	[REDACTED]
INPEX Operations Australia Pty Ltd (ACN 150 217 262) as the delegated operator of the Ichthys LNG Project in Western Australia and the Northern Territory	[REDACTED]
Shell Australia Pty Ltd (ACN 009 663 576) as the operator of the Prelude Floating LNG Project in Western Australia	[REDACTED]
Woodside Energy Ltd (ACN 005 482 986) as the operator of the NWS LNG Project and Woodside Burrup Pty Ltd (ACN 120 237 416) ( <b>WBPL</b> ) as the operator of the Pluto LNG Project in Western Australia	[REDACTED]

### 2.2 Contact person's name, position, telephone number, and email address

Contact: Linda Evans, Partner, Herbert Smith Freehills  
 Email address: [REDACTED]  
 Telephone: [REDACTED]



## 2.3 Description of business activities

The Applicants have either developed, are developing or expanding, or may in the future develop or expand, LNG and associated facilities, located onshore and offshore (each an **LNG Facility**). The LNG Facilities form part of the Gorgon, Wheatstone, Ichthys, Prelude, NWS and Pluto LNG projects, each of which involves the subsea extraction of natural gas, its processing and conversion to LNG for export (**LNG Projects**). Additional information on each of the Applicants' LNG Projects is set out at Attachment 1.

## 2.4 Email address for service of documents in Australia

C/- Linda Evans, Partner, Herbert Smith Freehills

[REDACTED]

## 3 Authorisations to be revoked (the existing authorisation)

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### 3.1 The registration number and date of the authorisations to be revoked

Authorisations AA1000396-1 and AA1000396-2 dated 2 March 2018.

### 3.2 Other persons and/or classes of persons who are a party to the authorisation which is to be revoked

The parties to the Existing Authorisation are described in section 2.1 above.

### 3.3 The basis for seeking revocation

The Applicants request that the ACCC revoke the Existing Authorisation because it is due to expire on 24 March 2023. The Applicants seek to substitute the Existing Authorisations with new authorisations on substantially the same terms as the Existing Authorisation.

## 4 Authorisation to be substituted (the new authorisation)

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See sections 2.1, 2.2 and 2.3 above.

No other persons or classes of persons propose to engage, or become engaged, in the proposed conduct, and authorisation is not sought on behalf of any other persons.

## 5 The Proposed Conduct

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### 5.1 Authorised Conduct under Existing Authorisation

The Existing Authorisation permitted the Applicants to coordinate scheduling of planned maintenance at the LNG Facilities by engaging in the following conduct:

- (a) to make and give effect to arrangements or understandings among the Applicants regarding the sequencing and timing of the conduct of scheduled



maintenance at the facilities which support LNG production, including the sequencing and timing of shutdowns and partial plant outages associated with such maintenance by:

- (1) identifying the maintenance requirements for each of the facilities which support LNG production, including the scope and expected duration of maintenance campaigns and any shutdowns or partial plant outages associated with those maintenance campaigns;
  - (2) classifying planned maintenance campaigns (eg major/minor shutdown maintenance or campaign maintenance);
  - (3) working to identify optimal maintenance windows having regard to factors such as climate, safety considerations and resource constraints;
  - (4) scheduling maintenance in such a way as to minimise contractor mobilisation and demobilisation costs;
  - (5) developing a process to:
    - (A) nominate preferred dates for planned maintenance;
    - (B) negotiate and agree the proposed dates for planned maintenance at each of the facilities supporting LNG production;
    - (C) inform one another of ad hoc unplanned maintenance requirements;
    - (D) consult about variations to any maintenance dates;
    - (E) resolve conflicts where maintenance dates overlap; and
    - (F) prepare and agree a schedule recording the planned maintenance dates for relevant facilities; and
- (b) to exchange information for the purpose of making and giving effect to the arrangements and understandings referred to in paragraph (a), including information about:
- (1) maintenance techniques, safety practices and operational processes, including personnel requirements, specialist equipment and the use, storage, transport and disposal of hazardous chemicals;
  - (2) potential resource constraints associated with particular maintenance windows (eg transport and accommodation) and discussing mitigation options; and
  - (3) disclosing the names of the maintenance contractors who have been appointed by each Party to perform the relevant maintenance, subject to applicable third party confidentiality restrictions.

## 5.2 The Proposed Conduct and changes between the existing authorisation and new authorisation

The Applicants seek to continue to engage in the Conduct (ie the Authorised Conduct described in section 5.1 above) authorised under the Existing Authorisation (**Proposed Conduct**) which relates to the coordination of scheduling of planned maintenance at the LNG Facilities. As set out in section 1.1, "LNG Facilities" are LNG and associated facilities, located onshore and offshore.



The Proposed Conduct is the same as the conduct authorised under the Existing Authorisation.

### 5.3 Provisions of the CCA which might apply to the Proposed Conduct

The relevant provisions of the *Competition and Consumer Act 2010* (Cth) (**CCA**) which might apply to the Authorised Conduct are listed below:

- cartel conduct (Division 1 of Part IV);
- contracts, arrangements or understandings that restrict dealings or affect competition (s. 45);
- concerted practices (s. 45); and
- exclusive dealing (s. 47).

By making this application, the Applicants seek to obtain the certainty afforded by authorisation of the Proposed Conduct. They do not concede that the Proposed Conduct would contravene the CCA in any of the ways identified above.

### 5.4 Rationale

Re-authorisation is sought to ensure that the Applicants can coordinate scheduling of planned maintenance at the LNG Facilities. As previously submitted in relation to the Existing Authorisation:

- the Proposed Conduct will assist in the management of safety risks (including fatigue management) by reducing activity levels associated with concurrent shutdowns at LNG Facilities;
- the Proposed Conduct will maximise the production of LNG by each LNG Project, ensuring that there is stability in the supply of LNG to overseas customers and causing the LNG industry located in North West region of Australia to remain internationally competitive;
- the Proposed Conduct will ensure that the Applicants are able to obtain appropriate equipment and appropriately skilled contracts to undertake maintenance during shutdowns; and
- the Proposed Conduct will reduce additional costs which would be incurred if there were simultaneous shutdowns of LNG Facilities.

### 5.5 Importance of re-authorisation

#### (a) Economic contribution

The Western Australia LNG Projects represent some of the largest resource development and private sector investment in the region. Australia is the largest global LNG exporter, accounting for 21.8% of global LNG exports in 2020. Western Australia accounted for 57% of Australia's LNG exports in 2020.<sup>8</sup>

In CY2021, LNG accounted for 12% (\$27.8 billion) of Western Australia's total sales of minerals and petroleum (\$229.9 billion).<sup>9</sup> As at 30 April 2022, it is estimated that

<sup>8</sup> Western Australia Department of Jobs, Tourism, Science and Innovation, *Western Australia LNG Profile*, April 2022: <https://www.wa.gov.au/government/publications/western-australias-economy-and-international-trade>.

<sup>9</sup> Western Australia Department of Jobs, Tourism, Science and Innovation, *Western Australia Economic Profile*, April 2022: <https://www.wa.gov.au/government/publications/western-australias-economy-and-international-trade>.





approximately \$249.6 billion will have been spent (capital expenditure) on Western Australia’s LNG projects and associated developments by 2026.<sup>10</sup>

Similarly, extractive resources are a key economic contributor to the Northern Territory, which produces oil and gas from offshore reserves in the Timor Sea, and onshore gas in Central Australia. The Northern Territory has benefitted from continued growth in the sector since the commissioning of the Darwin LNG Plant in 2006, through to the construction of the \$34 billion INPEX-led Ichthys LNG Facility.

The Northern Territory has seen record export figures following the 2018 commencement of production at the Ichthys LNG Project, with the value of exports in FY2021 rising by 21.1% to \$13.1 billion. While main commodities exported in that period are listed as ‘confidential items’ (87%), the Department of Treasury and Finance suggests these exports most likely relate to LNG.<sup>11</sup>

**(b) Ensuring the availability of limited resources**

By the end of the term of the Existing Authorisation:

- Woodside will have conducted nine shutdowns across both the NWS and Pluto LNG projects,<sup>12</sup> Shell will have conducted one shutdown,<sup>13</sup> Chevron will have conducted five shutdowns across both the Gorgon and Wheatstone LNG projects<sup>14</sup> and INPEX will have conducted two shutdowns.
- In total, the Applicants will have (based on current estimates for 2022) shutdown their LNG Facilities for maintenance for approximately [REDACTED] days.

The benefits of coordination were highlighted in 2021 after the Applicants delayed their planned maintenance at their LNG Facilities in 2020 due to the COVID-19 pandemic and then all had to schedule maintenance at their LNG Facilities for 2021. The ability for the Applicants to coordinate their scheduled maintenance in 2021 meant that limited resources could be accessed by each of the Applicants.

Going forward, the Applicants anticipate the following shutdowns:

- Woodside [REDACTED]; [REDACTED]
- Shell [REDACTED]; [REDACTED]
- Chevron [REDACTED]; and [REDACTED]
- INPEX [REDACTED]

The workforce required for these shutdowns is likely to be significant. The Applicants’ ability to continue to coordinate scheduled maintenance will continue to ensure that each LNG Facility can be serviced by those with the specialised skills required to perform such

<sup>10</sup> Western Australia Department of Jobs, Tourism, Science and Innovation, *Western Australia LNG Profile*, April 2022: <https://www.wa.gov.au/government/publications/western-australias-economy-and-international-trade>.

<sup>11</sup> Northern Territory Department of Treasury and Finance, *International trade*: <https://nteconomy.nt.gov.au/international-trade/#:~:text=In%202020%2D21%2C%20the%20NT's,2.2%25%20increase%20in%20goods%20imports> (accessed 17 March 2022).

<sup>12</sup> Three shutdowns in 2019, two shutdowns in 2020, three shutdowns in 2021 and one shutdown planned for 2022.

<sup>13</sup> Shutdown to be conducted in September 2022.

<sup>14</sup> One shutdown in 2019, one shutdown in 2020, two shutdowns in 2021 and one shutdown planned for 2022.



services. Additional information on the operation and maintenance of LNG Facilities is set out at Attachment 2.

## 5.6 Term of authorisation sought

The Applicants seek reauthorisation for a 10-year period given the net benefits likely to arise from the authorised conduct going forward.

The ACCC states in its Final Determination on the Existing Authorisation dated 2 March 2018 that it is “*more likely to grant longer periods of authorisation where it is being asked to re-authorise previously authorised conduct; there is evidence that anticipated net benefits have occurred; relevant parties continue to support the arrangements; and market conditions are stable*” (para 133). The Applicants’ submit that this criteria has been met.

In the period since the Existing Authorisation was granted the Western Australian gas market has evolved, with a number of demand and supply projects being announced and progressed (including final investment decisions on Scarborough LNG and Pluto LNG Train 2 and completion of the NWS Interconnector between the NWS Project and Pluto Project), new supply to the domestic gas market (including from Wheatstone and Pluto Projects), industry participant consolidation and the domestic market becoming more finely balanced.<sup>15</sup> In the Northern Territory, supply projects have also been announced (including a final investment decision on the Barossa Gas Project) and there have been changes to supply (including to the Darwin LNG Facility). However, there have been:

- no changes to the maintenance requirements of LNG facilities in Australia’s North West Region, that have had the effect of mitigating the concerns set out in section 5.5(b); and
- no changes to the regulation of the LNG industry in Australia’s North West region that have impacted how the Applicants operate their LNG Facilities,

which would cause re-authorisation to be inappropriate.

The benefits associated with the Authorised Conduct are greater than at the time of the Existing Authorisation as the COVID-19 pandemic has had an impact on the availability and number of skilled workers who have the training and expertise to perform maintenance activities on LNG Facilities (see section 7.4 for more detail). Given maintenance shutdowns are labour and capital intensive and require a significant number of highly skilled maintenance technicians, and the time required to educate and train technicians, reauthorisation under the terms sought and for a period of 10 years will assist the Applicants to address resourcing constraints going forward. A longer authorisation period will provide the Applicants with certainty that they will have the opportunity to engage skilled contractors to support their maintenance campaigns.

## 5.7 Persons, or classes of persons, who may be directly impacted by the Proposed Conduct

The persons and classes of persons are who may be directly impacted by the Proposed Conduct includes suppliers of maintenance services and relevant gas market regulators. The relevant persons are listed in the spreadsheet attached to this Application.

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<sup>15</sup> See, for example: AEMO, *2019 Western Australia Gas Statement of Opportunities*: [https://aemo.com.au/-/media/Files/Gas/National\\_Planning\\_and\\_Forecasting/WA\\_GSOO/2019/WA-Gas-Statement-of-Opportunities---December-2019.pdf](https://aemo.com.au/-/media/Files/Gas/National_Planning_and_Forecasting/WA_GSOO/2019/WA-Gas-Statement-of-Opportunities---December-2019.pdf); AEMO, *2021 Western Australia Gas Statement of Opportunities*: [https://aemo.com.au/-/media/files/gas/national\\_planning\\_and\\_forecasting/wa\\_gsoo/2021/wa-gas-statement-of-opportunities-gsoo-report.pdf?la=en](https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/wa_gsoo/2021/wa-gas-statement-of-opportunities-gsoo-report.pdf?la=en).



## 6 Market information

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See the Applicants' application for Authorisation lodged with the ACCC on 12 September 2017 (**2017 Authorisation Application**) and Attachment 1 to this Application.

## 7 Public benefits arising from the Proposed Conduct

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### 7.1 Overview

The term "public benefit" is not defined in the CCA. It has, however, been interpreted broadly to mean:<sup>16</sup>

"A public benefit arises from a proposed acquisition if the benefit would not exist without the acquisition or if the acquisition removes or mitigates a public detriment which would otherwise exist. If a claimed public benefit exists, in part, in a future without the proposal, the weight accorded to the benefit may be reduced appropriately. Public benefit is a wide concept and may include anything of value to the community generally so long as there is a causal link between the proposed acquisition and the benefit: see *Application by Medicines Australia Inc* (2007) ATPR 42-164; [2007] ACompT 4 ("*Medicines Australia*") at [107], [118]- [119]. Benefits not widely shared may nevertheless be benefits to the public: *Hospital Benefit Fund of Western Australia Inc v Australian Competition and Consumer Commission* (1997) 76 FCR 369 at 375-377. However, the extent to which the benefits extend to ultimate consumers is a matter to be put in the scales: *Mac Gen* at [168]."

The Applicants consider that the Authorised Conduct has given rise to a number of significant public benefits, which will continue should reauthorisation be granted.

### 7.2 Safety considerations

LNG train shutdowns involve periods of continuous activity which may last for 40 days or longer in the case of Major Shutdowns, and involve a proportionally larger volume of high risk maintenance activity compared to normal operations (for example, confined space entry, working at heights, heavy lifts and intrusive maintenance).

The LNG Projects will focus heavily on process safety and HSE throughout LNG train shutdowns. Ensuring an adequate emergency response to any potential incident remains critical to the safety of all involved in an LNG shutdown.

The Authorised Conduct has assisted in the management of safety issues (including fatigue management) during the Existing Authorisation by reducing activity levels at multiple LNG Facilities, as well as reducing the strain on emergency response resources, compared to a situation where two or more shutdowns are likely to occur concurrently.

In addition, the avoidance of concurrent or overlapping maintenance campaigns or shutdowns will ensure that each of the Applicants are able to engage maintenance contractors who can commit to performing their services for the duration of the campaign or shutdown period without stretching their resources or requiring them to undertake multiple maintenance contracts at the same time, thereby potentially compromising the

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<sup>16</sup> *Application by Sea Swift Pty Limited* [2016] ACompT 9, [42] citing *Application for Authorisation of Acquisition of Macquarie Generation by AGL Energy Limited* [2014] ACompT 1 (*Mac Gen*). Also see *Application by Tabcorp Holdings Limited* [2017] ACompT 1, [65].



quality of the maintenance work performed. Maintenance works performed to a high standard overall reduces potential incidents and ensures that the period between maintenance campaigns or shutdowns is maximised, resulting in fewer or less frequent shutdowns.

### 7.3 Maximisation of LNG production

The continued coordination of shutdowns and campaign maintenance will avoid the risk of production being affected at any LNG Facility and will in turn maximise the production of LNG by the LNG Projects. Maximising LNG production will lead to a reliable supply of LNG by the Applicants to overseas customers (primarily in Asia) causing the LNG industry located in the North West region of Australia to remain internationally competitive.

In 2020, Australia overtook Qatar to become the world's largest exporter of LNG, a title it appears to have (narrowly) retained in 2021, exporting a record 80.9 mt.<sup>17</sup> Australia's 10 LNG projects have a combined production capacity of 89 mtpa.<sup>18</sup> Australia is not alone in significantly increasing its LNG production over the past few years (as a result of the Applicants' projects as well as those situated in Queensland). There are a number of liquefaction plants also currently under construction in the United States and Qatar, which are expected to give the United States an export capacity of over 200 mtpa by the early 2030s and Qatar an export capacity of 110 mtpa by 2025.<sup>19</sup>

Consequently, Australian LNG producers will face significant competition from LNG producers in the Middle East and North America for the foreseeable future. In order to remain internationally competitive, it is vital that Australian LNG producers are able to guarantee the supply of LNG to customers. Failure by any of the Applicants to meet contracted LNG volumes would be expected to not only give rise to them potentially paying financial penalties under individual LNG supply contracts but also damage the industry's reputation more generally as a reliable and competitive source of LNG.

### 7.4 Availability of skilled workers and equipment

Maintenance shutdowns are labour and capital intensive. As described in Attachment 2 section 1.3, they require a significant number of highly skilled maintenance technicians, including specialist OEM maintenance personnel, who are experienced in servicing the relevant equipment. In many cases, these personnel and the firms they work for today operate on a national or international basis.

The LNG Projects will require between 600 and 1,600 skilled contractors to support major maintenance campaigns (per LNG train). The duration and complexity of training required to develop the specialist competencies to be able to service the relevant equipment at LNG facilities act as barriers that limit the pool of available personnel. Consequently, the LNG Projects have policies to attract local skilled labour to support major maintenance campaigns. The Applicants will often need to draw on the same pool of specialists (eg OEM vendors) in order to undertake major maintenance campaigns.

<sup>17</sup> EnergyQuest, *Australian LNG export revenue surges in 2021 but close to peak with increasing competition and a declining major gas field*, 5 January 2022: [https://www.energyquest.com.au/download/australian-lng-revenue-surge-in-2021/?wpdm\\_dl=2223&\\_wpdmkey=623284766c555&subscriber=PR\\_0y0w4iQ4voKuFTO79nuPR\\_t8F6ja\\_b5\\_rHd2\\_bwUpt01yZ1jAxu7OonlSEgnmF4izdLGYjNLITWuJp\\_fQ](https://www.energyquest.com.au/download/australian-lng-revenue-surge-in-2021/?wpdm_dl=2223&_wpdmkey=623284766c555&subscriber=PR_0y0w4iQ4voKuFTO79nuPR_t8F6ja_b5_rHd2_bwUpt01yZ1jAxu7OonlSEgnmF4izdLGYjNLITWuJp_fQ).

<sup>18</sup> EnergyQuest, *Australian LNG export revenue surges in 2021 but close to peak with increasing competition and a declining major gas field*, 5 January 2022: [https://www.energyquest.com.au/download/australian-lng-revenue-surge-in-2021/?wpdm\\_dl=2223&\\_wpdmkey=623284766c555&subscriber=PR\\_0y0w4iQ4voKuFTO79nuPR\\_t8F6ja\\_b5\\_rHd2\\_bwUpt01yZ1jAxu7OonlSEgnmF4izdLGYjNLITWuJp\\_fQ](https://www.energyquest.com.au/download/australian-lng-revenue-surge-in-2021/?wpdm_dl=2223&_wpdmkey=623284766c555&subscriber=PR_0y0w4iQ4voKuFTO79nuPR_t8F6ja_b5_rHd2_bwUpt01yZ1jAxu7OonlSEgnmF4izdLGYjNLITWuJp_fQ).

<sup>19</sup> Australian Department of Industry, Science, Energy and Resources, *Global Resources Strategy Commodity Report: Liquefied Natural Gas* (February 2022) p 7.



If reauthorisation is not granted, there is a material risk that maintenance and shutdowns will occur concurrently at more than one LNG Facility. This will have the effect that it will be more challenging to source skilled contractors and appropriate equipment to undertake maintenance during the period of the concurrent shutdown. This has the potential to not only increase the risk of safety incidents (as set out at section 7.2) but also increase search costs for the Applicants and result in a more inefficient planning process (which already has long lead times). The Applicants would then go to the effort and expense of conducting a formal procurement process only to find that the necessary contractors and equipment are not available due to maintenance commitments at another LNG Facility.

While the Authorised Conduct has not reduced demand for technical maintenance or associated services by any Applicant, in the Applicants' experience it has helped to mitigate some of the constraints the Applicants would otherwise face in attempting to obtain skilled contractors and equipment to undertake maintenance during the desired periods for shutdowns. These constraints have been exacerbated by the COVID-19 pandemic and consequential closure of State-borders, which impacted the availability of contractors with the required specialist training to perform maintenance activities as many contractors left the industry in search of alternative work opportunities. Reauthorisation under the terms sought would continue to assist the Applicants to address resourcing constraints by providing each Applicant with the opportunity to access skilled contractors, from a limited resource pool, who could support their maintenance campaigns, leading to business continuity.

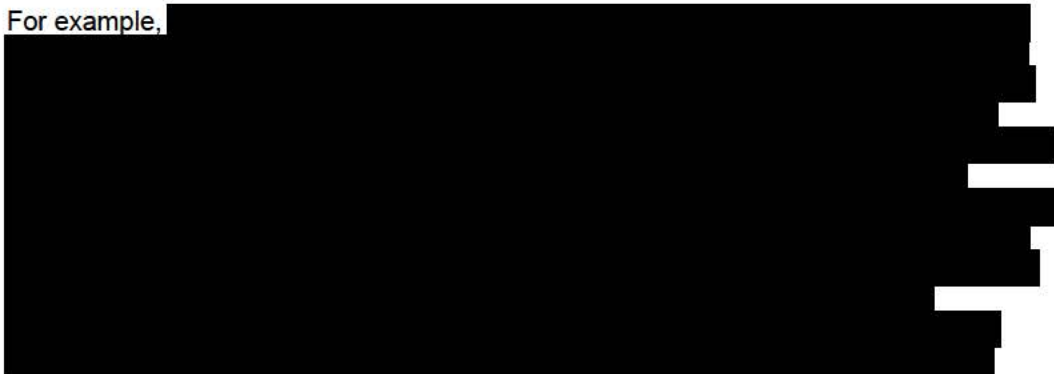
## 7.5 Cost savings

The Applicants consider continued authorisation to be important to reduce costs associated with the use of specialist maintenance equipment and mobilisation/demobilisation of specialist contractors. In the Applicants' experience, the anticipated reduced costs and downtime as set out in the 2017 Authorisation Application were achieved under the Existing Authorisation.

As discussed at section 1.3 of Attachment 2 below, a range of support equipment (eg heavy lift cranes) is required to carry out LNG Facility maintenance campaigns. Equipment may be sourced locally, interstate or internationally and may be needed to be transported to the facilities.

Simultaneous shutdowns give rise to a real prospect of delays, both in accessing equipment which is used across multiple LNG Facilities and in transporting that equipment to the facilities. Delays resulted during the COVID-19 pandemic due to the difficulties of transporting equipment across State-boarders. Such delays risk extending the time required by at least some of the LNG Projects to complete maintenance activities, thereby increasing the downtime of the relevant LNG train and foregoing LNG production.

For example,





Scheduling maintenance activities as between the Applicants will also continue to help reduce mobilisation and demobilisation costs if specialist contractors (who are likely to include interstate and international experts) can move from one LNG Facility to another in a planned and coordinated manner.

## 8 No anti-competitive detriments have occurred

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Potential anti-competitive detriments considered by the ACCC in its Final Determination on the Authorisation have not occurred and the risk of them occurring going forward if re-authorisation is granted on the terms proposed is low.

### 8.1 No information asymmetry between the Applicants and other participants in domestic gas markets

Under rules made under the *Gas Services Information Regulations 2012*,<sup>20</sup> the Applicants are required to report on a range of information, for publication on the Western Australian Gas Bulletin Board (**Gas Bulletin Board**).<sup>21</sup> Relevant to this Application, the Applicants (as Production Facility Operators and/or Storage Facility Operators under the rules) must report any planned service work over the following 12-month period that is expected to have a material impact on the capacity of a facility.<sup>22</sup> The Applicants are required to report this information on the last calendar day of each month, and failure to do so may attract a civil penalty. Additionally, the Applicants must report, as soon as practicable, any material changes to this information as they arise. All information published on the Gas Bulletin Board is publicly available. Extracts of the relevant reporting provisions in the rules are set out at Attachment 3.

Accurate maintenance information has been published by the Applicants on the Gas Bulletin Board, thereby entirely mitigating the ACCC's concern regarding information asymmetry.

The Applicants have also published scheduled maintenance information on their respective websites in a manner that is easily accessible to interested parties as required under the Condition to the Existing Authorisation.

### 8.2 No reduction in competition in the acquisition of maintenance services

In its Final Determination on the Existing Authorisation the ACCC articulated a potential concern around a reduction in competition in the acquisition of maintenance services, leading to less opportunities for maintenance service providers to win contracts with the Applicants. As part of its consultation process around the Existing Authorisation the ACCC contacted numerous maintenance service providers, none of whom raised concerns that the Authorised Conduct would reduce their ability to compete for contracts.

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<sup>20</sup> Gas Services Information Rules (17 December 2021): <https://www.wa.gov.au/system/files/2021-12/Gas-Services-Information-Rules-17-December-2021.pdf>.

<sup>21</sup> See: <https://gbbwa.aemo.com.au/#home>.

<sup>22</sup> The Applicants must report the expected dates of the planned service work, expected changes to capacity levels and provide a description of the nature and location of the work.



A range of service providers have been awarded contracts by the Applicants during the period of the Existing Authorisation, including those listed in the spreadsheet attached to this Application. Nothing arising from the tender processes for those contracts indicates any competitive concerns in the provision of maintenance services. Multiple service providers have participated in the tender processes that have been run and service providers have not expressed concerns to any of the parties running those tender processes.

### **8.3 No unauthorised coordination**

The ACCC also considered in its Final Determination on the Existing Authorisation the potential for anticompetitive coordination beyond the scope of the Authorised Conduct.

The Applicants confirm that there has been no such unauthorised coordination during the Existing Authorisation, nor any complaints about such conduct. The Applicants are aware of their obligations under the CCA, in particular to avoid any sharing of information beyond the scope of the Authorised Conduct.

### **8.4 No delay to maintenance on domestic gas facilities**

The last potential detriment considered by the ACCC was raised by Synergy, which suggested the Authorised Conduct could lead to preferential treatment of LNG facilities over domestic gas facilities, leading to delays in necessary maintenance work at the latter.

Only two of the Applicants (Chevron and Woodside) supply gas produced by their LNG Facilities in Western Australia to the Western Australian gas supply market. In each case, the infrastructure and facilities operated to produce gas for supply as domgas can be operated independently from the LNG Facilities. As a result, the shutdown of the part or whole of an LNG train or the carrying out of any maintenance on the infrastructure supporting LNG production by Chevron or Woodside does not have any impact on the supply of domgas by them to the Western Australian gas supply market.

During the Existing Authorisation, Chevron and Woodside have not delayed domestic gas maintenance work in favour of LNG Facility maintenance work, nor have they received any specific complaints to this effect. To date, domestic gas maintenance work has been completed according to plan.

## **9 Removal of the Condition of authorisation**

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The Condition to the Existing Authorisation was imposed by the ACCC in response to a concern that there was a likely detriment arising from an information asymmetry between the Applicants and other participants in the domestic gas markets. Interested parties to the Existing Authorisation submitted to the ACCC that a gas trading hub or STTM would likely be developed and commence operating in Western Australia in the next few years and that information asymmetries may arise.

The Applicants submit that the Condition should cease to apply to the requested re-authorisation for the following reasons.

First, no gas trading hub or STTM has been developed and commenced operating in Western Australia and no conditions have emerged over the period of the Existing Authorisation that suggest that a gas trading hub or STTM is likely to be developed over the term of the re-authorisation sought. The Public Utilities Office (now Energy Policy WA) held a stakeholder workshop in December 2018 and developed a consultation paper



(released in June 2019) on the potential for a gas spot trading platform for the Western Australia domestic gas market. Only two responses were received on the consultation paper and the Public Utilities Office decided that that was an insufficient response to warrant continued work.<sup>23</sup> In October 2021 the Gas Advisory Board reconsidered the issue and concluded that there was still no demand from industry for a gas trading mechanism.<sup>24</sup>

As at the time the Existing Authorisation was granted, there are two domgas spot trading market platforms in Western Australia (gasTrading<sup>25</sup> and Energy Access Services<sup>26</sup>). Uptake on these platforms is, and continues to be, relatively limited as the majority of Western Australian domgas customers are large base load users that require security of supply and pricing to underpin investment in their projects. In 2020, only approximately 3-5% of total gas consumption in Western Australia was traded on a short term basis<sup>27</sup> and since then this has decreased to approximately 1-3%. The majority of domgas continues to be supplied under long-term contracts<sup>28</sup> with approximately 10 domgas customers accounting for approximately 75% of demand.<sup>29</sup> Demand for domgas in Western Australia is therefore relatively constant and the likelihood of a liquid and high volume gas trading hub or STTM operating in Western Australia is low.

Secondly, if such an information asymmetry arose and there were no measures in place already requiring notification of scheduled maintenance work it may be appropriate for the ACCC to authorised specified conduct subject to a reporting condition. However, the Applicants are required, under rules made under the *Gas Services Information Regulations 2012*, to report to AEMO all planned maintenance that will impact the capacity of their operated assets for publication on the Gas Bulletin Board (see <https://gbbwa.aemo.com.au/#home>). As shown in Attachment 3, the information required to be reported to AEMO is more extensive than the information required to be reported under the Condition to the Existing Authorisation. The Western Australian domgas market is therefore already well informed on planned facility maintenance at LNG Facilities via the Gas Bulletin Board. As such, it is unlikely that any additional reporting condition imposed via an ACCC authorisation will materially increase information transparency or have benefits to domgas market participants. The Applicants submit that this will not change even if a gas trading hub or STTM is developed.

Thirdly, justifying the imposition of a condition on the basis of a condition being imposed on LNG producers engaging in similar conduct but operating in a structurally different market is erroneous. The Proposed Conduct must have a direct impact on the market for the supply or acquisition of domgas in the Northern Territory or Western Australia to justify a reporting condition being imposed. Such an impact does not exist.

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<sup>23</sup> Government of Western Australia, Energy Policy WA, *Meeting Agenda – Gas Advisory Board – Extraordinary Meeting (Meeting Number 202\_10\_28)*, 28 October 2021: [https://www.wa.gov.au/system/files/2021-10/GAB-2021\\_10\\_28-Combined-meeting-papers.pdf](https://www.wa.gov.au/system/files/2021-10/GAB-2021_10_28-Combined-meeting-papers.pdf).

<sup>24</sup> Government of Western Australia, Energy Policy WA, *Minutes – Gas Advisory Board – Extraordinary Meeting (Meeting Number 202\_10\_28)*, 28 October 2021: <https://www.wa.gov.au/system/files/2022-03/GAB-2021-10-28-Minutes.pdf>.

<sup>25</sup> See: <https://www.gastrading.com.au/>.

<sup>26</sup> See: [https://www.energyaccessservices.com.au/about\\_us/who\\_are\\_we\\_.phtml](https://www.energyaccessservices.com.au/about_us/who_are_we_.phtml).

<sup>27</sup> AEMO, *2020 Western Australia Gas Statement of Opportunities*, page 81: [https://aemo.com.au/-/media/files/gas/national\\_planning\\_and\\_forecasting/wa\\_gs00/2020/2020-wa-gs00-report.pdf?la=en](https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/wa_gs00/2020/2020-wa-gs00-report.pdf?la=en).

<sup>28</sup> AEMO, *2020 Western Australia Gas Statement of Opportunities*, page 16: [https://aemo.com.au/-/media/files/gas/national\\_planning\\_and\\_forecasting/wa\\_gs00/2020/2020-wa-gs00-report.pdf?la=en](https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/wa_gs00/2020/2020-wa-gs00-report.pdf?la=en).

<sup>29</sup> In contrast, domgas demand on the East Coast of Australia fluctuates as residential loads make up a large portion of demand.





Fourthly, the Applicants must take additional compliance steps to comply with the Condition to the Existing Authorisation. The Applicants already have extensive compliance requirements, and the additional steps and resources relevant to compliance with the Condition increase overall costs, and in that sense are burdensome to the Applicants.

## 10 Contact details of relevant market participants

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See the spreadsheet attached to this Application.

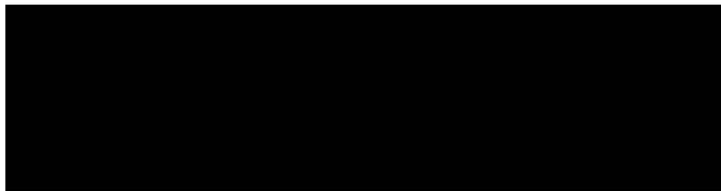
## 11 Declaration by Applicant(s)

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The undersigned declare that, to the best of their knowledge and belief, the information given in response to questions in this form is true, correct and complete, that complete copies of documents required by this form have been supplied, that all estimates are identified as such and are their best estimates of the underlying facts, and that all the opinions expressed are sincere.

The undersigned undertake(s) to advise the ACCC immediately of any material change in circumstances relating to the application.

The undersigned are aware that giving false or misleading information is a serious offence and are aware of the provisions of sections 137.1 and 149.1 of the *Criminal Code* (Cth).



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Signature of authorised person: Solicitor acting on behalf of the Applicants

Office held: Partner

Name of authorised person: Linda Evans

This 10<sup>th</sup> day of August 2022



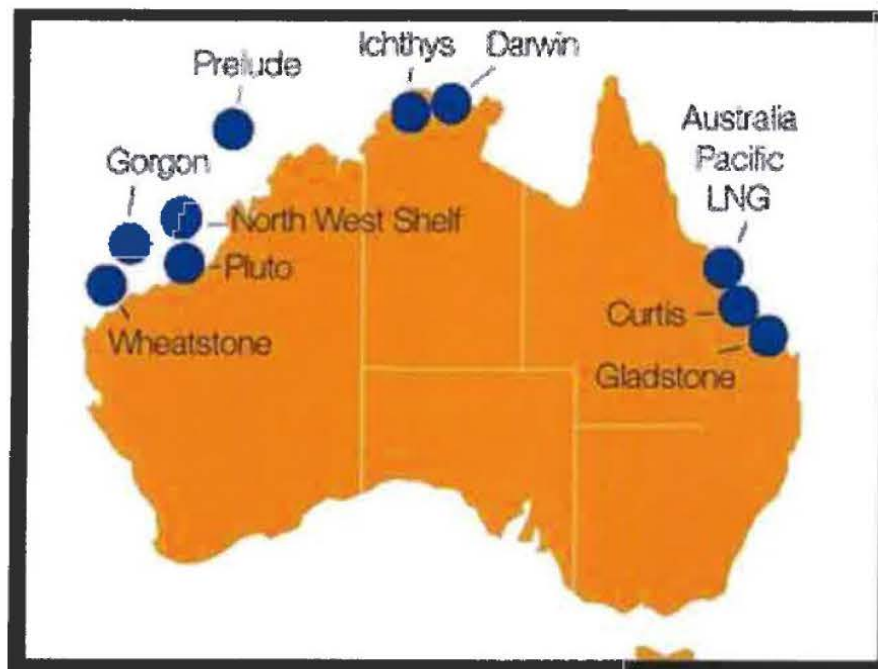
## Attachment 1

### The LNG Industry in the North West region of Australia

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#### 1.1 Overview of the LNG Projects

The Applicants operate a total of six LNG Projects, five of which are located in Western Australia and one in the Northern Territory (as shown in the Map below). The descriptions below relate only to the LNG Facilities and not to any associated infrastructure used in the supply of domestic gas in Western Australia or elsewhere.



Two of the Applicants (Chevron and Woodside) supply gas produced by their LNG Facilities in Western Australia to the Western Australian gas supply market. In each case, the infrastructure and facilities operated to produce gas for supply as domestic gas can be operated independently from the LNG Facilities.

##### (a) **Gorgon LNG Project (Chevron)**

The Chevron operated Gorgon LNG Project is situated on Barrow Island, 60 kilometres off the coast of Western Australia. The Project's offshore facilities currently include eighteen high-rate, big bore development wells and a subsea gas gathering system. The Project's onshore facilities include an LNG processing plant comprising three processing trains with a combined production capacity of 15.6 mtpa of LNG and a loading jetty.

The first LNG cargo departed in March 2016 and the Project became fully operational in March 2017. The Project has a production lifespan of 40 years, which includes environmental approval for a fourth LNG train.



Two expansion projects are underway. The Gorgon Stage 2 Project involves the expansion of the subsea gas gathering network, which is required to maintain long-term natural gas supply to the LNG plant and the domestic gas plant. The Project involves new wells in the Gorgon and Jansz-lo fields and accompanying offshore productive pipelines and subsea structures. As of July 2021, the Project was nearing completion of the installation phase and commissioning is due later this year.

The Jansz-lo Compression project (**J-IC**) is a modification of the existing Gorgon development and seeks to maintain gas supply from the Jansz-lo field to the three existing LNG trains and domestic gas plant at Gorgon. J-IC involves the construction and installation of a 27,000 tonne normally unattended floating Field Control Station (**FCS**), approximately 6,500 tonnes of subsea compression infrastructure and a 125 kilometre submarine power cable linked to Barrow Island. In July 2021, a final investment decision to undertake the project was made. Construction and installation activities are estimated to take five years to complete.

[REDACTED]

**(b) Wheatstone LNG Project (Chevron)**

The Wheatstone project, also operated by Chevron, is located 12 kilometres west of Onslow. The project is now fully operational with Trains 1 and 2 commencing LNG production in October 2017 and June 2018 respectively, with a combined capacity of 8.9 mtpa. The Project's offshore facilities include well infrastructure, subsea installations and a platform. The Project has a projected lifespan of 30 years, which includes environmental approval to expand to 25 mtpa of LNG.

[REDACTED]

**(c) Prelude LNG Project (Shell)**

The Shell-operated Prelude Project comprises a floating LNG production facility in the Browse Basin, off Western Australia's Kimberley Coast. The Project is the largest floating LNG offshore facility in the world, with a production capacity of 3.6 mtpa of LNG with an expected operating life of 25 years.

[REDACTED]

**(d) Ichthys LNG Project (INPEX)**

The INPEX-operated Ichthys project commenced offshore production in July 2018. The project is comprised of a number of onshore and offshore facilities. The floating offshore facility in the Browse Basin off Western Australia's Kimberley Coast is used for extraction, preliminary processing, storage and export. The onshore facilities at Bladin Point, Darwin include two LNG processing trains, storage tanks, administration facilities, utilities and a loading jetty. An 890 kilometre gas pipeline links the onshore and offshore facilities. The project has a production capacity of approximately 8.9 mtpa of LNG and an operating life of 40 years. In February 2022 INPEX announced plans to develop a third train at the Ichthys LNG onshore processing facility.<sup>30</sup>

<sup>30</sup> Northern Territory Department of the Chief Minister and Cabinet, *INPEX commits to LNG expansion*, 22 February 2022: <https://cmc.nt.gov.au/news/2022/inpex-commits-to-lng-expansion>.



(e) **Pluto LNG Project (WBPL)**

The WBPL-operated LNG project commenced LNG production in 2012. The onshore facilities comprise a single LNG processing train, LNG storage tanks and an export jetty. The Pluto Project has a production capacity of 4.9 mtpa of LNG, and usually operates unmanned (with operations controlled from the onshore Pluto Gas Plant).

In November 2021 a final investment decision was made to expand the Pluto LNG Project through the construction of a second LNG processing train (Pluto Train 2) which, once constructed, will have a production capacity of approximately 5 mtpa of LNG. Woodside has a 51% interest in Pluto Train 2 (Global Infrastructure Partners holds a 49% interest). Pluto Train 2 will process gas from the Scarborough and North Scarborough (Greater Scarborough) gas fields. Pluto Train 2 is expected to become operational in 2026.



(f) **NWS LNG Project (Woodside)**

The NWS LNG Project has been exporting LNG since 1989. The onshore NWS facilities include the Karratha Gas Plant, comprising five LNG processing trains with a combined production capacity 16.9 mtpa, as well as storage and loading facilities. The offshore production facilities include the North Rankin Complex, Goodwyn A and Angel platforms, and the Okha floating production storage and offloading vessel.

Ullage is available at the NWS LNG Project to process third party gas, and the project has entered into two third party gas processing agreements in respect of gas from the Pluto fields (commenced March 2022) and Waitsia Gas Project Stage 2 (commencing in 2023). To support these agreements:

- a 3.2 kilometre pipeline connecting the Pluto fields with the Karratha Gas Plant (**Pluto-KGP Interconnector**) has been constructed and commenced operations in March 2022; and
- infrastructure required to receive gas from the Pluto-KGP Interconnector and the Burrup Extension Pipeline has been constructed.





## 1.2 LNG Trains at each LNG Project

LNG Project	Current number of LNG trains	Status
Gorgon Project (Chevron)	3	All three trains operational. Train 1 became operational on 7 March 2016. Train 2 became operational on 25 October 2016. Train 3 became operational on 28 March 2017.
Wheatstone Project (Chevron)	2	Both trains operational. Train 1 commenced operations in October 2017 and Train 2 commenced operations in June 2018.
Prelude Project (Shell)	1	Project commenced operations in June 2019.
Ichthys Project (INPEX)	2	Both trains operational (operational since 2018). INPEX announced plans to develop a third train in February 2022.
North West Shelf Project (Woodside)	5	All trains are operational.
Pluto Project (WBPL)	1	Project operational (since 2012). Investment decision made to construct a second train and associated expanded facilities, expected to become operational in 2026.

## Attachment 2

### Operation and maintenance of LNG Facilities

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#### 1.1 LNG Facilities and production process

With the exception of Shell's Prelude LNG Facility, all of the LNG Projects are comprised of onshore and offshore facilities.

While there are some differences between each LNG Project, each LNG Facility will generally comprise the following minimum bundle of facilities:

##### **Onshore facilities**

- LNG processing train/s;
- LNG storage tanks;
- Condensate storage tanks;
- Utility plants (eg power generation);
- Marine facilities, including an offloading facility and jetty;
- Various operational and maintenance buildings.

##### **Offshore facilities**

- Subsea gas wells;
- Subsea gas gathering system;
- Processing facility/platform;
- Feed gas pipeline (connecting the gas gathering system to the onshore LNG processing trains);
- Electric-hydraulic control umbilical and associated pipelines (including for utilities and fibre optics).

#### 1.2 Operation of LNG Facilities

Each LNG Facility is designed to operate 24 hours per day, 365 days of the year. Although parts of the facility, including in some cases a whole LNG train, will need to be periodically shut down to allow for inspection and maintenance activities to occur as needed.

The total number of employees at each facility during normal operations (ie post-construction) will be within a range of 130 to 300. This will typically be a mix of operations, maintenance, management, administration, support and contractor personnel and visitors.



### 1.3 Maintenance of LNG Facilities

Each LNG Facility will require routine maintenance and inspections to ensure continued, safe operation during the course of its expected lifespan.

More significant maintenance activities such as major equipment services, regulatory internal vessel inspections, and corrective maintenance will typically necessitate certain shutdowns at the LNG Facility to ensure that these tasks can be undertaken safely. This typically involves the shutdown of all or part of an LNG train and a corresponding reduction or cessation in the gas supply to a train or the LNG Facility entirely.

Maintenance and inspections requiring a shutdown to safely execute work are grouped into maintenance campaigns (major and minor) to assist with planning and to minimise the duration and number of shutdowns over the expected facility lifespan. There are also likely to be some unplanned maintenance activities which require all or part of an LNG Facility to be shutdown.

Minor maintenance and external inspections are routine in nature and typically managed by the core operational workforce with support from a small number of specialist vendors.

Major LNG Facility maintenance is significantly more labour and capital intensive, requiring specialist equipment and a significant number of highly skilled maintenance technicians. The safe and efficient execution of these maintenance campaigns requires significant pre-planning and coordination of limited resources.

#### Major Shutdowns

Major shutdowns involve the planned outage of an LNG train to perform intrusive regulatory inspections, corrective maintenance, critical function testing (eg testing plant emergency shutdown systems, and verifying safety barriers), and routine maintenance. Major shutdowns involve draining, isolation and purging of the LNG train to enable intrusive maintenance to occur safely.

Major Shutdowns typically take between 36 to 40 days per LNG train and, for each of the Applicants, are broadly estimated to occur as follows:

- First shutdown: occurs for most assets after the first year of operation;<sup>31</sup> and
- Second (and subsequent) shutdown: occurs after three to five years (ie two to four years after initial inspection).

Major Shutdowns require a long lead time of up to 18-24 months, due to:

- the scale of the maintenance activities, the specialised equipment involved and the number of specialist technicians required;
- the need for significant planning and scheduling for the LNG Facility to secure:
  - materials which take a long time to become available (eg large engines, specialised gaskets);
  - arrangements for equipment that needs to be sent off-site for servicing;
  - specific OEM vendor technicians required to service particular machinery (eg engines);
  - accommodation for maintenance technicians;
  - support equipment (eg heavy lift cranes, transportation services); and

<sup>31</sup> This is not the case for the Shell operated Prelude FLNG Project.



- contract labour; and
- the time required for each LNG Facility to scope their maintenance requirements, identify prospective suppliers, ascertain availability of specialist contractors (eg OEM vendors), implement an appropriate procurement process (eg competitive tender), negotiate terms with the preferred service provider, make arrangements to secure the necessary resources and equipment to support the preparation and execution and ensure the appropriate systems and processes are in place to allow the major shutdown to occur.

There are a number of skills and occupations required for Major Shutdowns. The maintenance workforce will predominantly be a combination of contractor and specific OEM vendor personnel. In addition to core operational workforce, approximately 600 - 1,600 specialist workers will be required to support a Major Shutdown at each LNG Facility.

### **Minor Shutdowns**

Minor Shutdowns involve the planned partial shutdown of a LNG train (eg half a LNG train) to perform engine services, corrective maintenance and routine maintenance. Minor Shutdowns can potentially occur approximately every six months for three to six days per LNG train. This means that a two train facility could potentially have a Minor Shutdown on average once every 3 months, depending on scheduling.

Like Major Shutdowns, Minor Shutdowns are also planned in advance to secure materials which have a long lead time, support equipment (eg cranes), contract labour and OEM vendor technicians. As well as the core operational workforce, approximately 30-100 workers will be required to support a minor shutdown on a LNG Facility.

### **Unplanned Shutdowns**

It is anticipated that during the lifetime of an LNG Facility there may be unexpected failures of equipment which will require an immediate partial or full LNG train shutdown (**Unplanned Shutdown**). Depending on the nature of the unexpected equipment failure, additional support equipment, contract labour and OEM vendors will be required urgently to minimise the facility shutdown duration.

### **Campaign Maintenance**

Campaign Maintenance is defined as maintenance that can be logically grouped for execution as a pre-determined event that does not require a production outage. It is typically complex in resourcing, planning, coordinating or 'like type' work that is grouped to execute with a high degree of efficiency and productivity. Similar to Minor Shutdowns, Campaign Maintenance will utilise some core operational workforce as well as additional support equipment, contract labour and OEM vendors, with approximately 10-50 workers required to support a maintenance campaign on a LNG Facility.

## **1.4 Maintenance Workforce**

The skills and services required to undertake shutdowns and campaign maintenance are:

- the specialised technical skills and services required to plan, prepare and carry out the relevant maintenance work; and
- the associated skills and services required to support those undertaking the maintenance work.





### Technical skills and services

The LNG Facilities have sufficient similarities such that:

- the same OEM vendors have supplied some equipment to each of the LNG Facilities (eg each of the LNG Facilities uses the same turbines/engines or the same or similar components); and
- maintenance contractors with the same skills are required to support both Major Shutdowns and Minor Shutdowns.

It is also common for OEM vendors to perform maintenance on some of the equipment that they have manufactured and/or supplied to an LNG Facility. Where the same OEM has supplied equipment to more than one LNG Facility, the same group of specialist OEM maintenance personnel may be involved in the maintenance of that equipment.

The types of technical skills and occupations required to conduct maintenance work on an LNG Facility during a Major Shutdown or Minor Shutdown typically include:

- Supervisors;
- Mechanical Fitters;
- Electrical & Instrument Technicians;
- Rotating Equipment Specialists;
- Inspectors;
- Valve Overhaul Specialists;
- Scaffolders;
- Engineers;
- Catalyst Handling Specialists;
- Nitrogen Purging Specialists;
- Flange Management Technicians;
- Industrial Services Specialists;
- OEM Vendors; and
- Work preparers and planners.

In addition, the maintenance contractors used by each LNG Facility will typically be required to provide supervision, planning and support staff in order to assist in preparations for the shutdown. When undertaking capital project work within a shutdown, fabrication of equipment prior to execution will be required and usually requires long lead times to accommodate extensive quality checks and controls. At times there is a need for modification of equipment removed during the shutdown which requires quick turnaround performed by labour offsite.

When more than one LNG Facility uses the same contractors for these events, constraints may be placed on that contractor.

There is typically a limited supply of specialist maintenance contractors and OEM vendors required to support LNG train shutdowns. Many of these contractors and vendors also support the maintenance campaigns of several oil and gas facilities nationally and internationally.

Accordingly, the LNG Facilities will incur mobilisation, demobilisation and other associated costs to bring these specialist contractors and vendors to the North West region of Australia (eg flights, local accommodation, transportation to the LNG Facility etc) for the duration of each maintenance campaign.



### **Associated skills and services required to support the maintenance work**

The associated skills and services required in order to support those providing the specialised technical skills and services outlined above include the supply of:

- accommodation, catering and transport for temporary maintenance workforce; and
- equipment transport (eg barges and ferries to transport equipment to the relevant LNG Facility).

Many of these services necessarily have a local element to them and the Applicants expect that a number of these providers may wish to supply services to more than one of the LNG Projects where they have the ability and capacity to do so.

## **1.5 LNG Facility shutdown scheduling**

The frequency of the maintenance shutdowns which are likely to be required at the LNG Facilities is described in section 1.3 above. In practice, the scheduling of those maintenance campaigns in any given calendar year is influenced by regulatory requirements, external drivers (eg weather) and internal company considerations focused on minimising downtime and interruptions to production and exports.

For the North West region of Australia, weather plays a key influence on the scheduling of maintenance of LNG trains and associated facilities. The optimal weather windows for LNG train shutdowns are **April to May** and **September to October**, for the following reasons:

- **Tropical Cyclone** season in the region is from November to February. High winds, rainfall and elevated sea conditions associated with cyclones pose a safety hazard to the workforce. Avoiding the cyclone season eliminates the exposure to unpredictable weather events for the larger workforce required for maintenance campaigns.
- **High rainfall and thunderstorm activity** impacts the ability of the workforce to safely and efficiently conduct maintenance campaigns. Maintenance work on an LNG Facility is typically conducted in the open environment exposing the workforce and equipment to the weather. The region experiences an increase in thunderstorm activity and on average high rainfall from November to March.
- **Efficiency of LNG trains** is higher at lower ambient temperatures. Lower ambient temperatures during the winter period of June to August enable the LNG Facilities to marginally increase LNG production, and as such it is not desirable to conduct a shutdown during this period when increased production is possible.
- **Overseas demand for LNG exports** is higher during the northern hemisphere's winter months of December to February, and as such it is not desirable to conduct a shutdown during this period when demand and price for LNG is higher.

The LNG Projects will together comprise 14 LNG trains with the potential for future development. This application is made in respect of current and potential future LNG trains at each of the Facilities. It is highly likely that without the Proposed Conduct, two or more of the parties will schedule concurrent or overlapping shutdown maintenance owing to the factors described above.

## Attachment 3

### Comparison of maintenance information made available in compliance with the Condition to the Existing Authorisation and on the Gas Bulletin Board

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#### 1.1 Extracts of relevant reporting requirements under the Gas Services Information Rules (17 December 2021)

##### Part 3 Provision of Information for Gas Bulletin Board

Section 64 – Registered Storage Facility Operators to provide medium term storage capacity outlook

- (1) A Registered Storage Facility Operator must submit a Medium Term Capacity Outlook to AEMO for each of its GBB Storage Facilities by 6:00 PM on the last day of each calendar month, and that outlook must cover the period of 12 months from the start of the next calendar month.

*Note: This subrule is a civil penalty provision for the purposes of the GSI Regulations. (See the GSI Regulations, regulation 15 and Schedule 1).*

- (2) The Medium Term Capacity Outlook must include Planned Service Notifications for all planned work on the GBB Storage Facility during the period covered by the outlook, which the operator reasonably expects to have a material impact on the capacity of the storage facility.

- (3) A Planned Service Notification must include:

- (a) the identity of the GBB Storage Facility;
- (b) expected start and end dates of the capacity change;
- (c) the expected capacity of the GBB Storage Facility during that period as a result of the work; and
- (d) a text description of the nature and location of the work.

- (4) A Registered Storage Facility Operator must, as soon as practicable, submit a revised Medium Term Capacity Outlook to AEMO if the operator considers that there has been a material change to the information contained in the outlook, but need not submit a revised outlook for Gas Days within the period covered by Capacity Outlooks already provided under rule 65.

*Note: This subrule is a civil penalty provision for the purposes of the GSI Regulations. (See the GSI Regulations, regulation 15 and Schedule 1).*

- (5) For the purposes of subrules (2) and (4), a material impact or change means a change to capacity that is more than the greater of 10% of Nameplate Capacity or 10 TJ per day.

Section 71 – Registered Production Facility Operators to provide medium term production capacity outlook

- (1) A Registered Production Facility Operator must submit a Medium Term Capacity Outlook to AEMO for each of its GBB Production Facilities by 6:00 PM on the last day of each calendar month, and that outlook must cover the period of 12 months from the start of the next calendar month.

*Note: This subrule is a civil penalty provision for the purposes of the GSI Regulations. (See the GSI Regulations, regulation 15 and Schedule 1).*

- (2) The Medium Term Capacity Outlook must include Planned Service Notifications for all planned work on the GBB Production Facility during the period covered by the outlook, which the operator reasonably expects to have a material impact on the capacity of the production facility.
- (3) A Planned Service Notification must include:
  - (a) the identity of the GBB Production Facility;
  - (b) expected start and end dates of the capacity change;
  - (c) the expected capacity of the GBB Production Facility during that period as a result of the work; and
  - (d) a text description of the nature and location of the work.
- (4) A Registered Production Facility Operator must, as soon as practicable, submit a revised Medium Term Capacity Outlook to AEMO if the operator considers that there has been a material change to the information contained in the outlook, but need not submit a revised outlook for Gas Days within the period covered by Capacity Outlooks already provided under rule 72.

*Note: This subrule is a civil penalty provision for the purposes of the GSI Regulations. (See the GSI Regulations, regulation 15 and Schedule 1).*

- (5) For the purposes of subrules (2) and (4), a material impact or change means a change to capacity that is more than the greater of 10% of Nameplate Capacity or 10 TJ per day.



## 1.2 Information made available in compliance with the Condition to the Existing Authorisation

### (a) Woodside<sup>32</sup>

**2022 maintenance key dates**

Information in this table regarding scheduled maintenance shutdowns is:

- supplied pursuant to Australian Competition and Consumer Commission Authorisation Nos AA1000396-1 & AA1000396-2 (*Authorisation*);
- provided in good faith and published as a condition of the Authorisation; and
- based on Woodside's reasonable expectations, and is subject to change.

Facility	Scope	Approximate start date	Approximate end date
Karratha Gas Plant	One LNG Train	24 April 2022	28 April 2022
Karratha Gas Plant	One LNG Train	29 April 2022	21 May 2022

### (b) INPEX<sup>33</sup>

**Scheduled maintenance activity notice**

Planned maintenance campaigns are important in maintaining safe, reliable, and efficient operating facilities.

This information is supplied pursuant to Australian Competition and Consumer Commission (ACCC) authorisation numbers AA 1000396-1 and AA 1000396-2.

INPEX Australia provides this maintenance information on the basis that it is:

- provided in good faith and published as a condition of the authorisation granted by the ACCC
- based on INPEX Australia's reasonable expectation and subject to change.

Facility	Scope	Approximate start date	Approximate end date
Ichthys LNG	Two LNG Trains	1 July 2022	5 August 2022

<sup>32</sup> Information as at 3 May 2022: <https://www.woodside.com.au/sustainability/working-openly/facility-maintenance-information>.

<sup>33</sup> Information as at 3 May 2022: <https://www.inpex.com.au/projects/ichthys-Ing/scheduled-maintenance-activity-notice/>.



(c) **Chevron**<sup>34</sup>

This information is supplied pursuant to Australian Competition and Consumer Commission (ACCC) authorisation numbers AA1000396-1 and AA 1000396-2.

Chevron Australia provides this Maintenance Information on the basis that the information is:

- Provided in good faith and published as a condition of the authorisation granted by the ACCC
- Based on Chevron Australia's reasonable expectation and subject to change.

**gorgon LNG facility** ^

The Gorgon processing plant underwent shutdowns and servicing of all three LNG trains and most associated facilities between late 2019 and mid-2021.

Expected dates	Scope of train shutdown
TBA	TBA

**wheatstone LNG facility** ^

Expected dates	Scope of train shutdown
04/04/2022 - 09/05/2022	Shutdown of greater than one and a half of an LNG train but not greater than two LNG trains

### 1.3 Information available on the Bulletin Board

Medium Term Capacity Outlook from Gas Day 01/12/2021, as at 01/12/2021 15:14:53 (GSI Rule 85(c)).

Facility	Duration	Capacity Type	Description	Capacity
Pluto	27/11/2021 - 10/12/2021	Nameplate	planned maintenance	24.0
Devil Creek	29/11/2021 - 08/12/2021	Nameplate	well constraint	220.0
Macedon	01/12/2021 - 31/12/2021	Nameplate	Change to capacity	193.6
Xyris Production Facility	01/12/2021 - 31/12/2021	Nameplate	"None"	27.0
Goldfields Gas Pipeline	02/12/2021	Nameplate	Planned Maintenance at Wyloo West	178.5
Devil Creek	09/12/2021	Nameplate	planned maintenance	135.0
Devil Creek	10/12/2021	Nameplate	well constraint	220.0
Goldfields Gas Pipeline	19/12/2021	Nameplate	Planned Maintenance at Paroburdoo CS	189.0
Pluto	30/01/2022 - 05/02/2022	Nameplate	planned maintenance	0.0

<sup>34</sup> Access: <https://australia.chevron.com/our-businesses/scheduled-maintenance-activity-notices>.



Medium Term Capacity Outlook from Gas Day 03/05/2022, as at 03/05/2022 14:14:02  
(GSI Rule 85(c))

Facility	Duration	Capacity Type	Description	Capacity
Wheatstone	29/04/2022 - 10/05/2022	Nameplate	WHS DomGas plant turnaround	0.0
Macedon	01/05/2022 - 31/05/2022	Nameplate	Change to capacity	193.0
Xyris Production Facility	01/05/2022 - 31/05/2022	Nameplate	"None"	25.0
Devil Creek	02/05/2022 - 09/05/2022	Nameplate	planned maintenance	140.0
Varanus Island	02/05/2022 - 03/07/2022	Nameplate	well constraint	295.0
Mondarra	09/05/2022	Production	Planned Maintenance at Mondarra	0.0
Mondarra	09/05/2022	Refill	Planned Maintenance at Mondarra	0.0