

Australian Industry Participation (AIP) plan Summary

– Project Phase

1. Project Details

Designated project proponent: Santos NA Barossa Pty Ltd

Project name: Barossa Area Development

Description of the project:

The Barossa offshore development area is within the Bonaparte Basin, approximately 300 km north of Darwin in the Northern Territory (NT). The area encompasses petroleum retention lease NT/RL5 and potential future phased development in the smaller Caldita Field to the south in petroleum retention lease NT/RL6, both of which are held by the Designated Project Proponent, jointly with the other Project Proponent in line with the equity breakdown on the Project (Santos NA Barossa Pty Ltd: 37.5%; SK E&S Australia Pty Ltd: 37.5%; Santos Offshore Pty Ltd: 25%).

Subject to appropriate commercial arrangements being put in place, the proposed project will develop the large discovered Barossa resource and extend the operating life of the existing DLNG facility, thereby continuing to help meet future global demand for natural gas, and contributing significant income and employment opportunities for Australia.

The project development concept includes a proposal for a Floating Production Storage and Offloading (FPSO) facility, six subsea production wells to be drilled for the initial phase, subsea production system, supporting in-field subsea infrastructure and a gas export pipeline, all located in Australian Commonwealth waters. The FPSO facility will separate the natural gas and condensate extracted from the field with the dry gas transported via a gas export pipeline for onshore processing. The condensate will be exported directly from the FPSO to offtake tankers. The proposed new gas export pipeline that will transport the dry gas from the Barossa offshore development area will be approximately 260 km to 290 km long and is proposed to connect to the existing Bayu-Undan to Darwin pipeline in Commonwealth waters (subject to agreeing appropriate commercial arrangements). The new gas export pipeline route is still subject to refinement and therefore a pipeline corridor has been identified to allow flexibility at this early stage in the design phase.

The project proposes to provide a new source of dry gas to the existing Darwin LNG (DLNG) facility from 2023 when the existing offshore gas supply from the Bayu-Undan offshore field is expected to be exhausted. Anticipated annual average gas export production to the DLNG facility is approximately 196 BSCF/Y (billion standard cubic feet per year) with a target LNG production rate of 3.7 Mtpa and with associated condensate production peaking at 2.2 MMBBL/Y (million barrels per year).

The procurement approach for the major scopes such as the FPSO, subsea, export pipeline, drilling and pre-operations will be through a combination of EPC/I, leasing or direct contracting and procurement by the Project Proponent. Limited procurement activity is expected during Front End Engineering Design (FEED) with most contracting and procurement activity expected to occur post-Final Investment Decision (FID). Project duration is expected to be four years post-FID date. On 23 March 2020, Santos advised that, given the uncertain economic impact of COVID-19 combined with the lower oil price, it is expected to defer FID until business conditions improve. As a result, it is

expected that FEED, which commenced in Q2 2018, will continue until FID.

Estimated project value: Greater than AUD \$500 Million

Project location: The Project encompasses two areas, the Barossa offshore development area which is approximately 300 km north of Darwin and approximately 100 km north of the Tiwi Islands, and the gas export pipeline corridor connecting the FPSO facility in the Barossa offshore development area to the existing Bayu-Undan to Darwin pipeline in Commonwealth waters to the south-west of the Tiwi Islands.

Link to project information: The Project will use the ICN Gateway website (BarossaOffshore.icn.org.au) to promote and publish opportunities on the Project to Australian Industry. The Project specific webpage on the ICN Gateway website is currently under development and is expected to be publicly accessible around the start of the Project's FEED phase in Q2 2018. The website will include general and pre-qualification information for suppliers and a link to project opportunities for Australian entities to register their interest against specific opportunities.

Project contact for procurement information:

Contact Officer: Pat Aguero

Contact Officer phone number: +61 8 9423 6666

Contact Officer e-mail address: Pat.Aguero@santos.com

Other project proponents involved in the project: Santos Offshore Pty Ltd and SK E&S Australia Pty Ltd

2. Opportunities to supply Goods and Services

Expected opportunities	Opportunities for Australian entities	Opportunities for non-Australian entities
Goods		
FLOATING PRODUCTION STORAGE OFFLOADING (FPSO)		
Supply of Structural Steelwork (Misc. Packages)	Yes	Yes
Pressure Vessels	Yes	Yes
Filter Vessels	Yes	Yes
Plate and Frame Heat Exchangers	Yes	Yes
Printed Circuit Heat Exchangers	Yes	Yes
Shell and Tube Heat Exchangers	Yes	Yes
Gas Turbine Compressor Package	No	Yes

Expected opportunities	Opportunities for Australian entities	Opportunities for non-Australian entities
Reciprocating Compressor Package	Yes	Yes
Motor Driven Compressor Package	Yes	Yes
Turbo Expander/Compression Package	No	Yes
Gas Turbine Generator Package	No	Yes
Centrifugal Pumps	Yes	Yes
Submersible Pumps	Yes	Yes
Flare Package	Yes	Yes
Hypochlorite Package	Yes	Yes
TEG/MEG Regeneration Package	Yes	Yes
Induced Gas Floatation Package	Yes	Yes
Tertiary Water Treatment Package	Yes	Yes
CO2 Membrane Package	Yes	Yes
Hydrocyclone Package	Yes	Yes
Chemical Injection Package	Yes	Yes
Aviation Fuel Supply Package	Yes	Yes
Nitrogen Generator Package	Yes	Yes
Turbine Wash Water Package	Yes	Yes
Coalescers	Yes	Yes
Duplex Stainless Steel and Alloy 825 Pipes, Fittings, Flanges	Yes	Yes
Stainless Steel Pipes, Fittings, Flanges	Yes	Yes
Carbon Steel Pipes, Fittings, Flanges	Yes	Yes
Main Automation Contractor (MAC)	Yes	Yes
Operator Training Simulator and ICSS Test System	Yes	Yes

Expected opportunities	Opportunities for Australian entities	Opportunities for non-Australian entities
Telecom System Integrator (TSI)	Yes	Yes
Metering Stations and Metering Control Systems	Yes	Yes
High Integrity Pressure Protection System (HIPPS)	Yes	Yes
Control Valves	Yes	Yes
Pneumatic On-Off Valves	Yes	Yes
Instruments, Fire & Gas and Telecoms Cables	Yes	Yes
Anchors	Yes	Yes
Mooring Lines	Yes	Yes
Emergency Power Generation	Yes	Yes
HVAC	Yes	Yes
Cranes	Yes	Yes
Paint	Yes	Yes
Anodes	Yes	Yes
Offloading Hose	Yes	Yes
Inert Gas Generator Package	Yes	Yes
Mercury Removal Beds	Yes	Yes
Thermal Oxidizer	No	Yes
Waste Heat Recovery Unit	Yes	Yes
Electrochlorinator Skid	Yes	Yes
Instrument / Utility Air Compressor Package	Yes	Yes
Field Transmitters	Yes	Yes
Facility Control System	No	Yes
Subsea Hydraulic Power Unit, Emergency Shutdown Valve & Well Control Panel	Yes	Yes

Expected opportunities	Opportunities for Australian entities	Opportunities for non-Australian entities
Inmarsat Ka-Band/C-Ku-Band V Satellite System	No	Yes
E-House with Switchgear	Yes	Yes
Light Fixtures for Topside Modules	Yes	Yes
Gas Dehydration Package	Yes	Yes
SUBSEA AND EXPORT PIPELINE		
Subsea Production Systems – Manifolds	Yes	Yes
Umbilical Supply	Yes	Yes
Production & Service Riser Supply	Yes	Yes
Gas Export Riser Supply	Yes	Yes
Flowline Linepipe Supply	No	Yes
Flowline Coating & Anodes	No	Yes
Flowline Motherpipe & Bends Supply	No	Yes
Export Pipeline Linepipe, Motherpipe & Bends Supply	No	Yes
Export Pipeline Coating & Anodes	No	Yes
DRILLING		
Downhole Completion Equipment	Yes	No
Permanent Downhole Gauges	Yes	No
30" Conductor Pipe	Yes	Yes
Downhole Swell Packers	Yes	Yes
Bulk drilling & completion fluids & chemical additives	Yes	No
Liner Hangers	Yes	No
Squeeze & Storm Packers	Yes	No
Casing Cementing Accessories & centralisers	Yes	No

Expected opportunities	Opportunities for Australian entities	Opportunities for non-Australian entities
Drill Bits & accessories	Yes	No
PRE-OPERATIONS		
Fit-Out Tools	Yes	Yes
Laboratory	Yes	Yes
IT/IM	Yes	Yes
Services		
FLOATING PRODUCTION STORAGE OFFLOADING (FPSO)		
Catering Services	Yes	No
Contracting and Recruitment services	Yes	Yes
Port services	Yes	No
Logistics services	Yes	No
Installation Vessel	No	Yes
Weather Forecasting services	Yes	Yes
Hull and Living Quarters (LQ) Engineering Procurement and Construction (EPC)	No	Yes
Topsides Fabrication and integration	No	Yes
Turret EPC	No	Yes
Onshore Base Setup	Yes	Yes
FPSO Towing to Site	No	Yes
Marine Spread for Marine Operations	Yes	Yes
Vessels for Assistance During Marine Operations	Yes	Yes
Marine Crew during Support Vessel Marine Operations	Yes	Yes
Geophysical Surveys	Yes	Yes

Expected opportunities	Opportunities for Australian entities	Opportunities for non-Australian entities
Offshore Installation (Mooring)	Yes	Yes
Consultants – Marine	Yes	Yes
Safety and Reliability Studies	Yes	Yes
Site Vehicles	No	Yes
Office Lease	No	Yes
HR Mobility Provider	Yes	Yes
SUBSEA AND EXPORT PIPELINE		
SURF Transport and Installation (T&I)	Yes	Yes
Export Pipeline Pipelay	Yes	Yes
Fibre Optic EPC	Yes	Yes
Geotechnical Offshore Survey	Yes	No
Geotechnical Testing & Interpretation	Yes	No
DRILLING		
Drilling Rig	Yes	Yes
Downhole Completion Services	Yes	No
Permanent Downhole Gauge Services	Yes	No
Well Clean-Up & Flowback Services	Yes	No
Slickline Services	Yes	No
Directional Drilling Services	Yes	No
Mud Logging Services	Yes	No
Drilling Fluids Services	Yes	No
Rig Cooling Services	Yes	Yes
Cementing Top-up System	Yes	Yes

Expected opportunities	Opportunities for Australian entities	Opportunities for non-Australian entities
Casing & Tubular Running Services	Yes	No
Downhole Fishing Services	Yes	No
Downhole Tools	Yes	No
Pit & Tank Cleaning Services	Yes	No
ROV Services	Yes	No
Solids Control & Cuttings Handling Services	Yes	No
PRE-OPERATIONS		
Engineering Support	Yes	No
HSE / Security Emergency Response	Yes	No
Training and Competency	Yes	Yes
HSE Training	Yes	No
Supply Chain Services (Logistics)	Yes	No
Maintenance and Reliability	Yes	No
PROJECT SERVICES		
Helicopters & Logistics	Yes	No
Engineering Third Party Contracts	Yes	Yes
Marine Warranty Surveying	Yes	Yes
QA Inspection/Verification Services	Yes	Yes
Flotel (Accommodation Support Vessel)	Yes	Yes
Legal Fees	Yes	Yes

Disclaimer: The information provided in the table above is based on an initial assessment by the company. Any questions or issues should be raised with the project contact.

Explanation for item(s) in list above where it is indicated 'No Opportunities for Australian entities'

Based on general industry knowledge, including advice from potential procurement entities with recent experience on similar projects in Australia, the Project Proponent has concluded there is no capability in Australia to undertake the following packages:

FPSO: Gas Turbine (GT) Compressor Package; Turbo Expander/Compression Package; Gas Turbine Generator Package; Thermal Oxidizer; Facility Control System; Inmarsat Ka-Band/C-Ku-Band V Satellite System; Hull and Living Quarters EPC; Turret EPC; Topsides Fabrication and Integration; Towing to Site; Installation Vessel; Overseas Fabrication Yard site vehicles and office leasing.

Subsea and Export Pipeline: Subsea - Flowline Linepipe Supply; Coatings & Anodes; Motherpipe & Bends; and, Export Pipeline - Linepipe; Motherpipe & Bends Supply; Coatings & Anodes.

3. Standards to be used in the project

The design of the Project's facilities will be undertaken in accordance with the Project's design basis and include Company standards and specifications, Australian, ISO and other international standards and codes. International standards include those which are broadly adopted in the Australian oil and gas industry and in line with local industry practice, such as API, ASME, NACE, DNV-GL, IEC.

4. AIP activities to be undertaken by the Project Proponent

A summary of the key actions from the AIP Plan that will be undertaken to ensure Australian industry has full, fair and reasonable opportunity to bid for the supply of key goods and services is provided below:

- **Publication of Information:** The Project will use the ICN Gateway website (icngateway.org.au) to promote and publish opportunities on the Project to Australian Industry.
- **Communicating and Providing Opportunities:** Supplier/Industry briefings will be conducted early in the Project phase in Darwin and Perth to raise awareness of the Project and communicate opportunities to Australian entities to supply key goods and services on the Project. Industry Capability Network NT (ICNNT) will also be engaged to provide advice on Australian industry capability against specific opportunities for key goods and services. Internal training and alignment sessions will also be conducted to raise awareness of AIP requirements amongst management and key personnel.
- **Facilitating Future Opportunities:** The Project Proponent will facilitate capability development of Australian industry by providing advice and assistance in meeting prequalification and technical requirements, including referral to training organisations as appropriate and in consultation with ICNNT. This is expected to be part of the Project's industry/supplier briefings, information published on the ICN Gateway website and ICNNT services to the Project Proponent. Where commercially beneficial, consideration will also be given to encouraging overseas suppliers on the Project to transfer to their Australian offices information on international procurement requirements, practices, product and process technology, engineering and logistics support where applicable.
- **In respect to integrating Australian entities into global supply chains,** Australian entities awarded work will be added to the Project Proponent's global supply chain system for future opportunities. Further options will be considered, including facilitating via introductions, potential partnering, consortia and joint ventures between non-Australian and Australian entities where appropriate and in accordance with major contractor's business models which

may result in establishing local agency agreements, joint ventures or subsidiaries. Opportunities for introductions and networking to overseas-based procurement entities will also be explored.

- **Implementation Resources:** A record management system will be developed which leverages off existing internal document control and financial tracking systems to capture both quantitative (statistical) and qualitative (evidence-based) information. Contractors will be obligated to submit as part of their reporting obligations and as requested, copies of all documentation to provide evidence of contractor's AIP activities, particularly documents relating to contractor's engagement with ICNNT and ICN Gateway on opportunities to supply key goods and services to Australian entities.

5. AIP activities to be undertaken by procurement entities

A summary of the key actions from the AIP Plan that major contractors undertaking procurement activities on the Project will take to ensure Australian entities have full, fair and reasonable opportunity to bid for the supply of goods and services on the Project is provided below:

- **Opportunities to Supply Goods and Services:** Major contractors will be required to use the ICNNT to assist in identifying Australian industry capability. The ICNNT will also provide support to major contractors in managing the ICN Gateway website.
- **Publication of Information:** The use of ICN Gateway will be included as a contractual obligation for major contractors engaged on the Project. ICN Gateway will include both general and specific prequalification information and requirements that potential bidders must satisfy to bid on key goods and services.
- **Communicating and Providing Opportunities:** Major contractors will be required to include general prequalification requirements on the ICN Gateway website as early as possible in addition to any additional prequalification requirements specific to the individual tender opportunity for key goods and services. Bidders on major contracts will also be required to ensure the Project's AIP requirements are embedded into their contracting and procurement processes and schedules and included as part of their draft AIP Plan submitted with their bids. Post-award and as part of contractual obligations, major contractors will be required to provide evidence of engagement with ICNNT and ICN Gateway as part of their compliance reports. Major contractors will also be required to provide evidence of training and alignment sessions to their key personnel, including their contracting and procurement teams.
- **Facilitating Future Opportunities:** Bidders on major contracts will, where appropriate, be required to submit, as part of their draft AIP Plans in their bids, specific initiatives to encourage and facilitate capability development of Australian entities and inclusion into global supply chains (AVL's). This may include similar initiatives to the Project Proponent as summarised above or other initiatives. Post-award, major contractors will be required to report on initiatives to facilitate capability development of Australian entities and inclusion in global supply chains (AVL's). Where requested, major contractors will be required to provide feedback to unsuccessful Australian bidders (excluding pricing information) and to report this feedback as part of their compliance reporting.