



Arrow Energy Surat Gas Project

Supplier briefing

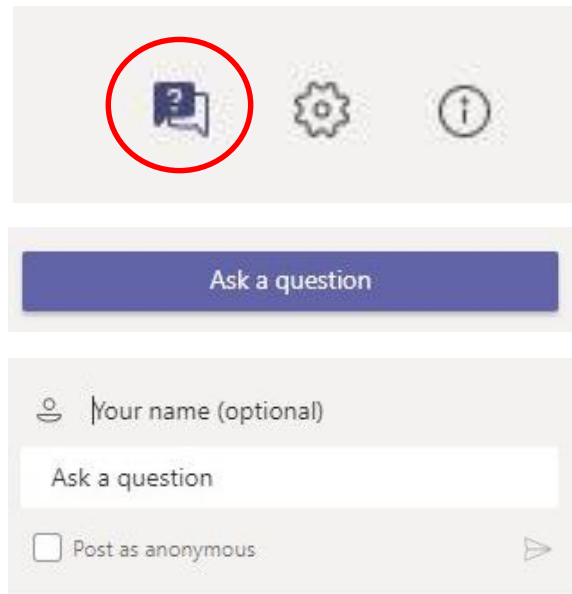
19 October 2020

You can submit questions throughout the presentation.

To ask a question:

- Select **Q&A button** (top-right side of your screen)
- Click **Ask a question**
- Type your question in the compose box, and then select **Send**. You may select **Post as anonymous**
- You can also text your questions to: **0428 744 520**

Presenters to answer at the end of the presentation.



Agenda

1

**Safety
moment and
about Arrow**

2

**Surat Gas
Project**

3

**Tender
opportunities**

4

**Pre-qualification
and tender
process**

5


**Indigenous
participation**

PHOTO: Tipton Central Gas Processing Facility

Submit your questions.
Use the comment box, or text **0428 744 520**.



Safety moment:
Arrow's Lifesaving Rules

 Safe Work. Strong Business.





01 Work with a valid work permit when required.



02 Conduct gas tests when required.



03 Verify isolation before work begins and use the specified life protecting equipment.



04 Obtain authorisation before entering a confined space.



05 Obtain authorisation before overriding or disabling safety critical equipment.



06 Protect yourself against a fall when working at heights.



07 Do not walk under a suspended load.



08 Do not smoke outside designated areas.



09 No alcohol or drugs while working or driving.



10 While driving, do not use your phone and do not exceed speed limits.

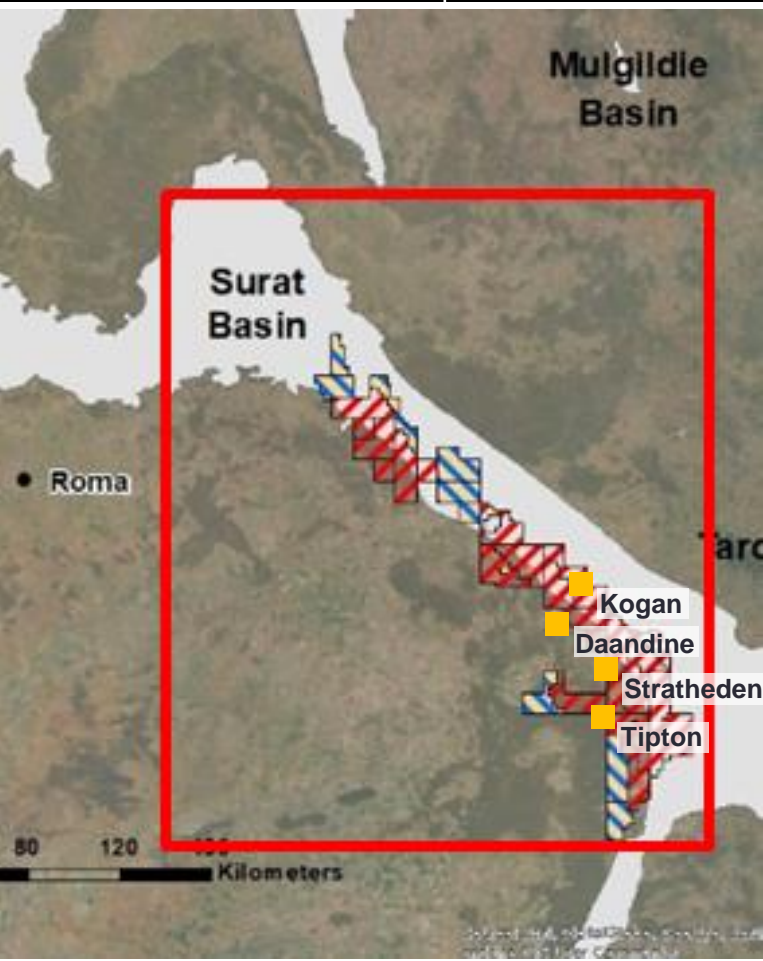


11 Wear your seat belt.



12 Follow prescribed Journey Management Plan.

- Target 12 high-risk operations
 - Operations in which failure to comply has the highest potential for serious injury or death
- Simplified, standardised rules that drive a culture of compliance
- Company-wide rules, which apply to **all employees and contractors**



- Queensland based, owned 50/50 by Shell and PetroChina
- Major domestic gas and power business:
 - five gas producing projects in the Surat and Bowen basins
 - ~1450 existing gas wells
 - gas supply to four power stations
 - capacity for supply = ~800,000 Queensland homes
- Surat Gas Project:
 - April 2020 - Shareholders agree FID for phase 1 of the 27-year Surat Gas Project (SGP):
 - largest gas sales agreement on the east coast of Australia, with the Shell-QGC joint venture
- Construction commenced this month
- Peak construction 2021-2025; first gas 2021



Arrow in the Dalby region:

- 15+ years of sustaining local jobs
- 2019: \$4.5M to Western Downs economy
 - locally awarded contracting packages alone
- Social investment to build regional capacity
 - Heart of Australia and other partnerships
 - scholarships and apprenticeships
 - Indigenous entrepreneur program to help increase the capacity of 100+ Indigenous businesses and entrepreneurs

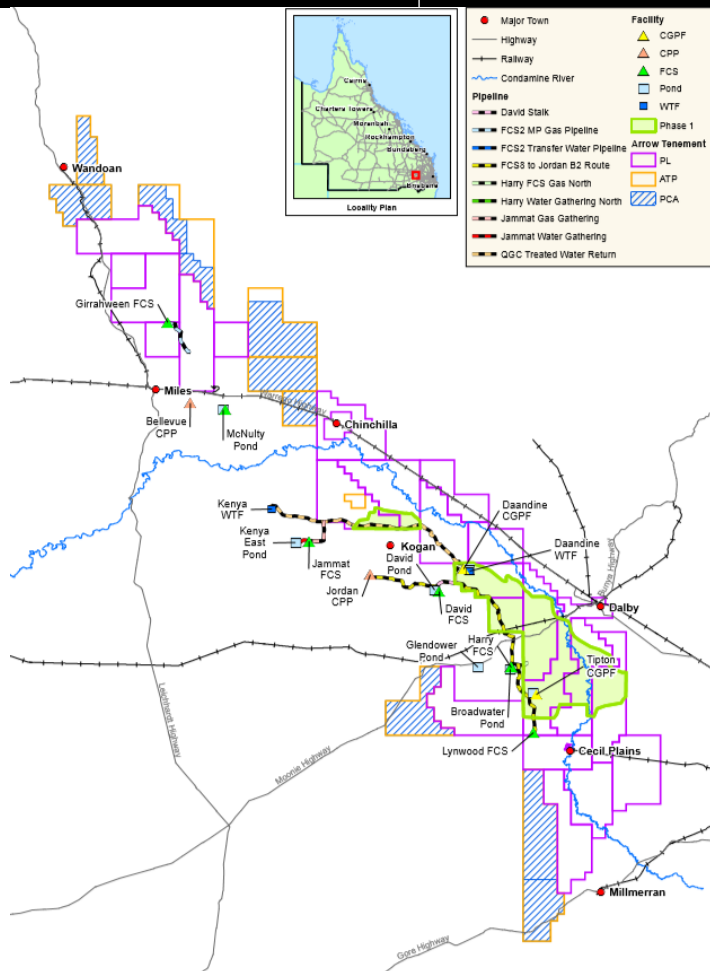


➤ Surat Gas Project




Submit your questions.
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- In a 27-year deal, Arrow will use existing Shell-QGC operated infrastructure to significantly reduce impacts to landholders and communities
- Project features:
 - ~2,500 wells across all phases (both vertical and deviated from a multi-well pad)
 - 2 new field compression stations
 - gas feeds Arrow facilities and Shell-QGC operated compression
- Arrow will construct and operate:
 - the wells and pipelines
 - inlet processing facilities (IPFs) at Shell-QGC operated Field Compression Stations and Central Processing Plants to allow Arrow gas into the facilities
- The project will deliver a measured, sustained development



- Expansion of current operations between Daandine to Tipton:
 - 600+ wells and associated gathering
 - IPFs at two Shell-QGC field compression stations (David, Harry)
 - Arrow will continue using Daandine and Tipton compression facilities; upgrade at Tipton to extend its operating life
- New on and off-tenure gas/water pipelines to Shell-QGC facilities
- Upgrades to Arrow's water treatment facilities
- Treated water return pipeline and new network to beneficially use produced and treated water

Well pad cleared and levelled	4-8 days	
Drilling	4-7 days	
Installation of well surface facilities	30-90 days	
Installation of water pump	5 days per well	
Well maintenance (workovers)	3-6 days per well	



- Typical construction workforce numbers:
 - Site prep: ~8 workers
 - Drilling: ~ 15 workers
 - Surface facility construction: ~10 workers
- Construction workforce accommodation:
 - existing Dalby accommodation (camp and local housing)
 - short-term ~30 person mobile camps for drilling contractors:
 - Stratheden (new)
 - Tipton, Daandine, Theten (existing)
- Lighting required short-term during 24-hour drilling:
 - expectation that contractors will orientate lighting to minimise light spill

- ~80 gathering construction workers on site at any one time
- Covering numerous work-fronts
- Construction timeframes vary
- Construction workforce housed in Dalby in existing accommodation



Right of way cleared and levelled, topsoil stockpiled



Pipeline is laid out and welded in a continuous string



The trench is excavated to at least 750mm to top of pipe, the pipe is lowered into the trench



Above ground infrastructure (high-point vents, low point drains) are constructed



The pipeline is pressure tested (road closures may be necessary)



The right of way is rehabilitated



During operations, maintenance will be required from time to time

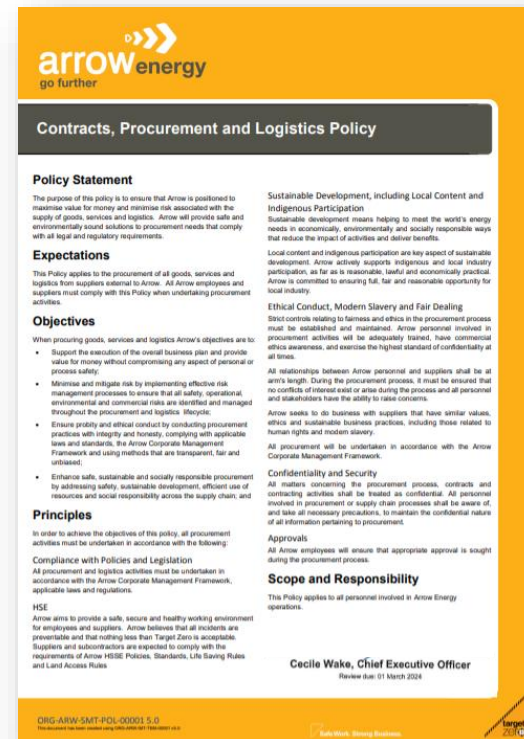




➤ Tender opportunities

Submit your questions.
Use the comment box, or text **0428 744 520**.

- Safety is Arrow's number one priority
- Arrow recognizes the importance of a safe, strong and sustainable relationship with its contractors
- Demonstrated commitment to supporting regional businesses and suppliers through its Local Content Policy
- More than 90% of Arrow's procurement spend occurs within Australia
- Arrow has submitted its Australian Industry Participation Plan (AIPP)
 - through the AIPP Arrow have committed to providing full, fair and responsible opportunity to local businesses
 - it outlines contracting and supply opportunities available locally



Top 10 SGP phase one activities:

1. **Drilling**
2. **Well services**
3. **Construction**
4. Engineering
5. Environment & water management
6. **Accommodation** (existing)
7. **Transport** and warehouse
8. **Logistics**
9. Rotating equipment
10. Other maintenance and support

Highlighted activities require ramp up



Area	Category	Estimated Contract Value	2020			2021				Estimated Contract Value	
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	< \$50M	> \$100M
Rigs and well services	Drilling rigs*										
	Completions / workover rigs										
	Geosteering#										
	Cementing#										
Materials	Casing										
	Pumps										
	Drill bits										
	Wellheads										
	Wellhead accessories										
	Drilling/ops chemicals										
Project materials	Wellhead skids										
	Control cabinets*										
	HDPE pipe & fittings										
	Gensets										
	Flare										

* Awarded
Award pending approval

Area	Category	Estimated Contract Value	2020			2021			
			Q2	Q3	Q4	Q1	Q2	Q3	Q4
Logistics	Warehouse services								
	Journey management								
	3PL transport								
Construction	CMSA off-plot Surat								
	Civils and Roads								
	Water treatment upgrade								
	Daandine brownfield expansion								
	Dam life extension								
	Telecoms								
	Inlet processing facilities								
Engineering	Engineering MSA								
Operations and maintenance	Waste management #								
	Accommodation (existing)								
	Mechanical maintenance								
	Vegetation Management								
	Vibration monitoring								
	Electrical instrumentation								
	Asset integrity and inspections								
	Facilities maintenance								
	Gas turbine overhauls								
	Rotating equip't services								

Estimated Contract Value	
< \$50M	
\$50M - \$100M	
> \$100M	

Award pending approval

Off-plot (wells, gathering)	Scope	Status
Gathering and well pad infrastructure	<ul style="list-style-type: none"> • Site clearance • HDPE gathering, surface well pad infrastructure – installation • Supply and install electrical networks, fibre optic 	Under evaluation
Specialist roads & civils	<ul style="list-style-type: none"> • Unsealed road and road turnout • Access tracks and pads • Sealed road and upgrades • Intersection construction and upgrades 	Under evaluation
On-plot (facilities)	Scope	Status
Inlet processing facilities	<ul style="list-style-type: none"> • Slug catcher, flare, plant inlet scrubber, water transfer, metering, air package, generators, telecoms - installation 	To be tendered
Water treatment facility upgrade	<ul style="list-style-type: none"> • Refurbish containerised water processing equipment • Install pre-filtration packages • Install new tanks, pumps pipework and instrumentation • Install closed-circuit reverse osmosis 	Awarded
Daandine brownfield construction	<ul style="list-style-type: none"> • Let-down system with process safety and reliability improvements • Procurement of bulk and non-long lead materials and site construction activities • Offsite skid fabrication • Onsite construction: civil, foundation, structural, mechanical and electrical & instrumentation and pre-commissioning 	Under evaluation
Dam life extension	<ul style="list-style-type: none"> • Daandine treated water (clay dam): synthetic liner installation • Theten dam (clay dam) – structural upgrade 	Under evaluation
Main telecommunication contractor	<ul style="list-style-type: none"> • Design, procure construct and commission: 13 towers, 12 equipment rooms, 26 microwave links, 15 network hardware, 13 DMR, 9 LTE 	To be tendered

Operation and maintenance	Scope	Status
Mechanical maintenance	<ul style="list-style-type: none"> Mechanical services for maintenance and operations. Includes fabrication, mechanical fitting, scaffolding, lifting and rigging, cranes, high pressure cleaning and painting. 	To be tendered
Rotating equipment services	<ul style="list-style-type: none"> Planned servicing and corrective maintenance: gas-driven engines, gas compression (screw and reciprocating) and diesel generators. For all Bowen and Surat compression facilities, Tipton and Daandine water treatment facilities, Braemar 2 and Surat wellfield engine packs. 	To be tendered
Electrical and instrumentation	<ul style="list-style-type: none"> Planned and corrective maintenance: all E&I equipment and infrastructure, hazardous area inspections and auditing (Bowen and Surat). 	To be tendered
Vegetation management	<ul style="list-style-type: none"> Pipeline maintenance: right-of-way and compounds 	To be tendered
Vibration monitoring services	<ul style="list-style-type: none"> Routine and ad-hoc vibration data collection, analysis and reporting on operating plant (Bowen and Surat). Includes compression, water and power assets. 	To be tendered
Asset integrity and inspections	<ul style="list-style-type: none"> Operating plant and equipment Includes, but not limited to, ultrasonic thickness surveys, radiography, thermography, boroscope, dye pen, mag particle and IRIS. Also laboratory analysis of water samples, and PSV maintenance and testing. 	To be tendered
Facilities maintenance	<ul style="list-style-type: none"> Surat facilities maintenance: dams slashing, spraying on farms, Surat facilities yards 	To be tendered
Gas turbine maintenance	<ul style="list-style-type: none"> Gas turbines maintenance: routine minor inspections, major overhauls, corrective works/breakdowns. Control system remote support, process control domain security, routine hardware/software maintenance. 	To be tendered



➤ Pre-qualification and tender process

Submit your questions.
Use the comment box, or text 0428 744 520.

Primary contractors

Opportunities

e.g. Construction contractor



Goods/services opportunities for single primary contractor, or a panel of suppliers/joint venture

e.g. Fencing contractor

Sub-contractors

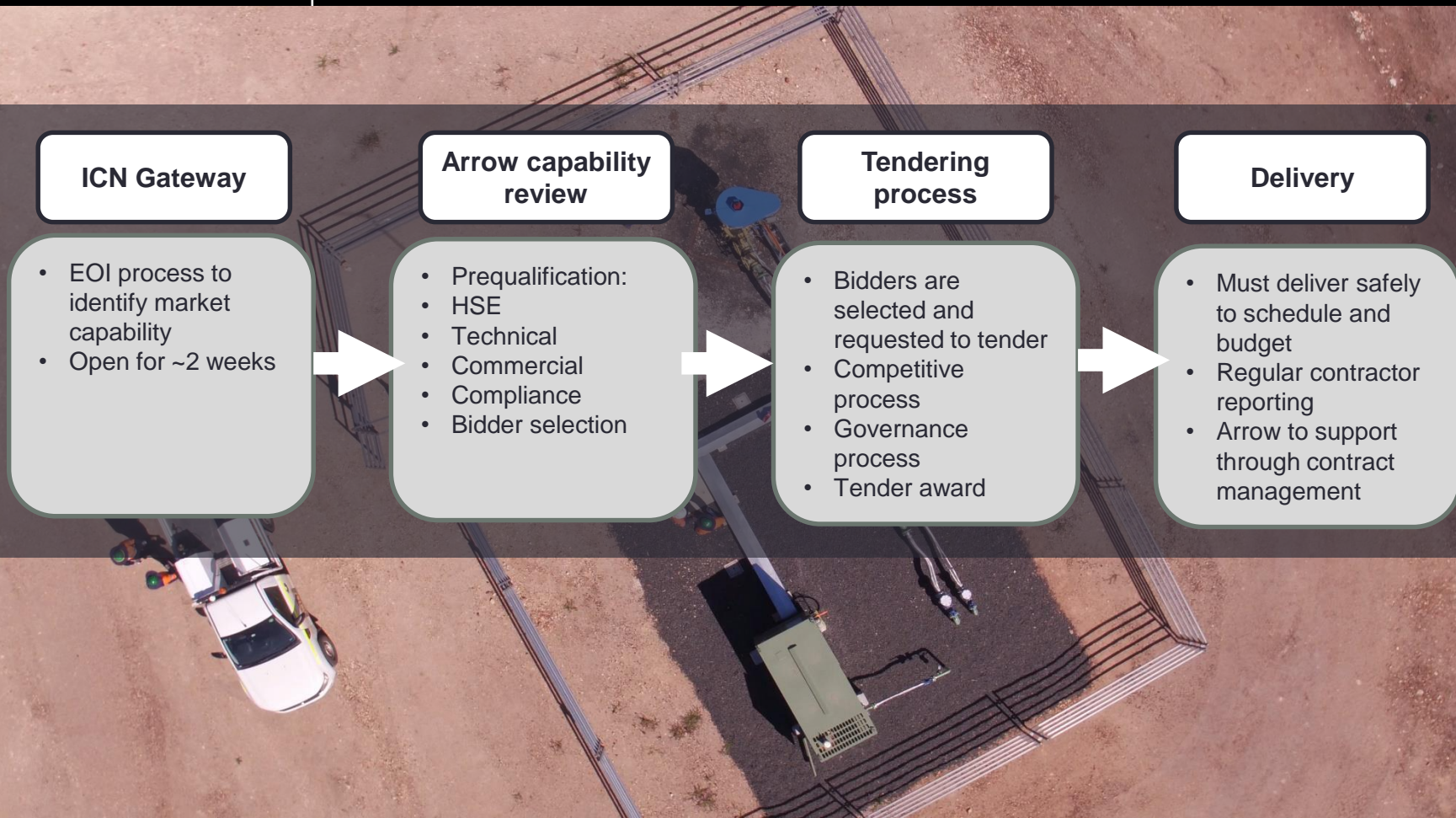


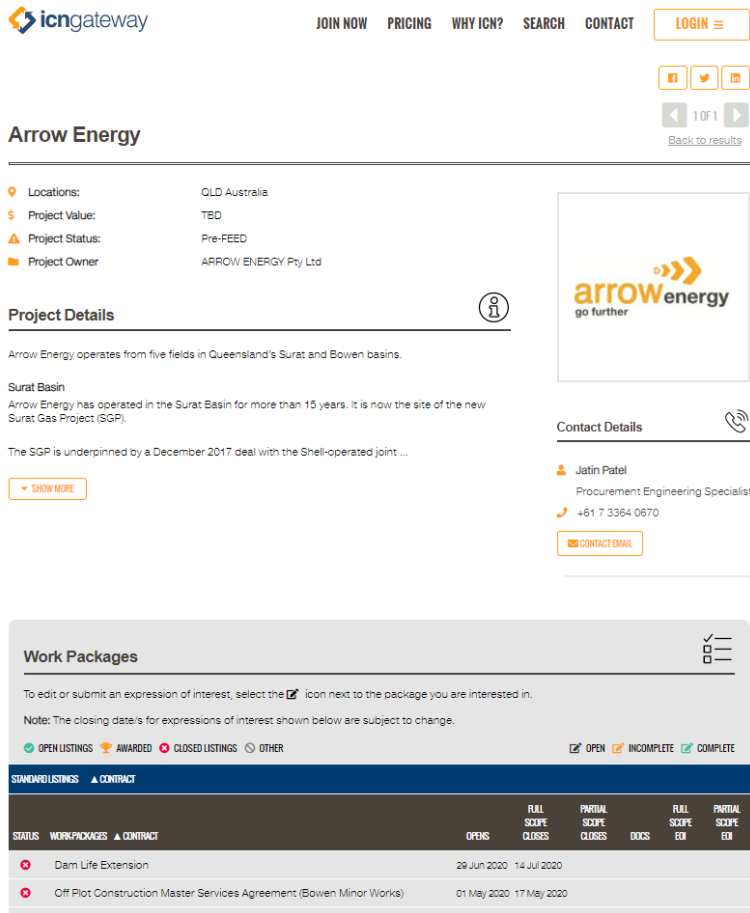
Specialist contractors:
Supporting primary contractors in the execution of work packages

e.g. Fence manufacturer



Manufacturers, resellers,
distributors of materials





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Arrow Energy 1 of 1 Back to results

Locations: QLD Australia
Project Value: TBD
Project Status: Pre-FEED
Project Owner: ARROW ENERGY Pty Ltd

Project Details

Arrow Energy operates from five fields in Queensland's Surat and Bowen basins.

Surat Basin
 Arrow Energy has operated in the Surat Basin for more than 15 years. It is now the site of the new Surat Gas Project (SGP).

The SGP is underpinned by a December 2017 deal with the Shell-operated joint ...

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Contact Details

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[CONTACT EMAIL](#)

Work Packages

To edit or submit an expression of interest, select the ☒ icon next to the package you are interested in.
 Note: The closing date/s for expressions of interest shown below are subject to change.

☒ OPEN LISTINGS ☒ AWARDED ☒ CLOSED LISTINGS ☒ OTHER ☒ OPEN ☒ INCOMPLETE ☒ COMPLETE

STATUS	WORK PACKAGES	CONTRACT	OPENS	FULL SCOPE CLOSING	PARTIAL SCOPE CLOSING	DOCS	FULL SCOPE EOI	PARTIAL SCOPE EOI
<input checked="" type="checkbox"/>	Dam Life Extension		29 Jun 2020	14 Jul 2020				
<input checked="" type="checkbox"/>	Off Plot Construction Master Services Agreement (Bowen Minor Works)		01 May 2020	17 May 2020				

Major contracts

- All EOIs on the Industry Capability Network (ICN) Gateway
- Register on ICN Gateway for notifications as EOIs are released:
 - Complete a profile
 - Nominate for notifications
 - Read the EOI document and register for either full or partial scope
 - Complete the EOI questions
- Notifications will also be provided by Arrow
 - email info@arrowenergy.com.au to join the mailing list.

Subcontracting

- All major Arrow SGP contractors to be published on Arrow's website

Safety Compliance Capability Commercial



Safe Work is essential to Arrow's business

- Arrow's HSE policy applies to all staff and contractors who must strive to:
 - achieve Target Zero and protect the environment
- Staff and contractors must demonstrate visible safety leadership:
 - comply with HSE Management System and HSE legislation
 - comply with the life saving rules
 - be 'fit for duty'
 - stop work or intervene if a situation is unsafe
 - plan ahead to minimise safety and environmental risks.
- All suppliers on Arrow sites must complete a HSE evaluation prior to contract award:
 - primary contractors must demonstrate they can meet Arrow's HSE for the services they will provide
 - primary contractors are responsible for ensuring subcontracting companies also comply

Safety Compliance Capability Commercial

Required:

- Compliance with Arrow Corporate Governance including:
 - Contracts, Procurement and Logistics Policy
 - Complaints Management
 - Media Policy
- Demonstrated capability to perform the work: experience and capacity
- Commercial compliant lowest cost

Encouraged:

- Tier 1 contractors are encouraged to identify how they can:
 - promote and support opportunities for local content and Indigenous participation (suppliers and workforce)



- The process requires the company to have:
 - strong safety leadership
 - demonstrated capability in the area of specialisation (including a capability statement)
 - Embedded management and HSE systems
 - capability to deliver on schedule and budget
- Key contacts provided at the end of the presentation

Recent pipe laying work along the Daandine-Nandi Rd



➤ Indigenous participation

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Reconciliation Action Plan (RAP)

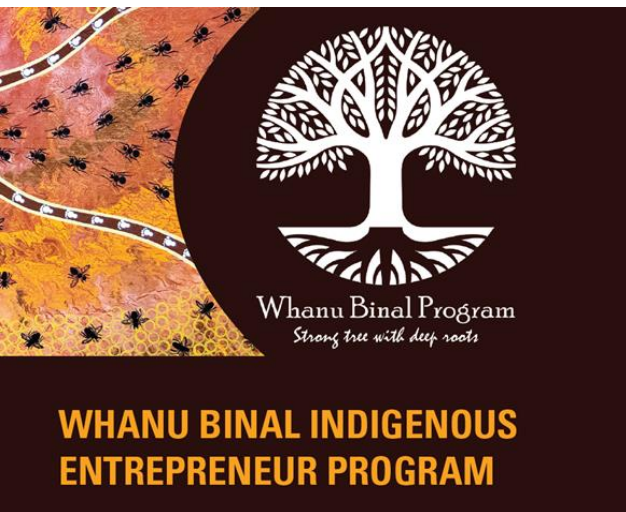
- In 2013, Arrow was the first Queensland CSG company to launch a RAP
- Working to release a new Innovate RAP in 2020
- Strategic priorities for Arrow and its supply chain:
 - Indigenous procurement spend
 - Indigenous employment and training
 - cultural competency

Supply Nation member

- Indigenous business directory (2500+ verified suppliers)

Whanu Binal – Indigenous Entrepreneur Program

- Fully created and funded by Arrow, delivered with CQUniversity:
 - supports development of new and established businesses
 - connects Arrow and contractors to Indigenous suppliers
- Combines online learning, regional workshops and mentoring
- Rolling intakes - contact CQUniversity to join



Arrow Energy	ICN Gateway	Supply Nation	CQUniversity
Arrow Community Engagement	Jatin Patel	Supply Nation	Whanu Binal Team – Desley Pidgeon
Info@arrowenergy.com.au	Jatin.patel@icnqld.org.au	info@supplynation.org.au	WBE@cqu.edu.au
1800 038 635	07 3364 0670	1300 055 298	0413 923 540

Questions



PHOTO: Single well pad - Grassdale

Submit your questions.
Use the comment box, or text **0428 744 520**.

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