

MEETING MINUTES



MINUTES OF:	Arrow Surat Community Reference Group (ASCRG)
HELD AT:	BMO Accounting, Conference Centre, Dalby
DATE:	Thursday, 12 March 2020
COMMENCEMENT TIME:	9.40am
PRESENT:	<p>Members: Ian Hayllor – Chair of Resource Sector Interactions, AgForce Jane Walker – GasFields Commission Queensland John Hughes – Department of Natural Resources Mines and Energy Pat Weir MP – State Member for Condamine Simon Gossmann – Groundwater Manager, Arrow Energy Liz Edwards – Manager Community & Communications, Arrow Energy</p> <p>Guest presenters: Norm Neligan – Health, Emergency & Security Manger, Arrow Energy Max Murray – Operations Manager Surat, Arrow Energy Chris Wicks – Senior Development Planner IFL, Arrow Energy Stephen Denner – Hydrogeology Team Lead, Arrow Energy Richard McLean – Principal Land Liaison Officer, Arrow Energy Brydie Hedges – Community Engagement Manager, Arrow Energy Professor Andrew ‘Aif’ Garnett – Director, Centre for Natural Gas, University of Queensland</p> <p>Alternates: Rohan Stephenson – Vice President, Dalby Chamber of Commerce & Industry Brian Bender – Basin Sustainability Alliance</p>
APOLOGIES:	<p>Ann Leahy MP – State Member for Warrego Colin Boyce MP – State Member for Callide Graham Clapham – Representative, Central Downs Irrigators Lee McNicholl – Chair, Basin Sustainability Alliance Matthew Paull – Policy Director (Queensland), APPEA Cr Nancy Sommerfield – Water & Waste Committee chair, Toowoomba Regional Council Cr Paul McVeigh – Mayor of Western Downs Regional Council Rohan May – President, Dalby Chamber of Commerce & Industry Scott Braund – Councillor, Australian Lot Feeders Association</p>
CHAIR:	Leisa Elder – VP External Relations & Tenure Management, Arrow Energy
SECRETARIAT:	Rita Hassan – Senior Community Officer (Dalby), Arrow Energy
DISCLOSURES:	None recorded

	Joint meeting – ASCRG & AIFL Committee	ACTION/ SUGGESTIONS
ITEM 1	<p>Welcome</p> <ul style="list-style-type: none"> Leisa Elder acknowledged Indigenous Elders past and present and emerging community leaders. Leisa welcomed attendees, acknowledged apologies and welcomed alternates, Brian Bender and Rohan Stephenson. Leisa welcomed and thanked Norm Neligan (Health, Emergency & Security Manager, Arrow Energy) for attending to present the safety moment and noted Norm also has a background in infection control. 	
ITEM 2	Safety moment: Novel Coronavirus – Norm Neligan	

	<ul style="list-style-type: none"> • Current situation regarding the late 2019 outbreak of pneumonia in Wuhan China caused by Novel Coronavirus. • Reported cases rising, circa 120,000 at this time <ul style="list-style-type: none"> ○ Over 4,000 deaths ○ In 110 countries, ○ 107 cases in Australia at this time • The virus is a new version of the common cold with no vaccine available. • The elderly and immunosuppressed are vulnerable. • Arrow is focusing on plans around business continuity and has implemented screening for staff boarding bus services and utilising workers camps. • All staff are being instructed to stay home if unwell. • Arrow is talking with businesses in the CSG industry and other industries to best manage the situation. • In the long term, it is likely that a majority of the world's population will be exposed to the virus and it will become accepted as background noise. • There is some fear about the virus since it is new, and little is known about how it will impact populations. • In context, 650,000 people around the world die from influenza each year. • It is important that everyone takes the opportunity to have the flu vaccine this season in particular. 	
<p>ITEM 3</p>	<p>Arrow update – Leisa Elder</p> <ul style="list-style-type: none"> • Arrow has a new leadership team (LT) including a new Chief Executive Officer, Cecile Wake from QCG/Shell. • These executives bring experience from around the world. • A lot of work is going on behind the scenes to support a final investment decision (FID) for the Surat Gas Project. • Arrow and its shareholders working together for a successful investment decision. In the meantime, the focus on the Bowen Basin development has increased and includes a \$100M appraisal program to de-risk production challenges: <ul style="list-style-type: none"> ○ deeper/tighter coal measures ○ different type of drilling to Surat ○ oldest and largest CSG fields in the state supplying to Townsville Power Station and Dyno Nobel. • The Bowen Basin has been estimated to have three times the resource potential of the Surat. • Arrow has been through a FEED (front-end engineering design) process in the Bowen; however, test wells have produced inconsistent gas flows. • Many wells in the Bowen are constructed with fibreglass casing (in the coal seams) in contrast to steel pipe and concrete in the Surat. • Arrow's tenure in the north overlaps with large coal companies. • Arrow is having a <u>stand down for safety</u> due to several incidents early in 2020 following a strong safety result in 2019. • The year ahead will bring an increase in on-ground activity and, with it, increased safety focus. • Arrow continues to push gas into the market and hopes to build on record production and revenue from 2019 as well as look at 	

	<p>opportunities to reduce costs in the current low oil price environment.</p> <ul style="list-style-type: none">• Arrow will continue to work to maintain the company scorecard whilst looking at prudent cost savings in the interim.• An 82kW solar system has been installed at the Dalby office which will pay for itself in ~5 years and contribute 16% of its output to the grid.• The system is online and will also contribute to reducing Arrow's greenhouse gas emissions.• Arrow's Moranbah office will also have a 98.9kW solar system connected by April 2020.• Arrow's ICT team has upgraded monitoring and control systems for cyber-security and SCADA system (supervisory control and data acquisition) which allows for remote monitoring of wells.• Dr Kathy Witt, Senior Research Fellow, University of Queensland Centre for Natural Gas, has been awarded a fellowship and will continue to explore the benefits of energy developments to regional Queensland communities.• Kathy will work a few days a week from Arrow offices while she carries out this research.	
ITEM 4	<p>Operations update – Max Murray</p> <ul style="list-style-type: none">• Rain in the last period has impacted access to many of our producing assets.• Construction and drilling schedules have been delayed as a result. <p><u>Hopeland groundwater monitoring bores</u></p> <ul style="list-style-type: none">• Arrow has drilled eight groundwater monitoring bores in the PL253 area in Hopeland.• Water sampling will commence soon. <p><u>Hopeland Pilot pipeline</u></p> <ul style="list-style-type: none">• Pipeline construction has been completed between Arrow's six-well pilot and a third-party delivery point.• The connection to the third-party infrastructure will be scheduled once contractual arrangements have been finalised. <p><u>Daandine area</u></p> <ul style="list-style-type: none">• Treated water and feedwater dam pump stations at the Daandine Water Treatment Plant have been upgraded. Upgrades were carried out to increase capacity.• Construction pads are being prepared for six additional wells to be drilled in the Daandine area in 2020.• There will be some temporary traffic impacts on Dalby-Kogan and Daandine–Nandi Road areas. <p>Ian Hayllor: The condition of Daandine-Nandi Road is terrible at present.</p> <ul style="list-style-type: none">• The annual shutdown for the Daandine Central Gas Processing Facility will be carried out on 28 April.	

- Flaring of gas will occur during the 24-hour shutdown. Community notifications will be carried out ahead of the planned flaring event.
- Compressor vent modifications are being carried out to lift vents to a higher location. Installation work will align with the shutdown and compressor outage.

Kogan North

- Three new wells were drilled in July and brought online at the end of 2019, these will now join the normal maintenance schedule.
- The plan is to drill three additional wells in this area in Q3 2020.

Tipton

- Pipeline connections continue for 21 new wells in this area, with wells to be brought online around May 2020.
- Once online, the wells and gathering network will be handed over to Arrow's operations team.
- Plans are underway to commence construction for a low-pressure header pipeline in Q3 2020.

Meenawarra

- Two wells drilled in 2019 were brought online at the end of 2019 and are now in production.
- These wells connect to existing gas and water infrastructure at Tipton.

Plainview East Pilot

- Planning continues for a new gas production pilot north of Cecil Plains, east of the existing Plainview Pilot.
- Pipelines will connect gas and water to the Tipton field.
- The objective is to test coal characteristics and production east of the Horrane Fault (similar to the existing Plainview Pilot).
- The current plan is for pipeline construction to commence Q3 2020. Landholders have been engaged and site surveys completed.
- Twenty-five soil gas monitoring points will be installed to baseline and monitor for gas migration in the region surrounding the pilot before the pilot is online.

Brian Bender: What does Arrow do with the data collected from the gas monitoring points, will it be available online?

Simon Gossmann: Arrow does not have a statutory obligation to share the information, but we will provide feedback via community committees and town halls.

Brian Bender: Would be possible to get a copy of the meeting presentation to go along with the minutes found online. Leisa agreed the presentation and minutes would be made available online.

Jane Walker: Is treated CSG water currently used on Arrow's farm?

Richard McLean: Water from Daandine water treatment plant is currently used on Arrow's demonstration farm. Water from the Tipton water treatment plant is currently supplying Grassdale feedlot.

Presentation to be made available online along with minutes.

ITEM 5

Surat Gas Project update – Chris Wicks

- If a successful final investment decision is achieved for the first phase of the project, activity will peak in 2021-2025.
- The first phase of works will expand north and south from Arrow's current operational areas of Daandine and Tipton, as well as future development near Miles.
- Additional civil construction will include an upgrade to facilities involving a high level of activity.
- Following phases 2023-2025, construction of two Arrow gas facilities and 2025-2028, development near Wandoan and Cecil Plains.

- Arrow's first step is to engage landholders which is what is currently happening through area wide planning (AWP).
- The first group of conduct and compensation agreements are expected in the next few months for negotiation.
- The maps shown are of Arrow's current development plans and areas of focus for AWP, bearing in mind that we are engaging landholder 1-2 years ahead of development:
 - Daandine area development -
 - AWP will focus on Kupunn, Nandi and Springvale areas.
 - Development will move east and south towards the Broadwater Road area.
 - Landholder engagement will take place east to the Condamine River between Daandine and Tipton.
 - Some landholders have already been engaged.
 - Dalby area development
 - AWP will focus on Kupunn, Broadwater, Nandi and Springvale areas.
 - Landholder engagement will move east to the river later in the year.
 - Tipton and Cecil Plains area development
 - AWP will focus on the broader Tipton area and Lynwood.
 - Landholder engagement for the Lynwood area will occur later.
 - Kogan and Chinchilla area development
 - AWP will focus on the Kogan North area.
 - Landholder engagement in Hopeland and Kogan will take place later this year.
 - Miles area development
 - AWP will focus on the Bellevue area.
- All maps shown are the same as those used in the September 2019 engagement sessions which are available on the Arrow website.

John Hughes: How are negotiations progressing?

Chris Wicks: It is early stages of consultation.

Neville Wirth (AIFL Committee): I have some concerns about Arrow staff discussing landholder agreements with other landholders in the area. I find this approach aggressive and would like the matter addressed.

	<p>Ian Hayllor: I have negotiated with Arrow and found Arrow in no way to be aggressive.</p> <p>Brian Bender: How many landholders are in this area?</p> <p>Chris Wicks: There is a total of ~70 landholders in this area, Arrow engages all landholders but would not require infrastructure on all properties.</p> <p><u>Traffic management</u></p> <ul style="list-style-type: none"> • Arrow’s traffic impact assessments identify and mitigate potential road and safety issues caused by our increased traffic. • This involves getting a baseline of existing conditions and traffic volumes as well as predicting future use and if roads will need to be upgraded in agreement with the relevant council or Department of Transport and Main Roads (TMR). • Once assessments are agreed to with council or TMR, Arrow enters into infrastructure agreements to support road maintenance programs. • Road use plans are developed for specific areas prior to construction activities. • Arrow is progressing an assessment for the Daandine to Tipton area and site inspections with Western Downs Regional Council scheduled for March 2020. • Arrow has engaged with TMR to progress proposed seal of Daandine Nandi Road. • TMR acknowledges the need for the upgrade and is keen to progress the work and have planned re-sheeting by mid-year. • Arrow will look to seal a larger section of road down the track. • Arrow is also engaging with WDRC regarding other roads, including Broadwater Road. • Nothing can progress without council agreement. <p>Neville Wirth (AIFL committee): It would be good to see these agreements with WDRC and DTMR resolved because it adds stress to landholder negotiations when the roads need repair.</p>	<p>Progress road use agreement with WDRC.</p>
<p>ITEM 6</p>	<p>Water and soil research and monitoring – Stephen Denner</p> <p><u>Subsidence</u></p> <ul style="list-style-type: none"> • Land subsidence is the loss of surface elevation due to removal of subsurface support; it occurs globally. • Diverse forms of ground failure can include from small and local to broad regional lowering of the earth’s surface. • Causes include: <ul style="list-style-type: none"> ○ withdrawal of fluids ○ subterranean mining ○ dewatering leading to oxidation of peat or organic soils ○ dissolution in lime aquifers ○ natural compaction, liquification (earthquakes), crustal deformation ○ thawing permafrost. • We are interested in pumping of groundwater and the impacts on the ground surface: <ul style="list-style-type: none"> ○ Weight of overlying strata is supported by water pressure and rock mass ○ Reduction in water pressure results in increased load on rock causing compression 	

- Combined compression across strata results in surface subsidence.
- Soft clay/wet material will see a lot of compaction compared to rock.
- Any reduction in water pressure can lead to compaction of rock, it depends on the initial consolidation or strength of the rock.
- Examples of this can be seen across the globe including:
 - Latrobe Valley, Victoria, 2.6m since the 1950s due to reduction in water pressure from mine dewatering
 - Tokyo, Japan, 27cm/year due to groundwater pumping
 - Mexico City, 1-9m over time due to groundwater pumping.
- Subsidence impacts are either on man-made infrastructure or on natural systems.
- How quickly compaction occurs impacts the degree of damage.
- Impacts can be highly visible and costly to maintain/rebuild when on infrastructure like roads, buildings and utilities.
- Compaction can impact an aquifers ability to store water.
- Topography changes are not consistent and may change river courses etc.
- Impeding surface flow of irrigation water on levelled paddocks may lead to soil moisture variations and impact growth (e.g. uneven crops).

Ian Hayllor: I have not seen any variance in the Condamine Alluvium but wonder if there is any record of it changing over the years.

Stephen Denner: There is no data from when it was first pumped for irrigation, but the clays are stiff and contain a lot of limestone cement and the gravel is densely packed. If anything significant has occurred, we would see it in linear infrastructure areas like train lines.

- Monitoring of subsidence is done using interferometric synthetic aperture radar (InSAR).
- This system provides high spatial resolution with an accuracy of 5-15mm (vertical change).
- International SAR satellite missions collect data every 12 days in a satellite image.
- The images are interpreted by identifying the phase difference between points within the areas scanned, this calculation based on the wavelength of radar system 5.66cm.
- Any changes of surface profile, including wet/dry erosion or deposition will show up as apparent ground movement.

Stuart Armitage (AIFL committee): Will subsidence stop over time.

Stephen Denner: Subsidence will stop once pressure is borne by the formation material.

- Arrow is obligated under Commonwealth approval conditions for its Surat Gas Project to monitor and report on subsidence impacts annually.
- Arrow has 90 days to develop an action plan to address impacts if trigger thresholds are exceeded.
- Monitoring includes modelling subsidence and recording changing water pressure.

Brian Bender: I have heard there is ~100mm of subsidence on western edges of the Surat Basin. Does Arrow know if there is data available around the Linc Energy site?

Stephen Denner: I would need to check the records however satellite data is available from 2012 (not prior).

Investigate what data is available in relation to subsidence

	<p><u>Plainview East Pilot</u></p> <ul style="list-style-type: none"> • Arrow will appraise the Walloon Coal Measures in the southern Horrane Trough (an area south east of Tipton). • The Plainview East Pilot will include: <ul style="list-style-type: none"> ○ four deviated wells on one pad ○ two groundwater monitoring bores (Condamine Alluvium and Springbok Sandstone) ○ 25 soil gas monitoring points. <p>Brian Bender: What act is used for to negotiate access to land for soil gas monitoring points?</p> <p>Richard McLean: Compensation arrangements come under the Mineral and Energy Resources (Common Provisions) Act 2014 (MERCPC).</p> <p><u>Groundwater monitoring installation update</u></p> <ul style="list-style-type: none"> • Arrow has installed 8 groundwater monitoring bores at Hopeland PL253 and is now installing monitoring gauges. • Sampling will commence this week. • Information gathered will be provided to the Queensland Department of Environment and Science which will also collect duplicate samples. <p>Brian Bender: Why has Arrow only installed eight monitoring bores?</p> <p>Stephen Denner: The investigation will be carried out in a staged approach. The need for additional monitoring bores will be determined once initial results are available.</p>	<p>around the Linc Energy site.</p>
<p>ITEM 7</p>	<p>Make good: decommissioning landholder water bores – Simon Gossman</p> <ul style="list-style-type: none"> • Make good agreements describe the make good measures Arrow will provide for a bore impaired by extraction of groundwater due to CSG. • The agreements also typically include for Arrow to plug and abandon (P&A) the impaired bore. • The P&A must be conducted in accordance with the Queensland Government’s Code of Practice for the construction and abandonment of petroleum wells and associated bores in Queensland. • Arrow demonstrates that it has complied with the Code through abandonment reporting which includes collecting general information via: <ul style="list-style-type: none"> ○ notice of decommissioning a well ○ drill log form (hole depth and casing). • A lot of this reported information is not really relevant to a landholder. • It is understandable that landholders would like to see more information to ensure that the objectives of the abandonment have been met, i.e. <ul style="list-style-type: none"> ○ surface equipment has been properly removed ○ bore is isolated and environmentally safe and sound, protecting groundwater resources ○ abandonment has isolated the productive formations from other formations. 	

- Measures to demonstrate isolation include:
 - Cementing in stages e.g. 800m 4 stages, which allows for pressure testing
 - If pressure test is unsuccessful, the cementing is redone.
- A lot of bores have casing in them already
 - A cement bond log is used to assess adequacy of a seal
 - Casing may be perforated to squeeze cement in if seal is inadequate.
- Data including; perforations and volumes of cement is captured in daily drilling reports.
- This information could be shared with landholders in a more comprehensive form.
- Arrow is currently working with drilling teams to compile a way to do this.

Brian Bender: Is 1.5m below ground what is required by the code of practice for the cut and cap, I thought it was 0.5m.

Simon Gossmann: I believe it is 1.5m, it may be part of the recent revision of the code.

Ian Hayllor: stock and domestic bores in the Condamine Alluvium area are gravel packed. How does Arrow manage gravel packing outside the well during abandonment to ensure well integrity?

Simon Gossmann: I would hope that Arrow do not need to P&A a bore in the Condamine Alluvium, we have not needed to so far.

Ian Hayllor: Through logging you can establish how strong the bond on the outside of the casing is and ensure the bores integrity. My concern is that we carry the risk so we have to have confidence that it's all be fully sealed.

Simon Gossmann: HDPE pipe does not achieve a seal as well as metal casing. With metal casing, seal quality is easily assessed using a cement bond log. It is important that the interface of the formations are well isolated (30m above and below).

Brian Bender: I have seen both Arrow and Origin wells abandoned in this area. The Arrow construction footprint is bigger but other than that I am confident that de-commissioning work carried out on my property has been effective. Except for the hiccup with the dirty truck.

Brian Bender: Are gassy bores becoming a bigger issue?

Simon Gossmann: Gassy bores haven't increased. We have carried out some make good agreements in Hopeland to address a majority of these.

Brian Bender: What about outside of Hopeland?

Simon Gossmann: No, Arrow has not found any gassy bores outside Hopeland. We have a soil gas monitoring program to test baseline methane around the Plainview Pilot. We generally want to P&A bores drilled into the Walloon Coal Measures as we don't know how they will react when we depressurise the coal.

Alf Garnett (guest): There is a big difference in P&A of gas industry wells and P&A of stock and domestic bores. Gas industry bores have the decommissioning building into the design philosophy. Stock and domestic bores do not.

Provide feedback on how Arrow would manage P&A of bores in the Condamine Alluvium area.

<p>ITEM 8</p>	<p>Deviated wells and compensation – Richard McLean</p>	
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- Deviated wells on multi-well pads is one of the ways that Arrow demonstrate coexistence with agriculture.
- The use of deviated wells equates to a seventy-five per cent reduction in area impacted for the landholder.
- Area wide planning (AWP) is an opportunity for all landholders to be involved and benefit from hosting infrastructure.
- The AWP process also allows Arrow to redesign initial layouts based on landholder feedback.
- Landholder feedback can be applied in most cases.
- Compensation varies depending on the direct impact to the property and residents.
- Arrow compensates landholders directly impacted by:
 - upfront payment and
 - ongoing payment.
- Compensation figures consider:
 - land value
 - disturbance
 - land use
 - professional fees
 - management time.
- Arrow will engage all landholders and occupiers affected by the activity.
- Neighbours do not received compensation because they are not subject to direct impacts.
- There are other frameworks to compensate neighbours in the event of indirect impacts

Jane Walker: How does Arrow compensate for noise and dust, is it through an alternate arrangement?

Richard McLean: Compensation agreements relate to infrastructure impacts.

- Impacts like noise, dust etc. are covered by the environmental authority (EA) for the activity.
- We don't compensate for dust. We manage the impact instead.
- Where we may exceed the noise limits specified in the EA, we will seek to enter into an alternate arrangement i.e.:
 - construction at night-time will exceed EA levels at times based on Arrow's modelling
 - limits are in place for night-time noise, 10pm-6pm <28dB
 - current design to meet 25dB
 - noise is measured at the sensitive receptor i.e. outside a house
 - alternate arrangements could include compensation to relocate for a temporary period or home improvements to mitigate an ongoing source of impact.
- Arrow tries to design infrastructure so that the noise emissions remain low and avoid the need for alternate arrangement.
- Arrow requires landholder feedback to help us adjust any noise issues or concerns.

Jane Walker: Compensation agreements are clear, whereas alternate arrangements are not so clear and offer relatively low compensation.

Brian Bender: If the EA states a limit, Arrow should be stick to that limit.

	<ul style="list-style-type: none"> • Alternate arrangements are not compulsory for anyone to sign and Arrow will try to move away from the need through better design. • If a neighbour refuses an offer of alternate arrangement, Arrow must stick to the limit. • However, we have the ability within the EA to enter into an alternate arrangement to remove the EA noise limit requirement. • Light impacts are difficult, Arrow is working with the drilling companies, neighbours and landholders to improve orientation to reduce light spill. • Alternate types of lighting will also be considered. <p>Neville Wirth (AIFL committee): Arrow has a multi-well pad near my property, I can hear it from 1km away, all the time. QGC seem to use a different system, their wells have been quiet from the beginning.</p> <p>Steve Williams (AIFL committee): Generator sets used to be quiet and I wonder why they have become a problem.</p> <ul style="list-style-type: none"> • Noise also depends on whether the well is high producing or free flowing. • Arrow are currently in the process of building attenuated gen sets. • Other options that could help to reduce noise include using reticulated power (where available) or adjusting the wells to turn down at night. <p>Stuart Armitage (AIFL committee): Other issues of concern in the community are workers camps, child safety with school buses etc. Even if the activity itself is far away from the school pick up location, as soon as you load roads with traffic, you increase safety risks.</p>	
<p>ITEM 9</p>	<p>Arrow Beneficial Use Network (BUN) sub-committee update – Simon Gossmann</p> <p><u>BUN committee tour of Tipton Water Treatment facility 11 March</u></p> <ul style="list-style-type: none"> • The tour helped to answer some questions around water quality and assurance systems that Arrow has in place (e.g. alarms/controls) at the reverse osmosis (RO) plant. • There was good discussion around the RO process including concerns/queries about salt content, salts vs clean water for delivery, electrical conductivity, pressure changes, flow valves, checks/cleans and other monitoring programs. • The tour included a visit to Arrow’s multi-well pad on a landholder property at Plainview Pilot. <p><u>BUN progress</u></p> <ul style="list-style-type: none"> • The committee will continue to meet into 2020 to work through implementation details of a preferred option for substitution of allocation. • The remaining meetings will discuss management issues including defining a process for selecting participants. <p>Stephen Williams (AIFL committee): what volume of water will be produced and how much will Arrow offset?</p>	

	<p>Simon Gossmann: Arrow's offset commitment is estimated at 63GL and Arrow will beneficially use at least that amount.</p>	
<p>ITEM 10</p>	<p>Local jobs and contracting – Brydie Hedges (for Jason King)</p> <ul style="list-style-type: none"> • Brydie shared apologies from Jason King, from Arrow's Contracting & Procurement team, who was unable to attend the session. • Arrow's Social Impact Management Plan (SIMP) obligations require us to establish local content opportunities. • Traditionally the term local refers to Australia and New Zealand but we are stepping away from this to a more regional focus. • Currently looking at how we can more effectively capture and demonstrate regional spend. • Arrow's current local content spend is significant but there are limitations in our current reporting system. • Our focus in 2020 will be to improve tracking, reporting and local engagement. • There will be opportunities with the proposed Surat Gas Project phases from 2020-2028. • Wells and gathering: <ul style="list-style-type: none"> ○ drilling ○ civil construction ○ logistics ○ telecommunications infrastructure ○ facility construction and upgrade ○ operations and maintenance • Field compression facilities: <ul style="list-style-type: none"> ○ facility construction and equipment ○ power station ○ civil construction ○ logistics ○ operations and maintenance. • Accommodation will be largely to house the construction workforce. • Upcoming opportunities will go to Arrow's tender board before we engage with the community through organisations like TSBE. <p>Stuart Armitage (AIFL committee): What about compensation values, should they be included?</p> <p>Brydie Hedges: Arrow are reviewing its local content reporting process to capture additional local spend which isn't being identified – such as money provided for rates, real estate leases and local road upgrades. We can have a look at what we can include from a CCA perspective however I note that this information is confidential. I'll come back to you on this one.</p> <p>Brian Bender: It would be difficult to capture whether compensation money is being spent in the community or otherwise.</p> <p>Alf Garnett (guest): These amounts are not traceable, but local content commitments help to assure spend in the local economy.</p> <p>Brian Bender: I believe WDRC currently receive 47% of their rates revenue from resources including CSG industry. They are planning for this to reduce significantly in 6-7 years.</p>	<p>Identify additional local content spend for reporting.</p>

ITEM 11	Community update – Liz Edwards <ul style="list-style-type: none">• The Indigenous Tertiary Scholarship program has received an overwhelming number of applications for 2020.<ul style="list-style-type: none">○ The program is delivered in partnership with 5 Queensland universities (USQ, QUT, Griffith, CQUni, JCU).○ Arrow has granted 110 scholarships through this program since 2012.• The Dalby Agricultural Scholarships Award ceremony took place on 2 March.<ul style="list-style-type: none">○ 10 students were awarded scholarships of \$5,000 each to pursue agricultural studies at the Dalby State High School campus.○ The funding covers a large portion of a student’s annual tuition and boarding costs.○ 80 students have been awarded with scholarships though this program since 2013.• The Dalby Youth Designation was held at Dalby State High School on 23-25 February.<ul style="list-style-type: none">○ 32 students from years 9-12 engaged with STEM related fields and were given an opportunity to bring their ideas to life.○ The students worked in teams to design and make prototypes and pitch their ideas to panel of industry experts including an Arrow representative.○ The program also included a one-day STEM related professional development opportunity for local teachers.• Arrow’s other recent social investment activities in the region have included the Arrow Broncos Dalby Blitz, school visits, regional dinner and fan day.• Through Brighter Futures, Arrow have supported a Paddock to Plate program at Waminda Services (disability support).• Mary O’Brien from the ‘RU Bugged Mate?’ program shared her message at a safety toolbox session for Arrow’s Surat Operations staff.• Arrow supported the Dalby Chamber of Commerce Christmas street party by supplying free face painting for children.	
ITEM 12	The role of gas in the energy transition – Alf Garnett <ul style="list-style-type: none">• Alf shared his views on energy transition and the critical roles for gas. Topics discussed included:<ul style="list-style-type: none">○ Global population growth as the root of the energy-climate issue.○ Differing world views on the degree of difficulty versus the urgency around dealing with climate change, technical, economic, social and political considerations make it difficult.○ Challenges with keeping the lights on, avoiding damaging price rises or large job losses whilst enabling economic development and United Nations Sustainable Development Goals.• Historic observations show that:<ul style="list-style-type: none">○ Provision of <i>more energy</i> is the main driver of increased wealth and welfare for an increasing population.	

	<ul style="list-style-type: none"> ○ Energy is demand-driven (not supply-led). • It's not a "<i>football match</i>" between competing technologies / ideologies the future mix will need a combination of various energy sources (renewable and non-renewable) as well as energy efficiency. • Natural gas has four main transition functions: <ul style="list-style-type: none"> ○ substitute for coal ○ enables renewables (as a back-up) ○ feeding people (used in fertiliser manufacture) ○ non-energy development (petrochemical production). • For gas to be a successful in the energy transition it must be abundant, affordable and acceptable. • Gas is a key part of a transition to a low carbon future if managed well. 	
ITEM 13	<p>Minutes of previous meeting and actions</p> <ul style="list-style-type: none"> • The minutes were circulated to members prior to the meeting. There were no questions raised; and the minutes were considered endorsed. • Outstanding actions have been closed out in this meeting. 	
ITEM 14	<p>Any other business</p> <p>Brian Bender: Is Arrow doing anything proactive around legacy coal core holes?</p> <p>Simon Gossmann: Arrow is not actively looking for existing coal exploration core holes.</p> <p>Alf Garnett (guest): The information is under the Mining Act not the Petroleum & Gas Act, so it sits with the State Government and is not publicly available.</p>	
ITEM 15	<p>Agreed outcomes, actions, deliverables</p> <ul style="list-style-type: none"> • Presentation to be made available online along with minutes. • Progress road use agreement with WDRC. • Investigate what data is available in relation to subsidence around the Linc Energy site. • Provide feedback on how Arrow would manage P&A of bores in the Condamine Alluvium area. • Identify additional local content spend for reporting. 	
	<p>Next meeting – 25 June, Toowoomba</p>	

There being no further business, the meeting was closed at 12.55pm