

Community information sessions 16-20 April 2012

Introduction

In April 2012 Arrow Energy held a series of community information sessions to discuss the Arrow Bowen Pipeline (ABP) Environmental Impact Statement (EIS).

Questions and answers were captured by Arrow staff and are presented in this document. Questions varied across the five sessions so to ensure that valuable information is shared throughout all of the communities, these notes summarise the discussions across all sessions. The notes are based on written records and include paraphrasing.

The information sessions were held from 16 to 20 April 2012 at:

- Moranbah, 16 April 2012
- Dysart, 17 April 2012
- Middlemount, 18 April 2012
- Gracemere, 19 April 2012
- Gladstone, 20 April 2012

How to read these notes

Questions and comments from the audience are in bold type.

The unbolded responses are from Arrow staff.

In some cases responses have been summarised. Where one response to a commonly-asked question was more comprehensive at one session than another, the more detailed response has been used in the interests of better understanding.

In some cases, additional information is included to provide further context or explanation. This information is in brackets within the text, or italicised following the answer.

If you have any further questions or comments about the project, the meeting notes or if you would like detailed maps of the proposed pipeline route, please contact the project team:

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- SKM are the EIS consultants and JTAA are the information session facilitators

ARROW BOWEN PIPELINE EIS CONSULTATION

MORANBAH SESSION 16/04/2012

Attendees:

- Community – five attendees
- Arrow/SKM/JTAA – 12 people

Presentation Length:

Formal presentation approximately 40 mins

Questions and Answers:

What will the pressure of the pipeline be?

10 200KPa may potentially go up to 13 000KPa

Clarification:

10.2 MPa up to 15.3MPa

Will there be compressor stations on the pipeline route?

The current plan is to have two liquefied natural gas (LNG) trains on Curtis Island. There is room to build an additional two trains if we would like. If we do go to four trains then we will either need a compressor station along the route or we will need to build an additional pipeline. There are compressor stations in our upstream fields and there will be another at the Gladstone Gas Hub (GGH).

Clarification:

There are no compressor stations planned along the pipeline route for the first stage of two train development. All compressor stations will be included in the upstream fields. A compressor station will not be located at the Gladstone Gas Hub (GGH).

What is the process for determining vegetation offsets?

We don't know yet. Quite often the ratio is 3:1 or 5:1 to account for mortality of regrowth. Environmental agencies will have the opportunity to comment on the EIS and our proposal. As mentioned this document is a draft, we will collate the feedback from community, government agencies and other stakeholders to incorporate into the final EIS document which will also include the final results from studies that are incomplete at this point in time such as Cultural Heritage studies.

Clarification:

Vegetation offsets will be managed in accordance with the Offset Management Strategy for Endangered Vulnerable or Near Threatened Species impacted by the project

Are there any plans to cohabitate any cables along the pipeline, for example fibre optic cables?

Anything we do establish will be directly related to, and necessary for, the pipeline project specifically.

Clarification:

A fibre optic cable for the ongoing management of the pipeline may be installed to facilitate operational communications and to assist in leak detection.

Will there be a fence during construction?

Traditionally not, because stock tends to stay away (*from construction activities*) and sometimes fencing attracts stock to the area causing more trouble for landholders. We will consult with landholders regarding the usual patterns of stock movement, driving routes etc prior to commencing construction.

Camps will be fenced to keep wild animals out.

Workforce will be fly in fly out (FIFO) during construction but we will aim for a residential workforce during operation.

Are the construction of the Arrow Surat Pipeline (ASP) and the ABP scheduled to commence at the same time and work to the same timeframes?

The timelines are similar based on the premise that Arrow intends to take final investment decision (FID) in late 2013 and this decision will be made on the basis of the whole project. Construction of the ASP and ABP projects is planned to occur during the dry season months with the ASP construction planned for 2015/2016 and ABP construction planned for 2016/2017.

Will the procurement strategy to buy steel require you to purchase a pipe mill?

There is no pipe mill in Australia that produces the pipe (*of the diameter*) that we require so we are forced to look offshore. There is also no pipe mill (*in Australia*) that supplies the coating that we require.

Clarification:

Arrow Energy will not be required to purchase a pipe mill.

What will the length be of any one single piece of pipe?

Either 12m or 18m. We are looking at the pros and cons of both. 12m can fit on an existing semi trailer whereas an 18m pipe needs an extended trailer. It will also depend on what diameter these pipes are available in.

Will there be any above ground rises along the pipeline route?

Where there is gas flow the pipeline will be under the ground. Line valves will be established aboveground at approximately 60-70km intervals along the pipeline. Additionally aboveground scraper stations will be established at approximately 100-150km intervals along the pipeline.

ARROW BOWEN PIPELINE EIS CONSULTATION

DYSART SESSION 17/04/2012

Attendees:

- Community – five attendees
- Arrow/SKM/JTAA – 13 people

Presentation Length:

An informal presentation was given due to low numbers and staggered arrival of community stakeholders.

Questions and Answers:

Is it specified whether you need to use native grasses during rehabilitation and vegetation offsets?

Normally we do, but we consult with the landholder about their preferences and planned activities regarding the future of the land. Any endangered plant species in the area are also taken into consideration and preference would be given to those where required.

When you say 'disturbance' (to the land or activities) do you refer to during construction or during operation?

Regarding compensation, it accounts for loss of land use and reduced quality of the land if that is the case. Often it is found that turning the top soil is actually beneficial for cropping.

Once the pipeline is laid (*and an easement is registered over the pipeline*) the only things you can't do are build houses or infrastructure over the right of way (ROW) or put dams in the ROW area, so activities typically continue as normal during the operation period. There should be no long term impacts.

Clarification:

Compensation is paid for impacts during and after the construction phase of the pipeline.

Arrow Energy will pay all direct losses incurred by the landholder which are not too remote and which are a natural and reasonable consequence of the project.

A right of way (ROW) is also referred to as an easement.

Will you be having dry camps?

No, however Arrow has a zero drug and alcohol policy with random or 100 per cent drug and alcohol testing taking place across all sites. The wet mess will close at 8pm each night to ensure workers arrive for work the next day with a 0.00 blood alcohol content (BAC) level. Additionally, since the consequence for a non-negative reading is instant dismissal for Arrow staff or prohibition from working on Arrow sites for contractors, the work teams tend to regulate themselves in terms of alcohol consumption.

What is the pipeline made out of?

It is a buried steel pipeline up to 42 inches in nominal diameter.

At what depth is the pipeline laid?

The pipeline is laid with a minimum depth of 750mm but may be laid at depths up to 1200-1500mm (*depth of cover*) in the event that the landholder needs to be able to carry out deep or blade ploughing or similar activities on the land. The increased depth will ensure that these activities are not impacted after construction.

ARROW BOWEN PIPELINE EIS CONSULTATION

MIDDLEMOUNT SESSION 18/04/2012

Attendees:

- Community – 6 attendees, all local landholders
- Arrow/SKM/JTAA – 13 people

Presentation Length:

Formal presentation approximately 50 mins

Questions and Answers:

How many days does it take to complete drilling activities?

Horizontal directional drilling (HDD) depends on the type of rock in the area and may take up to a week to complete drilling. We then complete welding and construction of the pipeline so in total construction may take 10 to 14 days to complete.

Clarification:

The HDD activities are a 24 hour, seven day operation. The welding and other construction activities are carried out during standard working hours as determined by the Queensland Department of Environment and Heritage Protection (DEHP) 'Conditions of Approval' for the EIS. Current proposed standard working hours are from 6am to 6pm.

How deep do you drill to go under rivers such as the Isaac River?

To go underneath a river the size of the Isaac we would use a HDD technique and drill to a depth of 15m beneath the bottom of the water crossing.

I have a bore 30m up from the proposed pipeline alignment

Geotechnical investigations to determine depth and type of geological conditions that exist will need to be undertaken to determine any likely impacts.

Stephen's Creek has very high sides which are prone to erosion, do you plan on using the HDD technique there?

Not at this stage. We are only planning on using HDD on the Isaac, Fitzroy and Raglan river crossings.

There are 12m high banks on that creek, are you going to try and trench there because that is right near my cultivation?

We will be working with you to look at the best way to cross that creek.

Clarification:

Further investigations and site inspections may determine that HDD may be required in this area.

Stephen's Creek is as big as the Isaac River and when it rains it comes up to the bridge maybe three times a year.

The area where you propose to cross at Stephen's Creek experiences rain and flood events in every month of the year, what will you do if it rains during construction and the creek banks erode?

During the short term, that is while construction activities take place, we acknowledge there will be a level of exposure and heightened risk of erosion. However, long term the plan is to re-instate banks to an equivalent condition to that in which they were found prior to construction.

This highlights why we consult with landholders to understand local conditions and the environment. You have just now told us that this area may be prone to flooding and erosion and we can address that.

So are you going to come back after five years and check for erosion?

We will come back more often than every five years. We will reinforce banks during the rehabilitation stage that follows the construction process and we will return to check any areas prone to flood events or erosion on a regular basis, particularly following any periods of heavy rain or flooding throughout the first three years.

The country that you're talking about is very fragile. If you were to start 100m either side of the Isaac Bridge it would be much better, the areas are at least 2m deeper there than at the Isaac Bridge.

ARROW BOWEN PIPELINE EIS CONSULTATION

GRACEMERE SESSION 19/04/2012

Attendees:

- Community – 27 attendees
- Arrow/SKM/JTAA – 14 people

Presentation Length:

Formal presentation approximately 60 mins

Questions and Answers:

I read in the EIS that you need a 30m easement – is that during construction or forever?

The easement is required during construction.

Clarification:

The 30m wide easement is required during construction and operations. The easement is registered on the land title for the lifetime of the pipeline.

The area of pipeline construction is referred to as a right of way (ROW) during construction and an easement during operation.

And can landowners still use that area?

We do require a 30-40m easement which is known as the right of way (ROW) for the pipeline. This is acquired via an access agreement, the ownership of the land remains with the landowner and they may use the land as they have prior to construction. The ROW will be the only land used and accessed during the pipeline construction which is why it needs to be about 30m wide, to allow movement of workers and materials along the length of the pipeline route. Following construction this ROW is rehabilitated and the landowner is able to continue all activities that were undertaken prior to construction. The only things that they will not be able to do in the area (*of the easement*) are build a house (*or any other structure*) or a dam.

How will Arrow access the easement, and will they only need to access the easement?

Landowners will be notified prior to anyone accessing the easement during operations and when access is required it will be restricted to the existing ROW (*easement*) area.

What does the landholder do with livestock? If you are building 2km of trench a day, you will have open trenches on the land for a considerable amount of time.

When trenching we don't have to split paddocks via a continuous pipeline as the trenching is not continuous and neither are pipelines.

We do talk to landholders regarding the typical movements of stock and any plans they may have in place regarding their stock. (*Breaks in the trench can be left for landholder or stock access reasons.*)

We usually find the stock are often inquisitive but they rarely fall into trenches and we have escape ramps to assist in case they did manage to get into the trench. Because it is uncommon, livestock don't typically need to be moved, unless you have Melbourne Cup grade horses that may need to be protected, we could look at fencing them in somewhere. It's really up to the landholder and these things would all be discussed prior to any work starting.

Other options available to prevent stock from approaching the trenches include fencing and grates.

What's the depth for horizontal directional drilling (HDD) that you intend to do under roads and railways?

Minimum depth would be about 1200mm (*depth of cover*) below the lowest points, such as the road (*table*) drain.

Has the State Government approved the deviation from the Stanwell Gladstone Infrastructure Corridor (SGIC)?

At this point no, the EIS proposes the deviation and presents the reasoning behind the decision to deviate. Some of these reasons include the lot sizes in particular areas, the impact is felt considerably less on larger blocks of land, avoiding flood prone areas to minimise environmental impacts and to minimise risk surrounding pipeline buoyancy. Because the pipeline will carry methane gas, it will be very light and counter buoyancy measures would be required in areas where the pipeline is likely to inundated with flood water.

The State Government has spent considerable amounts of tax payer's dollars to have the SGIC and now you're not even going to use it for its key purpose.

It's up to us to make a case for the (*proposed*) 50-60km deviation, but other people will make the judgement on that.

Clarification:

The pipeline does occupy 75% of the length of the SGIC.

If you get approval from the State Government to deviate from the SGIC will that set a precedent for other future pipelines to do the same?

We can't speculate on what decisions the State Government may or may not make, nor the decisions of other companies.

Can you use a different type of pipeline to counter the buoyancy issue?

Yes, we could but that still does not address the greater environmental impact in this area.

Clarification:

Given the operational pipeline will contain gas it will remain naturally buoyant even with mitigations in place.

The SGIC is designed to contain the disturbance while what you're proposing is to have both the existing SGIC and a separate disturbed area for your pipeline deviation. Also the deviation causes you to go onto additional landholder properties and devalue their land.

Land value is taken into account during the compensation process. Land is valued by an independent valuer both before any activity takes place on the land and after the pipeline has been constructed beneath the land. This ensures any diminished value can be compensated for fully.

Clarification:

Fair and reasonable compensation is assessed by an independent certified Practising Valuer by using existing valuation principles and Land Court precedent. Comparison land sales in the district are used for comparison with the affected property. Any directly affected property owners are compensated for loss in value and disturbance.

I think you're missing his point, he's saying that an area for pipelines has already been set aside, so you guys are going to end up putting easements in everyone's back yards.

You mentioned before the pipeline will be buried 1-2m, what happens if someone is currently a grazer and then the poor bugger decides to grow crops, what option does he have, you're not going to come back and lower the pipeline?

We need to be fairly conservative in our design to allow landholders to continue to use their land as they require and with the flexibility to make changes to the way they use their land in the future. Most crops don't need to be cultivated deeper than a meter so it shouldn't require the pipeline to be buried any deeper than this. There is also compensation for the impacts of having the pipeline on your property.

Have you determined where the five camps will be exactly? It doesn't say in the EIS where they are going to be? How much land is it going to take up? If it is on agricultural land or council land? Where will the water come from? How big will the camps be?

The location of the camps will be determined by the construction contractor and the process requires approvals through a separate process to the pipeline approvals.

Although there are five planned camps, only two will ever be operational at any given time and they will leap frog each other as the construction process progresses along the route.

The water will be supplied by Sun Water (*proposed*) but the contract for this will not be finalised until the construction planning phase begins.

Clarification:

Camp locations are subject to development approvals through the local council.

With the easement in place will there be any potential for future aboveground pipelines to be constructed in the same easement?

According to Australian Standards, ASA2008, pipelines are required to be underground.

Why can't Arrow use existing easements such as the power easements?

Whilst there is an area beneath powerlines and towers that does not appear to be occupied by the electricity companies, there is often associated underground infrastructure involved with these lines such as earth grids, which surround each tower. This infrastructure usually occupies the full width of the easement making it unsafe to lay pipelines in the same easement.

Additionally, when a company applies for an easement area they typically only apply for the minimum area required which doesn't allow for future infrastructure to use the same easement. This is because you want to achieve as little environmental impact as possible with a project.

Clarification:

Additionally there is an issue of induced voltages from high voltage powerlines that can cause issues elsewhere along the pipeline route, and this influences our preference for not locating pipelines adjacent to powerlines.

Will you run parallel to power lines?

We will cross power line easements in places but will not run parallel to them.

Clarification:

As above, the risk of induced voltages from powerlines influences our preference for not locating pipelines adjacent to powerlines. These risks can include injury to personnel working on pipelines or damage to the pipeline and associated infrastructure. Engineering design processes need to be adopted to ensure such injury or damage does not occur.

With regard to environmental disturbance of vegetation such as the Bluegrass and Brigalow will you undertake rehabilitation with these species?

Yes, seeds will be collected during any clearing and used for rehabilitation additional to the vegetation offset program. The details are currently being nussed out with the government as to what the offset ratio will be.

Can you explain the process for regulating weeds?

Numerous surveys have been conducted to identify all weeds and noxious plants along the route and ongoing surveys will be conducted to regulate the spread of any weeds and noxious plants during construction and operation activities. Additionally mandatory wash down procedures will be implemented for all vehicles and machinery during both construction and operation.

Is the pipeline going through any other floodplain areas?

The better part of 200km of the pipeline will be situated in floodplain areas.

Clarification:

The pipeline does pass through the Isaac River floodplain. Route selection in conjunction with landholders along the route has assisted in the location of the majority of the pipeline being laid on higher ground which is not normally subject to flooding.

So you will have buoyancy issues there as well?

Buoyancy is dependent upon soil type, for example black soil is likely to present buoyancy issues while clay is much heavier and denser and will hold the pipeline in place even if the floodplains are inundated.

So is it black soil in the SGIC?

We have yet to conduct detailed soil and geotechnical studies to determine the soil types along the entire pipeline length.

You don't yet know what soil is in the SGIC, yet you say that the pipeline will float there.

When we conduct detailed soil and geotechnical studies we will know conclusively and will be able to determine where buoyancy issues will arise. The studies that have taken place to date (*when combined with the existing soil mapping data currently available*) however do indicate that we will likely have issues in that section of the SGIC.

The real reason you're not using the SGIC is dollars.

It doesn't help landholders when people like you and Ergon and others keep putting easements in our back yards, why don't you use the easement that the Government used taxpayer's dollars to build?

Why aren't all the studies completed, isn't that necessary before you release an EIS? Why have you come here if you haven't finished your studies yet?

In this case that is the point of the supplementary EIS. The flora and fauna studies have been taking place for 12 to 18 months and other studies were carried out prior to that even. It is also worth noting that with these studies we survey beyond the 30m ROW and target specific habitats in the surrounding areas.

What happens with all the noise – what if a landholder doesn't want that ongoing noise?

The actual level and volume of noise differs minimally from the noise associated with road works that the council may conduct. Also, similar to road works, the noise would only ever be temporary as it would be associated with construction or maintenance activities.

Noise testing to date indicates that noise levels will not be exceeded.

Clarification:

There is no noise during operation of the pipeline.

The \$891M injection refers to what exactly?

The \$891M is the overall value to the Australian economy as a direct result of the pipeline itself. It is not representative of the value of the entire Arrow LNG project, which would be much larger.

So you have had the same type/size of pipes with CSG in areas with high bushfire risk?

During construction a total fire ban is imposed and necessary emergency response personnel will be onsite to assist. Additionally we will notify and cooperate with local bushfire services and emergency services. We are very conscious of bushfires and obviously don't want to do anything that might inadvertently start a fire.

During operation there is no way the pipeline can be exposed to any potential spark that would lead to fire or explosion.

Clarification:

The buried pipeline would not be exposed to any ignition sources.

What about the valves and scraper stations?

There is generally no gas flowing above ground, it remains below ground in the pipeline.

But how does a farmer know not to slash?

The farmer is fine to do anything on the land once the pipeline is laid. Other than build a dam or a house on it, the landholder is free to undertake any activity on his land.

ARROW BOWEN PIPELINE EIS CONSULTATION

GLADSTONE SESSION 20/04/2012

Attendees:

- Community – 18 attendees
- Arrow/SKM/JTAA – 13 people

Presentation Length:

Formal presentation approximately 50 mins

Questions and Answers:

Just a question on your hazard and risk, is there going to be any blasting activities?

There may be. We haven't completed our geotechnical studies yet but if results from these studies indicate that blasting is required then we may do so. If blasting is required the activities will be carried out according to Australian Standards and any landowners in the area will be notified in advance and consulted.

How would you transport and store the explosives required for blasting?

We don't anticipate that we will be using blasting extensively but haven't ruled out that we may need to. Everything including the transportation of blasting materials and the process followed to carryout blasting will be in accordance with current Australian Standards. For example vehicles will have appropriate explosives signage.

The area I was really thinking of is, as you might have seen in the media a number of firearms have gone missing recently, so security is important to us.

Any explosive material would be stored securely and inventory management and auditing will help monitor this risk as well.

Would the police, fire and State Emergency Services (SES) be involved if blasting activities were to take place?

Where deemed necessary, yes these services would be engaged and consulted. We would also ensure that if any blasting was to occur near a public road we would notify the community and work with the Department of Transport and Main Roads (DTMR) and the police to manage that.

Do you include the police service when you refer to emergency service, in particular regarding the Emergency Response Plan (ERP)?

Yes.

What communication services will be established along the pipeline route to assist with carryout activities and for safety purposes?

Primarily we will use two-way radio communication along the pipeline route to prevent dependence on mobile phones as we are aware of black spots in the coverage. Every vehicle, office, camp and such will be fitted out with a two-way radio.

There will also be permanent communication systems established to support operational staff in the long term including use of satellite phones.

So will that be integrated with the public phone system?

No, all construction communications will be operating on a stand alone system

How corrosive is methane to the steel pipeline?

There is actually nothing corrosive in gas. Gas will be treated at the upstream facilities; this treatment mostly focuses on removing water molecules from the gas. The gas will be treated to a particular specification to make it suitable for transmission via the pipeline.

The pipeline will also be sealed as a precautionary measure and ongoing inspections of the pipeline quality (wall thickness) along the route will be part of maintenance during operations.

In regard to the 2,952 workers mentioned via flow on effects, how will this impact travel and road use locally?

There will be some minor impacts mostly due to ancillary suppliers such as cleaning services, food deliveries and so on.

Clarification:

The 2,952 refers to the total of jobs projected to be generated by the pipeline project Australia wide as stated in the EIS (Table 4-102). It is expected that the project will generate approximately 700 direct roles during construction.

Will that be quantified in the transport management plan?

Yes both locally and regionally.

With regard to the five sites for camps, will the exact locations be bedded down by the time of the Supplementary EIS?

No, they will not be decided until the project is going ahead, during the construction approvals process.

How would someone like us find out about the proposed camp locations then?

A development application (DA) would need to be submitted (*to the local council*) so people would be made aware via the construction applications submitted to government.

We are looking at approximately 80 projects at the moment where we have been asked to be stakeholders in projects. We're finding things are falling through the cracks. There is an 800 bed facility to be constructed here that we knew nothing about. We have considerable experience but previously there has been a lack of prior contact regarding these projects.

Both regional and State Government will be engaged along with the normal referral bodies that will be involved and consulted such as emergency services.

Will the Terms of Reference provided by Arrow to your construction people be part of the ERPs?

Emergency response plans are dealt with by the actual contactor with Arrow providing Terms of Reference to the contractor. Emergency response plans are dealt with post-approval and form part of the projects management plan.

Emergency response plans which are currently being developed will be made available to emergency services for review in draft form as they become available.

We've been having trouble as we're often given 30 days to review and respond and in busy periods we may need 60-90 days in reality to comment particularly as local agencies may be responding to more than one Emergency Response Plan / EIS.

Will there be any security on valves and leak detection systems in place?

Yes, these will be in fenced compounds. Although the gas doesn't technically flow above ground if a leak is detected then the valves are able to isolate the leaking section of pipe.