

## Business Case – Capital Expenditure

# Wollert CG Instrument Air

Business Case Number 216

## 1 Project Approvals

**TABLE 1: BUSINESS CASE – PROJECT APPROVALS**

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<b>Approved By</b>	Craig Bonar, Manager East Coast Grid Engineering, APA Group

## 2 Project Overview

**TABLE 2: BUSINESS CASE – PROJECT OVERVIEW**

<b>Description of Issue/Project</b>	<p>The Wollert City Gate uses Instrument Gas which vents to atmosphere causing a safety hazard and unnecessary greenhouse gas emissions. There is adequate Instrument Air available at Wollert Compressor Station to power the actuated valves</p> <p>The project is to construct and commission the WCG Instrument Air which will be supplied from Wollert Compressor Station.</p>
<b>Options Considered</b>	<p>The following options have been considered:</p> <ol style="list-style-type: none"> <li>Option 1: Do Nothing Option</li> <li>Option 2: Link the Instrument Air supply from Wollert Compressor Station to the City Gate</li> </ol>
<b>Proposed Solution</b>	Link the Instrument Air supply from Wollert Compressor Station to the City Gate
<b>Estimated Cost</b>	\$504,247
<b>Consistency with the National Gas Rules (NGR)</b>	<p>The construction of these assets complies with the new capital expenditure criteria in Rule 79 of the NGR because:</p> <ul style="list-style-type: none"> <li>it is necessary to maintain and improve the safety of services and maintain the integrity of services (Rules 79(2)(c)(i) and (ii)); and</li> <li>it is such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services (Rule 79(1)(a)).</li> </ul>
<b>Stakeholder Engagement</b>	<p>Stakeholder benefits from this project are:</p> <ul style="list-style-type: none"> <li>Gas Market (reduced unaccounted for gas)</li> <li>Reduced carbon emissions</li> <li>Operations personnel whom benefit from reduced hazards in the workplace</li> </ul>

## 3 Background

The Wollert City Gate (WCG) operates with Instrument Gas (IG) for regulators and other devices. This equipment vents small amounts of IG during normal operation. Thus there is an almost constant release of natural gas to the atmosphere.

Natural gas is mostly methane which has a greenhouse gas multiple greater than 20 times that of carbon dioxide.

The Wollert Compressor Station (WCS) is adjacent to the WCG and operates on Instrument Air (IA) and provisioned for the WCG to be connected to the IA system in terms of capacity and an offtake, however the project did not route piping to WCG and thus did not convert the WCG to IA.

The conversion will require approximately 200m of underground pipe, a pressure indicating instrument, commissioning and drawing updates.

## 4 Risk Assessment

Converting the WCG from IG to IA will eliminate the hazard from gas release during normal operation and reduce greenhouse gas emissions. Whilst this hazard can be reduced through the control of ignition sources by using procedures and appropriately designed electrical equipment this is a second best option that does not eliminate the risk eliminating the gas release.

TABLE 3: RISK RATING

Risk Area	Risk Level
Health and Safety	Low
Environment	Low
Operational	Negligible
Customers	Negligible
Reputation	Low
Compliance	Negligible
Financial	Negligible
<b>Final Untreated Risk Rating</b>	<b>Low</b>

## 5 Options Considered

### 5.1 Option 1 – Do Nothing

The Do Nothing option will continue to operate as normal with gas release during normal operation

The Environmental Protection Act requires businesses to reduce harm to the environment where possible.

#### 5.1.1 Cost/Benefit Analysis

The costs with the Do Nothing option is to continue to report the release of gas through normal operation for the life of the WCG, expected to be at least 50 years. The amount of gas release per year is difficult to approximate, however over the life of the plant the volumes would be significant.

The risks to the Do Nothing option are the mitigation efforts must be sustained for the life of the plant.

The reasonably practical means of eliminating the hazard of venting gas in normal operation is the conversion to IA.

### 5.2 Summary of Cost/Benefit Analysis

TABLE 4: SUMMARY OF COST/BENEFIT ANALYSIS

Option	Benefits (Risk Reduction)	Costs
Option 1	Do Nothing	Indeterminate

WOLLERT CG INSTRUMENT AIR

Option 2	No alternative identified	
Option 3	Convert WCG to IA	\$ 504,247

### 5.3 Proposed Solution

#### 5.3.1 Convert the Wollert City Gate to Instrument Air

The proposed solution is to construct approximately 200m of underground polyethylene pipe, 50m of above ground stainless steel pipe for IA service. Connect to the existing IA system and commission the IA from IG at the WCG.

Consistent with the requirements of Rule 79 of the National Gas Rules, APA considers that the capital expenditure is:

- Prudent – The expenditure is necessary in order to improve the safety of services to personnel and is of a nature that a prudent service provider would incur. IA systems are used in all new compressor stations within APA.
- Efficient – The field work will be carried out by a suitably qualified external contractor. This procurement will be undertaken consistent with the APA procurement policy. The expenditure can therefore be considered consistent with the expenditure that a prudent service provider acting efficiently would incur
- Consistent with accepted and good industry practice – Addressing the risks associated with the constant venting of natural gas is a priority. Consistent with the As Low As Reasonably Practical principal in AS2885, this project is eliminates some threats to safe operation.

#### 5.3.2 Forecast Cost Breakdown

TABLE 5: PROJECT COST ESTIMATE,

	Total
Internal Labour	\$119,326
Materials	\$83,032
Contracted Labour	\$301,889
Other Costs	\$0
<b>Total</b>	<b>\$ 504,247</b>