

# Project Overview



**Project Name:** Network Monitoring Capability – IT07

**Description:**

Multinet Gas (MG) has a fleet of field devices that monitor the status of the gas distribution network and provide measurement data which is critical for the day-to-day management of the distribution network.

These devices are predominantly gas pressure chart recorders distributed across the network that communicate with a head end system via the 2G telecommunications network. The head end system includes software which allows MG operational staff to undertake analysis on the condition of the network and make decisions on network re-configuration necessary to maintain quality and reliability of supply.

These gas pressure monitoring devices are at end-of-life as they are physically locked to the Vodafone 2G network and cannot be upgraded to support 3G or 4G communications. When the Vodafone 2G network is shutdown these devices will cease to function

Between 2018 and 2022, MG will progressively replace the existing gas pressure devices with the next generation of logging devices. At the same time, other monitoring devices, such as Cathodic Protection devices for corrosion detection, are becoming cost effective and will be deployed across the network. It is expected that the number of devices will increase from approximately 100 in 2016 to 400 by 2022.

In conjunction with the rollout of new monitoring devices into the field, the existing head end system and associated monitoring software will need to be replaced to support these devices and ensure MG's monitoring capability is not disrupted.

Trials of new technology are planned to be undertaken in 2016/17 with large scale deployment expected to commence in 2018.

This project involves the replacement of the network monitoring head end system and associated software to support the deployment of new and replacement field devices and maintain the capability to monitor the gas network.

**Strategic Alignment:** The key strategic drivers for this project are to:

- Maintain systems to industry standards to avoid disruption to customers and to retain levels of efficiency.
- Ensure the ongoing performance, resilience and safety in the changing distribution network. - through the real-time monitoring of network status

The capital expenditure for this project is justified as it is:

- Prudent and efficient in line with accepted good industry practice: and
- Necessary to maintain the integrity and safety of MG's services.

**Options:**

All credible options to meet the key drivers of this project have been assessed:

1. Do Nothing
2. **Replace the network monitoring head end system/software**
3. Delay replacement of network monitoring head end system/software

**Rationale:**

The recommended option is:

**2. Replace the network monitoring head end system/software**

This recommended option provides the least-cost, least risk approach to maintain network monitoring capability and ensure the continued reliable and safe operation of the electricity distribution network.

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These existing pressure monitoring logging devices are at end-of-life as they are physically locked to the Vodafone 2G network and cannot be upgraded to support 3G or 4G. The devices themselves will be progressively replaced during the next GAAR period and will require replacement of the head end system in order to maintain this capability.

The Do Nothing option will not maintain MG's existing gas pressure monitoring capability and expose MG to unacceptable risk in managing the distribution network and maintaining current quality, reliability and security of supply, and safety standards.

Similarly, with Option 3, deferral of the replacement beyond 2019 is not recommended as there would be a very high likelihood the existing gas pressure monitoring capability will be jeopardised exposing MG to unacceptable risk.

<b>Timing:</b>	Major upgrade 2019
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<b>Cost:</b>	Total Cost: \$106,932
	The impact on IT Operating cost is estimated at ~\$8k per annum from 2020

<b>Notes:</b>
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