

Attachment 3.3

Minor capital works

Revised GN21 Plan

ACT and Queanbeyan-Palerang gas
network 2021–26

Submission to the Australian Energy Regulator
January 2021

1.1 Overview

To ensure that Evoenergy continues to provide a safe, reliable and competitive network gas service, we need to incur capex to undertake minor capital works. Minor capital works are identified and typically undertaken in a short timeframe, generally because of equipment failure or external party requirements. The projects range from replacing a leaking section of high-pressure pipe to installing bushfire valves during major fire incidents based on advice from emergency services.

Evoenergy's GN21 plan allocated expenditure for three minor capital works categories within stay-in-business (network renewal) and capacity development capex. These include the following:

- Minor capital works (Networks)
- Minor capital works (Pipes)
- Minor capital works (HP facilities)

The AER's draft decision accepted these projects as a placeholder but requested further information on actual expenditure trends on expenditure for each category. This attachment contains the relevant information and shows that Evoenergy's proposed allocations for minor capital works are prudent and efficient.

As shown in Table 1, despite our network assets getting older, we have proposed minor capital works on par with our historical 5 year average (2015-2020), consistent with our lean capex proposal approach.

Table 1 Annual capex for each program (\$ million (\$2020/21), direct, unescalated)

Program	Annual forecast requirement	Historical 5-year average annual capex (RY16-20)
Minor capital works (Networks)	0.10	0.14
Minor capital works (Pipes)	0.10	0.17
Minor capital works (HP facilities)	0.10	0.13
Total	0.30	0.44

When a minor project is identified to address / resolve a network issue, a separate project number is raised / created to better track the costs of that project and the funds are then drawn down from these minor capital allocations.

The following sections describe each of the three minor capital works allocations in further detail.

1.2 Minor capital works (Networks)

Minor capital works (Networks) are required to replace equipment on the medium pressure network (210kPa plastic network) such as mains and district regulators or augmenting the network with small reinforcements. These works are usually triggered by field investigations or analysis of the performance of the network and are generally undertaken to correct an issue or risk, concerning operability, safety or supply.

There are over 4,300km of 210kPa medium pressure plastic mains and 95 district regulators within the Evoenergy gas network which supplies gas to the entire domestic

gas customer base (>152,000) and a majority of the commercial customer base (~3,000).

Zincara stated:

... Evoenergy needs to demonstrate that in the current five-year period, it had actually incurred expenditure for small projects that supports the forecast allocation. There is no information in that regard. Zincara is therefore unable to recommend accepting the allocation.

Consistent with our objective to propose a lean capex forecast, we proposed a capex of \$0.10 million per annum for this allocation, which is below the costs we have recently incurred in carrying out these works – over the last 5 years, we have incurred an average of \$0.14 million per annum (refer Table 1-1).

Historical minor capital projects (networks) that were funded from this category included:

- District Regulator Vibration issues – Mooney type gas pressure regulators are an integral part of district regulators and I&C meter sets. Their performance of high gas flows at minimal differential pressures are ideal for Canberra winter loads, however at low off-period gas loads, the regulators “chattered” causing pressure waves resulting in significant vibration to all components within the district regulator meter sets. With the risk of over pressure and/or gas escape, the fleet of Mooney regulators (24 district regulators and two meter sets) were modified with the installation of Flowmax type Low Flow Range extenders to eliminate the vibration and risk. The project cost was \$72K.
- WASP pressure data loggers – This identified project was to replace the obsolete 2G data loggers and end of life Bristol mechanical gauges used for the Evoenergy winter gauging program to monitor end point network pressures during peak winter. This obsolete fleet was replaced with portable, intrinsically safe electronic pressure data loggers used on the medium pressure network. The project cost was \$156K.
- Florey reinforcement – This minor network reinforcement was identified during winter monitoring and performance analysis, where 500m of 110mm PE medium pressure main was constructed in Ratcliffe Crescent, Florey to ensure continuity of supply for the upcoming winter to approximately 300 customers. This is one example of many projects that are identified during winter performance analysis. The project cost was \$99K.

1.3 Minor capital works (Pipes)

Minor capital works (Pipes) are required to cover a range of reactive work to undertake on our pipework, both underground and above ground. These works are usually triggered by field investigations and defects and are generally undertaken to correct an issue or risk, concerning operability, safety or supply. Examples include installation of bushfire valves, cathodic protection equipment and high-pressure piping equipment (sleeves and clamps).

Zincara stated:

... Evoenergy needs to demonstrate that in the current five-year period, it had actually incurred expenditure for small projects that supports the forecast allocation. There is no information in that regard. Zincara is therefore unable to recommend accepting the allocation.

Consistent with our objective to propose a lean capex forecast, we proposed a capex of \$0.10 million per annum for this allocation, which is below the costs we have recently incurred in carrying out these works – over the last 5 years, we have incurred an average of \$0.17 million per annum (refer Table 1-1).

Historical minor capital projects (pipes) that were funded from this category included:

- Installation of Bushfire valves – These valves were identified, installed and prioritised during Dec 2019 – Feb 2020 bushfires and post event. Bushfire valves are installed as identified based on advice from Emergency Services on pockets of residential customer dwellings that could be engulfed by fire or have the potential to be in the line of sight of a fire. We respond to extreme bushfire events by reviewing the network configuration and installing valves. Where valves are installed, we can isolate these high-risk areas of the network to reduce the chances of explosion and fuelling the oncoming bushfire. Due to the urgency of this work, it was unable to be planned in the program. The project cost was \$335K.
- High pressure pipeline repair – During the installation of the Canberra Light Rail project, a section of the DN450mm secondary main was exposed along Northbourne Avenue and a gas leak was identified on the main. A temporary repair using a Smith-Plus Clamp was used to stop the gas leak. We then carry out a permanent repair on the section of affected main by removing the temporary clamp and welding a repair sleeve over the hole, in turn encapsulating the corroded pipe section. The project cost was \$237K.
- The purchase of high-pressure equipment – This minor project required the purchase of one Plidco DN250, high pressure class 900 (rating to 15MPa) clamp in the event of pipeline failure. A Plidco Clamp is required to maintain the capability of the network provider to respond to high pressure pipeline emergencies when the pipe is damaged. A Plidco Clamp, once installed, will ensure continuous pipeline pressure operation, and provide a safe environment for field personnel and the public whilst the repair plan is being developed and subsequent repair. The project cost was \$90K.

1.4 Minor capital works (HP facilities)

Minor capital works (HP Facilities) are required to replace failed or at-risk equipment on our High Pressure (HP) gas facilities. These HP facilities are among the most critical in the network as they are the main gateways to supplying the downstream customers in the gas network and operate at high pressure levels where equipment failures can result in catastrophic outcomes. Works are usually triggered by field investigations and defects and are generally undertaken to correct an issue or risk, concerning operability, safety or supply. We have seven HP facilities within the Evoenergy gas network.

Examples include upgrading actuators / regulators, improvements to the water bath / catalytic heaters and its systems, and replacement / upgrade of site security such as doors and fencing.

Zincara stated:

... We believe that Evoenergy needs to demonstrate that in the current five-year period, it actually incurred expenditure for small projects which would support the forecast allocation. There is currently no information in that regard. Zincara is therefore unable to recommend accepting the allocation.

Consistent with our objective to propose a lean capex forecast, we proposed a capex of \$0.10 million per annum for this allocation, which is below the costs we have recently incurred in carrying out these works – over the last 5 years, we have incurred an average of \$0.13 million per annum (refer Table 1-1).

Historical minor capital projects that were funded from this category included:

- Actuator replacement – A slam shut valve at the Watson facility was found to be faulty and unable to fully close. This could cause the network to over-pressure and risk a gas escape. It was found that the type of actuators on site were defective and obsolete. This minor project replaced the obsolete actuators with a new type, installation of new valve controllers and other control panel cabling. The project cost was \$48K.
- Fire risk mitigation – Following a review of the Watson facility, fire risk mitigation measures were urgently required. Fire at the facility may cause damage to pipes and equipment resulting in gas leakage or rupture. Works to the site included removal of trees / shrubs around the perimeter, gravelling of approximately 500m² within the compound, replacement of grate lids, installation of smoke detectors and fire-proof cabinetry. The project cost was \$312K.
- Water Bath Heater fuel gas line – The fuel gas system which feeds the Water Bath Heater (WBH) at the Hoskinstown facility had a design flaw which led to failure of equipment, burner trips, operation below material design minimum temperature (MDMT) and aggressive corrosion due to icing. Hence, this project upgraded the fuel gas line and removed the single point of failure, stopped icing of the fuel gas line, and improved the burner feed system at the WBH. The project cost was \$228K.