

# Final Plan Attachment 8.7

IT Expenditure Benchmarking, Australian Gas  
Networks Limited Victoria and Albury

A Report by KPMG

December 2016

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# IT Expenditure Benchmarking

Australian Gas Networks Limited  
Victoria & Albury

December 2016

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**Commercial in confidence**

Mr Craig de Laine  
Australian Gas Networks Limited  
400 King William Street  
ADELAIDE SA 5000

9 December 2016

Dear Craig

**Report on AGN's Victoria & Albury IT expenditure submission**

We have been engaged by Australian Gas Networks Limited (AGN) to provide analysis over the IT expenditure forecasts to be submitted to the Australian Energy Regulator (AER), as part of its proposal for the upcoming 2018 – 2022 Access Arrangement for its Victoria and Albury networks. Our analysis has been performed in accordance with our engagement letter dated 14 April 2016 and outlined in the Scope section of this report.

This report has been prepared based on data supplied by AGN on 6 December 2016. AGN's Victoria and Albury results have been compared to utilities industry benchmarks based on publicly available data and from KPMG's utilities IT benchmarking surveys. We have indicated in this report the sources of the information presented.

This report is not to be used for any other purpose or distributed to any other person, except as agreed by us in writing.

Thank you for the opportunity to provide AGN with these advisory services. We would like to thank you and the relevant AGN personnel for the assistance provided in conducting this engagement and we look forward to continuing to provide service to your organisation.

Yours sincerely



Josephine Meneses  
Partner

**Important Notice****Inherent Limitations**

This report has been prepared as outlined in the scope section for Australian Gas Networks Limited, Victoria & Albury (AGN Vic/Alb). The services provided in connection with this report comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board and consequently no opinions or conclusions intended to convey assurance have been expressed.

No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by, AGN Vic/Alb staff consulted as part of the process.

KPMG has indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the report.

KPMG is under no obligation in any circumstance to update this report, in either oral or written form, for events occurring after the report has been issued in final form.

The findings in this report have been formed on the above basis.

**Third Party Reliance**

Our consent to releasing this report to the AER is conditional to the terms below.

With respect to the release, and to the maximum extent permitted by law:

- a) KPMG is not responsible to you or any other party for any loss you or any other party may suffer in connection with the release of the report to, or use of the report by, the AER;
- b) you agree to release and forever discharge KPMG, its affiliated entities, and their partners, officers and employees from, and not assert against them, any action, liability, claim, suit, demand, claims for costs or other expenses or any other proceedings arising out of, or in connection with, the release of the report to the AER; and
- c) you will indemnify KPMG and its affiliated entities, and their partners, officers and employees against any loss, action, liability, claim, suit, demand, claim for costs or expenses or any other proceeding they may suffer arising out of, or in connection with, the release of the report to the AER.

# Contents

	Page		Page
<b>Glossary</b>	4	<b>Appendix A. AGN Victoria and Albury Data</b>	18
<b>Executive summary</b>	5	<b>Appendix B. Utilities Benchmarking Data</b>	19
— Background, scope and approach	6	<b>Appendix C. Data Definitions</b>	20
— Key observations	7		
<b>IT Expenditure overview</b>	8		
<b>Benchmarking analysis</b>	10		
— Explanation	11		
— Benchmarking			
I. Totex per customer	12		
II. Capex per customer	13		
III. IT Totex per customer	14		
IV. IT Capex per customer	15		
V. IT Opex per customer	16		

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# Glossary

<b>AA</b>	Access Arrangement	<b>Next AAP</b>	Next Access Arrangement Period From 1 January 2018 to 31 December 2022
<b>AAP</b>	Access Arrangement Period	<b>Nom</b>	Nominal
<b>AER</b>	Australian Energy Regulator	<b>NGR</b>	National Gas Rules
<b>AGN</b>	Australian Gas Networks Limited	<b>Opex</b>	Operating Expenditure
<b>APA</b>	APA Group	<b>Pop'n Size</b>	Number of organisations, included within the benchmark calculation of that year
<b>CA</b>	Category Analysis	<b>Previous AAP</b>	Previous Access Arrangement Period From 1 January 2008 to 31 December 2012
<b>Capex</b>	Capital Expenditure	<b>PTRM</b>	Post-tax Revenue Model
<b>Current AAP</b>	Current Access Arrangement Period From 1 January 2013 to 31 December 2017	<b>RFM</b>	Roll Forward Model
<b>Dep</b>	Depreciation	<b>RIN</b>	Regulatory Information Notices
<b>DPI</b>	Delivery Point ID	<b>Totex</b>	Total Expenditure, being: Capital Expenditure plus Operating Expenditure
<b>EB</b>	Economic Benchmarking	<b>Vic/Alb</b>	Victoria & Albury gas distribution networks
<b>EDPR</b>	Electricity Distribution Price Reset		
<b>Exc.</b>	Exclude		
<b>FTE</b>	Full Time Equivalent		
<b>FY</b>	Financial Year		
<b>Gas business</b>	AGN gas distribution business		
<b>Inc.</b>	Include		
<b>IT</b>	Information Technology		



# Executive summary

## Executive Summary

# Background, scope and approach

### Background

Australian Gas Networks Limited (AGN) is due to submit its proposal to the Australian Energy Regulator (AER) for the next Victoria & Albury Access Arrangement (AA) by 1 January 2017. In its initial forecasts AGN has proposed Information Technology (IT) Capital Expenditure (Capex) of \$63.4 million (\$Real 2016) over the next AA Period (AAP). It has also proposed IT Operating Expenditure (Opex) of \$30.0 million (\$Real 2016) over the next AAP.

AGN has engaged KPMG to perform an independent benchmark analysis of its IT expenditure against other Australian utilities. This report presents the results of the benchmarking analysis.

### Scope and Approach

This report provides a comparison of AGN's IT Capex and Opex benchmarks for the combined Victoria and Albury networks against other utilities, based on publicly available utilities data and KPMG's Utilities IT Benchmarking surveys.

The IT and network business data provided by AGN have been included in Appendix A of this report.

KPMG calculated the following benchmarks for AGN Vic/Alb, then compared the results to industry benchmarks.

- I. Total Expenditure (Totex): Totex per customer
- II. Capital Expenditure (Capex): Capex per customer
- III. IT Total Expenditure (IT Totex): IT Totex per customer
- IV. IT Capital Expenditure (IT Capex): IT Capex per customer, and
- V. IT Operating Expenditure (IT Opex): IT Opex per customer.

The comparison is based on five benchmarks, over a period of approximately 15 years (covering the previous, current and next AAPs), and is dependent on AGN and industry data availability. The list of benchmarked organisations and the scope of the data used in the calculations have been included in Appendix B of this report.



# Key observations

### Key observations

Based on the IT cost benchmarking analysis for AGN Vic/Alb, we have the following observations:

- IT Capex in the current and forecast AAPs reflect AGN's investment cycle for Victoria and Albury over the 15 year period whereby after a period of relatively low expenditure on IT, AGN is now commencing a period of increased investment as it modernises its systems.
- Other than a single spike in 2015 due to the implementation of two major IT projects, IT Capex in the current and previous AAPs has been low when compared to the industry. AGN is proposing IT investments in the next AAP to bring its technology capabilities in line with the industry. This is part of a national program impacting each of the jurisdictions in which AGN provides gas distribution network services.
- AGN's Victoria and Albury IT Totex, Capex and Opex per customer benchmark results are consistently below or in line with the industry benchmark mean. This suggests that its IT expenditure is comparatively efficient against the Australian utilities industry for both actual and planned IT expenditure. Other key observations include:
  - AGN's Victoria and Albury IT expenditure has been amongst the lowest in the industry in the previous AAP. Forecast increases in IT Capex for the next AAP will bring it closer to, but remaining below, the industry mean
  - AGN has forecast an increase to its Victoria and Albury IT Capex over the next AAP whilst still remaining below the industry mean for Capex per customer. It is forecast to return to its historically low levels towards the end of the period, a profile that reflects the general industry trend projected for that time
  - The increase in IT expenditure reflects an increasing reliance on IT within the industry to deliver the level of information and service being demanded by customers. There is a consistent trend within the industry for increasing use of IT in meeting customer requirements and managing distribution services.



# IT Expenditure overview

## IT Investment Cycles

AGN's IT Capex for Vic/Alb reflects a typical cycle of lower investment and consolidation followed by increased expenditure to 'catch-up' with changing customer requirements.

This cycle of IT Capex is evident across the three AAPs benchmarked in this report.

In the previous AAP, from 2008 to 2012, AGN Vic/Alb had very low levels of IT Capex. This was followed by an increase in the current AAP to deliver a number of IT programs in order to bring its technology capabilities in line with the industry.

After a lull in activity whilst AGN's South Australian jurisdiction takes priority in IT development, a catch-up period to bring Vic/Alb in to line with its South Australian business is forecast before returning to lower levels.

AGN has provided its financial data for Vic/Alb in line with its AA proposal submitted to the AER. The information shown on this summary is as provided by AGN – Nominal for all years to 2015 and Real \$2016 for all future years.

### IT Capex

A summary of AGN's Vic/Alb IT Capex over the three AAPs is as follows (all in \$Real 2016):

- Previous AAP, \$6.88m (Actual);
- Current AAP, of \$15.44 m (Actual/Forecast); and
- Next AAP, of \$63.39m (Forecast).

The under-investment in IT in the previous AAP has led AGN Vic/Alb to be out of step with the industry on its technology capabilities.

AGN has responded with investments in its foundation IT systems in the current AAP, such as its billing and enterprise asset management systems, commencing the process of bringing its IT capabilities back in line with the industry.

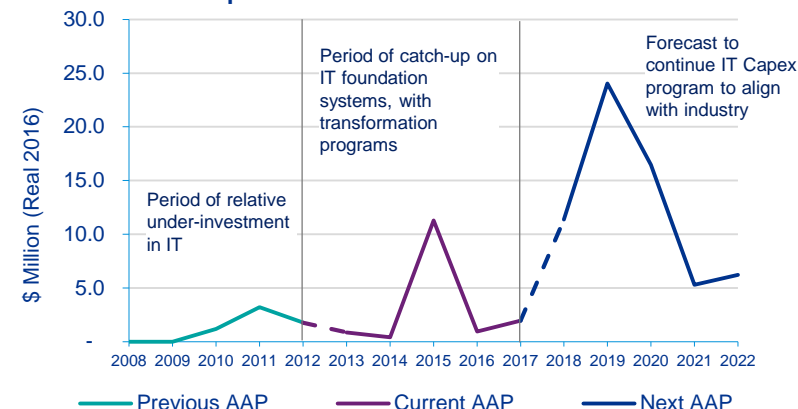
As part of their national program to update key IT systems, AGN has proposed to continue the growth in its IT Capex in the early years of the next AAP before reducing it on completion of the investment program towards the end of the period.

### IT Opex

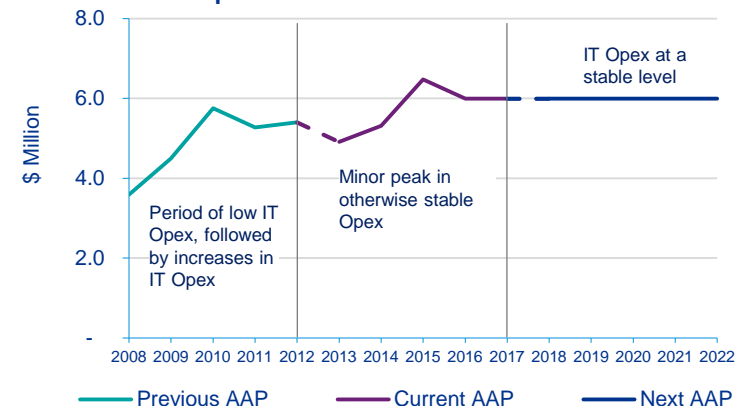
After an increase in IT Opex early in the previous AAP, AGN's IT Opex has remained relatively stable at approximately \$6.0m p.a. AGN is proposing to maintain the 2016 forecast Opex over the next AAP.

*Note: (1) IT Capex presented for the next AAP are direct costs only and do not incorporate cost escalation or overheads*

AGN Vic/Alb IT Capex



AGN Vic/Alb IT Opex





# Benchmarking analysis

# Explanation

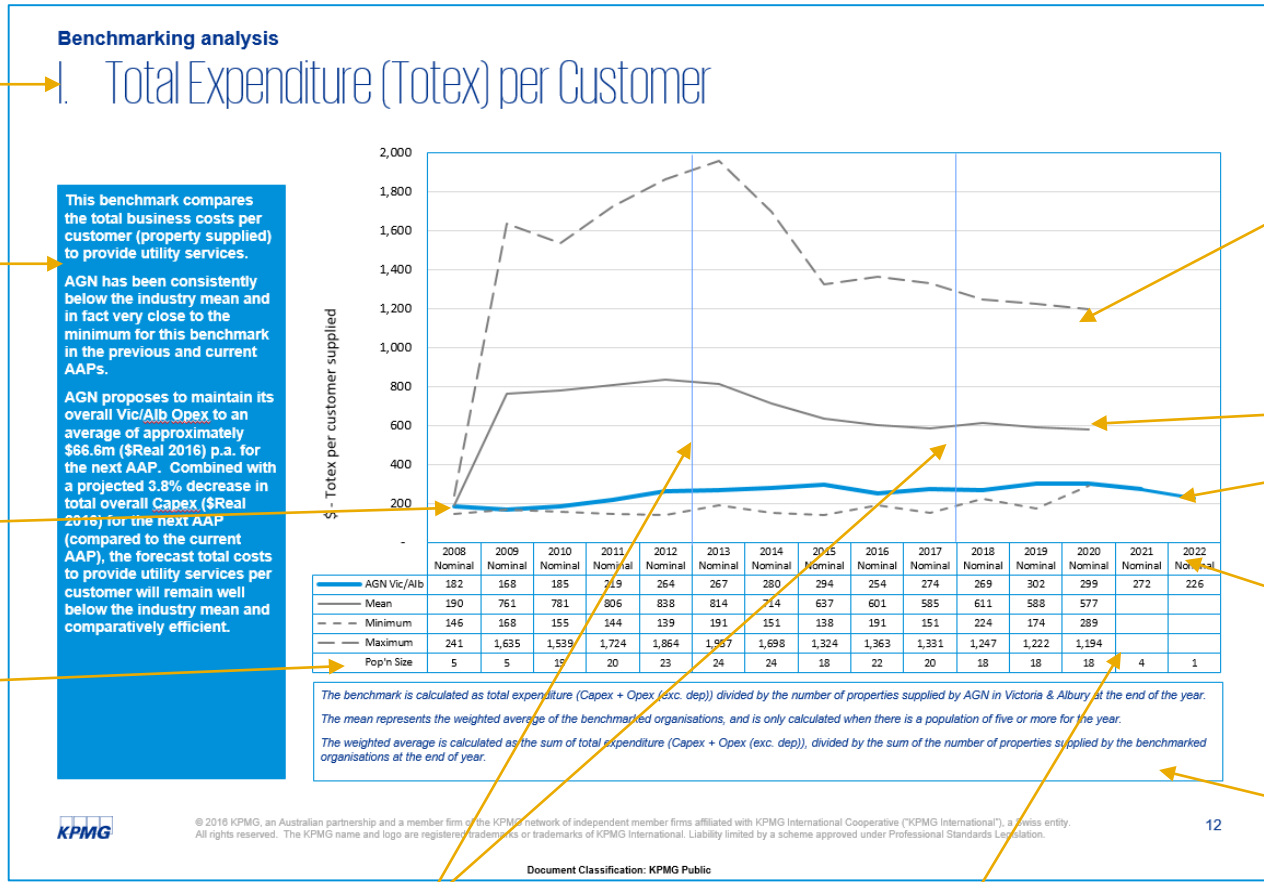
The diagram below explains the key components of the benchmarking analysis presented in this section:

Benchmark title

The text box provides an explanation of the benchmark, commentary of known anomalies in the industry and a summary of AGN's Vic/Alb benchmarking results.

The minimum line presents the lowest value each year for the specified benchmark across the utility organisations.

The number of utility organisations AGN Vic/Alb was benchmarked against for the year.



The maximum line presents the highest value each year for the specified benchmark across the utility organisations.

The mean line presents the value of the weighted average each year for the specified benchmark across the utility organisations.

The AGN Vic/Alb line represents AGN's Victoria & Albury result each year for the specified benchmark.

A mix of financial year and calendar year utilities data have been used in the calculations. Refer to Appendix B for details.

Explanation as to how the benchmark and the mean were calculated.

The chart is segmented into the three AGN Vic/Albury AA Periods.

A minimum of 5 utilities are required before a mean, max and min value is calculated

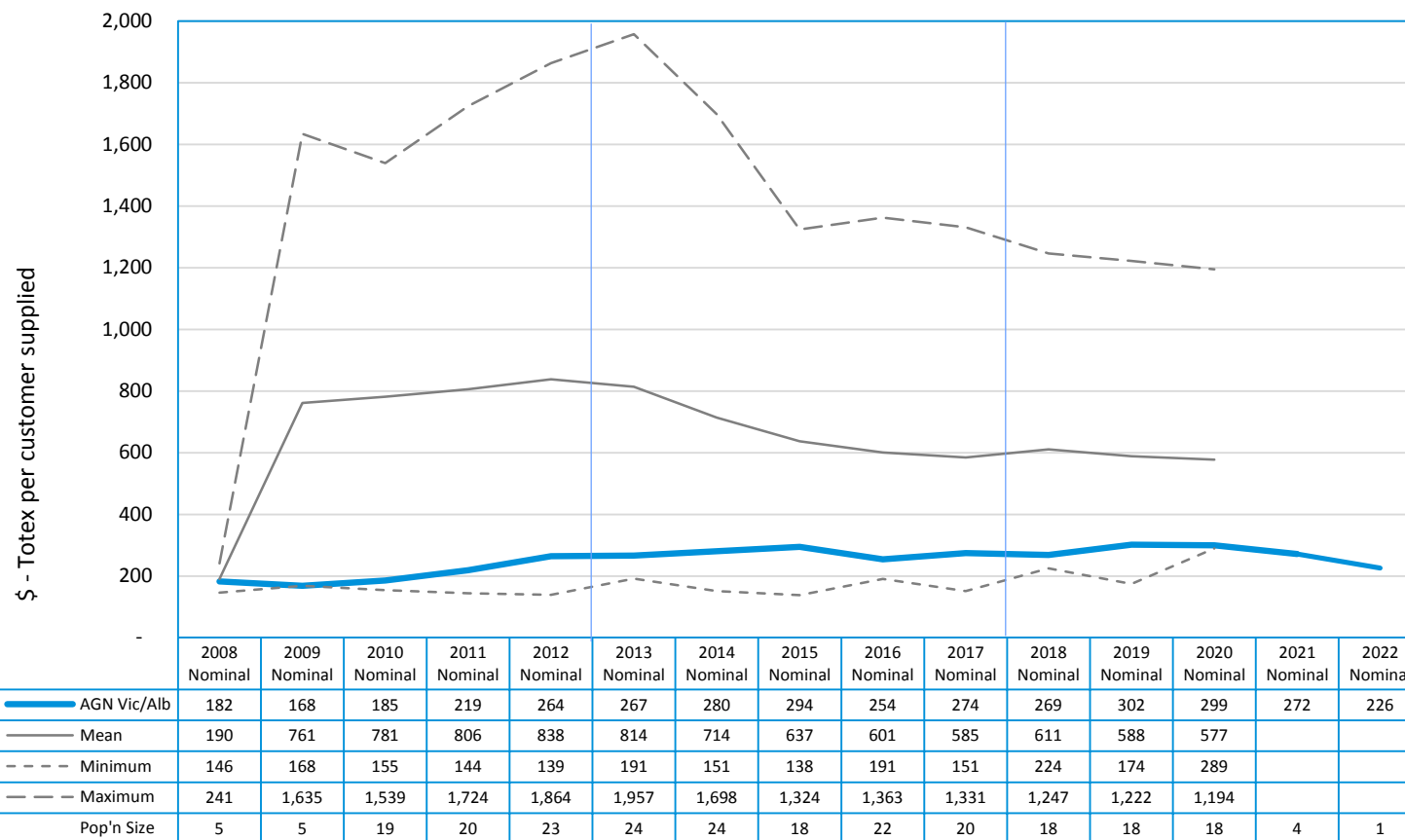
## Benchmarking analysis

# I. Total Expenditure (Totex) per Customer

This benchmark compares the total business costs per customer (property supplied) to provide utility services.

AGN has been consistently below the industry mean and in fact very close to the minimum for this benchmark in the previous and current AAPs.

AGN proposes to maintain its overall Vic/Alb Opex to an average of approximately \$66.6m (\$Real 2016) p.a. for the next AAP. Combined with a projected 3.8% decrease in total overall Capex (\$Real 2016) for the next AAP (compared to the current AAP), the forecast total costs to provide utility services per customer will remain well below the industry mean and comparatively efficient.



The benchmark is calculated as total expenditure (Capex + Opex (exc. dep)) divided by the number of properties supplied by AGN in Victoria & Albury at the end of the year.

The mean represents the weighted average of the benchmarked organisations, and is only calculated when there is a population of five or more for the year.

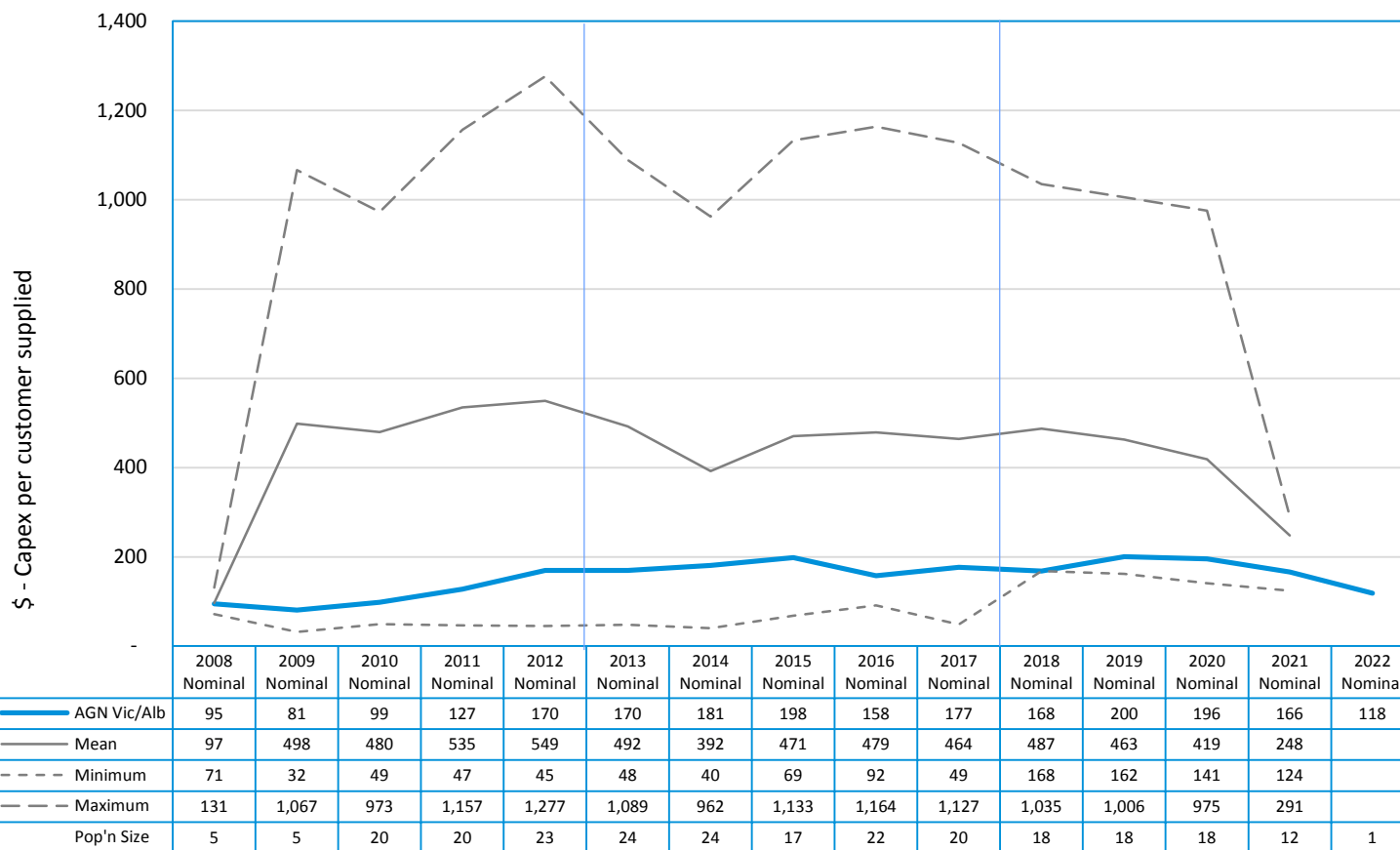
The weighted average is calculated as the sum of total expenditure (Capex + Opex (exc. dep)), divided by the sum of the number of properties supplied by the benchmarked organisations at the end of year.

# II. Capex per Customer

This benchmark compares the total business Capex investment per customer (property supplied) of the distribution utilities.

AGN has been consistently below the industry mean in the previous and current AAPs, which suggests relative under-investment in IT during these periods compared to the industry.

AGN has planned initial increases in business and IT Capex for Vic/Alb in the next AAP followed by a significant fall in both towards the end of the period. Taking into consideration the proposed pattern of Capex and the forecast steady increase in customer numbers, Capex per customer is forecast to remain below the industry mean and close to the minimum of the benchmark group.



The benchmark is calculated as total capital expenditure divided by the number of properties supplied by AGN in Victoria & Albury at the end of the year.

The mean represents the weighted average of the benchmarked organisations, and is only calculated when there is a population of five or more for the year.

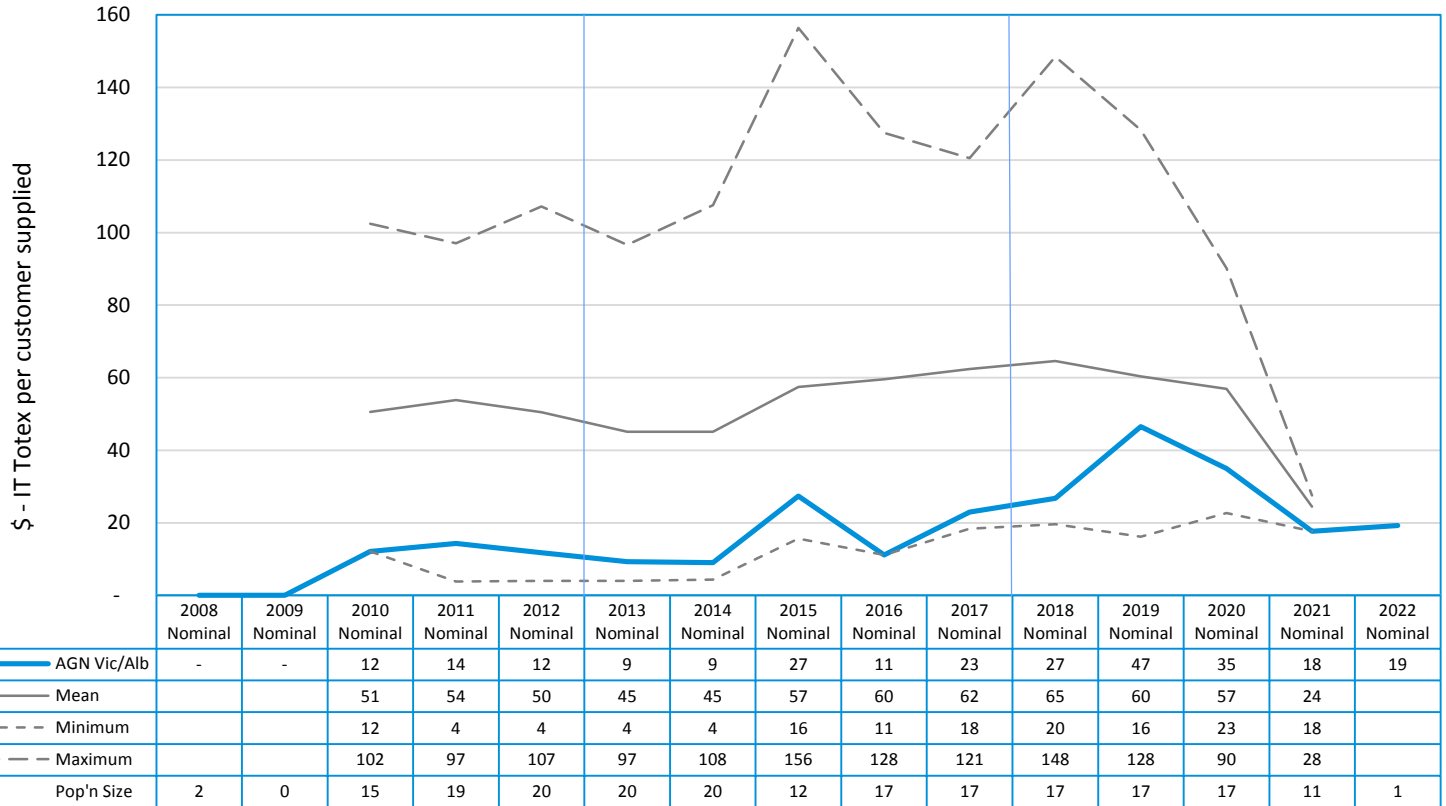
The weighted average is calculated as the sum of total capital expenditure divided by the sum of number of properties supplied by the benchmarked organisations at the end of year.

# III. IT Totex per Customer

This benchmark compares the total IT costs required to provide the utility services to each customer (property supplied).

AGN Vic/Alb has been consistently on or just above the minimum benchmark in the previous and current AAPs and has forecast to remain below the industry mean in the next AAP. After a sharp increase (still keeping below the mean), the AGN Vic/Alb result for this benchmark returns to the minimum level for the group.

The results suggest AGN's Vic/Alb IT expenditure is consistently efficient compared to the industry mean.



The benchmark is calculated as total IT expenditure (Capex + Opex (exc. dep)) divided by the number of properties supplied by AGN in Victoria & Albury at the end of the year.

The mean represents the weighted average of the benchmarked organisations, and is only calculated when there is a population of five or more for the year.

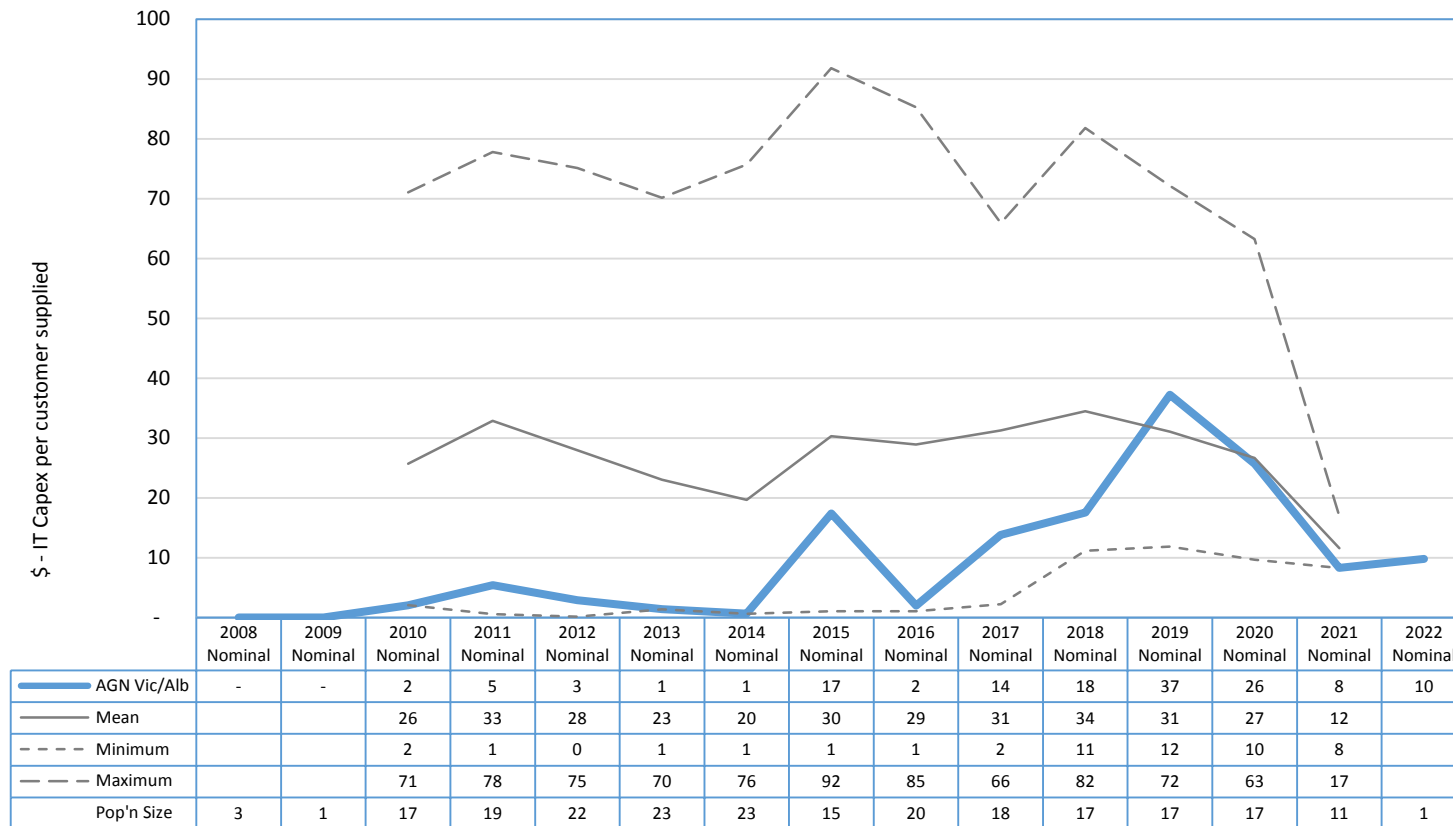
The weighted average is calculated as the sum of total IT expenditure (Capex + Opex (exc. dep)), divided by the sum of the number of properties supplied by the benchmarked organisations at the end of year.



# IV. IT Capex per Customer

This benchmark compares the level of IT capital expenditure per customer (property supplied). This benchmark also reflects an utility organisation's investment cycles.

AGN Vic/Alb has had amongst the lowest level of IT Capex per customer in the past two periods. Even with the planned uplift in the next AAP to bring its capability in line with the industry, AGN Vic/Alb is expected to remain close to the industry mean for this benchmark.



The benchmark is calculated as IT capital expenditure divided by number of properties supplied by AGN in Victoria & Albury at the end of the year.

The mean represents the weighted average of the benchmarked organisations, and is only calculated when there is a population of three or more for the year.

The weighted average is calculated as the sum of IT capital expenditure divided by the sum of number of properties supplied by the benchmarked organisations at the end of year.

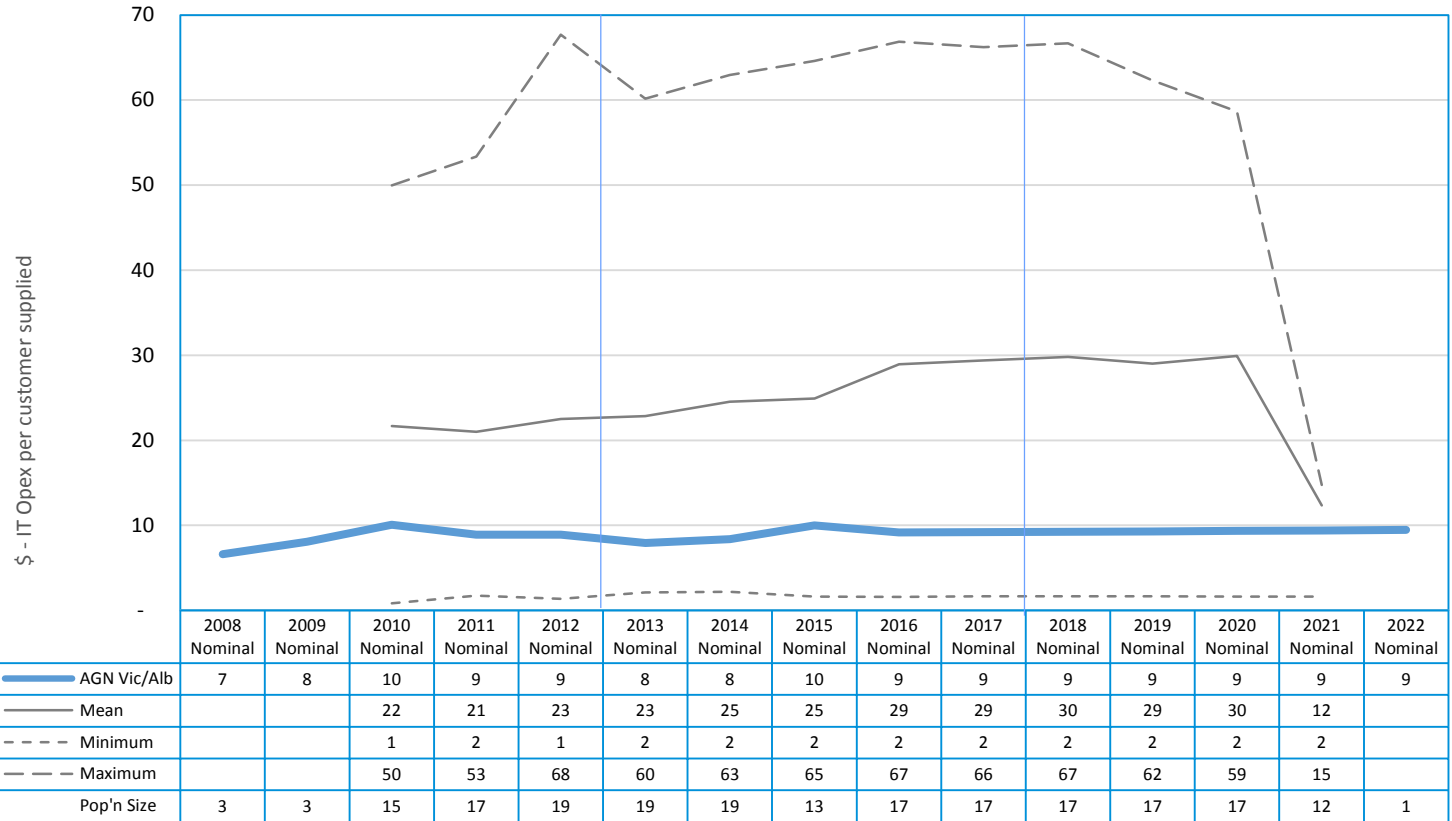
## Benchmarking analysis

# V. IT Opex per Customer

This benchmark compares the level of IT Opex per customer (property supplied).

AGN's Vic/Alb IT Opex per customer has been at a consistently low level which is forecast to continue. This reflects a flat level of expenditure despite increasing customer numbers.

Based on these results, AGN's Vic/Alb IT Opex can be considered efficient when compared to the industry.



The benchmark is calculated as IT operating expenditure (excl. dep) divided by number of properties supplied by AGN in Victoria & Albury at the end of the year.

The mean represents the weighted average of the benchmarked organisations, and is only calculated when there is a population of five or more for the year.

The weighted average is calculated as the sum of IT operating expenditure (excl. dep) divided by the sum of number of properties supplied by the benchmarked organisations at the end of year.



# Appendices

## Appendix A

# AGN Victoria & Albury benchmarking data

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	Nominal Actual	Nominal Actual	Nominal Actual	Nominal Actual	Nominal Actual	Nominal Actual	Nominal Actual	Nominal Actual	Nominal Fcast	Nominal Fcast	Nominal Fcast	Nominal Fcast	Nominal Fcast	Nominal Fcast	Nominal Fcast
<b>Capital Expenditure (\$000)</b>															
IT Capex	-	-	1,184	3,215	1,776	867	408	11,290	1,321	9,225	11,958	25,886	18,169	5,977	7,218
Total Capex	51,474	45,061	56,224	75,563	102,948	105,259	114,616	128,484	103,037	117,967	114,773	139,073	138,562	119,758	86,959
<b>Operating Expenditure (\$000)</b>															
IT Opex	3,586	4,499	5,758	5,276	5,400	4,910	5,311	6,477	5,993	6,142	6,296	6,453	6,615	6,780	6,950
Total Opex	47,524	48,425	49,326	54,124	57,408	60,106	63,079	62,363	63,204	65,102	68,320	70,745	73,352	76,175	79,186
<b>Customer Numbers</b>															
Customer	543,101	556,473	570,560	592,834	607,310	619,997	633,941	648,153	653,767	668,169	681,739	694,781	707,971	721,384	735,020

The AGN Vic/Alb benchmarks compared to the utility industry have been calculated based on the data presented above.

AGN Vic/Alb has provided their IT and gas business expenditure data and their customer numbers data for a 15-year period, from 2008 to 2022, covering their previous, current and future AAPs.

Financial data has been converted to a consistent Nominal basis.

The data reflects that provided by AGN as of 24 November 2016.

## Appendix B

# Utilities benchmarking data

KPMG has compared AGN's Vic/Alb IT expenditure benchmarks to a set of industry group benchmarks. The group consists of the 24 Australian gas, electricity and water distribution utilities as indicated to the right.

AGN's Vic/Alb results are compared to the benchmark means of the group. The means are calculated as the weighted average for each year where there is data available from five or more utilities.

The data, ranging from 5 to 15 years, has been sourced from publicly available company or regulatory data sources and KPMG utilities benchmarking surveys.

DNSP	State	Data	Years	Regulatory Data Period
<b>Gas Distribution</b>				
Australian Gas Networks	South Australia	Provided by AGN SA	2007 to 2021	Financial 1 July to 30 June
Jemena	New South Wales	Access Arrangement – PTRM, RFM, KPMG Benchmarking	2016 to 2020	
ActewAGL	ACT	Access Arrangement Reset RIN Master	2007 to 2020	
ATCO Gas	Western Australia	Access Arrangement Tariff Model	2007 to 2019	
Australian Gas Networks	Queensland	Access Arrangement Final Decision	2012 to 2016	
Allgas	Queensland	Access Arrangement - RFM	2012 to 2016	
Australian Gas Networks	Victoria	Access Arrangement – PTRM, RFM	2013 to 2017	Calendar 1 Jan to 31 Dec
Multinet Gas	Victoria	Access Arrangement – PTRM, KPMG Benchmarking Data	2013 to 2017	
Ausnet Services	Victoria	Access Arrangement – RFM	2013 to 2017	
<b>Electricity Distribution</b>				
Energex	Queensland	AER RINs: <ul style="list-style-type: none"> <li>• Categories Analysis RIN;</li> <li>• Economic Benchmarking RIN;</li> <li>• Reset RIN;</li> </ul> KPMG Benchmarking data: <ul style="list-style-type: none"> <li>• 2013 Utilities Benchmarking Survey;</li> <li>• IT expenditure for EDPR determinations</li> </ul>	In general: 2009 to 2020	Financial 1 July to 30 June
Ergon Energy	Queensland			
ActewAGL	ACT			
Ausgrid	New South Wales			
Endeavour Energy	New South Wales			
Essential Energy	New South Wales			
SA Power Networks	South Australia			
TasNetworks (Distribution)	Tasmania			
CitiPower	Victoria			
Powercor	Victoria			
Ausnet Services	Victoria			
Jemena	Victoria			
United Energy	Victoria			
<b>Water Distribution</b>				
SA Water	South Australia	KPMG Benchmarking data	2013 to 2020	Financial 1 July to 30 June
Melbourne Water	Victoria	KPMG Benchmarking data	2012 to 2021	

# Data definitions

Expenditure Data (\$000)	
Capital Expenditure (Capex)	
<b>Distribution Capex</b>	Gas distribution system capital expenditure (Capex) and forecasts, other than non-distribution system and IT Capex. Including connection, market expansion, mains augmentation, mains replacement, telemetry, meter replacement, regulators and distribution system Capex.
<b>Non-Distribution Capex</b>	Capex relating to motor vehicles, properties, etc., not relating to gas distribution system Capex.
<b>IT Capex</b>	Capital expenditure and forecasts for IT and communications directly attributable to IT and communications assets, including Capex relating to client devices, recurrent and non-recurrent categories.
Operating Expenditure (Opex (exc. Depreciation))	
<b>Distribution Opex</b>	Gas distribution system operating expenditure (Opex) and forecasts, other than non-distribution system and IT Opex. Including expenditure for connection market expansion, mains augmentation, mains replacement, telemetry, meter replacement, regulators and distribution system Opex.
<b>Non-Distribution Opex</b>	Opex relating to motor vehicles, properties etc., not relating to gas distribution Opex.
<b>IT Opex</b>	Operating expenditure and forecasts for IT and communications directly attributable to IT and communications assets, including Opex relating to client devices, recurrent and non-recurrent categories.
Total Expenditure (Totex)	
<b>Totex</b>	Sum of Capex and Opex (exc. Depreciation).
Volume / Drivers	
<b>Number of customers</b>	Number of properties (DPI) supplied by the gas distribution network at the end of the year.



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