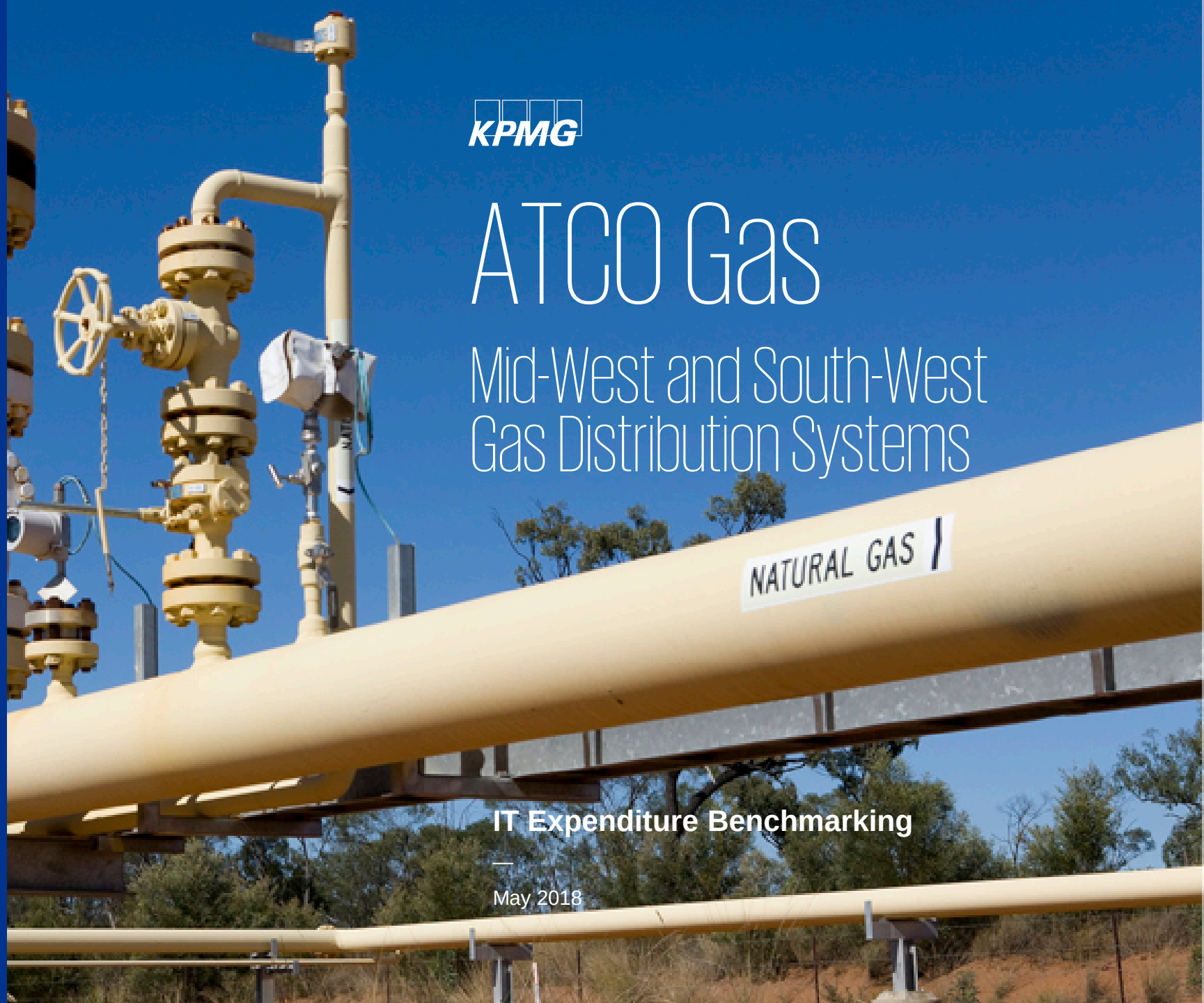

KPMG

ATCO Gas

Mid-West and South-West Gas Distribution Systems

IT Expenditure Benchmarking

—

May 2018

KPMG

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Commercial in confidence

9 May 2018

Mr Matt Nile
ATCO Gas Australia Pty Ltd
81 Prinsep Road
Jandakot WA 6164

Dear Matt,

Report on ATCO Gas – Mid-West and South-West Gas Distribution Systems IT expenditure submission

We have been engaged by ATCO Gas Australia Pty Ltd (AGA) to provide analysis over the IT expenditure forecasts to be submitted to the Economic Regulation Authority (ERA), Western Australia, as part of its proposal for the Fifth Access Arrangement (AA5), for the Mid-West and South-West gas distribution systems (MW&SW).

Our analysis has been performed in accordance with the Economic Consultancy Panel Agreement between ATCO Gas and KPMG and outlined in the Scope section of this report.

This report has been prepared based on data and information provided by ATCO Gas between 23 March and 4 May 2018. ATCO Gas's results have been compared to 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 ATCO Gas with these advisory services. We would like to thank you and the relevant ATCO Gas 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

This draft report has been prepared as outlined in the Scope Section. The services provided in connection with this engagement 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 you and the survey participants consulted as part of the process.

KPMG have 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

This report has been prepared at your request in accordance with the terms of the Economic Consultancy Panel Agreement between ATCO Gas and KPMG, Contract No. 460021001, signed 21 September 2017.

Our consent to releasing this report, when finalised, to the ERA WA 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 ERA WA;

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 ERA WA; 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 ERA WA.

Contents

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Glossary

AA	Access Arrangement
AA3	Third Access Arrangement Period From 1 Jan 2009 to 30 June 2014
AA4	Fourth Access Arrangement Period From 1 Jul 2014 to 31 Dec 2019
AA5	Fifth Access Arrangement Period From 1 Jan 2020 to 31 Dec 2024
AGA	ATCO Gas Australia
CA	Category Analysis
Capex	Capital Expenditure
CY	Calendar Year
Dep	Depreciation
DPI	Delivery Point ID
EB	Economic Benchmarking
EDPR	Electricity Distribution Price Reset
ERA	Economic Regulation Authority
Exc.	Exclude
FTE	Full Time Equivalent
FY	Financial Year
IT	Information Technology
MW&SW	Mid-West and South-West gas distribution systems
Nom	Nominal
NGR	National Gas Rules
Opex	Operating Expenditure
OT	Operational Technology
Pop'n Size	Population Size – the number of organisations, included within the benchmark calculation of that year
PTRM	Post-tax Revenue Model
RFM	Roll Forward Model
RIN	Regulatory Information Notices
SCADA	Supervisory Control and Data Acquisition
Totex	Total Expenditure, being: Capital Expenditure plus Operating Expenditure
WA	Western Australia

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Executive summary

Background, scope and approach

Background

ATCO Gas Australia Pty Ltd (AGA), as the owner and operator of the Mid-West and South-West Gas Distribution Systems (MW&SW), is preparing its Fifth Access Arrangement (AA5) submission, due to be lodged with the Economic Regulation Authority (ERA), Western Australia (WA) in September 2018. The submission will include IT capital and operating expenditure forecasts for the AA5 period (2020-2024) to support gas distribution systems services.

In its initial forecasts, ATCO Gas is proposing Information Technology (IT) Capital Expenditure (Capex) of $36.6 million (Real 2019$) and IT Operating Expenditure (Opex) of $56.5 million (Real 2019$) for the AA5 period.

ATCO Gas has engaged KPMG to perform an independent benchmark analysis of its IT expenditure against other Australian utilities.

Scope and approach

This report provides a comparison of ATCO Gas's IT Capex and Opex benchmarks for the Mid-West and South-West gas distribution systems against other utilities, based on publicly available utilities data and KPMG's Utilities IT Benchmarking surveys.

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

KPMG calculated the following benchmarks for ATCO Gas, then compared the results to industry benchmarks.

I. Total Expenditure (Totex): Totex per customer;
II. Capital Expenditure (Capex): Capex per customer;
III. Operating Expenditure (Opex): Opex per customer;
IV. IT Total Expenditure (IT Totex): IT Totex per customer;
V. IT Capital Expenditure (IT Capex): IT Capex per customer;
VI. IT Operating Expenditure (IT Opex): IT Opex per customer;
VII. Total Expenditure (Totex): IT Totex as a % of Totex;
VIII. Capital Expenditure (Capex): IT Capex as a % of Capex; and
IX. Operating Expenditure (Opex): IT Opex as a % of Opex.

The comparison is based on nine benchmarks, over a period of 16 years (covering the three Access Arrangement periods, AA3, AA4 and AA5) and is dependent on ATCO Gas 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 ATCO Gas MW&SW, we have the following observations:

- ATCO Gas's IT Totex, Capex and Opex per customer benchmark results are consistently below the industry mean and in many cases benchmarked close to or at the industry minimum. The results suggest ATCO Gas's IT expenditure is efficient, when compared to the Australian utilities industry.
- ATCO Gas reported low IT Capex for AA3, with benchmark results amongst the lowest in the industry.
- During AA4, ATCO Gas commenced the renewal and enhancements of its core IT applications and systems, the initiatives include application renewal, enhancements to existing core applications, transformation of and the investment in the SAP platform to align asset management practices and processes with ISO 55001. The benchmark results over AA4 remain below the industry mean.
- ATCO Gas is forecasting further IT expenditure increases in AA5. Despite this, the IT expenditure is expected to remain lower than benchmarked industry.
- The planned AA5 IT investments will enable ATCO Gas to advance towards becoming a Digital Utility by optimising technology and processes, whilst leveraging technological capabilities to deliver sustained operational efficiency, customer services and a safe and reliable network service. The planned IT investments include:
  - Continuation of the application renewal program;
  - Integration of IT and OT platforms for asset conditioning data;
  - Digital platforms and Omni channel approach for customer services;
  - Collaboration, work and resource management through secure channels; and
  - Programs to minimise risks from application outages and security threats.

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IT expenditure overview

IT Capex and IT Opex

IT Capex:

- **Low IT Capex for AA3;**
- **Increase in AA4 with the enhancement and renewal of core IT applications and systems;**
- **Forecasting increases in AA5, with proposed IT investment in the following areas:**
  - **Continuation of applications renewal,;**
  - **IT and OT platforms integration;**
  - **Digital platforms and Omni channel approach for customer services;**
  - **Collaboration, work and resource management; and**
  - **Programs to minimise risks from application outages and security threats.**

IT Opex:

ATCO Gas is forecasting an increase in IT Opex in AA5, to reach approximately $11.3 million p.a. (Real 2019$).

ATCO Gas has provided its financial data for MW&SW in line with its Access Arrangement proposal planned for submission to the ERA. The expenditure information shown on this summary is presented in Real 2019$ for all years from 2009 to 2024.

IT Capex

A summary of ATCO Gas's IT Capex over the three AA periods is as follows (all in Real 2019$):

- AA3, $19.37million (Actual);
- AA4, $30.01 million (Actual/Forecast); and
- AA5, $36.57 million (Forecast).

The low expenditure in AA3, is a result of reduction in approved regulatory funding.

In the current AA4 period, IT investments included front and back office IT systems for asset management, financial management, customer relationship management and employee self-serve systems. These investments have enabled ATCO Gas to commence the process of bringing its IT capabilities back in line with the industry.

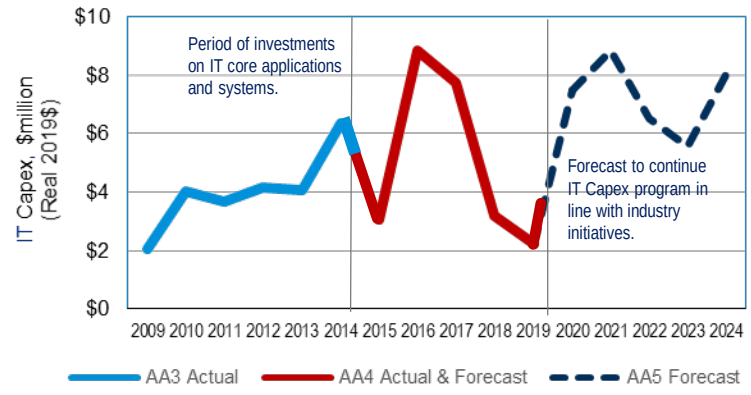
During the AA5 period, investments will continue for upgrading and expanding existing IT systems with a more strategic requirement to explore new opportunities for digital transformation of the business.

IT Opex

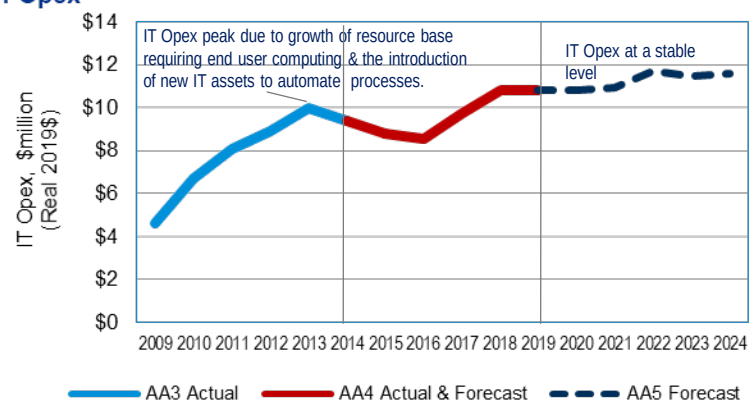
IT Opex increased at the end of AA3 due to increased demand on IT services from growth in its resource base, end user computing and automation of business processes.

ATCO Gas reported lower IT Opex in early AA4, then increased through the period and is forecasting to further increase in AA5, to approximately $11.3 million p.a. (Real 2019$).

IT Capex



IT Opex



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ATCO Gas benchmark data and results

ATCO Gas benchmark data

ATCO Gas has provided the business and IT expenditure data within Appendix A for benchmarking analysis. The data covers three AA periods over 16 years, it includes: business and IT, actual and forecast expenditure and customer data.

Access Arrangement Period		Dates	Duration	Accounting Year	Expenditure data provided
Third Access Arrangement Period	AA3	1 January 2009 to 30 June 2014	5.5 years	Financial Year	Actuals in Nominal$
Fourth Access Arrangement Period	AA4	1 July 2014 to 31 December 2019	5.5 years	Calendar Year	Actuals in Nominal$ and Forecasts in Real 2019$
Fifth Access Arrangement Period	AA5	1 January 2020 to 31 December 2024	5 years	Calendar Year	Forecasts in Real 2019$

Conversion of financial data

For consistent comparison with the industry group data to perform benchmark analysis, KPMG applied the following to the ATCO Gas data:

- Converted the financial year based data to calendar year, by summing 50% each of the current and following financial years as a calendar year, and
- Converted financial data from Nominal$ to Real 2019$ using the CPI adjustment factors provided by ATCO Gas.

Exclusion of Telemetry Capex

KPMG acknowledges the mixed approach taken by the utility organisations in the treatment of operational and information technology expenditures. Based on our analysis of the benchmark group data, most utility organisations account for their telemetry Capex (and equivalent) within their distribution system Capex categories, hence for the purpose of consistency, Telemetry Capex has been excluded from ATCO Gas's IT Capex for this benchmark analysis.

ATCO Gas benchmark data and results

ATCO Gas Benchmark Data – data converted for benchmark analysis are summarised in the table below:

ATCO Gas Benchmark Data																
Calendar Year	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Capital Expenditure ($000) Real 2019$																
IT Capex	$2,069	$4,012	$3,656	$4,146	$4,051	$6,356	$3,081	$8,824	$7,759	$3,182	$2,239	$7,505	$8,862	$6,534	$5,577	$8,095
Total Capex	$52,380	$53,101	$44,049	$65,152	$82,184	$82,331	$81,076	$93,028	$92,572	$99,047	$84,064	$108,864	$109,355	$109,728	$112,005	$109,101
Operating Expenditure ($000) Real 2019$																
IT Opex	$4,637	$6,712	$8,042	$8,920	$9,997	$9,387	$8,794	$8,527	$9,731	$10,794	$10,806	$10,782	$10,951	$11,688	$11,482	$11,587
Total Opex	$58,625	$72,028	$64,780	$66,488	$71,198	$71,648	$62,131	$61,346	$60,776	$60,130	$59,991	$61,189	$62,649	$64,273	$65,368	$66,666
Customer Numbers																
Customers	598,171	617,213	632,086	646,798	661,260	682,986	699,160	718,325	732,182	740,943	749,836	761,990	774,341	786,958	799,867	813,038

ATCO Gas benchmark results - key benchmark results are summarised in the table below.

Benchmarks (Real 2019$)																
Calendar Year	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Totex per customer	$186	$201	$170	$201	$229	$225	$205	$215	$209	$215	$192	$223	$222	$221	$222	$216
Capex per customer	$88	$85	$69	$100	$123	$121	$116	$130	$126	$134	$112	$143	$141	$139	$140	$134
Opex per customer	$98	$115	$101	$102	$106	$105	$89	$85	$83	$81	$80	$80	$81	$82	$82	$82
IT Totex per customer	$11	$17	$18	$20	$21	$23	$17	$24	$24	$19	$17	$24	$26	$23	$21	$24
IT Capex per customer	$3	$6	$6	$6	$6	$9	$4	$12	$11	$4	$3	$10	$11	$8	$7	$10
IT Opex per customer	$8	$11	$13	$14	$15	$14	$13	$12	$13	$15	$14	$14	$14	$15	$14	$14
IT Totex as a % of Totex	6.04%	8.57%	10.75%	9.93%	9.16%	10.22%	8.29%	11.24%	11.41%	8.78%	9.06%	10.75%	11.52%	10.47%	9.62%	11.20%
IT Capex as a % of Capex	3.95%	7.55%	8.30%	6.36%	4.93%	7.72%	3.80%	9.49%	8.38%	3.21%	2.66%	6.89%	8.10%	5.95%	4.98%	7.42%
IT Opex as a % of Opex	7.91%	9.32%	12.41%	13.42%	14.04%	13.10%	14.15%	13.90%	16.01%	17.95%	18.01%	17.62%	17.48%	18.18%	17.57%	17.38%

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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 ATCO Gas benchmarking results.

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

The number of utility organisations ATCO Gas was benchmarked against for the year.

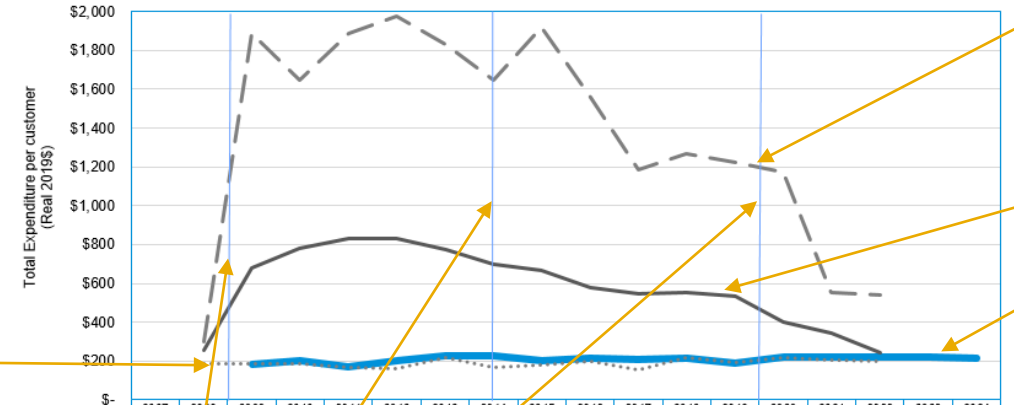
I. Total Expenditure (Totex) per Customer

This benchmark compares the total expenditure in providing utility services to each customer.

The industry cost to provide utility services, is trending downwards.

ATCO Gas benchmark:

- **Consistently below or close to industry minimum;**
- **Forecast average annual Totex to increase from $207 (Real 2019$) per customer in AA4 to $221 (Real 2019$) in AA5; and**
- **Despite the forecast increase, ATCO Gas is likely to remain below industry mean and comparatively efficient.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			$186	$201	$170	$201	$229	$225	$205	$215	$209	$215	$192	$223	$222	$221	$222	$216
Mean		$255	$678	$782	$830	$833	$776	$700	$669	$578	$546	$553	$532	$402	$347	$242		
Minimum		$184	$186	$187	$169	$161	$216	$167	$179	$201	$156	$215	$192	$216	$204	$199		
Maximum		$302	$1,885	$1,845	$1,886	$1,976	$1,830	$1,649	$1,916	$1,557	$1,185	$1,268	$1,222	$1,171	$554	$540		
Pop'n Size	2	5	20	20	21	24	25	25	25	25	22	21	21	18	8	5	2	2

The benchmark is calculated as Totex divided by the number of properties supplied by ATCO Gas at the end of the year. Totex is defined as Total Capex + Total Opex (exc. Dep) and is calculated where both Total Capex and Total Opex data are available.

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

The weighted average is calculated as the sum of Totex, divided by the sum of the number of properties supplied by the benchmarked organisations at the end of 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 ATCO Gas line represents ATCO Gas's 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 ATCO Gas AA Periods.

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

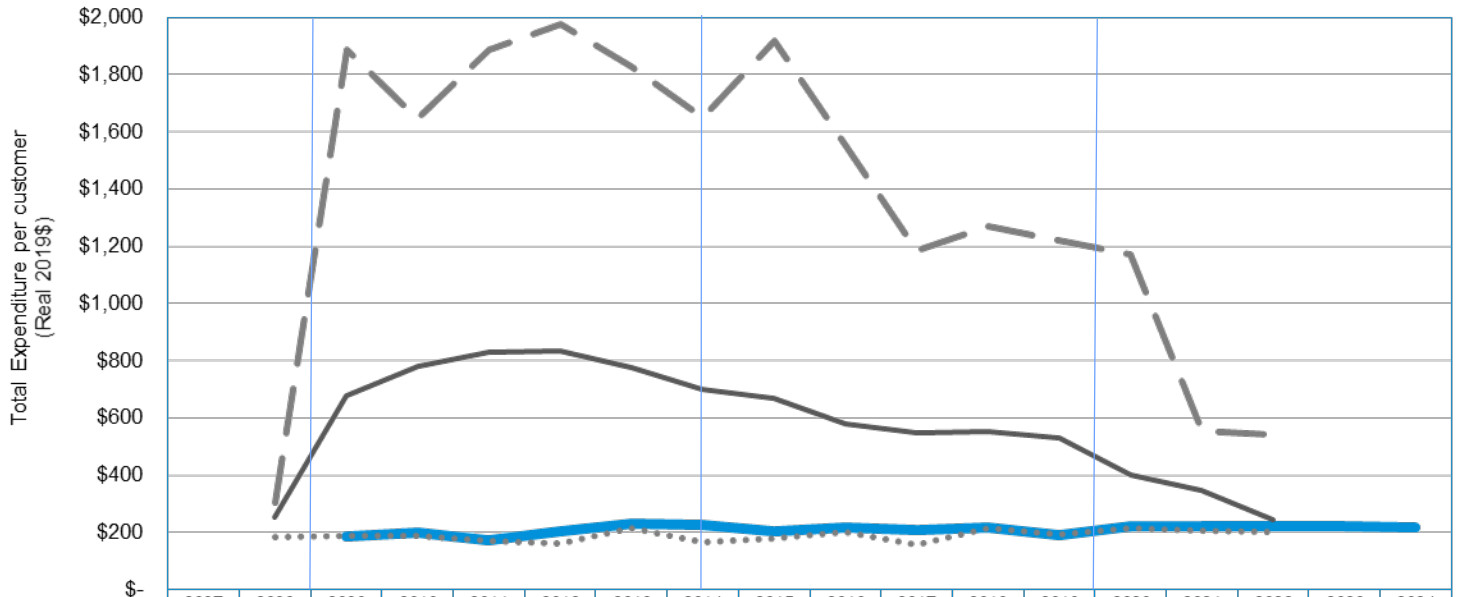
I. Totex per customer

This benchmark compares the total expenditure in providing utility services to each customer.

The industry cost to provide utility services, is trending downwards.

ATCO Gas benchmark:

- **Consistently below industry mean and is either close to or at the industry minimum;**
- **Forecast average annual Totex to increase from $207 (Real 2019$) per customer in AA4 to $221 (Real 2019$) in AA5; and**
- **Despite the forecast increase, ATCO Gas is likely to remain below industry mean and comparatively efficient.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			$186	$201	$170	$201	$229	$225	$205	$215	$209	$215	$192	$223	$222	$221	$222	$216
Mean		$255	$678	$782	$830	$833	$776	$700	$669	$578	$546	$553	$532	$402	$347	$242		
Minimum		$184	$186	$187	$169	$161	$216	$167	$179	$201	$156	$215	$192	$216	$204	$199		
Maximum		$302	$1,885	$1,645	$1,886	$1,976	$1,830	$1,649	$1,916	$1,557	$1,185	$1,268	$1,222	$1,171	$554	$540		
Pop'n Size	2	5	20	20	21	24	25	25	25	25	22	21	21	18	8	5	2	2

The benchmark is calculated as Totex divided by the number of customers supplied by ATCO Gas at the end of the year. Totex is defined as Total Capex + Total Opex (exc. Dep), and is only calculated where both Total Capex and Total Opex data are available.

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

The weighted average is calculated as the sum of Totex, divided by the sum of the number of customers supplied by the benchmarked organisations at the end of the year.

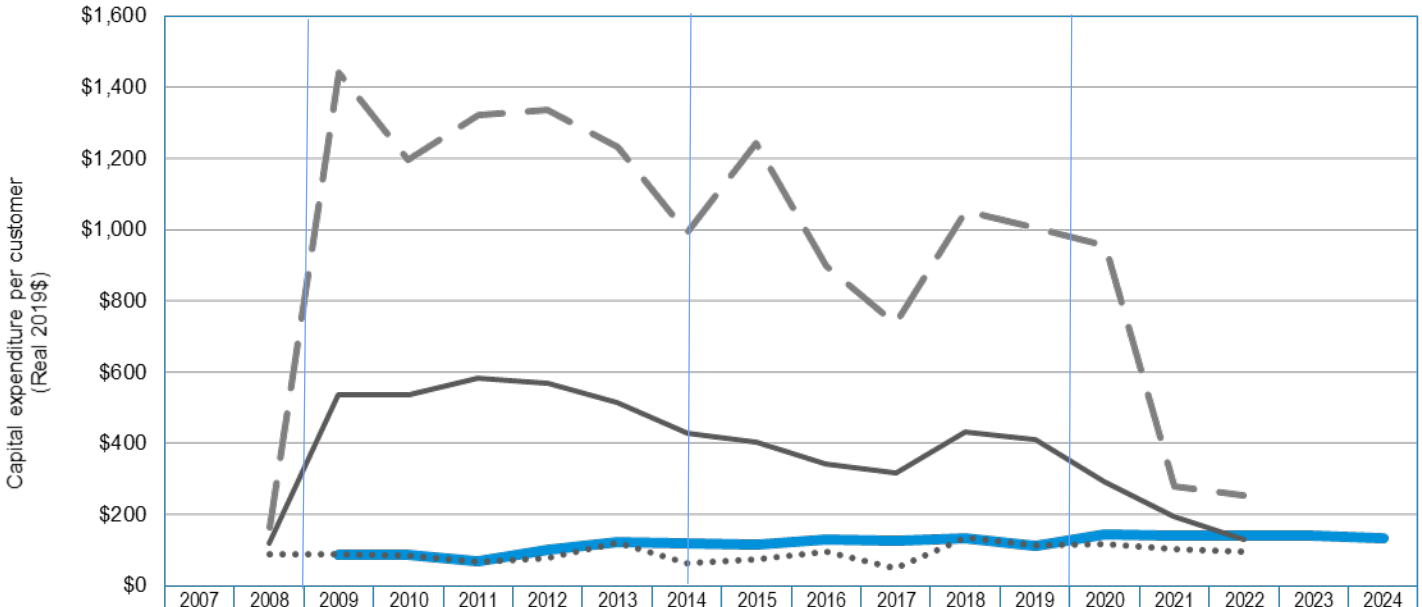
II. Capex per customer

This benchmark compares the total capital expenditure in providing utility services to each customer.

Capex per customer at the industry level is trending downwards.

ATCO Gas benchmark:

- **Consistently at the industry minimum or slightly above the industry minimum from 2009 to 2021, then increases to slightly above the industry mean in 2022;**
- **Indicates an increase to Capex, bringing the average annual Capex per customer to $140 (Real 2019$); and**
- **Despite the forecast increase, ATCO Gas is likely to remain below the industry mean in Capex.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			$88	$85	$69	$100	$123	$121	$116	$130	$126	$134	$112	$143	$141	$139	$140	$134
Mean		$120	$538	$538	$583	$568	$513	$427	$404	$341	$316	$433	$411	$291	$196	$132		
Minimum		$90	$88	$85	$69	$80	$120	$63	$73	$97	$50	$134	$112	$118	$102	$97		
Maximum		$164	$1,441	$1,196	$1,322	$1,338	$1,233	$992	$1,242	$898	$736	$1,053	$1,006	$956	$279	$253		
Pop'n Size	2	5	19	21	21	24	25	25	25	25	22	21	21	18	8	5	2	2

The benchmark is calculated as Total Capex divided by the number of customers supplied by ATCO Gas 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 four or more for the year.

The weighted average is calculated as the sum of Total Capex divided by the sum of number of customers supplied by the benchmarked organisations at the end of the year.

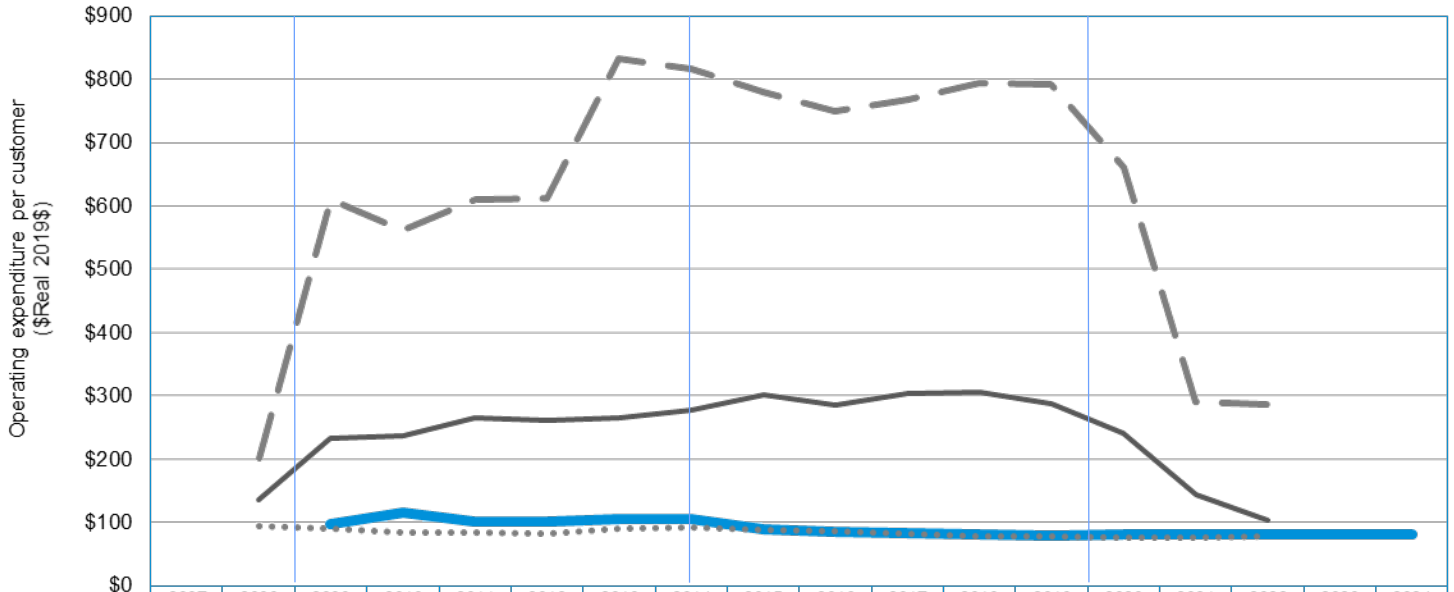
III. Opex per customer

This benchmark compares the total operating expenditure in providing utility services to each customer.

Opex per customer at the industry level has remained stable since 2014, with an indication that it will reduce from 2019 onward.

ATCO Gas benchmark:

- **Consistently at the industry minimum or close to the industry minimum;**
- **Decrease in Opex per customer from AA3 to AA4; and**
- **Forecast to maintain efficient annual Opex at an average of $81 per customer (Real 2019$) in AA5.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			$98	$115	$101	$102	$106	$105	$89	$85	$83	$81	$80	$80	$81	$82	$82	$82
Mean		$135	$233	$237	$266	$261	$265	$278	$301	$286	$305	$306	$288	$240	$144	$103		
Minimum		$94	$91	$85	$84	$81	$90	$92	$89	$85	$83	$78	$78	$77	$76	$78		
Maximum		$202	$610	$561	$610	$612	$832	$817	$779	$750	$768	$794	$793	$662	$291	$287		
Pop'n Size	2	5	19	19	20	24	25	25	25	24	22	22	22	16	8	5	2	2

The benchmark is calculated as Total Opex (exc. Dep) divided by the number of customers supplied by ATCO Gas 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 four or more for the year.

The weighted average is calculated as the sum of Total Opex (exc. Dep), divided by the sum of the number of customers supplied by the benchmarked organisations at the end of year.

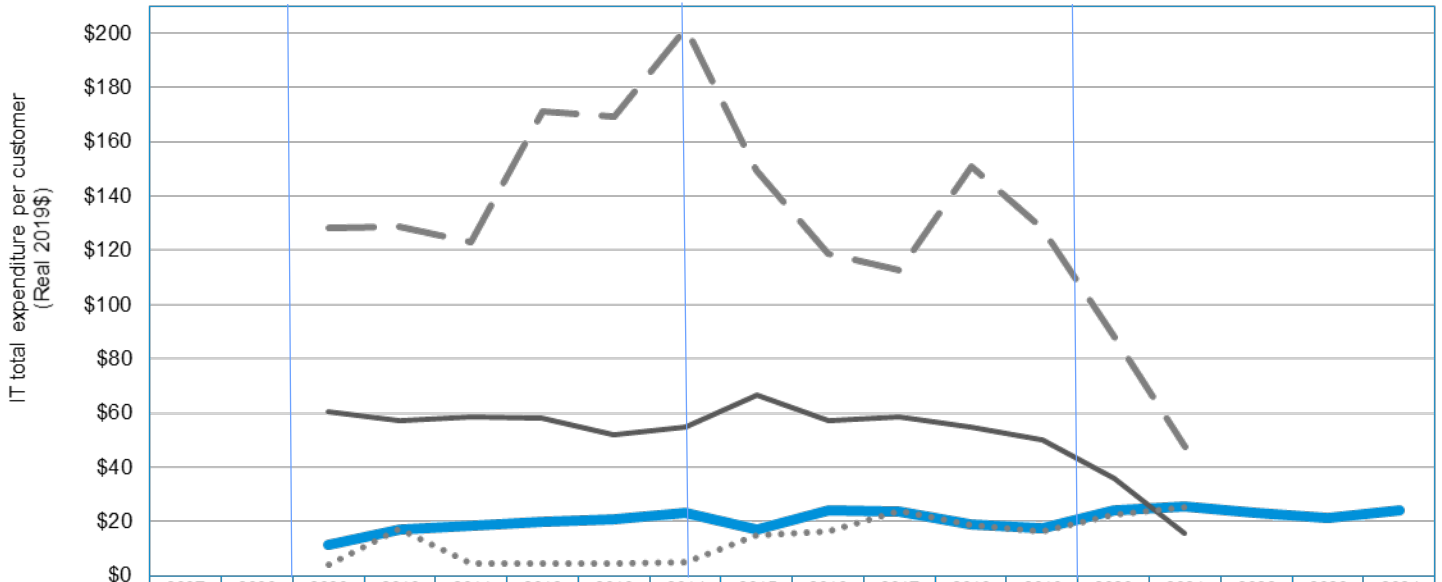
IV. IT Totex per customer

This benchmark compares the total IT expenditure in supporting the utility services to each customer.

Industry IT Totex, as IT Totex per customer, has been stable from 2009 to 2017, with indication to decrease from 2018, however this remains to be confirmed when benchmark data from a higher population size becomes available.

ATCO Gas benchmark:

- **Consistently below the industry mean or close to industry minimum;**
- **IT Totex per customer has been stable in AA3 and AA4. Forecast to remain stable in AA5 at an average annual IT Totex of $24 per customer (Real 2019$); and**
- **Despite the forecast increase, ATCO Gas is likely to remain below industry mean in IT Totex.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			$11	$17	$18	$20	$21	$23	$17	$24	$24	$19	$17	$24	$26	$23	$21	$24
Mean			$60	$57	$58	$58	$52	$55	$66	$57	$58	$55	$50	$36	$16			
Minimum			$4	$17	$4	$5	$4	$5	$15	$16	$24	$19	$16	$22	$25			
Maximum			$128	$129	$123	$171	$169	$202	$150	$119	$113	$151	$128	$88	$48			
Pop'n Size	2	2	15	15	19	20	20	20	19	19	18	17	17	14	4	2	2	2

The benchmark is calculated as IT Totex divided by number of customers supplied by ATCO Gas at the end of the year. IT Totex is defined as IT Capex + IT Opex (exc. Dep), and IT Totex is only calculated where both IT Capex and IT Opex data are available.

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

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

V. IT Capex per customer

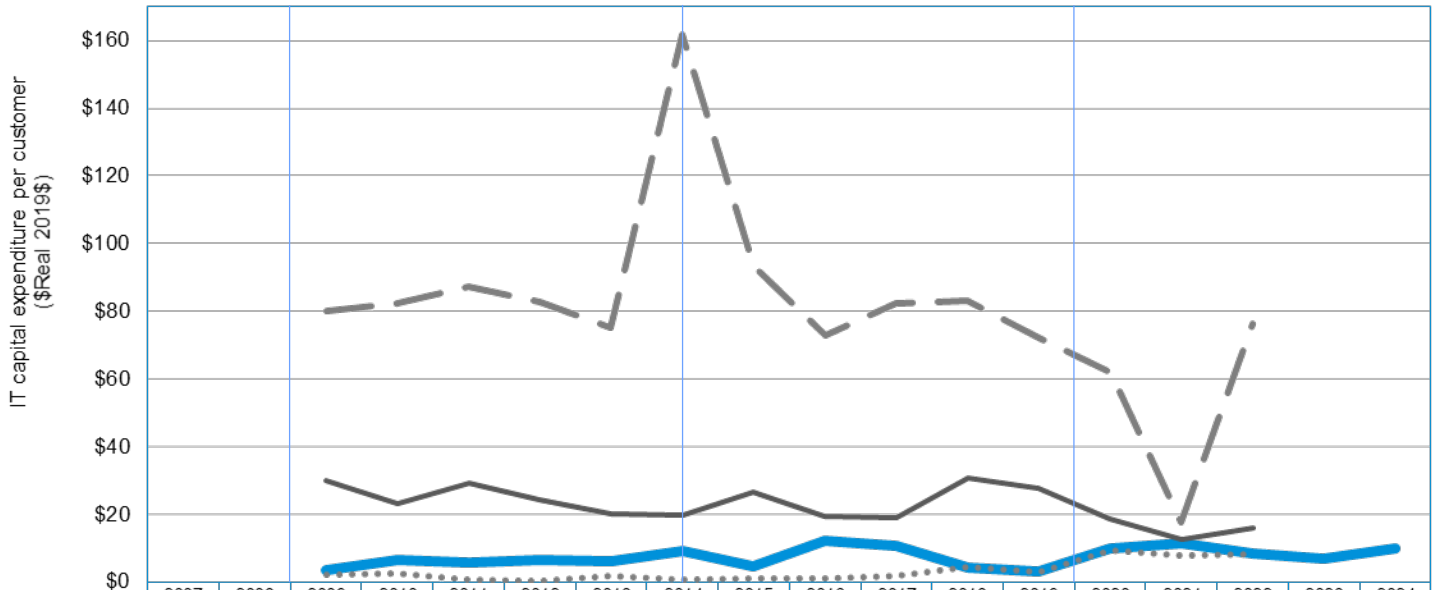
This benchmark compares the IT capital expenditure in supporting utility services to each customer.

The results reflect the IT investment cycle of both the industry and ATCO Gas.

Industry IT Capex per customer has ranged between $19 to $30 (Real 2019$) from 2009 to 2019, trending downwards from 2020 to below $20 per customer (Real 2019$).

ATCO Gas benchmark:

- **Reflects IT Capex cycle, with low results in AA3, increased slightly in AA4 and forecast to further increase in AA5;**
- **Consistently at or close to the industry minimum;**
- **Comparably efficient to industry in IT Capex; and**
- **Despite increase in forecast for AA5, benchmark likely to remain below industry mean.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			$3	$6	$6	$6	$6	$9	$4	$12	$11	$4	$3	$10	$11	$8	$7	$10
Mean			$30	$23	$29	$24	$20	$20	$27	$19	$19	$31	$28	$19	$13	$16		
Minimum			$2	$3	$1	$0	$2	$1	$1	$1	$2	$4	$3	$9	$8	$8		
Maximum			$80	$82	$87	$83	$75	$162	$93	$73	$82	$83	$72	$62	$18	$76		
Pop'n Size	2	3	16	18	20	23	24	23	23	23	20	20	20	17	7	5	2	2

The benchmark is calculated as IT Capex divided by number of customers supplied by the ATCO Gas 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 four or more for the year.

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

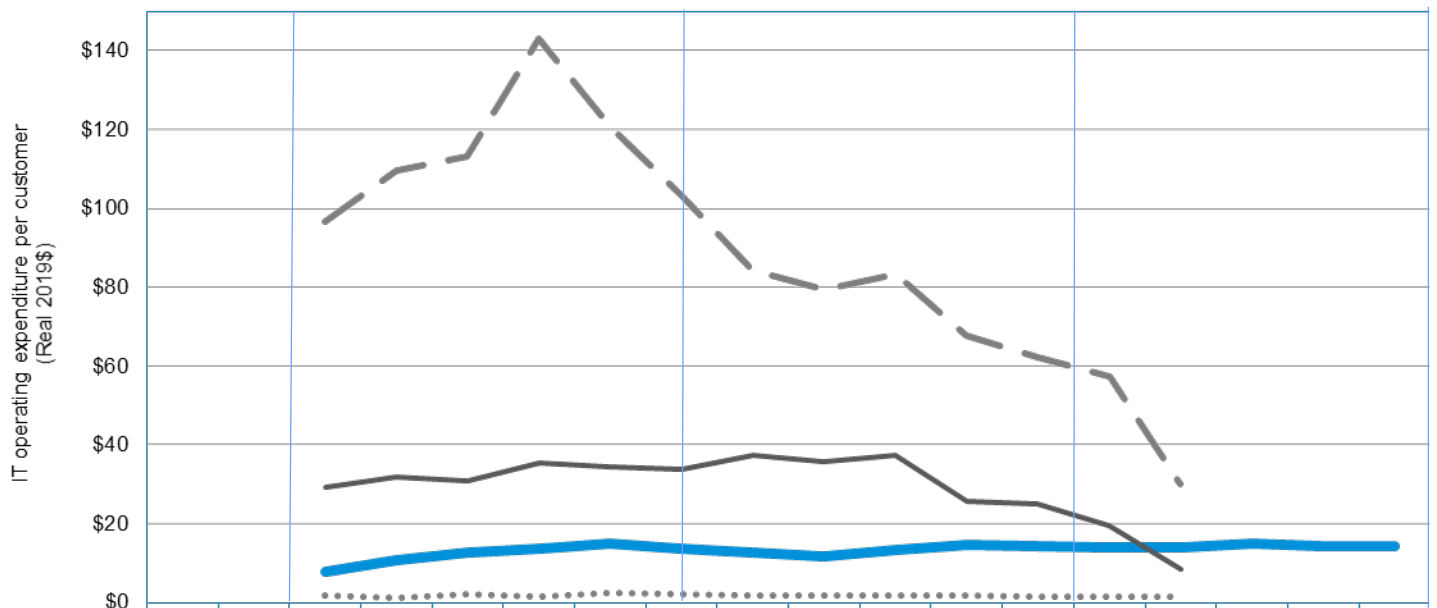
VI. IT Opex per customer

This benchmark compares the IT operating expenditure in supporting utility services to each customer.

Industry IT Opex per customer has been stable from 2011 to 2017, with a trend to decrease from 2017. Further decreases from 2021 remains to be confirmed with a higher benchmark population size.

ATCO Gas benchmark:

- **IT Opex per customer is consistently efficient and below the industry mean; and**
- **Despite a forecast increase in IT Opex in AA5, IT Opex per customer is predicted to remain at low range in comparison to industry.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			$8	$11	$13	$14	$15	$14	$13	$12	$13	$15	$14	$14	$14	$15	$14	$14
Mean			$29	$32	$31	$35	$34	$34	$37	$36	$37	$26	$25	$20	$9			
Minimum			$2	$1	$2	$2	$2	$2	$2	$2	$2	$2	$2	$2	$2			
Maximum			$97	$110	$113	$143	$120	$103	$84	$79	$83	$68	$62	$57	$30			
Pop'n Size	2	2	16	16	19	20	20	20	20	20	19	18	18	15	5	2	2	2

The benchmark is calculated as IT Opex (excl. Dep) divided by number of customers supplied by the ATCO Gas 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 four or more for the year.

The weighted average is calculated as the sum of IT Opex (excl. Dep) divided by the sum of number of customers supplied by the benchmarked organisations at the end of year.

VII. IT Totex as a % of Totex

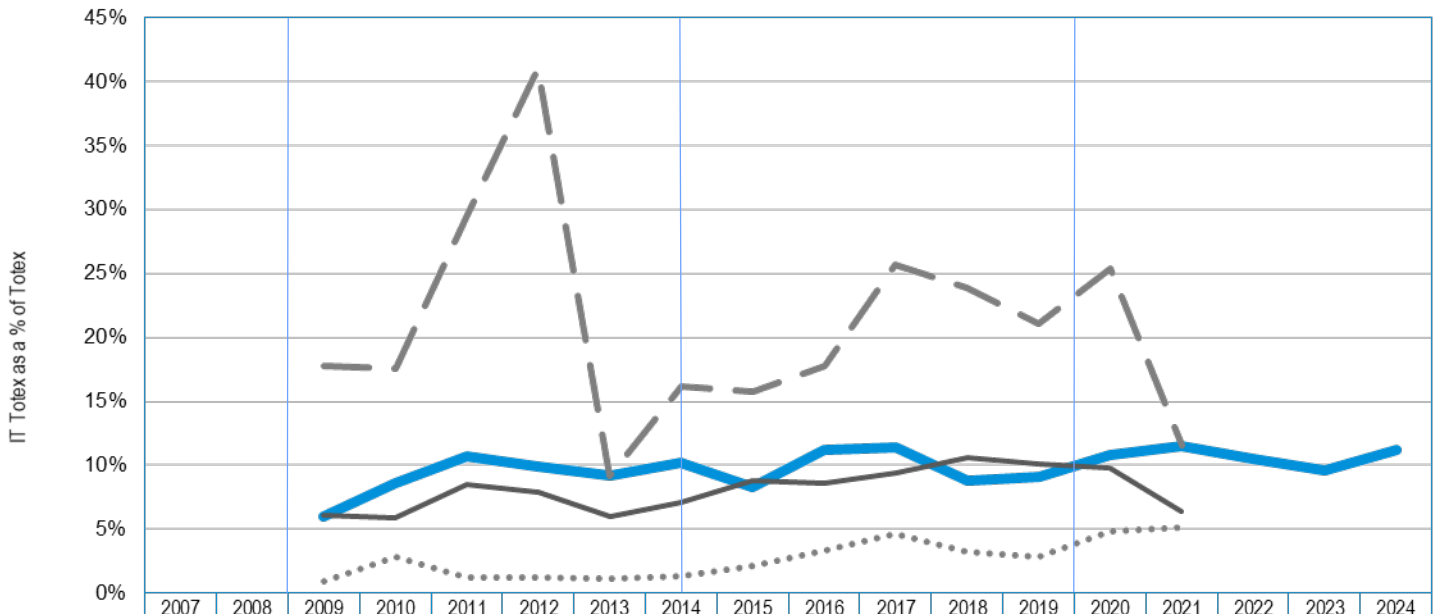
This benchmark compares the level of IT investment and indirectly compares the level of reliance on IT services.

Industry benchmarks indicate an increasing share of total costs are dedicated to IT. This trend is consistent with the increasing application of technology in industry.

The decreasing trend in the industry mean from 2021 remains to be confirmed with a higher benchmark population size.

ATCO Gas benchmark:

- **Generally stable and in line with industry trend;**
- **Forecast increase in allocation of expenditure to IT is in line with industry trend; and**
- **Despite increases in the IT Capex and Opex forecast, ATCO Gas forecast benchmark will likely remain in line with industry mean.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			6.04%	8.57%	10.75%	9.93%	9.16%	10.22%	8.29%	11.24%	11.41%	8.78%	9.06%	10.75%	11.52%	10.47%	9.62%	11.20%
Mean			6.12%	5.93%	8.50%	7.92%	6.04%	7.13%	8.80%	8.64%	9.39%	10.56%	10.05%	9.76%	6.36%			
Minimum			0.97%	2.87%	1.27%	1.26%	1.17%	1.37%	2.13%	3.38%	4.66%	3.20%	2.89%	4.86%	5.09%			
Maximum			17.79%	17.57%	29.34%	40.98%	9.16%	16.12%	15.79%	17.76%	25.63%	23.87%	21.02%	25.41%	11.52%			
Pop'n size	2	2	15	15	19	20	20	20	19	18	18	17	17	14	4	2	2	2

The benchmark is calculated as IT Totex divided by Total Expenditure, the result is represented in percentage.

Totex is defined as Total Capex + Total Opex (exc. Dep) and IT Totex is defined as IT Capex + IT Opex (exc. Dep). Totex is only calculated where both Total Capex and Total Opex data are available and IT Totex is only calculated where both IT Capex and IT Opex data are available.

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

The weighted average is calculated as the sum of IT total expenditure divided by the sum of business total expenditures, the result is represented in percentage.

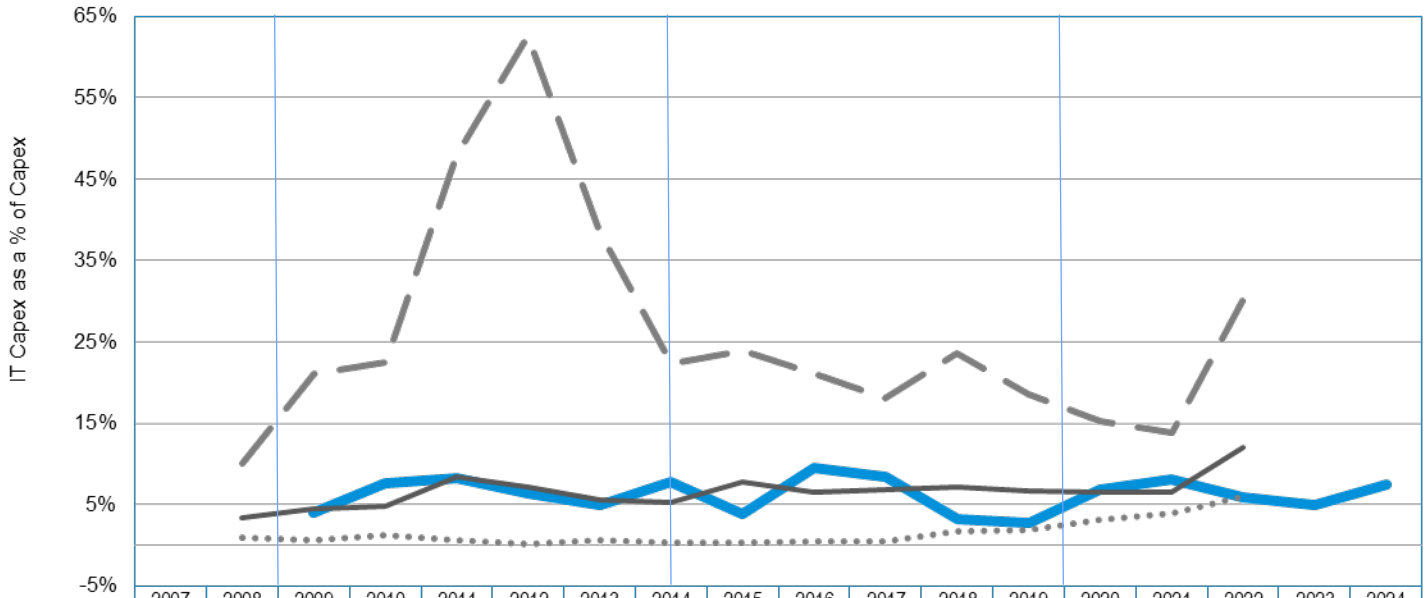
VIII. IT Capex as a % of Capex

This benchmark compares the level of IT Capex to Total Capex.

The benchmark represents the level of reliance on technology as well as the utility organisations IT investment cycles.

ATCO Gas benchmark:

- **Generally in line with industry in AA3 and AA4 and will slightly increase by 0.39% in AA5, which reflects the planned IT Capex in application renewal, cyber security and Information Technology (IT) / Operational Technology (OT) convergence platform, i.e. SCADA; and**
- **Despite the proposed increase for AA5, the share of capital expenditure in IT is predicted to remain in line with industry.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			3.95%	7.55%	8.30%	6.36%	4.93%	7.72%	3.80%	9.49%	8.38%	3.21%	2.66%	6.89%	8.10%	5.95%	4.98%	7.42%
Mean		3.38%	4.44%	4.79%	8.37%	7.09%	5.61%	5.30%	7.72%	6.51%	6.87%	7.08%	6.73%	6.48%	6.48%	12.01%		
Minimum		0.86%	0.55%	1.19%	0.58%	0.13%	0.55%	0.29%	0.31%	0.38%	0.48%	1.67%	1.80%	3.18%	3.97%	5.95%		
Maximum		9.99%	21.11%	22.53%	47.75%	62.65%	38.55%	22.29%	23.84%	21.05%	18.14%	23.57%	18.61%	15.17%	13.78%	30.11%		
Pop'n size	3	4	16	18	20	23	24	23	23	23	20	20	20	17	7	5	2	2

The benchmark is calculated as IT Capex divided by Total Capex, the result is presented in percentage.

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

The weighted average is calculated as the sum of IT Capex divided by the sum of Total Capex, the result is presented in percentage.

IX. IT Opex as a % of Opex

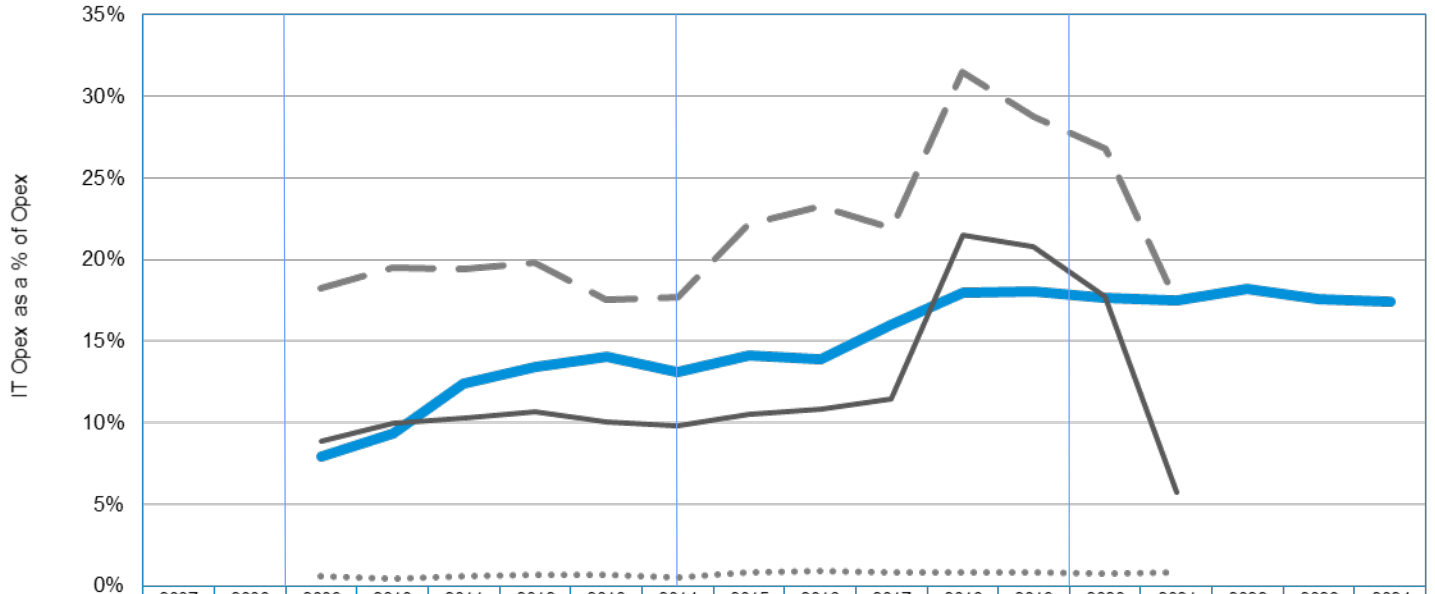
This benchmark compares the percentage of Opex allocated to IT.

The industry result suggest an increasing share of Opex is dedicated to IT.

The trend also reflects the shift from traditional investments from IT Capex to consumption of IT services through IT Opex.

ATCO Gas benchmark:

- **Above industry in AA3 and AA4; and**
- **The proposed increase in the share of Opex for IT is consistent with the plan to increase the use of IT services in AA5.**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
ATCO Gas			7.91%	9.32%	12.41%	13.42%	14.04%	13.10%	14.15%	13.90%	16.01%	17.95%	18.01%	17.62%	17.48%	18.18%	17.57%	17.38%
Mean			8.88%	9.96%	10.26%	10.65%	10.04%	9.84%	10.55%	10.84%	11.42%	21.53%	20.79%	17.71%	5.71%			
Minimum			0.58%	0.46%	0.64%	0.67%	0.66%	0.53%	0.82%	0.89%	0.84%	0.85%	0.83%	0.77%	0.80%			
Maximum			18.23%	19.46%	19.42%	19.79%	17.57%	17.71%	22.20%	23.23%	21.95%	31.48%	28.79%	26.77%	17.48%			
Pop'n Size	2	2	16	16	19	20	20	20	20	20	13	9	9	8	5	2	2	2

The benchmark is calculated as IT Opex (excl. Dep) divided by Total Opex. The result is represented in percentage.

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

The weighted average is calculated as the sum of IT Opex (excl. Dep) divided by the sum of Total Opex.

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Appendices

Appendix A

ATCO Gas data

ATCO Gas has provided the IT and gas distribution business data for expenditures, and customer numbers for the 16-year period, from 2009 to 2024. The data was provided on 20 April and covers the previous, current and future Access Arrangement Periods, i.e. AA3 to AA5.

AA	AA3 period (historical actual)							AA4 period (historical actual)				
Year	CY 2009	Jan-Jun 2010	FY 2011	FY 2012	FY 2013	FY 2014	Jul-Dec 2014	CY 2015	CY 2016	CY2017	CY 2018	CY 2019 Real Dec 2019
$	Nominal	Nominal	Nominal	Nominal	Nominal	Nominal	Nominal	Nominal	Nominal	Nominal	Nominal	
Capital Expenditure ($000)												
IT Capex	$1,676	$1,521	$3,675	$2,592	$4,642	$2,616	$4,510	$2,868	$8,336	$7,470	$3,122	$2,239
Total Capex	$42,434	$25,045	$38,809	$36,704	$76,971	$70,291	$40,224	$75,474	$87,878	$89,117	$97,181	$84,064
Operating Expenditure ($000)												
IT Opex	$3,756	$2,204	$6,829	$6,957	$8,606	$9,308	$3,940	$8,186	$8,055	$9,368	$10,591	$10,806
Total Opex	$47,492	$33,380	$53,828	$57,225	$58,782	$68,794	$31,193	$57,838	$57,950	$58,508	$58,997	$59,991
Customer Numbers												
Customers	598,171	610,352	624,074	640,099	653,498	669,021	682,986	699,160	718,325	732,182	740,943	749,836

AA	AA5 period (forecast)				
Year	CY 2020 Real Dec 2019	CY 2021 Real Dec 2019	CY 2022 Real Dec 2019	CY 2023 Real Dec 2019	CY 2024 Real Dec 2019
$					
Capital Expenditure ($000)					
IT Capex	$7,505	$8,862	$6,534	$5,577	$8,095
Total Capex	$108,864	$109,355	$109,728	$112,005	$109,101
Operating Expenditure ($000)					
IT Opex	$10,782	$10,951	$11,688	$11,482	$11,587
Total Opex	$61,189	$62,649	$64,273	$65,368	$66,666
Customer Numbers					
Customers	761,990	774,341	786,958	799,867	813,038

Appendix B

Utilities benchmarking data

KPMG has compared ATCO Gas's MW&SW expenditure data to a set of industry group benchmarks.

The group consists of the 25 Australian gas, electricity and water distribution utilities as indicated in the table on the right.

ATCO Gas's results between the years 2009 to 2024, are compared to the benchmark means of the group, where available. The means are calculated as the weighted average for each year where there is data available from four or more utilities.

The data, ranging between 5 to 19 years, has been sourced from publicly available company or regulatory data sources and KPMG utilities benchmarking surveys.

Distribution business	State	Sources of data	Years	General data period
Gas Distribution				
ATCO Gas MW&SW	Western Australia	Provided by ATCO Gas	2009 to 2024	Calendar 1 Jan to 31 Dec
Australian Gas Networks	Victoria	Provided by AGN Victoria & Albury	2008 to 2022	
Multinet Gas	Victoria	Access Arrangement – PTRM, Capex Model, KPMG Benchmarking	2008 to 2022	
Ausnet Services	Victoria	Access Arrangement – PTRM, KPMG Benchmarking	2013 to 2018	
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 – PTRM	2007 to 2020	
Australian Gas Networks	Queensland	Access Arrangement Final Decision	2012 to 2016	
Allgas	Queensland	Access Arrangement – RFM	2012 to 2016	
Electricity Distribution				
Energex	Queensland	AER RINs: • Categories Analysis RINs; • Economic Benchmarking RINs; • Reset RINs; KPMG Benchmarking data: • 2016 Utilities Benchmarking Survey; • IT expenditure for EDPR determinations	In general: 2007 to 2020 ActewAGL: 2007 to 2024	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			
Western Power	Western Australia			
CitiPower	Victoria			Calendar 1 Jan to 31 Dec
Powercor	Victoria			
Ausnet Services	Victoria			
Jemena	Victoria			
United Energy	Victoria			
Water Distribution				
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	

Appendix C

Data definitions

Expenditure Data ($000)	
Capital Expenditure (Capex)	
Total Capital Expenditure	The total capital expenditure for the Mid-West and South-West gas distribution systems, including distribution systems and non-distribution systems capital expenditures. The expenditure categories include connections, market expansions, mains augmentation, mains replacement, systems capacity enhancements, upgrades, telemetry, new meters installation, meter replacement, pressure regulators, control systems, IT, telemetry, communication systems, properties, sites and equipment.
IT Capital Expenditure	Capital expenditure and forecasts for IT and communications directly attributable to IT and communications assets, including capital expenditure relating to client devices, recurrent and non-recurrent categories. Consistent with industry expenditure categories, IT capital expenditure does not include capital expenditure relating to telemetry, SCADA and operational technologies.
Operating Expenditure (Opex (exc. Depreciation))	
Total Operating Expenditure	The total operating expenditure for the Mid-West and South-West gas distribution systems and non-distribution systems operating expenditures, The expenditure categories include all maintenance and operational management and activities for the gas distribution systems, including control and monitoring, gas users, meters, IT, telemetry, communication systems, properties, sites and equipment.
IT Operating Expenditure	Operating expenditure and forecasts for IT and communications directly attributable to IT and communications assets, including operating expenditure relating to client devices, recurrent and non-recurrent categories. Does not include operating expenditure relating to telemetry, SCADA and operational technologies, consistent with industry expenditure categories.
Total Expenditure (Totex)	
Total Expenditure	Sum of capital expenditure and operating expenditure (exclude depreciation), total expenditure is only calculated when both total capital expenditure and total operating expenditure data are available.
IT Total Expenditure	Sum of IT capital expenditure and IT operating expenditure (exclude depreciation), IT total expenditure is only calculated when both IT capital expenditure and IT operating expenditure data are available.
Volume / Drivers	
Number of customers	Number of customers (No. of DPI) supplied by the Mid-West and South-West gas distribution systems, at the end of the year.

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