

Electricity Distribution Network Service Provider

Performance Data

Introduction



This workbook contains performance data for the electricity distribution businesses regulated by the AER. Charts and data are presented for a range of financial and network performance measures.

Interpretation

The data covers the regulatory years from 2006 to 2018. It is reported on an end of year basis. Victorian distribution businesses report on a calendar year basis, and so is for the year ending 31 December. All other distribution businesses report on a financial year basis, so refers to data collected for the year ending 30 June.

All financial values have been converted to June 2018 dollars.

Any changes in service classification between regulatory periods have not been adjusted for in the data contained in this report.

These data series are provided to facilitate general stakeholder engagement in the AER's regulatory processes. The data is subject to revisions, arising from changes from improved data collation, or regulatory updates that apply from time to time. Information to aid interpretation of the data is available with the businesses RIN responses, and AER Guidelines and Explanatory material associated with our models and data collections - available on the AER website.

Sources

Data is classified as actual or forecast data.

Actual data is generally sourced from individual annual RIN responses, including economic benchmarking and category analysis RINs, or historical data provided at the time of regulatory determinations. The RIN responses of the distribution businesses are available on the AER website.

Forecast data is generally sourced from the final regulatory determinations made by the AER for each of the businesses, updated for decisions by the Australian Competition Tribunal, and other allowed adjustments.

Data sources are listed in each of the worksheets.

VERSION RECORD

Version	Publication date	Data range/updates	
2	Aug 2019	Financial years	2005-06 to 2017-18
		Calendar years	2006 to 2018
1	Nov 2018	Financial years	2005-06 to 2016-17
		Calendar years	2006 to 2017

Return on assets included

Electricity Distribution Network Service Provider **Performance Data**

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DNSP Total

Important: Please click in cell to use drop-down list to see NEM total or individual DNSP statistics

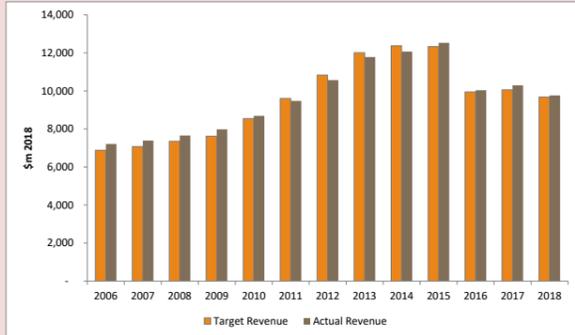
Summary statistics

	2018 value	5 year trend
Target Revenue	\$9,680m	
Actual Revenue	\$9,762m	
Forecast RAB	\$76,188m	
Actual RAB	\$73,003m	
Forecast Capex	\$4,426m	
Actual Capex	\$4,000m	
Forecast Opex	\$3,103m	
Actual Opex	\$3,008m	
Average Outage Duration (per customer)	110 minutes	
Outage Frequency per customer	1.10	
Forecast energy delivered	146,907GWh	
Actual energy delivered	144,126GWh	
Customer numbers	10,287,000	
Circuit length	747,359km	
Circuit length - overhead	633,536km	
Circuit length - underground	113,823km	
Network utilisation	0.48	
Reg Service Life- Overhead lines less than 33kV	25	
Reg Service Life- distribution substations and transformers	20	
Reg Service Life- zone substations and transformers	23	
Return on assets, including incentive scheme penalties or rewards	0.00	
Return on assets, excluding incentive scheme penalties or rewards	0.00	
Return on assets, real pre-tax WACC	0.00	

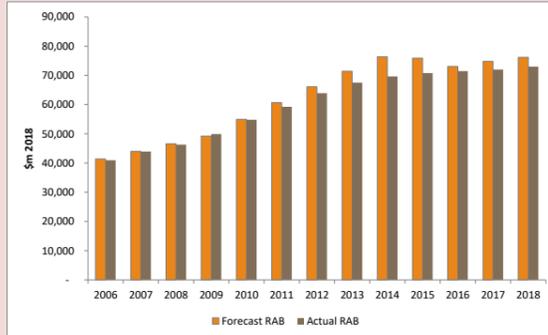


Financials

Annual revenue



Closing RAB

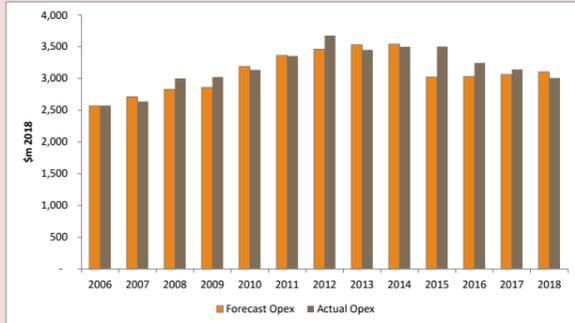


Return on Assets

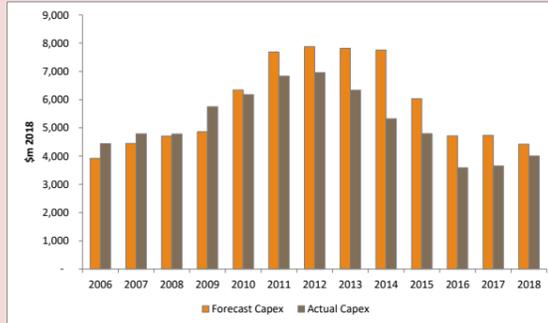
No data for DNSP Total Return on assets

Expenditure

Opex

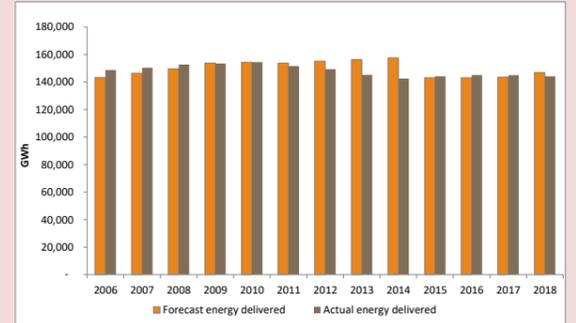


Capex



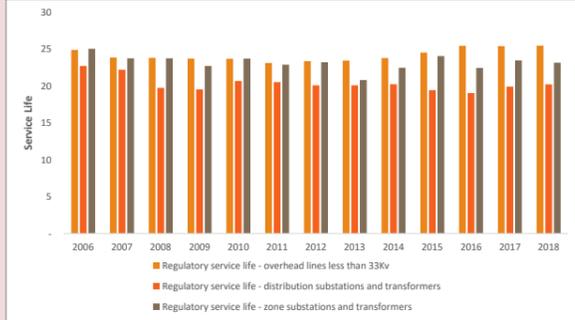
Service Performance

Energy delivered

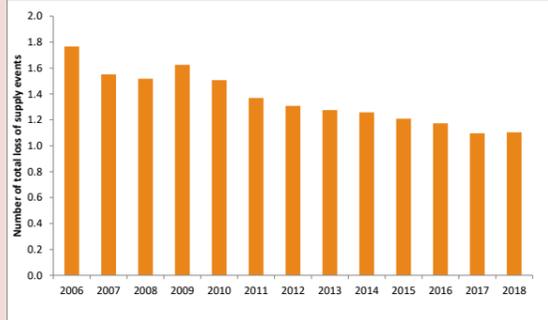


Service Performance

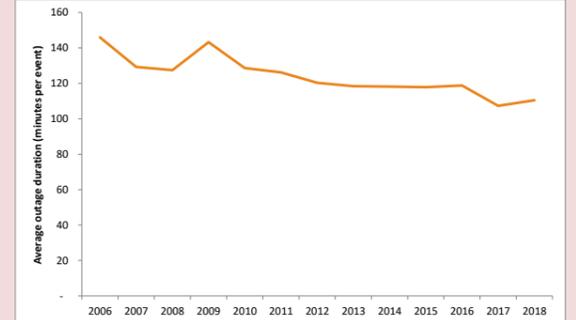
Regulatory Service Life



Reliability - outage events

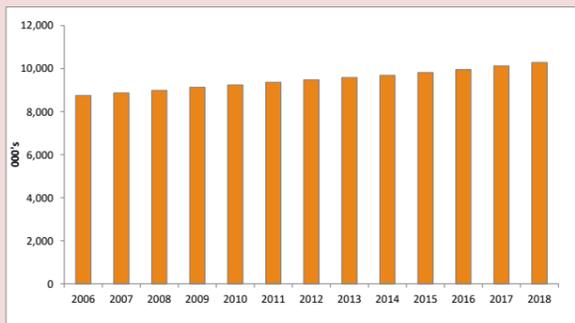


Reliability - outage duration

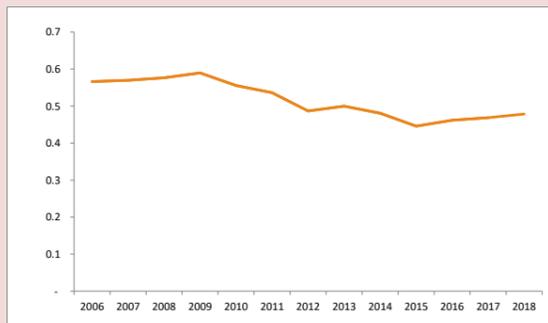


Network Descriptors

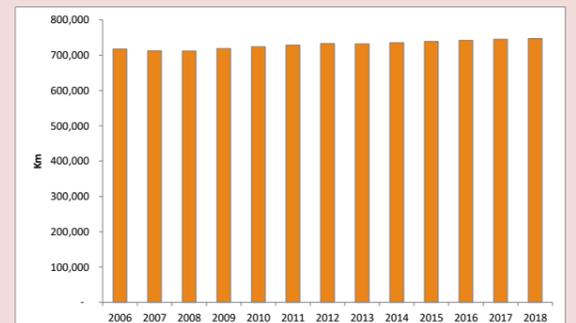
Customer Numbers



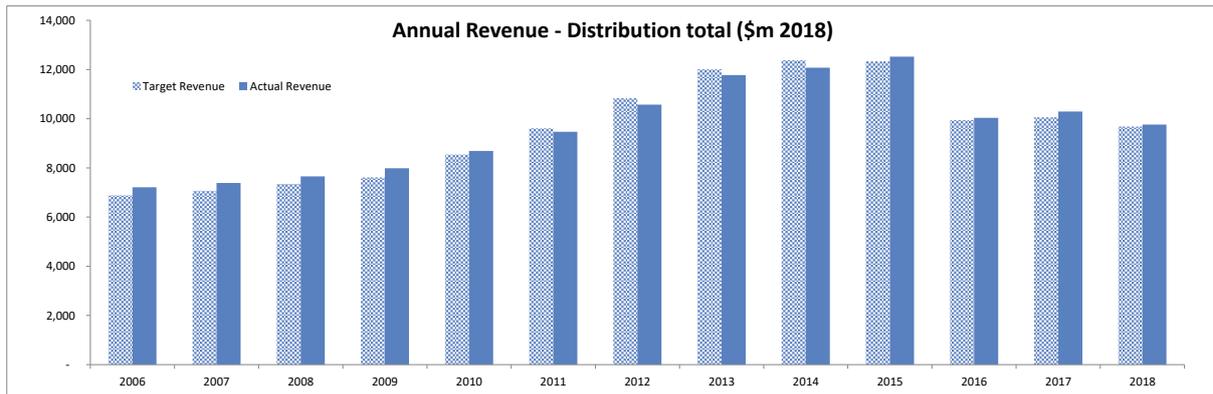
Utilisation



Circuit Length



Revenue



Actual revenues reported by the distribution businesses are for core distribution services - standard control services. Standard control services, which may include network, connection and metering services, make up the bulk of the services provided by distribution businesses and are regulated by the AER. Target revenue is derived from regulatory decisions, but adjusted to present it on a comparable basis to actual revenues. The adjustments include rewards and penalties from incentive schemes, cost pass throughs and other factors that are taken into account in determining the target revenues used to set prices each year.

Target Revenue

\$m 2018	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	138	144	151	144	165	174	178	189	204	164	134	147	145
Ausgrid	NSW	816	878	929	986	1,497	1,792	2,119	2,507	2,367	2,075	1,529	1,653	1,605
Endeavour Energy	NSW	704	731	757	791	916	1,060	1,191	1,185	1,117	1,015	817	799	775
Essential Energy	NSW	782	811	837	888	1,024	1,226	1,447	1,616	1,537	1,371	949	932	934
Energex	Qld	837	911	992	1,079	1,108	1,259	1,382	1,656	1,838	2,038	1,633	1,542	1,485
Ergon Energy	Qld	1,005	1,034	1,076	1,073	1,107	1,257	1,354	1,518	1,722	1,946	1,506	1,502	1,348
SA Power Networks	SA	610	624	638	651	663	668	889	913	968	969	711	780	796
TasNetworks (D)	Tas	207	223	236	257	270	273	280	308	313	319	313	300	233
AusNet (D)	Vic	407	393	409	407	432	491	518	545	612	626	622	655	617
CitiPower	Vic	257	241	225	226	238	232	249	260	277	300	289	285	293
Jemena Electricity	Vic	182	173	179	190	186	211	228	251	271	270	256	260	250
Powercor Australia	Vic	450	458	466	478	489	499	519	556	612	661	633	630	627
United Energy	Vic	382	354	361	342	323	350	365	380	391	424	376	397	411
Power and Water	NT	104	93	95	101	120	114	116	122	145	152	173	173	161
DNSP Total		6,880	7,069	7,351	7,613	8,540	9,605	10,835	12,006	12,374	12,331	9,943	10,055	9,680

Sources:

Target revenue is sourced from pricing determinations made each year and published on the AER web site. Where pricing determinations are not available (for example, prior to the AER taking on the role of economic regulation of distribution businesses), forecast revenue has been sourced from post tax revenue models determined as part of final regulatory decisions, as made by jurisdictional regulators or the AER, and amended to take into account any updates made after the final decision. AER pricing data has been used for the following years: 2010-2016: Evoenergy, Ausgrid, Endeavour Energy, Essential Energy. 2011-2018: Energex, Ergon Energy, SA Power Networks. 2011-2017: Ausnet (D), CitiPower, Jemena Electricity, Powercor Australia, United Energy. 2012-2018: TasNetworks (D).

Actual Revenue

\$m 2018	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy*	ACT	149	151	159	147	170	222	226	235	246	197	167	173	133
Ausgrid*	NSW	1,130	1,157	1,219	1,278	1,511	1,798	2,043	2,424	2,305	2,127	1,566	1,589	1,518
Endeavour Energy*	NSW	725	742	816	833	934	1,054	1,129	1,142	1,098	1,045	878	898	849
Essential Energy*	NSW	773	828	866	905	1,045	1,166	1,420	1,649	1,503	1,448	892	975	987
Energex	Qld	853	902	958	1,119	1,188	1,195	1,340	1,515	1,739	2,018	1,626	1,584	1,498
Ergon Energy	Qld	922	909	932	969	1,021	1,181	1,298	1,476	1,657	1,876	1,510	1,541	1,373
SA Power Networks	SA	616	627	634	647	662	716	877	907	919	982	708	776	795
TasNetworks (D)	Tas	180	189	216	234	264	259	275	295	296	303	321	308	245
AusNet (D)	Vic	402	418	418	404	455	478	501	550	621	692	609	661	616
CitiPower	Vic	265	265	253	253	256	230	241	257	273	302	289	284	291
Jemena Electricity	Vic	201	209	208	216	205	216	223	247	262	272	265	277	250
Powercor Australia	Vic	518	516	509	521	502	490	520	582	630	689	643	641	632
United Energy	Vic	374	379	370	356	354	352	361	375	377	421	386	410	414
Power and Water**	NT	104	93	95	101	120	114	116	122	145	152	173	173	161
DNSP Total		7,212	7,386	7,653	7,983	8,688	9,471	10,570	11,777	12,071	12,524	10,033	10,291	9,762

Sources:

Regulatory accounts 2006 to 2010, Annual reporting RIN responses 2011 to 2018

Notes:

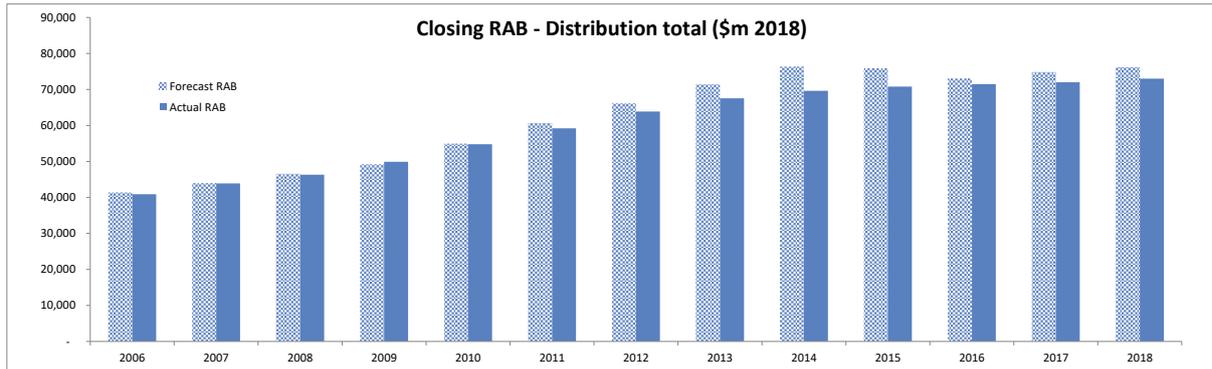
Any distribution revenue derived from cross boundary revenue sources has been excluded.

Evoenergy operates under an average revenue cap form of control and therefore it does not have a "target revenue". Rather, it has a target yield. Compliance with this target yield is determined by multiplying individual tariffs by volumes from two years prior to arrive at a notional revenue figure. The notional revenue reported in Evoenergy's pricing proposal for the purposes of determining compliance is not comparable to the actual revenue reported in its RIN.

**Power and Water (NT) 2006-2014: Revenue forecasts are not available for this period. 2015-2018: Intra-period differences in service classifications between forecasts (based on the Utilities Commission of the Northern Territory's service classifications) and actuals (aligned with 2019-24 AER regulated service classification) mean comparisons would be misleading. To ensure the aggregate target revenue data is comparable with the aggregate actual revenue data, the target revenue for PWC has been assumed to match the actual revenue. This data is shaded green in the table.

*The actual revenues reported for 2014-15 to 2017-18 for NSW/ACT electricity distributors should be interpreted with caution. The reported revenues for those years were affected by two factors that do not typically occur over a regulatory control period: the transitional decision for 2014-15; and, an amendments to the 2015 final decision on remittal.

Regulated asset base



The regulated asset base (RAB) represents the value of the distribution networks' assets used to provide the core services regulated by the AER, at a given point in time. The value changes each year due to capital expenditures, depreciation, and disposal of assets.

Forecast RAB

\$m 2018	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	726	728	720	718	769	803	833	853	868	935	942	953	953
Ausgrid	NSW	6,707	7,158	7,595	8,042	11,528	12,939	14,532	16,089	17,557	15,483	15,639	15,779	15,887
Endeavour Energy	NSW	3,819	4,083	4,347	4,549	4,910	5,415	5,830	6,182	6,511	6,237	6,378	6,450	6,510
Essential Energy	NSW	3,788	4,014	4,253	4,503	5,835	6,430	7,080	7,699	8,308	7,541	7,781	7,989	8,175
Energex	Qld	6,705	7,416	8,131	8,807	8,190	10,348	11,407	12,411	13,344	14,325	11,982	12,201	12,354
Ergon Energy	Qld	6,312	6,958	7,670	8,406	9,162	9,282	10,062	10,860	11,678	12,598	10,638	10,878	11,067
SA Power Networks	SA	3,416	3,413	3,400	3,397	3,409	3,596	3,808	3,958	4,092	4,208	4,170	4,283	4,378
TasNetworks (D)	Tas	1,190	1,264	1,324	1,385	1,440	1,486	1,524	1,654	1,677	1,696	1,715	1,735	1,684
AusNet (D)	Vic	1,915	1,973	2,025	2,082	2,141	2,610	2,829	3,044	3,249	3,447	3,745	3,997	4,191
CitiPower	Vic	1,436	1,475	1,511	1,566	1,598	1,601	1,695	1,801	1,899	1,994	1,904	2,002	2,071
Jemena Electricity	Vic	827	831	837	835	841	949	995	1,036	1,078	1,108	1,298	1,407	1,475
Powercor Australia	Vic	2,349	2,430	2,516	2,596	2,676	2,755	2,919	3,081	3,250	3,410	3,620	3,843	4,080
United Energy	Vic	1,727	1,728	1,727	1,754	1,804	1,724	1,833	1,897	1,938	1,973	2,254	2,348	2,405
Power and Water*	NT	481	496	532	580	645	718	773	858	919	954	974	968	959
DNSP Total		41,400	43,968	46,588	49,221	54,949	60,657	66,119	71,421	76,368	75,908	73,040	74,832	76,188

Sources:

Forecast closing RAB is sourced from post tax revenue models developed as part of final regulatory decisions, as made by the AER or jurisdictional regulators, and amended to take into account any updates made after the final decision.

Actual RAB

\$m 2018	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	714	717	727	726	666	699	718	729	745	765	767	764	775
Ausgrid	NSW	6,590	7,285	8,044	8,847	11,386	12,824	14,264	15,130	15,347	15,389	15,161	15,057	15,125
Endeavour Energy	NSW	3,630	3,912	4,151	4,474	4,692	5,027	5,499	5,883	5,995	6,179	6,174	6,133	6,255
Essential Energy	NSW	3,916	4,306	4,735	5,237	5,739	6,228	6,775	7,159	7,277	7,501	7,629	7,725	7,798
Energex	Qld	6,638	7,258	7,774	8,446	9,284	10,114	10,844	11,475	11,911	11,749	11,935	12,080	12,177
Ergon Energy**	Qld	6,194	6,800	7,288	7,835	8,437	8,963	9,411	9,913	10,273	10,382	10,558	10,680	10,786
SA Power Networks	SA	3,596	3,560	3,512	3,510	3,422	3,537	3,696	3,841	3,915	3,973	4,014	4,008	4,093
TasNetworks (D)	Tas	1,148	1,280	1,330	1,432	1,510	1,580	1,629	1,635	1,645	1,642	1,662	1,646	1,725
AusNet (D)	Vic	1,866	1,960	2,019	2,252	2,440	2,565	2,828	3,088	3,358	3,581	3,715	3,847	4,026
CitiPower	Vic	1,375	1,407	1,376	1,458	1,500	1,571	1,643	1,708	1,781	1,834	1,862	1,851	1,843
Jemena Electricity	Vic	816	858	829	892	891	970	1,054	1,116	1,178	1,235	1,276	1,328	1,372
Powercor Australia	Vic	2,296	2,408	2,403	2,543	2,579	2,700	2,893	3,060	3,259	3,441	3,542	3,685	3,831
United Energy	Vic	1,661	1,668	1,590	1,676	1,609	1,717	1,854	1,936	2,033	2,167	2,208	2,232	2,236
Power and Water	NT	481	496	532	580	645	718	773	858	919	954	974	968	959
DNSP Total		40,920	43,916	46,309	49,908	54,801	59,213	63,880	67,531	69,637	70,793	71,479	72,002	73,003

Sources:

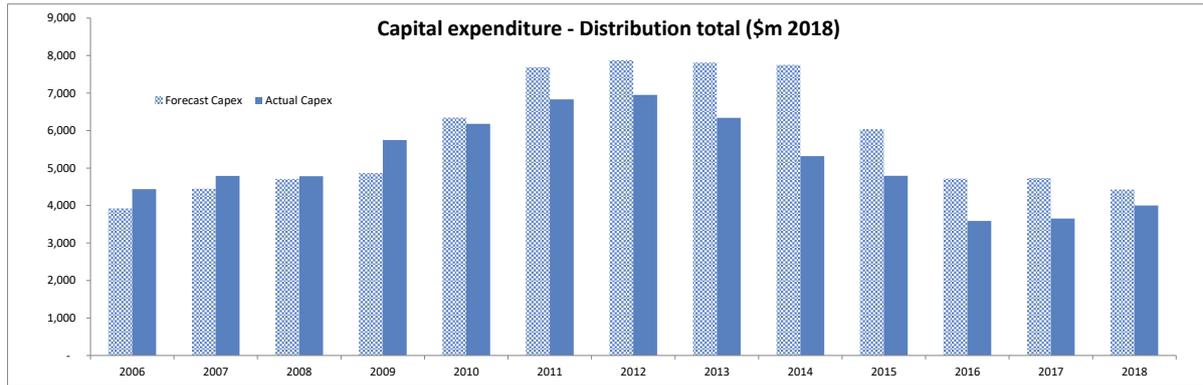
Actual RAB has been taken from roll forward models (RFM) developed as part of final regulatory decisions, as made by the AER or jurisdictional regulators, and amended to take into account any updates made after the final decision. When a final decision RFM is unavailable, we have used the latest available RFM, and if no RFM is available economic benchmarking data has been used.

Note:

*Power and Water: An error in asset revaluation for the 2014-19 regulatory period resulted in the forecasts not being aligned with the actual RAB. To ensure the DNSP total forecast RAB data is comparable with the DNSP total actual RAB data, the forecast RAB for PWC has been assumed to match the actual RAB. This data is shaded green in the table.

**Due to errors in Ergon Energy's Regulatory proposal RFM, the AER has used EB data for the years 2016, 2017, 2018 to estimate the closing actual RAB. This is in line with the process for where RFM data is not available, and the data will be updated when a new RFM is published.

Capital expenditure



Capital expenditure (capex) is a measure of investment in the distribution networks. This includes augmentation of the network, replacement of assets, improving network performance and non-network investments (for example, buildings). Capex is reported on an as-incurred basis.

Forecast Capex

\$m 2018	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	29	32	28	29	77	70	68	61	58	78	65	69	60
Ausgrd	NSW	622	806	801	807	1,710	1,749	1,982	2,008	1,950	649	691	700	638
Endeavour Energy	NSW	412	492	498	589	690	739	657	596	571	444	360	304	295
Essential Energy	NSW	334	494	499	499	875	908	931	934	955	531	529	517	489
Energyex	Qld	826	880	1,025	1,023	1,046	1,336	1,364	1,345	1,311	1,378	583	586	536
Ergon Energy	Qld	683	732	755	747	736	1,179	1,135	1,169	1,218	1,312	694	625	575
SA Power Networks	SA	205	206	199	214	224	357	410	366	368	364	406	397	381
TasNetworks (D)	Tas	66	66	132	153	148	145	142	113	117	109	103	103	114
AusNet (D)	Vic	178	168	169	180	188	326	331	342	331	326	344	417	369
CitiPower	Vic	134	128	126	139	116	172	170	188	187	189	172	198	176
Jemena Electricity	Vic	65	56	60	53	62	107	102	103	109	99	145	179	146
Powercor Australia	Vic	205	225	231	227	230	302	300	309	326	331	363	396	425
United Energy	Vic	136	128	129	138	148	196	200	170	157	159	223	213	185
Power and Water*	NT	30	36	55	67	94	103	85	111	96	67	41	30	38
DNSSP Total		3,924	4,449	4,707	4,865	6,344	7,689	7,877	7,814	7,754	6,034	4,720	4,734	4,426

Sources:

Forecast capex has been sourced from post tax revenue models developed as part of final regulatory decisions, as made by the AER or jurisdictional regulators, and amended to take into account any updates made after the final decision.

Actual Capex

\$m 2018	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	32	39	46	27	77	82	75	72	89	65	52	46	61
Ausgrd	NSW	713	927	1,019	1,402	1,567	1,766	1,874	1,343	717	573	316	463	604
Endeavour Energy	NSW	428	471	447	524	486	569	700	618	558	387	219	195	359
Essential Energy	NSW	463	566	617	681	790	805	822	698	606	492	422	410	381
Energyex	Qld	963	927	841	996	1,156	1,109	1,049	977	813	771	533	510	476
Ergon Energy	Qld	804	909	792	871	792	894	813	887	766	807	634	508	503
SA Power Networks	SA	192	154	144	199	182	299	354	355	300	325	253	279	371
TasNetworks (D)	Tas	144	112	128	154	166	155	98	96	104	92	106	131	152
AusNet (D)	Vic	158	166	235	284	279	299	337	397	409	367	298	331	357
CitiPower	Vic	110	94	99	116	123	154	125	148	160	148	122	102	100
Jemena Electricity	Vic	76	79	49	87	94	133	124	127	131	137	118	134	125
Powercor Australia	Vic	214	210	212	200	223	265	287	316	356	326	271	336	341
United Energy	Vic	115	100	100	139	151	200	208	193	215	220	173	153	128
Power and Water	NT	30	36	55	67	94	103	85	111	96	84	72	51	43
DNSSP Total		4,440	4,789	4,784	5,748	6,180	6,832	6,953	6,339	5,320	4,793	3,590	3,651	4,000

Sources:

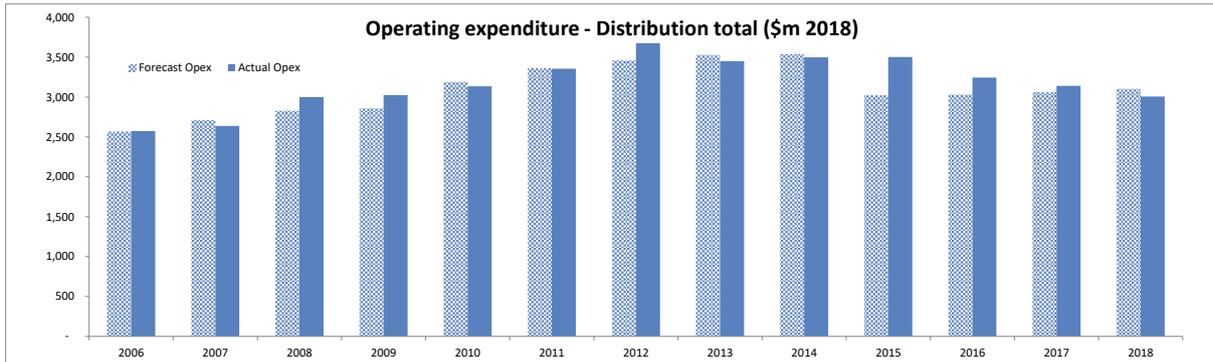
Actual capex has been sourced from roll forward models (RFM) developed as part of final regulatory decisions, as made by the AER or jurisdictional regulators, and amended to take into account any updates made after the final decision. Where a final decision RFM is unavailable, we have used the latest available RFM. When RFM data is unavailable, economic benchmarking data is used.

Note:

Capital contributions have been removed from both forecast and actual capex.

*Power and Water (NT) 2006-2014: Capex forecasts are not available for this period. To ensure the aggregate forecast capex data is comparable with the aggregate actual capex data, the forecast capex for PWC has been assumed to match the actual capex in the years 2006 to 2014. This data is shaded green in the table.

Operating expenditure



Operating expenditure (opex) includes network operation, maintenance and other non-capital costs incurred by the distribution businesses.

Forecast Opex

\$m 2018	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	55	54	56	57	74	79	84	90	93	67	51	53	53
Ausgrid	NSW	437	449	456	459	614	627	640	652	653	463	435	442	435
Endeavour Energy	NSW	287	291	294	296	360	363	368	373	371	256	260	265	269
Essential Energy	NSW	323	382	387	392	479	489	498	506	512	344	347	351	355
Energyex	Qld	295	344	385	396	394	375	377	387	397	392	360	357	362
Ergon Energy	Qld	366	362	361	322	325	417	437	436	432	418	357	363	369
SA Power Networks	SA	172	180	183	182	183	228	225	247	253	255	256	265	265
TasNetworks (D)	Tas	45	44	80	86	89	92	92	82	81	82	82	81	75
AusNet (D)	Vic	150	154	158	162	166	184	192	199	209	212	234	239	244
CitiPower	Vic	48	49	50	51	52	51	55	58	55	56	86	87	90
Jemena Electricity	Vic	70	71	73	75	76	68	66	67	72	71	94	92	93
Powercor Australia	Vic	160	164	167	171	175	173	191	202	191	194	236	243	253
United Energy	Vic	114	116	118	121	121	123	125	126	131	133	146	149	152
Power and Water*	NT	47	49	60	90	82	94	106	103	89	79	86	74	87
DNSSP Total		2,569	2,711	2,829	2,859	3,189	3,363	3,458	3,529	3,540	3,022	3,030	3,060	3,103

Sources:

Forecast opex is sourced from post tax revenue models developed as part of final regulatory decisions, as made by the AER or jurisdictional regulators, and amended to take into account any updates made after the final decision.

Actual Opex

\$m 2018	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	46	46	50	51	57	64	69	76	86	78	42	48	56
Ausgrid	NSW	525	459	645	591	647	628	693	559	624	691	614	545	470
Endeavour Energy	NSW	228	249	307	286	272	286	291	265	301	287	324	313	260
Essential Energy	NSW	329	390	443	419	441	455	550	512	495	415	327	330	349
Energyex	Qld	275	321	340	350	353	388	420	450	410	418	364	366	368
Ergon Energy	Qld	367	342	371	363	363	446	466	386	387	444	442	365	389
SA Power Networks	SA	152	144	163	180	179	225	234	250	256	266	224	273	254
TasNetworks (D)	Tas	66	67	68	76	90	87	96	79	80	68	73	96	87
AusNet (D)	Vic	125	158	168	201	210	215	221	246	254	261	239	212	196
CitiPower	Vic	48	56	53	62	67	65	79	77	81	59	77	76	70
Jemena Electricity	Vic	70	76	65	61	72	72	82	79	77	79	85	88	87
Powercor Australia	Vic	185	175	160	186	186	189	225	240	228	234	204	218	226
United Energy	Vic	110	105	106	107	114	140	141	127	130	123	143	136	110
Power and Water	NT	47	49	60	90	82	94	106	103	89	79	86	74	87
DNSSP Total		2,573	2,638	3,000	3,023	3,134	3,354	3,674	3,449	3,499	3,502	3,244	3,141	3,008

Sources:

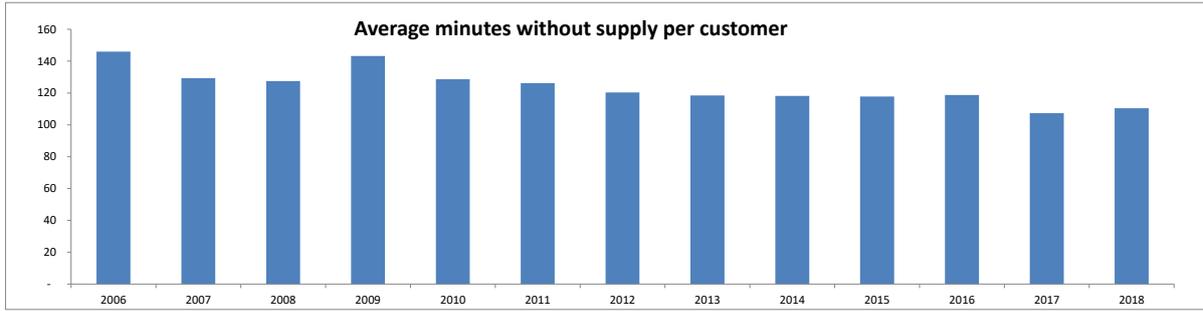
Economic benchmarking RIN responses 2006-2013, 2014, 2015, 2016, 2017, 2018

Note:

*Power and Water: Opex forecasts are not available for the period 2006-2014. Intra-period differences in service classifications between forecasts (based on the Utilities Commission of the Northern Territory's service classifications) and actuals (aligned with 2019-24 AER regulated service classification) for the years 2015-2018 mean comparisons would be misleading. To ensure the aggregate opex data is comparable with the aggregate actual opex data, forecast opex for PWC has been assumed to match the actual opex. This data is shaded green in the table.

Only some networks have operating expenditure for metering services. Those which recorded no opex for metering across the span of the report were: Evoenergy, CitiPower, Power and Water, Powercor Australia, SA Power Networks, TasNetworks (D) and United Energy.

Network reliability - outage duration



Outage duration is measured using a System Average Interruption Duration Index (SAIDI). This shows the average length of time each customer was without supply in a year when averaged over all customers in the distribution network. This data does not include outages caused by force majeure events or other outages primarily caused or initiated by third parties. Aggregate data has been weighted by each network's customer numbers.

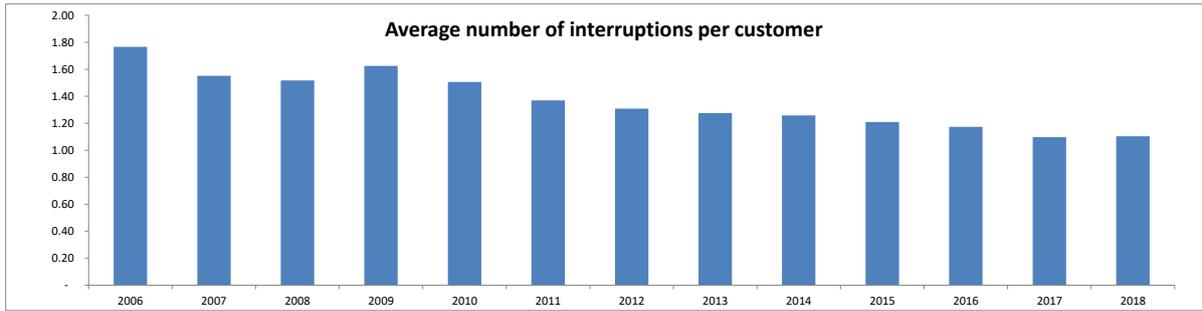
Outage Duration

Minutes/customer	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	35	44	26	30	26	48	33	29	27	33	35	40	31
Ausgrid	NSW	87	86	97	107	79	89	79	68	77	71	76	79	70
Endeavour Energy	NSW	99	96	102	96	79	77	93	104	83	91	87	73	71
Essential Energy	NSW	297	222	218	261	197	223	238	233	181	222	214	236	212
Energyex	Qld	128	88	100	91	88	79	64	67	70	84	74	62	68
Ergon Energy	Qld	380	264	317	352	352	325	296	264	228	281	280	217	235
SA Power Networks	SA	156	180	130	136	181	162	130	143	168	124	139	151	132
TasNetworks (D)	Tas	132	173	175	201	205	139	160	137	185	141	150	137	157
AusNet (D)	Vic	190	177	132	178	130	145	126	133	157	137	171	121	167
CitiPower	Vic	25	22	17	30	30	23	29	27	35	26	25	20	25
Jemena Electricity	Vic	69	68	63	71	62	55	50	60	59	47	46	42	43
Powercor Australia	Vic	121	141	119	170	150	125	130	139	166	134	130	100	135
United Energy	Vic	51	61	63	61	57	61	79	74	78	66	55	43	46
Power and Water	NT	216	211	227	239	174	305	243	214	114	178	175	179	157
Weighted Average		146	129	127	143	129	126	120	118	118	118	119	107	110

Sources:

Economic benchmarking RIN responses 2006-2013, 2014, 2015, 2016, 2017, 2018

Network reliability - outage frequency



Outage frequency is measured using a System Average Interruption Frequency Index (SAIFI). This shows the number of supply interruptions each customer experienced in a year when averaged over all customers on the distribution network. This data does not include outages caused by force majeure events or other outages primarily caused or initiated by third parties. Aggregate data has been weighted by each network's customer numbers.

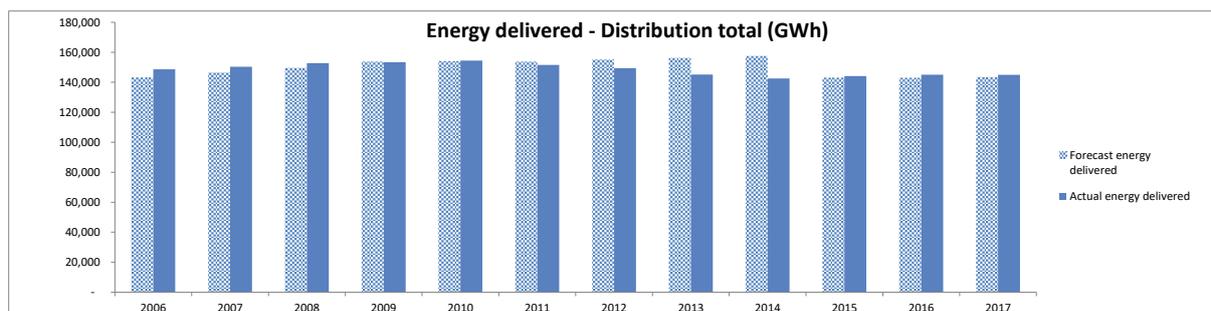
Outage Frequency

Interruptions/customer	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	0.71	0.64	0.56	0.59	0.62	0.80	0.63	0.59	0.50	0.61	0.67	0.70	0.50
Ausgrid	NSW	1.16	1.04	1.15	1.30	1.06	1.03	0.88	0.73	0.83	0.69	0.70	0.71	0.68
Endeavour Energy	NSW	1.21	1.22	1.23	1.10	0.97	0.90	1.01	1.22	0.98	1.09	0.87	0.85	0.78
Essential Energy	NSW	2.64	2.30	2.26	2.34	2.00	1.87	2.12	1.85	1.73	1.97	1.77	1.86	1.78
Energex	Qld	1.72	1.25	1.38	1.30	1.38	1.10	0.85	0.88	0.89	0.91	0.86	0.75	0.75
Ergon Energy	Qld	3.95	2.75	2.94	3.42	3.27	2.83	2.71	2.42	2.32	2.52	2.49	2.14	2.17
SA Power Networks	SA	1.66	1.74	1.35	1.37	1.65	1.55	1.31	1.33	1.45	1.12	1.20	1.24	1.14
TasNetworks (D)	Tas	2.04	1.77	1.77	1.72	1.84	1.45	1.73	1.46	1.82	1.30	1.56	1.45	1.66
AusNet (D)	Vic	2.49	2.33	1.96	2.18	1.91	1.94	1.66	1.90	1.80	1.73	1.69	1.50	1.87
CitiPower	Vic	0.53	0.47	0.31	0.55	0.44	0.40	0.47	0.39	0.42	0.39	0.40	0.33	0.34
Jemena Electricity	Vic	1.19	1.32	1.00	1.17	0.94	0.90	0.92	1.11	0.96	0.77	0.88	0.79	0.73
Powercor Australia	Vic	1.89	1.73	1.50	1.81	1.77	1.35	1.37	1.44	1.60	1.38	1.30	1.11	1.28
United Energy	Vic	0.92	1.07	1.30	1.30	0.98	0.96	1.09	1.01	1.00	0.91	0.81	0.64	0.58
Power and Water	NT	3.61	3.33	2.78	3.68	2.56	3.65	3.46	3.46	1.74	1.85	2.63	2.75	2.39
Weighted Average		1.77	1.55	1.52	1.63	1.51	1.37	1.31	1.28	1.26	1.21	1.17	1.10	1.10

Sources:

Economic benchmarking RIN responses 2006-2013, 2014, 2015, 2016, 2017, 2018

Energy delivered



Energy delivered is a measure of total energy transported through the distribution networks in each year.

Forecast energy delivered

GWh	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	2,655	2,694	2,733	2,906	2,933	2,916	2,908	2,898	2,889	2,737	2,730	2,761	2,959
Ausgrid	NSW	26,771	27,236	27,843	28,482	27,948	28,041	27,989	27,673	27,477	25,057	24,944	24,795	25,332
Endeavour Energy	NSW	17,796	18,091	18,483	18,860	17,373	17,313	17,526	17,967	18,202	15,367	15,245	15,259	16,313
Essential Energy	NSW	11,071	11,269	11,455	11,610	12,092	12,147	12,202	12,258	12,314	11,681	11,628	11,557	12,306
Energex	Qld	20,480	21,305	22,250	23,170	24,085	22,416	23,138	24,042	24,795	20,629	20,569	20,504	20,548
Ergon Energy	Qld	13,358	13,650	13,944	14,592	14,889	15,871	16,450	16,874	17,433	14,115	14,399	14,773	15,159
SA Power Networks	SA	10,509	10,690	10,869	10,994	11,119	11,618	11,422	11,264	11,194	10,418	10,510	10,530	10,467
TasNetworks (D)	Tas	4,176	4,297	4,110	4,694	4,625	4,601	4,560	4,467	4,509	4,551	4,081	4,074	4,187
AusNet (D)	Vic	7,374	7,588	7,785	7,967	8,173	7,975	7,978	7,961	7,974	7,449	7,456	7,458	7,453
CitiPower	Vic	5,702	5,803	5,901	5,959	6,014	6,180	6,227	6,218	6,201	6,371	6,566	6,726	6,847
Jemena Electricity	Vic	4,213	4,264	4,302	4,326	4,357	4,334	4,322	4,271	4,222	4,274	4,326	4,344	4,406
Powercor Australia	Vic	10,024	10,228	10,419	10,605	10,804	10,726	10,795	10,781	10,761	11,087	11,225	11,339	11,491
United Energy	Vic	7,665	7,817	7,943	8,046	8,161	7,936	7,964	7,905	7,842	7,625	7,585	7,600	7,673
Power and Water*	NT	1,432	1,476	1,545	1,576	1,640	1,643	1,640	1,671	1,719	1,751	1,812	1,780	1,767
DNISP Total		143,226	146,408	149,582	153,787	154,213	153,717	155,121	156,250	157,531	143,110	143,076	143,501	146,907

Source:

Regulatory proposal RIN responses, various regulatory periods

Actual energy delivered

GWh	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	2,758	2,821	2,847	2,873	2,896	2,910	2,891	2,904	2,830	2,856	2,876	2,914	2,852
Ausgrid	NSW	30,120	30,442	30,555	30,707	30,533	30,570	29,345	26,338	25,523	25,630	25,618	25,669	25,387
Endeavour Energy	NSW	17,196	17,483	18,112	17,426	17,411	17,501	16,506	16,001	15,637	16,128	16,645	16,716	16,639
Essential Energy	NSW	11,965	11,974	12,037	12,121	12,104	11,943	11,853	12,291	12,030	12,271	12,313	12,389	12,533
Energex	Qld	20,618	20,707	21,155	21,994	22,193	21,454	21,210	21,055	20,838	21,154	21,138	21,355	21,262
Ergon Energy	Qld	13,486	13,576	13,813	14,130	14,257	13,227	13,692	13,496	13,716	13,656	13,747	13,332	13,243
SA Power Networks	SA	10,955	11,259	11,344	11,267	11,504	11,259	11,019	11,008	10,603	10,342	10,355	10,215	10,154
TasNetworks (D)	Tas	4,449	4,417	4,441	4,586	4,545	4,445	4,318	4,248	4,112	4,186	4,243	4,193	4,293
AusNet (D)	Vic	7,398	7,500	7,886	7,750	7,909	7,630	7,595	7,501	7,448	7,686	7,560	7,673	7,570
CitiPower	Vic	5,975	6,079	6,100	6,096	6,210	6,105	6,085	5,981	5,919	5,944	5,876	5,917	5,824
Jemena Electricity	Vic	4,279	4,379	4,490	4,375	4,450	4,415	4,364	4,254	4,136	4,212	4,187	4,264	4,219
Powercor Australia	Vic	10,148	10,299	10,510	10,491	10,678	10,471	10,744	10,556	10,333	10,713	10,657	10,720	10,753
United Energy	Vic	7,915	7,973	7,896	8,013	8,163	8,023	8,121	7,856	7,696	7,604	8,068	7,844	7,667
Power and Water	NT	1,432	1,476	1,545	1,576	1,640	1,643	1,640	1,671	1,719	1,751	1,812	1,780	1,730
DNISP Total		148,693	150,384	152,731	153,406	154,492	151,594	149,382	145,160	142,540	144,133	145,096	144,980	144,126

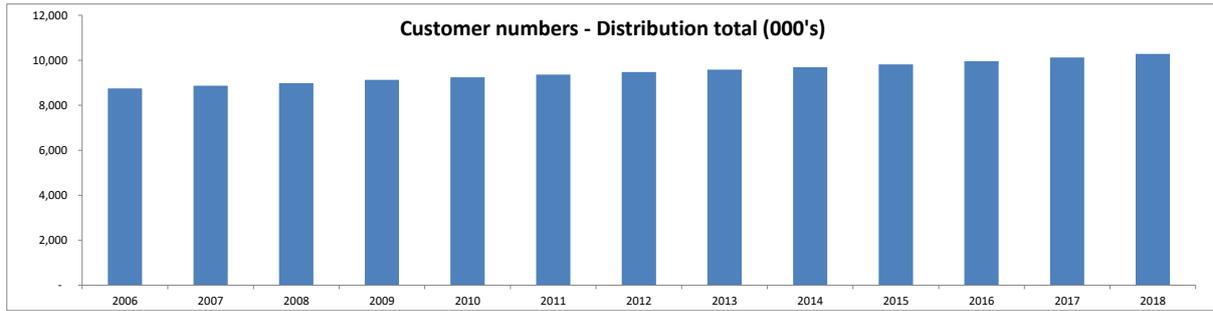
Sources:

Economic benchmarking RIN responses 2006-2013, 2014, 2015, 2016, 2017, 2018

Note:

*Power and Water (NT): Forecasts of energy delivered for Power and Water (NT) are not available for the years prior to 2018. To ensure the aggregate forecast energy delivered data is comparable with the aggregate actual energy delivered data, the forecast for Power and Water has been assumed to match actual energy delivered. This data is shaded green in the table.

Customer numbers



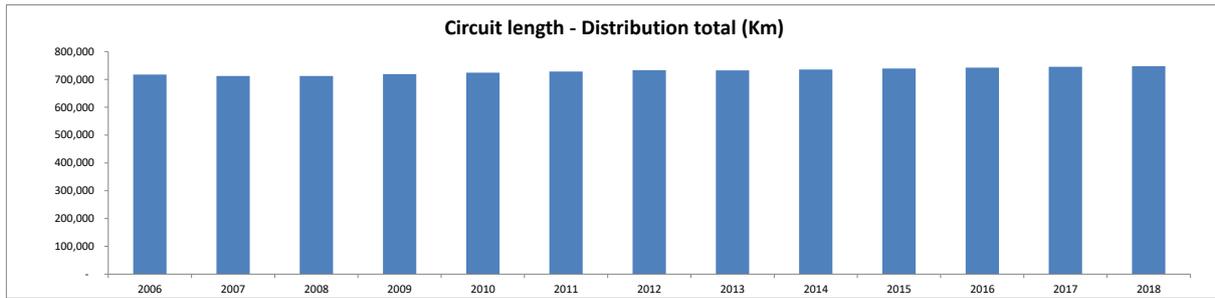
Customer numbers represent the number of customers connected to the distribution networks, including both metered and unmetered customers.

Customer numbers		000's	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	155	156	158	161	165	169	173	177	179	182	185	185	191	198	
Ausgrid	NSW	1,546	1,562	1,574	1,586	1,597	1,609	1,622	1,635	1,651	1,670	1,688	1,707	1,727		
Endeavour Energy	NSW	850	860	870	879	886	895	904	919	940	956	968	984	1,006		
Essential Energy	NSW	799	805	815	822	825	834	838	844	854	867	879	892	906		
Energyex	Qld	1,212	1,236	1,264	1,287	1,308	1,327	1,344	1,360	1,376	1,397	1,422	1,448	1,474		
Ergon Energy	Qld	624	635	648	663	677	689	699	710	722	728	739	746	760		
SA Power Networks	SA	779	779	781	814	827	836	844	848	852	854	859	878	894		
TasNetworks (D)	Tas	251	255	260	265	271	276	278	280	281	283	285	288	288		
AusNet (D)	Vic	605	617	628	639	646	655	669	681	685	706	713	735	742		
CitiPower	Vic	295	300	303	306	310	314	319	323	326	328	336	339	343		
Jemena Electricity	Vic	293	299	303	305	310	313	317	319	318	321	327	335	344		
Powercor Australia	Vic	664	676	688	701	715	731	744	754	765	777	800	816	836		
United Energy	Vic	613	618	624	628	634	641	648	657	658	665	670	677	685		
Power and Water	NT	67	68	69	72	74	76	77	79	81	83	84	86	85		
DNSP Total		8,752	8,867	8,985	9,129	9,244	9,365	9,476	9,586	9,689	9,817	9,955	10,122	10,287		

Sources:

Economic benchmarking RIN responses 2006-2013, 2014, 2015, 2016, 2017, 2018

Circuit length



The circuit length data is measured at the end of each regulatory year. It includes both overhead lines and underground cables. Circuit length is always greater than or equal to route length, as a double circuit line that traverses 10 kms is counted as 20 km of circuit length.

Circuit length

Km	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	4,649	4,684	4,740	4,813	4,886	4,990	5,108	5,171	5,151	5,272	5,312	5,333	5,384
Ausgrid	NSW	38,742	38,875	39,224	39,462	39,745	40,272	40,626	40,964	41,271	41,324	41,453	41,642	41,847
Endeavour Energy	NSW	32,432	32,832	33,299	33,579	33,817	34,172	34,568	35,029	35,492	36,005	36,468	36,993	37,543
Essential Energy	NSW	199,551	189,452	185,829	187,750	188,634	190,592	190,819	191,107	191,156	191,475	191,945	192,103	192,204
Energex	Qld	46,658	47,645	48,486	49,427	50,117	50,771	51,342	51,781	52,097	52,565	53,202	53,757	54,266
Ergon Energy	Qld	148,353	150,136	150,660	151,770	152,580	152,730	153,748	150,472	151,122	152,460	152,255	152,491	151,976
SA Power Networks	SA	84,830	85,326	85,822	86,625	87,209	87,194	87,648	87,882	88,083	88,201	88,808	88,971	89,311
TasNetworks (D)	Tas	21,210	21,210	21,210	21,268	21,632	22,027	22,222	22,336	22,496	22,629	22,681	22,725	22,767
AusNet (D)	Vic	41,507	41,836	42,111	42,712	42,969	43,214	43,702	43,822	44,255	44,349	44,703	44,907	45,115
CitiPower	Vic	3,952	4,076	4,036	4,070	4,099	4,284	4,303	4,347	4,481	4,505	4,541	4,550	4,536
Jemena Electricity	Vic	5,719	5,770	5,868	5,927	5,971	6,042	6,102	6,135	6,161	6,246	6,301	6,345	6,568
Powercor Australia	Vic	71,677	71,931	72,121	72,939	73,499	73,133	73,597	73,889	74,181	74,452	74,675	75,121	75,412
United Energy	Vic	12,384	12,476	12,583	12,538	12,644	12,725	12,818	12,835	12,823	12,873	12,875	13,342	13,382
Power and Water	NT	5,747	5,929	6,110	6,186	6,308	6,460	6,522	6,601	6,664	6,845	6,945	7,015	7,049
DNBP Total		717,411	712,178	712,098	719,065	724,110	728,606	733,125	732,371	735,433	739,202	742,164	745,295	747,359

Circuit length - overhead

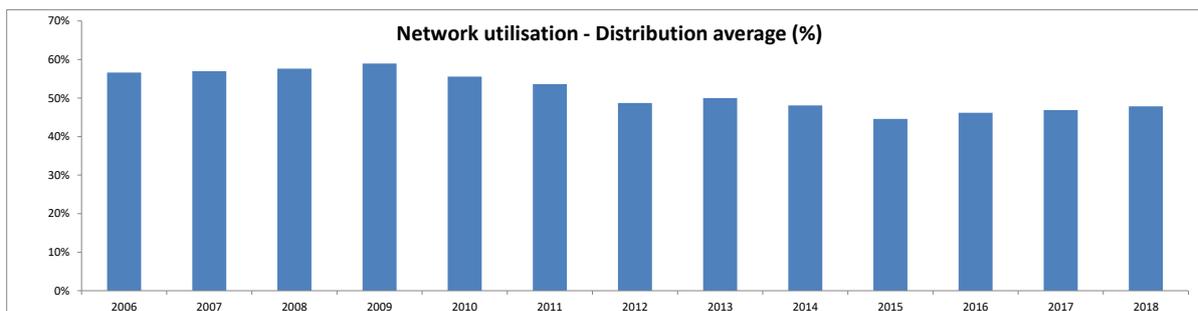
Km	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	2,422	2,414	2,404	2,396	2,391	2,404	2,404	2,395	2,364	2,368	2,365	2,361	2,360
Ausgrid	NSW	26,109	25,885	25,986	25,934	25,967	26,139	26,085	26,072	26,044	26,006	25,934	25,890	25,892
Endeavour Energy	NSW	23,387	23,409	23,440	23,443	23,431	23,411	23,412	23,412	23,387	23,369	23,295	23,227	23,165
Essential Energy	NSW	194,385	183,413	179,875	181,761	182,431	183,526	183,454	183,500	183,490	183,530	183,612	183,386	183,247
Energex	Qld	34,457	34,623	34,659	34,731	34,780	34,900	34,992	35,033	35,102	35,122	35,129	35,119	35,090
Ergon Energy	Qld	144,396	145,654	145,367	145,424	145,685	145,390	146,023	142,293	142,618	143,546	143,114	143,176	143,166
SA Power Networks	SA	71,069	71,025	70,982	71,136	71,323	71,066	71,148	71,153	71,160	71,230	71,322	71,217	71,247
TasNetworks (D)	Tas	19,308	19,308	19,308	19,337	19,537	19,752	19,883	19,962	20,063	20,164	20,179	20,201	20,207
AusNet (D)	Vic	37,642	37,724	37,820	38,099	38,176	38,145	38,380	38,320	38,527	38,383	38,436	38,333	38,206
CitiPower	Vic	2,261	2,292	2,193	2,192	2,185	2,223	2,230	2,233	2,270	2,272	2,274	2,275	2,268
Jemena Electricity	Vic	4,418	4,426	4,452	4,463	4,464	4,476	4,472	4,456	4,436	4,451	4,450	4,453	4,490
Powercor Australia	Vic	68,353	68,418	68,579	68,355	68,370	68,445	68,767	68,824	68,933	68,875	68,814	68,795	68,729
United Energy	Vic	10,108	10,158	10,197	10,113	10,148	10,130	10,186	10,144	10,085	10,080	10,041	10,046	10,042
Power and Water	NT	4,663	4,804	4,953	5,003	5,042	5,120	5,153	5,178	5,204	5,331	5,367	5,405	5,428
DNBP Total		642,977	633,553	630,214	632,387	633,929	635,127	636,593	632,974	633,684	634,729	634,332	633,882	633,536

Circuit length - underground

Km	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	2,227	2,271	2,337	2,418	2,496	2,586	2,704	2,776	2,786	2,904	2,946	2,972	3,024
Ausgrid	NSW	12,634	12,990	13,238	13,528	13,779	14,134	14,542	14,892	15,227	15,318	15,519	15,752	15,955
Endeavour Energy	NSW	9,045	9,423	9,859	10,136	10,386	10,761	11,151	11,617	12,105	12,636	13,173	13,766	14,378
Essential Energy	NSW	5,166	6,039	5,954	5,989	6,203	7,066	7,365	7,607	7,666	7,946	8,333	8,717	8,957
Energex	Qld	12,201	13,022	13,827	14,696	15,337	15,871	16,350	16,748	16,995	17,442	18,073	18,638	19,176
Ergon Energy	Qld	3,958	4,482	5,293	6,346	6,895	7,339	7,725	8,179	8,504	8,913	9,141	9,315	8,810
SA Power Networks	SA	13,762	14,301	14,840	15,489	15,885	16,128	16,500	16,729	16,923	16,971	17,486	17,754	18,064
TasNetworks (D)	Tas	1,902	1,903	1,903	1,931	2,095	2,275	2,339	2,374	2,433	2,465	2,502	2,524	2,560
AusNet (D)	Vic	3,865	4,111	4,291	4,613	4,793	5,069	5,322	5,502	5,728	5,966	6,267	6,575	6,909
CitiPower	Vic	1,691	1,784	1,843	1,878	1,914	2,061	2,073	2,114	2,211	2,233	2,267	2,274	2,268
Jemena Electricity	Vic	1,301	1,344	1,416	1,463	1,507	1,566	1,630	1,679	1,725	1,795	1,851	1,892	2,078
Powercor Australia	Vic	3,324	3,513	3,542	4,585	5,129	4,688	4,830	5,065	5,248	5,577	5,861	6,326	6,683
United Energy	Vic	2,276	2,318	2,386	2,424	2,497	2,595	2,632	2,691	2,738	2,793	2,834	3,297	3,339
Power and Water	NT	1,084	1,124	1,157	1,183	1,266	1,340	1,369	1,423	1,460	1,514	1,578	1,610	1,621
DNBP Total		74,434	78,625	81,884	86,678	90,181	93,479	96,531	99,396	101,749	104,473	107,832	111,413	113,823

Sources:
Economic benchmarking RIN responses 2006-2013, 2014, 2015, 2016, 2017, 2018

Network utilisation



Network utilisation is a measure of the use of the network. Utilisation rates are derived by comparing maximum demand to the total capacity of the distribution network, at the zone substation level.

Network utilisation

	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	0.48	0.50	0.49	0.52	0.49	0.49	0.45	0.46	0.46	0.44	0.46	0.47	0.45
Ausgrid	NSW	0.53	0.50	0.49	0.46	0.42	0.42	0.35	0.34	0.30	0.29	0.32	0.36	0.33
Endeavour Energy	NSW	0.59	0.52	0.51	0.54	0.52	0.54	0.43	0.47	0.40	0.40	0.44	0.48	0.45
Essential Energy	NSW	0.40	0.36	0.32	0.33	0.31	0.29	0.26	0.27	0.19	0.18	0.19	0.20	0.19
Energex	Qld	0.50	0.48	0.48	0.50	0.50	0.46	0.45	0.44	0.42	0.39	0.41	0.43	0.42
Ergon Energy	Qld	0.71	0.73	0.76	0.77	0.69	0.65	0.64	0.64	0.55	0.57	0.52	0.53	0.56
SA Power Networks	SA	0.71	0.69	0.71	0.75	0.70	0.69	0.59	0.59	0.59	0.53	0.55	0.57	0.54
TasNetworks (D)	Tas	0.43	0.56	0.52	0.45	0.45	0.36	0.35	0.36	0.37	0.37	0.35	0.34	0.39
AusNet (D)	Vic	0.64	0.65	0.67	0.66	0.62	0.58	0.57	0.57	0.62	0.54	0.54	0.49	0.55
CitiPower	Vic	0.61	0.62	0.65	0.68	0.59	0.61	0.54	0.56	0.55	0.47	0.50	0.51	0.51
Jemena Electricity	Vic	0.57	0.62	0.64	0.68	0.65	0.63	0.56	0.61	0.63	0.53	0.57	0.58	0.59
Powercor Australia	Vic	0.83	0.80	0.83	0.87	0.83	0.80	0.75	0.77	0.74	0.72	0.74	0.73	0.76
United Energy	Vic	0.65	0.66	0.69	0.73	0.71	0.67	0.60	0.64	0.66	0.57	0.64	0.62	0.64
Power and Water	NT	0.28	0.29	0.30	0.31	0.31	0.30	0.27	0.28	0.24	0.24	0.23	0.25	0.32
DNISP Average		0.57	0.57	0.58	0.59	0.56	0.54	0.49	0.50	0.48	0.45	0.46	0.47	0.48

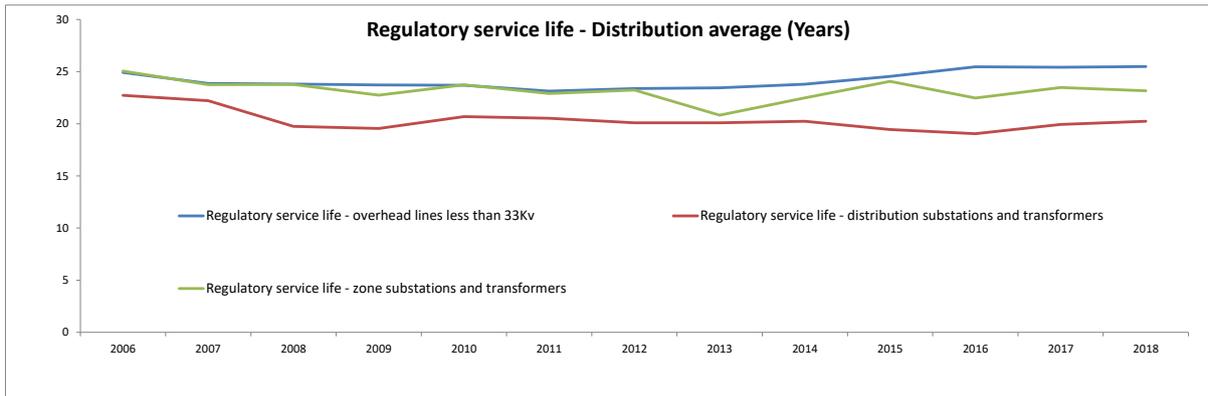
Sources:

Economic benchmarking RIN responses 2006-2013, 2014, 2015, 2016, 2017, 2018

Note:

"DNISP average" is a simple average of all businesses' results for that year. No weightings or other considerations have been applied.

Regulatory Service Life



Regulatory service life is an indicator of the regulatory age of assets in service across the distribution businesses. In general terms an increasing regulatory service life implies increased maintenance expenditure may be required, or the asset may be reaching the end of its useful life and may need to be replaced. Regulatory service life has been calculated as the difference between the expected life of a new asset and the residual life of the existing assets in service.

Regulatory service life - overhead lines less than 33kV

years	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	42	42	42	42	42	42	42	42	42	34	36	38	40
Ausgrid	NSW	14	14	13	13	13	13	12	12	12	12	13	13	13
Endeavour Energy	NSW	12	3	5	6	7	7	8	8	9	12	12	13	13
Essential Energy	NSW	28	28	29	29	30	30	31	32	39	41	42	43	44
Energex	Qld	24	21	19	17	15	14	13	13	12	12	12	12	12
Ergon Energy	Qld	25	26	25	25	25	15	23	23	22	22	22	22	21
SA Power Networks	SA	33	34	35	35	38	38	38	39	39	40	43	43	44
TasNetworks (D)	Tas	19	19	19	19	19	19	19	20	20	20	21	21	13
AusNet (D)	Vic	24	24	24	24	24	24	24	24	30	29	31	34	34
CitiPower	Vic	26	27	27	27	27	27	26	26	26	27	26	28	29
Jemena Electricity	Vic	32	31	32	31	28	32	29	32	28	30	35	26	27
Powercor Australia	Vic	32	31	29	28	27	25	25	24	24	24	24	25	26
United Energy	Vic	14	14	14	14	14	14	14	14	14	14	14	13	13
Power and Water	NT	22	22	21	21	22	22	22	20	15	26	26	25	28
DNISP Average		25	24	24	24	24	23	23	23	24	25	25	25	25

Regulatory service life - distribution substations and transformers

years	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	39	39	39	39	39	39	39	39	39	25	25	25	25
Ausgrid	NSW	23	21	19	17	14	13	12	12	13	13	13	14	15
Endeavour Energy	NSW	7	2	3	4	8	5	6	7	7	8	8	9	9
Essential Energy	NSW	21	22	22	23	24	24	25	26	23	23	23	24	24
Energex	Qld	14	13	13	12	11	11	11	11	10	11	11	11	12
Ergon Energy	Qld	20	21	19	19	18	21	16	16	15	16	15	15	15
SA Power Networks	SA	25	26	26	26	27	27	26	26	26	27	24	25	26
TasNetworks (D)	Tas	20	20	20	21	21	21	21	21	22	22	22	22	17
AusNet (D)	Vic	23	23	23	23	23	23	23	23	26	27	25	25	26
CitiPower	Vic	26	27	27	27	27	27	26	26	26	27	26	28	29
Jemena Electricity	Vic	21	21	22	22	21	20	19	18	19	18	18	26	27
Powercor Australia	Vic	32	31	29	28	27	25	25	24	24	24	24	25	26
United Energy	Vic	14	14	14	14	14	14	14	14	14	14	14	13	13
Power and Water	NT	32	33	0	0	16	16	18	19	20	19	18	17	21
DNISP Average		23	22	20	20	21	21	20	20	20	19	19	20	20

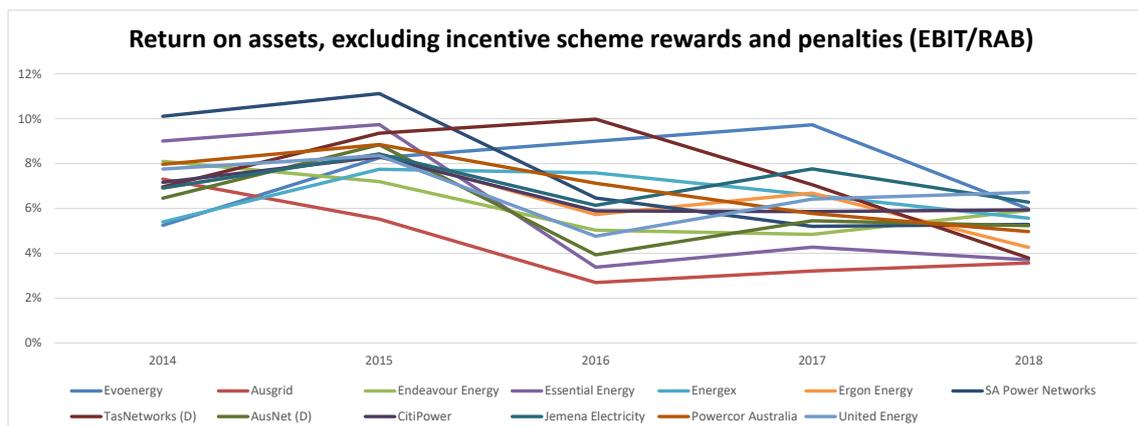
Regulatory service life - zone substations and transformers

years	State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Evoenergy	ACT	21	21	21	21	21	21	21	21	24	25	32	30	33
Ausgrid	NSW	21	20	19	17	13	12	11	10	12	12	12	13	13
Endeavour Energy	NSW	13	1	3	3	4	5	6	6	6	6	6	7	7
Essential Energy	NSW	31	27	27	28	28	28	29	30	21	24	24	25	25
Energex	Qld	22	19	18	17	16	14	14	13	13	12	13	13	14
Ergon Energy	Qld	19	20	21	17	18	17	15	14	13	18	15	12	12
SA Power Networks	SA	25	26	26	26	27	27	26	26	26	27	18	19	19
TasNetworks (D)	Tas	26	25	26	26	27	26	27	27	26	26	27	26	12
AusNet (D)	Vic	28	28	28	28	28	28	28	28	26	35	37	38	38
CitiPower	Vic	26	27	27	27	27	27	26	26	26	27	26	28	29
Jemena Electricity	Vic	28	30	29	28	30	24	34	21	31	31	10	24	25
Powercor Australia	Vic	32	31	29	28	27	25	25	24	24	24	24	25	26
United Energy	Vic	36	36	36	36	36	36	36	36	36	36	36	37	37
Power and Water	NT	23	24	24	18	32	30	29	9	31	34	34	32	33
DNISP Average		25	24	24	23	24	23	23	21	22	24	22	23	23

Sources:

Economic benchmarking RIN responses, 2006-13, 2014, 2015, 2016, 2017, 2018

Return on assets



Return on assets, including incentive scheme penalties or rewards

%	State	2014	2015	2016	2017	2018
Evoenergy	ACT	5.25%	8.26%	8.99%	9.73%	5.94%
Ausgrid	NSW	7.33%	6.11%	3.26%	3.64%	3.86%
Endeavour Energy	NSW	8.23%	8.68%	5.35%	5.28%	5.52%
Essential Energy	NSW	9.01%	9.75%	3.39%	4.28%	3.76%
Energex	Qld	5.40%	8.05%	7.70%	7.14%	5.79%
Ergon Energy	Qld	6.93%	8.75%	6.29%	7.35%	5.15%
SA Power Networks	SA	10.64%	11.49%	6.47%	5.51%	5.91%
TasNetworks (D)	Tas	6.96%	9.35%	9.82%	7.57%	4.61%
AusNet (D)	Vic	7.32%	9.34%	4.57%	6.65%	5.29%
CitiPower	Vic	6.75%	7.96%	5.66%	5.71%	6.06%
Jemena Electricity	Vic	8.83%	9.75%	7.35%	8.50%	6.02%
Powercor Australia	Vic	8.47%	8.96%	6.93%	6.52%	5.46%
United Energy	Vic	6.78%	7.23%	4.14%	6.73%	7.48%

Return on assets, excluding incentive scheme penalties or rewards

%	State	2014	2015	2016	2017	2018
Evoenergy	ACT	5.25%	8.26%	8.99%	9.73%	5.98%
Ausgrid	NSW	7.31%	5.52%	2.69%	3.21%	3.56%
Endeavour Energy	NSW	8.10%	7.19%	5.02%	4.84%	5.91%
Essential Energy	NSW	9.00%	9.74%	3.38%	4.27%	3.71%
Energex	Qld	5.39%	7.74%	7.58%	6.60%	5.56%
Ergon Energy	Qld	6.91%	8.43%	5.72%	6.69%	4.26%
SA Power Networks	SA	10.10%	11.12%	6.46%	5.20%	5.29%
TasNetworks (D)	Tas	6.96%	9.35%	9.98%	7.06%	3.79%
AusNet (D)	Vic	6.46%	8.84%	3.93%	5.45%	5.23%
CitiPower	Vic	7.16%	8.30%	5.89%	5.86%	5.94%
Jemena Electricity	Vic	6.91%	8.42%	6.14%	7.76%	6.27%
Powercor Australia	Vic	7.97%	8.85%	7.12%	5.77%	4.97%
United Energy	Vic	7.75%	8.35%	4.76%	6.41%	6.72%

Return on assets, real pre-tax WACC

%	State	2014	2015	2016	2017	2018
Evoenergy	ACT	6.91%	4.61%	4.51%	4.48%	4.42%
Ausgrid	NSW	8.13%	4.68%	4.62%	4.53%	4.44%
Endeavour Energy	NSW	8.15%	4.82%	4.76%	4.76%	4.76%
Essential Energy	NSW	8.07%	4.73%	4.67%	4.59%	4.50%
Energex	Qld	8.02%	8.02%	3.97%	4.00%	4.00%
Ergon Energy	Qld	7.89%	7.89%	3.94%	3.97%	3.98%
SA Power Networks	SA	8.98%	8.98%	4.35%	4.36%	4.35%
TasNetworks (D)	Tas	6.55%	6.55%	6.55%	6.55%	4.19%
AusNet (D)	Vic	7.80%	7.80%	4.53%	4.49%	4.46%
CitiPower	Vic	7.86%	7.86%	4.42%	4.36%	4.31%
Jemena Electricity	Vic	8.70%	8.70%	4.70%	4.64%	4.58%
Powercor Australia	Vic	7.76%	7.76%	4.32%	4.26%	4.21%
United Energy	Vic	7.91%	7.91%	4.79%	4.73%	4.67%

Sources:

Roll forward Model
 Post tax revenue Model
 Economic benchmarking RIN responses 2014 to 2018
 Annual reporting RIN responses 2014 to 2018

Notes:

We have calculated the regulatory return on assets (EBIT) measure for each distribution network service provider using the formulae used in our profitability measures review (i.e. EBIT/RAB). Our detailed approach is set out in the [AER Draft Position Paper](#). However, our review of data reported in the income statements (annual RIN submissions) has identified some differences in reporting between DNSPs. We are currently reviewing our EBIT measure as part of the ongoing work in our profitability review. We will update this data if changes in the derivation of EBIT arise from our ongoing work.