

Attachment 4.11

Energy volume forecasts to 2018/19

6 December 2013



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This attachment sets out the energy volume forecasts which support Ausgrid's Regulatory Proposals for the periods 1 July 2014 to 30 June 2015 and 2015-19.

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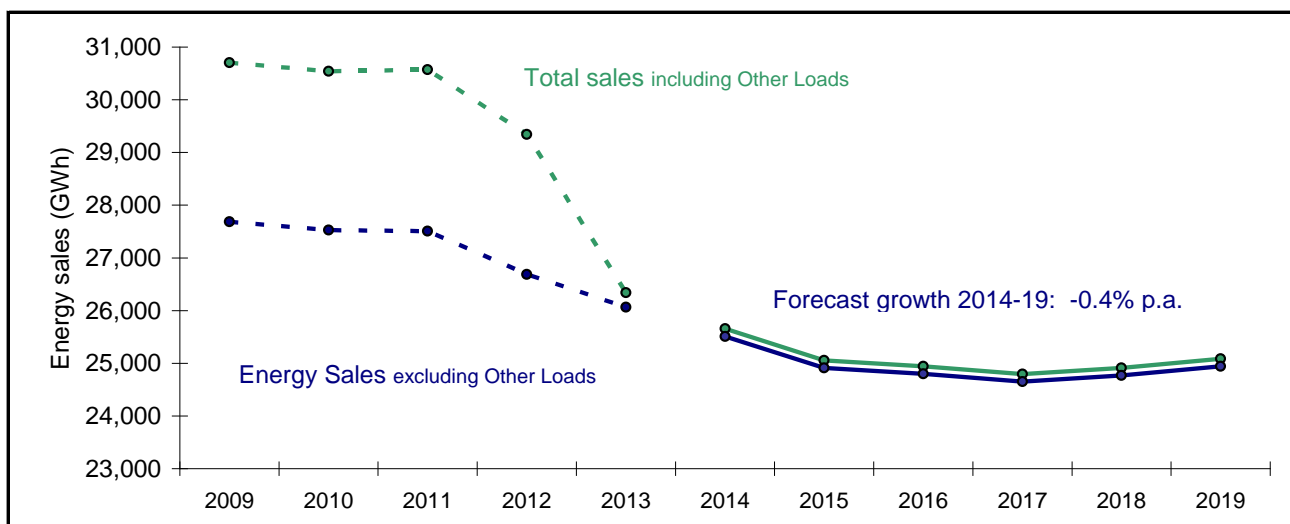
1 Executive summary

1.1 High level segment energy forecast to 2018/19

This report presents the forecasts of annual energy sales which supports Ausgrid’s regulatory proposal for the 2014/15 to 2018/19 period. The forecasts are based on information which was available as at the end of November 2013, and are summarised below.

Sector Sales (GWh) Year ended June -->	Actual	Actual	Actual	Actual	Actual	F'cast	AER Determination Period Forecast					Growth p.a.
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2014-19
Residential	8,422	8,199	8,101	7,630	7,382	7,068	6,998	7,004	6,964	6,975	7,053	0.0%
% growth	2.8%	-2.6%	-1.2%	-5.8%	-3.3%	-4.3%	-1.0%	0.1%	-0.6%	0.2%	1.1%	0.0%
Controlled load	1,430	1,313	1,276	1,261	1,197	1,122	1,077	1,019	957	901	846	-5.5%
% growth	-2.8%	-8.2%	-2.8%	-1.1%	-5.1%	-6.2%	-4.0%	-5.4%	-6.1%	-5.9%	-6.1%	-5.5%
Non-residential	17,832	18,015	18,133	17,797	17,483	17,317	16,839	16,778	16,731	16,893	17,043	-0.3%
% growth	0.2%	1.0%	0.7%	-1.8%	-1.8%	-0.9%	-2.8%	-0.4%	-0.3%	1.0%	0.9%	-0.3%
Energy sales	27,684	27,527	27,510	26,689	26,062	25,508	24,914	24,801	24,653	24,769	24,942	-0.4%
% growth	0.8%	-0.6%	-0.1%	-3.0%	-2.3%	-2.1%	-2.3%	-0.5%	-0.6%	0.5%	0.7%	-0.4%
Other loads *	3,022	3,011	3,060	2,656	276	149	143	143	143	143	143	-0.8%
% growth	-2.4%	-0.4%	1.6%	-13.2%	-89.6%	-46.1%	-4.1%	0.0%	0.0%	0.0%	0.0%	-0.8%
Total sales with Other *	30,706	30,539	30,570	29,345	26,338	25,656	25,057	24,944	24,795	24,912	25,085	-0.4%
% growth	0.5%	-0.5%	0.1%	-4.0%	-10.2%	-2.6%	-2.3%	-0.5%	-0.6%	0.5%	0.7%	-0.4%

* Other loads refers to combined Hydro Aluminium, OneSteel Newcastle and Essential Energy transfers.



Energy sales excluding “Other loads” (that is, excluding Hydro Aluminium, OneSteel Newcastle and Essential Energy transfers) declined by an average -1.5% per annum in the first four years of the current five-year determination period. Sales are projected to decline by -2.1% in 2013/14 and by -2.3% in 2014/15. Thereafter the rate of annual decline in sales is forecast to moderate, before returning to positive growth in 2017/18. Projected average sales growth in the five years to 2018/19 is -0.4 percent per annum. Despite the projected turnaround from consistently negative growth, forecast energy sales excluding other loads in 2018/19 would be close to -10% lower than 2008/09 levels.

The key reason behind the expected slowdown in declining consumption trends is that the rate of increase in retail electricity prices is projected to moderate after 2015/16, following the high and sustained price growth which has been experienced in recent years. The projected electricity price path together with expected moderate uptake of electric vehicle usage adds positive stimulus to growth trends compared with recent years. However these positive stimuli are to a large degree offset by independently projected energy conservation outcomes associated with ongoing solar PV penetration, the NSW Energy Savings Scheme (NSW ESS) and ongoing building shell and electrical end-use efficiency improvements.

1.2 Report layout

The energy forecast presented in Section 1.1 is the sum of individual forecasts of the residential, non-residential, controlled load and “other load” segments. Sections 3 to 6 of this report respectively set out the details behind each of the long-term segment forecasts. Section 2 of the report details the estimation of current year (2013/14) sales volumes, which forms the starting point or base year of the forecasts.

1.3 Tariff and tariff component level forecast to 2018/19

The calculation of Network Use of System (NUoS) revenue requires individual volume forecasts for each component¹ of each Network tariff². The sum of the component volume forecasts multiplied by the corresponding component price tariff gives NUoS revenue. Sections 3 to 6 of the report include a summary of the various assumptions which have been applied to translate the high level segment forecasts into the level of detail necessary to enable NUoS revenue calculations.

¹ Tariff components include (a) energy based charges which are further broken down into peak/shoulder/off-peak, block consumption and non-time-of-use based components, (b) Network Access Charges (or fixed “per day” charges) and (c) capacity based charges (based on a customer’s maximum demand level of usage).

² In 2013/14 there were 63 different tariffs available in the Ausgrid Network region.

2 Current year (2013/14) energy forecasts

The energy forecast is prepared on a disaggregated basis, with separate long-term forecasts made for energy consumption in each of the residential, non-residential, controlled load and “other load” market segments.

The long-term forecast is overlaid onto a related although separately derived forecast of the current year’s energy consumption. The forecast for the current year forms the base year starting point for the long-term energy forecasts.

2.1 Current year energy forecast process

Ausgrid is required (generally on a quarter-year basis) to prepare projections of current year revenues for its stakeholder, the NSW Treasury. Given that Network tariffs for the current year are in place, then the key driver of the revenue projections is the forecast of tariff-related volumes for the year.

In preparing the current year volume forecasts, the following issues have been taken into consideration:

(a) Abnormal year-to-date weather: Overall milder than normal weather in the year to November 2013 is estimated to have reduced energy consumption by -82 GWh and this has been factored into the forecast for 2013/14 energy consumption.

(b) Underlying energy growth: Underlying (that is, weather and daytype corrected) Bulk Supply Point (BSP) energy growth in July and August 2013 averaged -3.0% before recovering to average -1.3% in the September to November 2013 period. In part the more recent strengthening in growth was due to the ramping up in load of a new large customer. After allowing for this customer’s contribution, underlying energy growth in the September to November 2013 period was -1.8%, which is close to the budgeted full year 2013/14 underlying growth rate of -1.9%. For 2013/14 energy consumption projection purposes it has been assumed that underlying growth for the December 2013 to June 2014 period will be on budget at -1.9%, but that an additional BSP energy allowance needs to be made for the increasing loads of the new large customer. On this basis projected 2013/14 BSP energy (excluding other loads – see Section 5.2) would be 26,533 GWh, which is -2.2% lower than the 2012/13 level.

(c) Assumed system losses for 2013/14: Translation of the projected 2013/14 BSP energy (from (b) above) into energy sales projections requires that an assumed system loss factor be applied. For the purposes of projecting 2013/14 energy sales it has been assumed that system losses will be 3.86%, which is halfway between the 2012/13 system losses figure of 3.91% and the “pure physics” expectation (based on the projected reduction in 2013/14 BSP energy from (b) above) of 3.81%. On this basis the projected sales excluding other loads for 2013/14 is 25,508 GWh, which is -2.1% lower than 2012/13 energy sales.

(d) Recent segment sales growth relativities: The projected total 2013/14 energy sales has been disaggregated into the residential, controlled load, non-residential and other loads segments on the basis of recent growth trend relativities among the segments.

2.2 Current year (2013/14) energy forecast

On the basis of the process set out in Section 2.1, the adopted forecast for 2013/14 energy sales is shown at right.

The very weak forecast growth in the other loads segment is associated with the progressive closure of the Hydro Aluminium smelter.

Sector Sales (GWh) Year ended June -->	Actual 2013	Forecast 2014	Change
Residential	7,382	7,068	-4.3%
Controlled load	1,197	1,122	-6.2%
Non-residential	17,483	17,317	-0.9%
Energy sales	26,062	25,508	-2.1%
Other loads	276	149	-46.1%
Total sales with Other	26,338	25,656	-2.6%

3 Long-term residential segment energy forecast

3.1 Residential segment forecast overview

The residential segment in 2012/13 accounted for approximately 28% of total energy sales volumes and 40% of total Network Use of System (NUoS) revenue. The derivation of the residential energy sales forecast entails the following steps:

(Step 1) Development of an econometric model which explains historical residential sales trends against the corresponding trends in driver variables (including income and retail electricity prices).

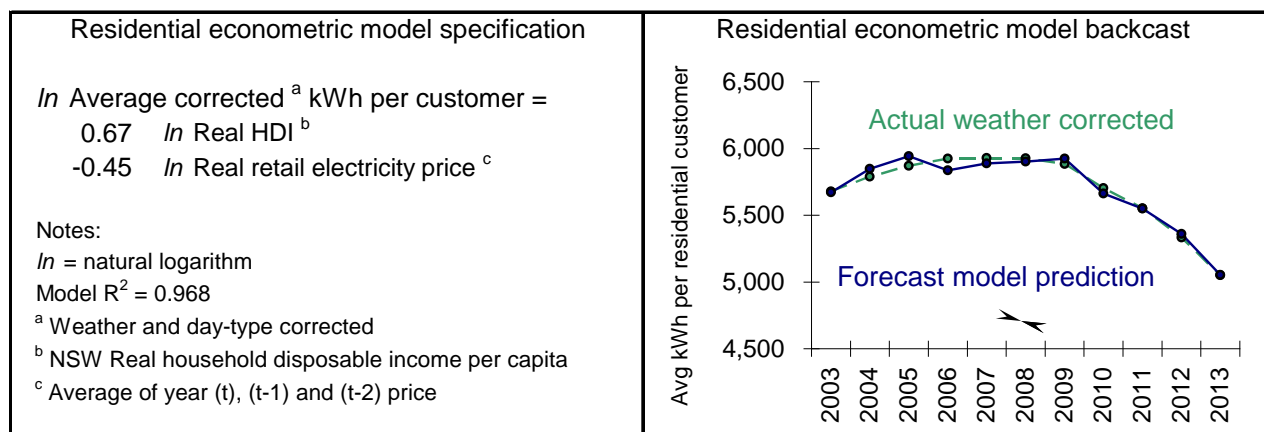
(Step 2) Input projections of the identified driver variables into the econometric model. This interaction translates the projected trends in the driver variables into a Business As Usual (BAU) energy forecast. As noted in Section 2 the forecast for the current year (2013/14) energy sales factors in year-to-date weather impacts and year-to-date underlying trends in sales.

(Step 3) Overlay the assessed impacts of any identified future energy consumption developments which will not have been captured in the BAU forecast. These “post-model adjustments” are necessary because the econometric model is based on the historical interaction between energy and the identified driver variables, and therefore cannot take into account the impact of emerging new driver variables or expected material changes to relatively recent drivers, such as the emergence of solar PV.

3.2 Residential segment econometric model

In developing the residential econometric model the driver variables which have been tested include customer numbers, annual weather indices, disposable income, mortgage interest rates, electricity, gas retail prices, and an index of conservation practices. The evidence of lagged impacts in the electricity price variable has also been tested.

On the basis of statistical significance and logic of parameter estimates the econometric model adopted for the residential energy forecast is summarised below.

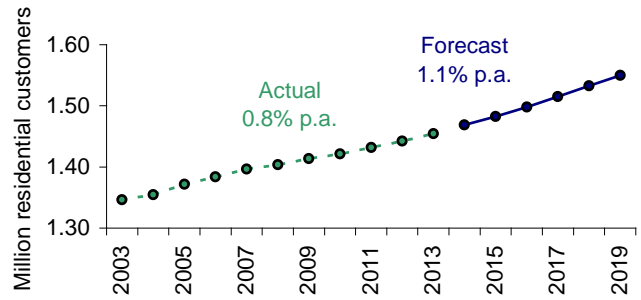


The modelling of average weather/daytype corrected energy as the dependent variable automatically incorporates weather and daytype (particularly leap year effects) impacts into the BAU forecast. Expressing the relationship in logarithmic form (“ \ln ”) means that the income parameter of +0.67 and the lagged price parameter of -0.45 can be interpreted as elasticities. The inclusion of the two previous years’ prices in the overall price parameter indicates the presence of lagged responses to price changes.

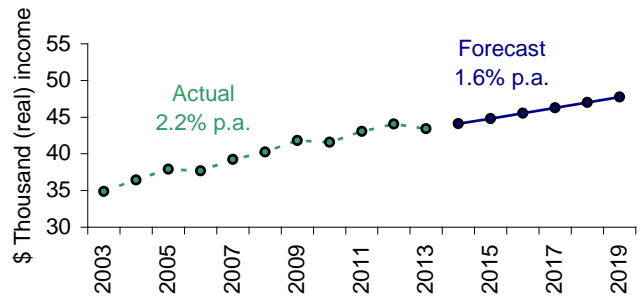
3.3 BAU Residential segment energy forecast

The BAU residential energy forecast is the product of inputting projections of the modelled driver variables (income and price) into the econometric model. The sources of the driver projections and the projections themselves are set out below.

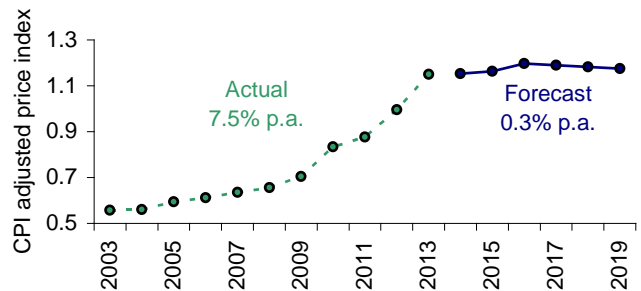
Residential customer numbers: The residential customer number projection is sourced from Ausgrid’s System Planning branch and corresponds with that which has been developed for connections-related capital expenditure forecast purposes. The projection implies an expected moderate upturn in housing building activity, following the last decade of weakness.



Real household disposable income (RHDI) per capita: The RHDI projection is sourced from the NIEIR report “Economic Scenarios for the Endeavour Region 2010-2026”, June 2013 (a report prepared on behalf of the three NSW DNSPs, hereafter referred to as the “June 2013 NIEIR economic and price projections report”). The projection is for slower real income growth compared with that experienced in the past decade.



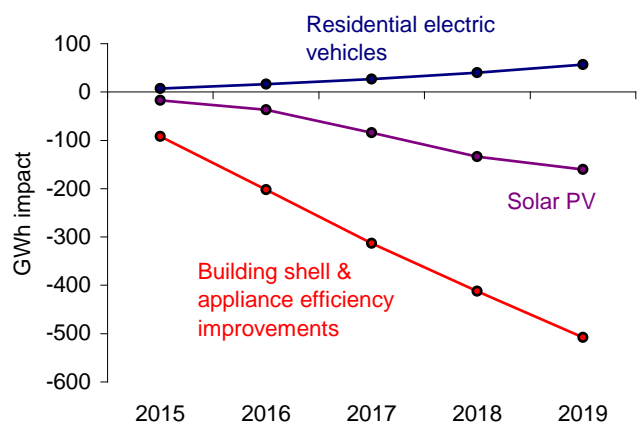
Real retail residential electricity price: The residential retail electricity price projection is also sourced from the June 2013 NIEIR economic and price projections report. The projection is for a marked moderation in electricity price changes compared with that experienced since 2008/09.



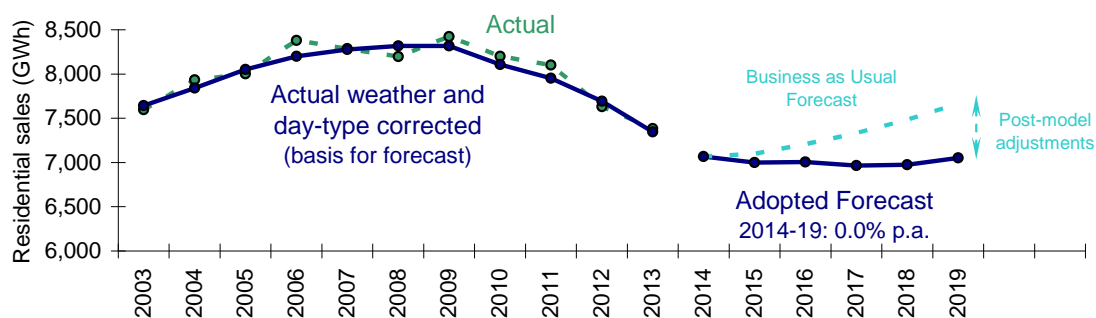
3.4 Residential forecast post-modelling adjustments

Post-modelling adjustments to the BAU forecast are required in order to capture the expected impacts of ongoing solar PV penetration, energy efficiency improvements and electric vehicle loads.

The post-modelling adjustments which have been adopted for the residential segment’s share of these impacts are shown at right. The source of the adjustments is the August 2013 report “Review of post modelling adjustments to the NSW DNSPs long-term energy forecasts”, by Energy Efficient Strategies.



3.5 Residential energy forecast

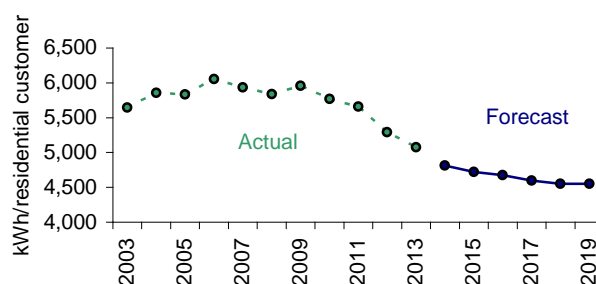


The residential forecast which is the outcome of the foregoing forecasting processes is shown above. Residential energy sales are forecast to continue to remain weak until 2014/15 in response to the lagged impact of the approximately 20% nominal electricity price increase which occurred in 2012/13. Over the 2014-19 period residential sales are forecast to be flat. Under this forecast sales levels in 2018/19 would be around -1,400 GWh or -16% lower than in 2008/09.

3.5.1 Implicit average customer consumption forecast

The projected trend in average energy consumption per residential customer which is implicit in the residential energy forecast is shown at right.

Average customer consumption is projected to continue the post 2008/09 declining trend in 2013/14, after which the rate of decline moderates.



3.6 Residential tariff component forecast

Two residential tariffs will apply throughout the 2015-19 regulatory period, namely EA010 (Residential Inclining Block) and EA025 (Residential ToU). EA010 is the default tariff for new residential customers.

The following rules and assumptions have been applied in apportioning the overall residential energy forecast across the residential tariff components:

(a) The peak/shoulder/off-peak energy components of EA025 are assumed to grow at the forecast rate for average customer consumption (see Section 3.5.1). This assumption provides the forecast share of EA025 in overall residential energy. The residual is the forecast share of EA010 in overall residential energy.

(b) The Block 1/2/3 energy components of EA010 are assumed to be in the same proportions as was recorded in 2012/13.

(c) All new residential customers default to EA010. Therefore, Network Access Charge (NAC) volumes for EA025 are forecast to remain constant throughout the forecast period, while the NAC volumes for EA010 grow in line with forecast residential customer number growth.

A reconciliation of the overall residential energy forecast with the residential tariff components is included in Appendix A.

4 Long-term non-residential segment energy forecast

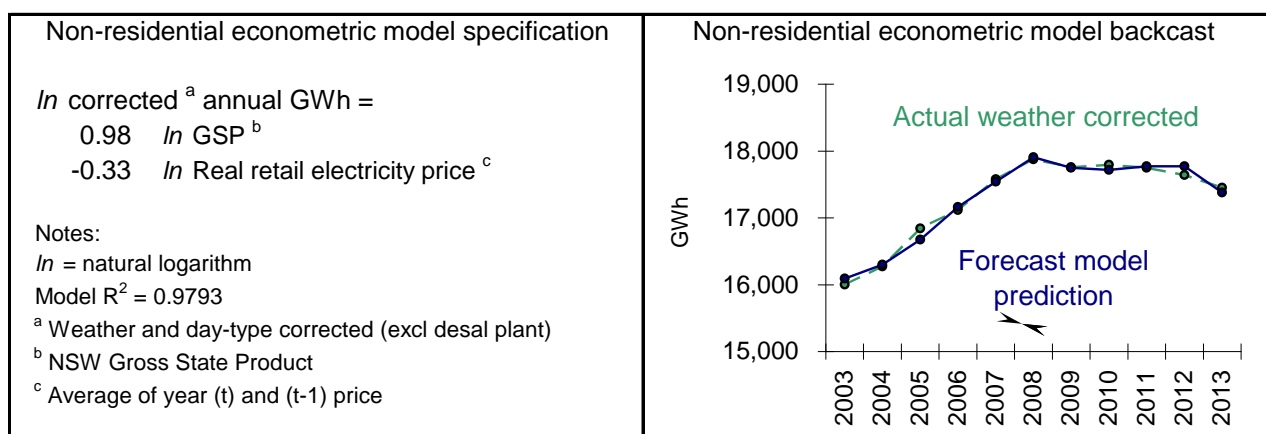
4.1 Non-residential segment forecast overview

The non-residential segment³ accounted for approximately 66% of total energy sales volumes and 58% of total NUoS revenue in 2012/13.

As with the residential segment, the non-residential energy forecast relies on an econometric approach to produce a BAU forecast, upon which is overlaid the impacts of relevant post-modelling adjustments (refer back to Section 3.1 for the process step details).

4.2 Non-residential segment econometric model

In developing the non-residential econometric model the driver variables which were tested include annual weather indices, economic activity (as measured by NSW Gross State Product or GSP), exchange rates, and electricity prices. The evidence of lagged impacts in the electricity price variable has also been tested. On the bases of statistical significance and logic of parameter estimates the econometric model adopted for the non-residential energy forecasts is set out below.

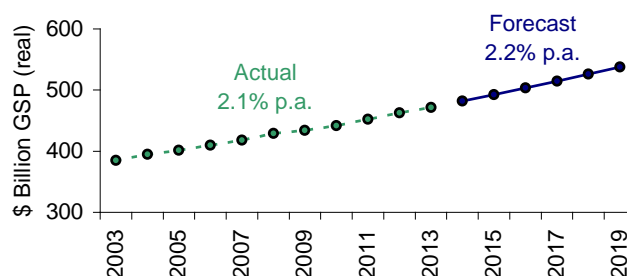


The modelling of average weather and daytype corrected energy as the dependent variable automatically incorporates weather and daytype (particularly leap year effects) impacts into the forecasts. Expressing the relationship in logarithmic form (“ \ln ”) means that the income parameter of +0.98 and the lagged price parameter of -0.33 can be interpreted as elasticities. The inclusion of the previous years (year t-1) price in the overall price parameter suggests the presence of lagged responses to price changes.

4.3 BAU Non-residential segment energy forecast

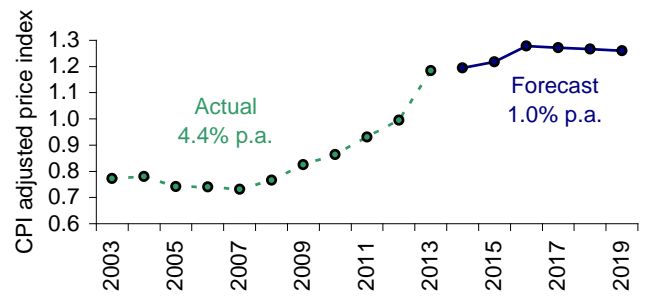
The BAU non-residential energy forecast is the product of inputting projections of the modelled driver variables (GSP and price) into the econometric model. The sources of the driver projections and the projections themselves are set out below.

NSW Gross State Product (GSP): The GSP projection is sourced from the June 2013 NIEIR economic and price projections report. The projection is for similar GSP growth to that which was experienced in the past decade.



³ Ausgrid’s non-residential segment definition excludes loads associated with Hydro Aluminium, OneSteel Newcastle and Essential Energy transfers. These particular loads are covered by the “Other loads” segment.

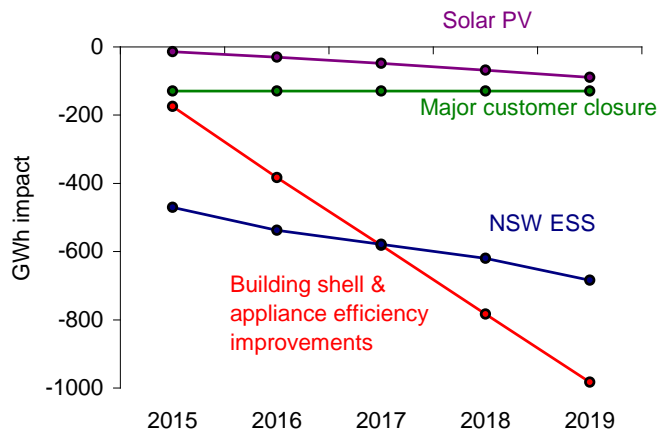
Real retail non-residential electricity price: The non-residential retail electricity price projection is sourced from the June 2013 NIEIR economic and price projections report. The projection is for a marked moderation in electricity price change compared with that experienced since 2008/09. The increase in 2015/16 was the expectation at the time the NIEIR report was prepared of the impact of the next stage of the carbon tax.



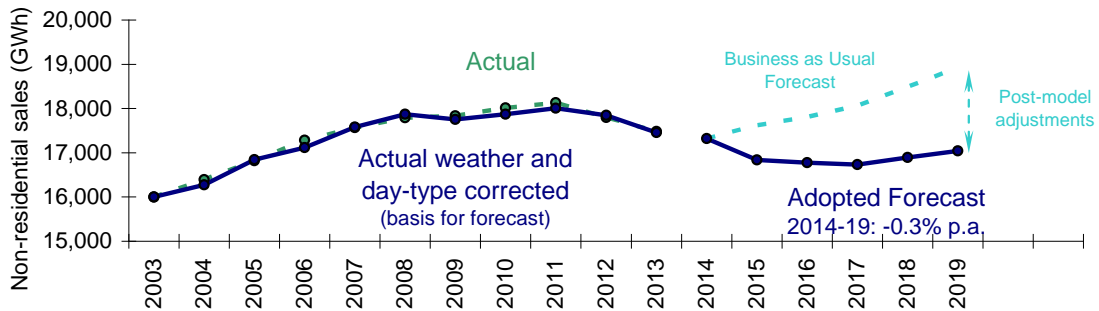
4.4 Non-residential forecast post-modelling adjustments

Post-modelling adjustments to the BAU forecast are required in order to capture the expected impacts of ongoing solar PV penetration, energy efficiency improvements and electric vehicle loads.

The post-modelling adjustments which have been adopted for the non-residential segment's share of these impacts are shown at right. The source of the adjustments is the August 2013 report "Review of post modelling adjustments to the NSW DNSPs long-term energy forecasts", by Energy Efficient Strategies.

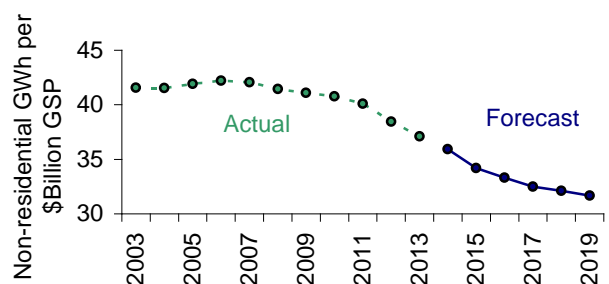


4.5 Non-residential segment energy forecast



The non-residential energy forecast which is the outcome of the foregoing forecasting processes is shown above. Non-residential sales are forecast to continue to weaken in 2013/14 in response to the lagged impact of the approximately 20% nominal electricity price increase which occurred in 2012/13, but which is partly offset by loads associated with a new large customer. Sales in 2014/15 are impacted by the retirement of another large customer and by the NSW ESS effective target reaching its maximum target level. Sales levels in 2018/19 are forecast to be approximately -800 or -4.4% lower than in 2008/09. As with residential sales, the key determinants of the longer-term outlook are the interactions of the outlook for more stable electricity prices, and the impacts of the post-modelling adjustments set out in Section 4.4.

The implicit projected trend (shown at right) in the electrical energy intensity of non-residential consumption as measured in GWh per \$ billion of GSP is for ongoing reductions in intensity.



4.6 Non-residential tariff component forecast

Thirteen generic non-residential tariffs and 40 Cost Reflective Network Price (CRNP) tariffs will apply throughout the 2015-19 regulatory period.

The following rules and assumptions have been applied in apportioning the overall non-residential energy forecast across the non-residential tariff components:

(a) Approximately 100 small business customers per week will transfer from EA050 (Small Business Inclining Block) to EA225 (Small Business ToU).

(b) Desalination Plant consumption (one of the CRNP customers) will remain unchanged during the forecast period.

(c) Residual forecast non-residential energy (that is, total forecast non-residential energy less the EA050, EA225 and Desalination Plant forecasts from assumptions (a) and (b) above) is apportioned uniformly across the remaining non-residential tariffs and energy tariff components based on the projected 2013/14 tariff and tariff component shares.

(d) CRNP customer Network Access Charge (NAC) volumes are fixed throughout the forecast period. After allowing for the impact of the tariff transfers in assumption (a) above, NAC volumes for the remaining generic non-residential tariffs are assumed to grow at the same rate.

(e) For those tariffs which include a kW/kVA capacity component, the capacity component volume is assumed to change at the lesser of the rate of change in (a) NAC volumes and (b) peak component energy consumption.

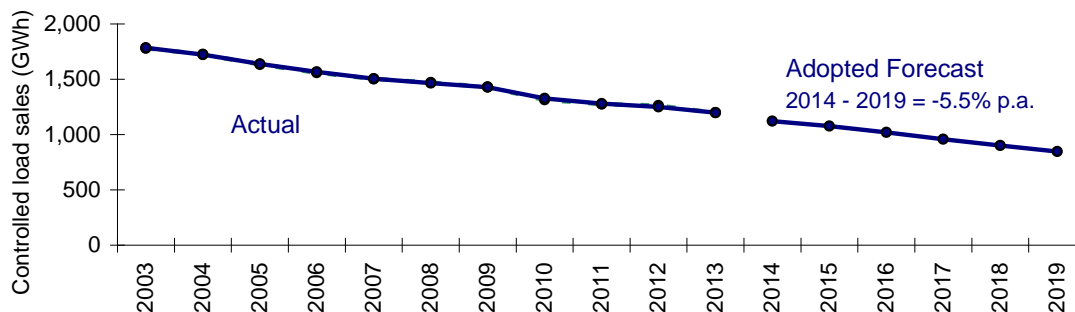
A reconciliation of the overall non-residential energy forecast with the non-residential tariff components is included in Appendix A.

5 Long-term controlled load and other loads energy forecasts

5.1 Controlled load segment forecast overview

The controlled load segment accounted for approximately 5% of total energy sales volumes and 2% of total NUoS revenue in 2012/13.

5.2 Controlled load segment forecast



Controlled load segment sales have exhibited a downward trend since the early 2000's. The declining sales trend is due to a combination of factors including substitution of electric water heating energy by gas and solar and the increasing penetration of water efficient taps and showerheads. The controlled load energy forecast, which is shown above, is based on the assumption that recent trends in controlled load energy consumption and customer numbers and the drivers of those trends will continue into the future. The forecast also incorporates a relatively minor post-modelling adjustment of -12 GWh by 2018/19 which has been recommended by Energy Efficient Strategies in the August 2013 report "Review of post modelling adjustments to the NSW DNSPs long-term energy forecasts".

5.3 Controlled load tariff component forecast

Two controlled load tariffs will apply throughout the 2015-19 regulatory period, namely EA030 (Controlled Load 1) and EA040 (Controlled Load 2).

It has been assumed that the relative shares among the tariffs with regard to both energy and Network Access Charge (NAC) volumes will remain constant throughout the forecast period.

A reconciliation of the overall controlled load energy forecast with the controlled load tariff components is included in Appendix A.

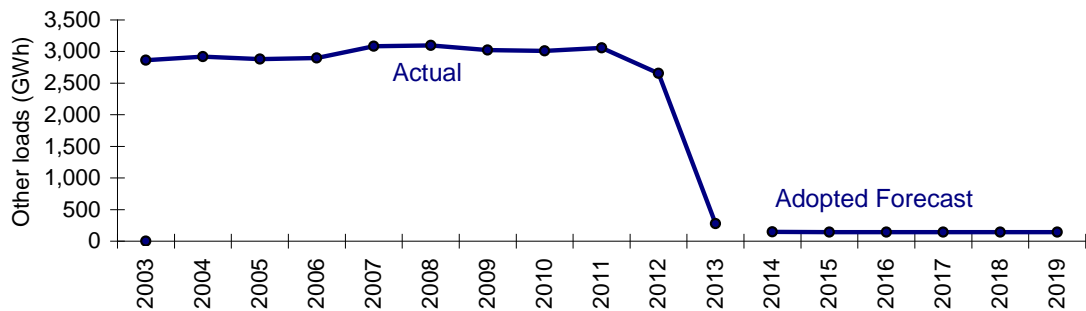
6 Other loads segment energy forecast

6.1 Other loads segment forecast and tariff component forecast

For legacy reasons and to ensure consistency with traditional reporting of peak demand, loads associated with Hydro Aluminium, OneSteel Newcastle and Essential Energy transfers have traditionally been excluded from Ausgrid’s definition of non-residential energy.

The other loads segment accounted for approximately 1% of total energy sales volumes but just 0.1% of total NUoS revenue in 2012/13. The recent reduction in loads at the Hydro Aluminium smelter have had a significant impact on these relativities – in 2010/11 these other loads accounted for 10% of total energy sales volumes, but still just 0.4% of NUoS revenue.

The forecasts of other loads are based on the assumption that Hydro Aluminium consumption will cease at the end of 2013/14 and that the remaining other loads volumes and volume components will remain constant at the current projection for 2013/14 levels.



A reconciliation of the overall other loads energy forecast with the other loads tariff components is included in Appendix A.

Appendix A: Reconciliation of high level segment energy forecasts to tariff and tariff component forecasts

This appendix sets out on a financial year basis details of the individual tariff and tariff component volume forecasts, and includes a reconciliation of the tariff and tariff component energy volumes to the high level energy forecasts which were set out in Section 1.1.

The 44 individual Cost Reflective Network Price customers have been aggregated into a single row value, and the “Other Loads” segment (which is comprised of CRNP customers) has been aggregated into a “total” non-residential category, being the sum of the non-residential energy forecasts from Section 4 and the other loads energy forecasts from Section 6.

2013/14 Financial Year Tariff and Tariff Component Volumes

Tariff	Energy (GWh)							NAC	Capacity (MVA)
	Non-ToU	Inclining Block			Time of Use (ToU)				
		1	2	3	Peak	Shoulder	Off-Peak		
Residential Inclining Block		3,310	1,087	417				4,814	1,120,062
Residential ToU					477	1,105	659	2,241	331,642
SGSC Residential Trial					0	7	3	10	1,528
SGSC Residential Trial					0	1	1	3	437
TOTAL Residential		3,310	1,087	417	477	1,114	663	7,068	1,453,669
High level Residential energy forecast (from Section 1.1)								7,068	
Controlled Load 1	767							767	352,263
Controlled Load 2	355							355	155,025
TOTAL Controlled Load	1,122							1,122	507,288
High level Controlled Load energy forecast (from Section 1.1)								1,122	
Small Business Inclining Block		400	254					655	75,821
Small Business ToU					273	598	258	1,129	66,264
LV 40-160 MWh (System)					392	610	709	1,710	24,582
LV 160-750 MWh (System)					592	910	1,148	2,650	9,665
LV >750 MWh (System)					1,253	1,862	2,643	5,759	3,862
LV Connection (Standby)					0	0	0	0	3
HV Connection (Standby)					0	0	0	0	11
HV Connection (System)					212	332	575	1,119	250
HV Connection (Substation)					17	30	63	109	10
ST Connection					159	238	484	881	58
Public Lighting	145							145	
Constant Unmetered	44							44	
Energy Light	6							6	
44 x CRNP Customers					606	878	1,774	3,258	60
TOTAL Non-Res'l & Other Loads	194	400	254	0	3,505	5,459	7,653	17,466	180,587
High level Non-Res'l & Other Loads energy forecast (from Section 1.1)								17,466	52,370

2014/15 Financial Year Tariff and Tariff Component Volumes

Tariff	Energy (GWh)							NAC	Capacity (MVA)
	Non-ToU	Inclining Block			Time of Use (ToU)				
		1	2	3	Peak	Shoulder	Off-Peak		
Residential Inclining Block		3,251	1,102	447				4,800	1,135,369
Residential ToU					467	1,084	646	2,198	330,169
SGSC Residential Trial					0	0	0	0	0
SGSC Residential Trial					0	0	0	0	0
TOTAL Residential		3,251	1,102	447	467	1,084	646	6,998	1,465,538
High level Residential energy forecast (from Section 1.1)								6,998	
Controlled Load 1	736							736	347,568
Controlled Load 2	341							341	152,959
TOTAL Controlled Load	1,077							1,077	500,527
High level Controlled Load energy forecast (from Section 1.1)								1,077	
Small Business Inclining Block		318	247					566	68,834
Small Business ToU					283	619	267	1,169	74,775
LV 40-160 MWh (System)					381	593	689	1,663	24,846
LV 160-750 MWh (System)					576	885	1,116	2,577	9,769
LV >750 MWh (System)					1,219	1,811	2,570	5,600	3,904
LV Connection (Standby)					0	0	0	0	3
HV Connection (Standby)					0	0	0	0	11
HV Connection (System)					206	323	559	1,088	253
HV Connection (Substation)					16	29	61	106	10
ST Connection					160	246	500	907	59
Public Lighting	141							141	
Constant Unmetered	43							43	
Energy Light	5							5	
44 x CRNP Customers					580	841	1,694	3,115	56
TOTAL Non-Res'l & Other Loads	189	318	247	0	3,422	5,347	7,457	16,981	182,520
High level Non-Res'l & Other Loads energy forecast (from Section 1.1)								16,981	51,065

2015/16 Financial Year Tariff and Tariff Component Volumes

Tariff	Energy (GWh)							NAC	Capacity (MVA)
	Non-ToU	Inclining Block			Time of Use (ToU)				
		1	2	3	Peak	Shoulder	Off-Peak		
Residential Inclining Block		3,270	1,108	450				4,828	1,150,953
Residential ToU					463	1,074	640	2,177	330,169
SGSC Residential Trial					0	0	0	0	0
SGSC Residential Trial					0	0	0	0	0
TOTAL Residential		3,270	1,108	450	463	1,074	640	7,004	1,481,122
High level Residential energy forecast (from Section 1.1)								7,004	
Controlled Load 1	696							696	342,936
Controlled Load 2	323							323	150,920
TOTAL Controlled Load	1,019							1,019	493,856
High level Controlled Load energy forecast (from Section 1.1)								1,019	
Small Business Inclining Block		271	247					518	64,505
Small Business ToU					294	644	278	1,216	80,736
LV 40-160 MWh (System)					381	593	689	1,662	25,128
LV 160-750 MWh (System)					575	885	1,116	2,576	9,880
LV >750 MWh (System)					1,218	1,810	2,569	5,597	3,948
LV Connection (Standby)					0	0	0	0	3
HV Connection (Standby)					0	0	0	0	11
HV Connection (System)					206	323	559	1,088	256
HV Connection (Substation)					16	29	61	106	10
ST Connection					160	246	500	906	59
Public Lighting	141							141	
Constant Unmetered	43							43	
Energy Light	5							5	
44 x CRNP Customers					571	826	1,663	3,061	55
TOTAL Non-Res'l & Other Loads	189	271	247	0	3,423	5,356	7,435	16,921	184,593
High level Non-Res'l & Other Loads energy forecast (from Section 1.1)								16,921	50,917

2016/17 Financial Year Tariff and Tariff Component Volumes

Tariff	Energy (GWh)							NAC	Capacity (MVA)
	Non-ToU	Inclining Block			Time of Use (ToU)				
		1	2	3	Peak	Shoulder	Off-Peak		
Residential Inclining Block		3,268	1,108	450				4,825	1,168,230
Residential ToU					455	1,055	629	2,139	330,169
SGSC Residential Trial					0	0	0	0	0
SGSC Residential Trial					0	0	0	0	0
TOTAL Residential		3,268	1,108	450	455	1,055	629	6,964	1,498,398
High level Residential energy forecast (from Section 1.1)								6,964	
Controlled Load 1	654							654	338,362
Controlled Load 2	303							303	148,907
TOTAL Controlled Load	957							957	487,269
High level Controlled Load energy forecast (from Section 1.1)								957	
Small Business Inclining Block		222	247					469	60,276
Small Business ToU					305	668	288	1,260	86,785
LV 40-160 MWh (System)					380	591	687	1,658	25,443
LV 160-750 MWh (System)					574	883	1,113	2,569	10,004
LV >750 MWh (System)					1,215	1,805	2,562	5,582	3,997
LV Connection (Standby)					0	0	0	0	3
HV Connection (Standby)					0	0	0	0	12
HV Connection (System)					206	322	557	1,085	259
HV Connection (Substation)					16	29	61	106	10
ST Connection					160	245	499	904	60
Public Lighting	140							140	
Constant Unmetered	43							43	
Energy Light	5							5	
44 x CRNP Customers					569	824	1,659	3,053	55
TOTAL Non-Res'l & Other Loads	188	222	247	0	3,425	5,367	7,425	16,874	186,905
High level Non-Res'l & Other Loads energy forecast (from Section 1.1)								16,874	50,792

2017/18 Financial Year Tariff and Tariff Component Volumes

Tariff	Energy (GWh)							NAC	Capacity (MVA)
	Non-ToU	Inclining Block			Time of Use (ToU)				
		1	2	3	Peak	Shoulder	Off-Peak		
Residential Inclining Block		3,290	1,115	453				4,858	1,186,007
Residential ToU					450	1,044	623	2,117	330,169
SGSC Residential Trial					0	0	0	0	0
SGSC Residential Trial					0	0	0	0	0
TOTAL Residential		3,290	1,115	453	450	1,044	623	6,975	1,516,175
High level Residential energy forecast (from Section 1.1)								6,975	
Controlled Load 1	615							615	333,806
Controlled Load 2	285							285	146,902
TOTAL Controlled Load	901							901	480,709
High level Controlled Load energy forecast (from Section 1.1)								901	
Small Business Inclining Block		179	249					428	56,015
Small Business ToU					319	698	301	1,318	92,805
LV 40-160 MWh (System)					383	597	694	1,674	25,748
LV 160-750 MWh (System)					579	891	1,123	2,594	10,123
LV >750 MWh (System)					1,227	1,823	2,586	5,636	4,045
LV Connection (Standby)					0	0	0	0	3
HV Connection (Standby)					0	0	0	0	12
HV Connection (System)					208	325	562	1,095	262
HV Connection (Substation)					16	29	62	107	10
ST Connection					161	247	503	912	61
Public Lighting	142							142	
Constant Unmetered	43							43	
Energy Light	5							5	
44 x CRNP Customers					575	832	1,674	3,081	55
TOTAL Non-Res'l & Other Loads	190	179	249	0	3,469	5,443	7,506	17,036	189,139
High level Non-Res'l & Other Loads energy forecast (from Section 1.1)								17,036	51,226

2018/19 Financial Year Tariff and Tariff Component Volumes

Tariff	Energy (GWh)							NAC	Capacity (MVA)
	Inclining Block			Time of Use (ToU)			Total Energy		
	Non-ToU	1	2	3	Peak	Shoulder			
Residential Inclining Block		3,343	1,133	460			4,935	1,202,683	
Residential ToU					450	1,045	623	2,118	330,169
SGSC Residential Trial					0	0	0	0	0
SGSC Residential Trial					0	0	0	0	0
TOTAL Residential		3,343	1,133	460	450	1,045	623	7,053	1,532,852
High level Residential energy forecast (from Section 1.1)								7,053	
Controlled Load 1		578					578	329,212	
Controlled Load 2		268					268	144,880	
TOTAL Controlled Load		846					846	474,092	
High level Controlled Load energy forecast (from Section 1.1)								846	
Small Business Inclining Block		135	251				386	51,691	
Small Business ToU					333	729	314	1,375	98,771
LV 40-160 MWh (System)					387	602	700	1,689	26,032
LV 160-750 MWh (System)					584	899	1,133	2,617	10,235
LV >750 MWh (System)					1,237	1,839	2,609	5,685	4,090
LV Connection (Standby)					0	0	0	0	3
HV Connection (Standby)					0	0	0	0	12
HV Connection (System)					209	328	567	1,105	265
HV Connection (Substation)					16	30	62	108	11
ST Connection					163	250	508	920	61
Public Lighting	143							143	
Constant Unmetered	43							43	
Energy Light	6							6	
44 x CRNP Customers					579	839	1,689	3,107	55
TOTAL Non-Res'l & Other Loads	192	135	251	0	3,510	5,515	7,583	17,185	191,226
High level Non-Res'l & Other Loads energy forecast (from Section 1.1)								17,185	51,626