Whether it be transport, housing, entertainment or food, the cost of living is at the forefront of everyone’s mind. This report is the fourth instalment of a monthly series that aims to compare the prices of every day essentials.

RACQ has commissioned this research from Deloitte Access Economics. As Queensland’s peak motoring body, RACQ will use the data to advocate for its 1.6 million members. This may involve questioning discrepancies in cost or celebrating fair prices.

The fourth report in this series focuses on utilities; investigating the cost of electricity, water and sewerage expenses. Electricity, water and sewerage represent significant household expenses, however there is much that consumers can do to reduce the bills.

RACQ hopes to better educate Queenslanders through this research, allowing families to recognise where they must allocate funds. The research will be made publically available on RACQ’s website so that Queenslanders can access the information most relevant to them and their every day expenses.
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Power to the people

In this report, we investigate the cost of utilities in Queensland. The prices of electricity, water and sewerage access are investigated, along with the typical contributors to the household bill. Tips for reducing usage are also outlined.

**Top 5 household contributors to energy consumption:**

1. Hot water (30%)
2. Cooling and heating (26%)
3. Appliances (23%)
4. Cooking (10%)
5. Lighting (8%)

**Top 5 household contributors to water consumption:**

1. Outdoors (35-55%)
2. Bathroom (30-37%)
3. Laundry (10-13%)
4. Kitchen (9-13%)
5. Leakage (1-10%)

Due to comparatively low fixed supply charges, household electricity bills are largely driven by the variable costs associated with consumption. For bill conscious Queenslanders, the greatest savings can be made through changing consumption behaviour.

Compared to electricity, fixed charges represent a larger proportion of the typical water and sewerage access bill, though there is still a substantial variable cost component. There are a range of behavioural changes consumers can make to reduce their water consumption and therefore their bill.
Areas of household energy usage

Queensland households use the most amount of energy on hot water, cooling and heating – half of the typical household energy bill is spent on these items.


Note: Estimates are based on an annual household consumption of 3,989 kWh on Tariff 11 and 1,666 kWh on Tariff 33.
Household electricity consumption in Queensland

Queenslanders on average do not consume as much electricity as our interstate peers. This is especially the case in winter, when we are blessed with a warm climate, reducing the need for heating. Interestingly, our consumption does not vary significantly with seasons.

Source: Australian Energy Regulator, Electricity Consumption Benchmarks for Residential Customers, March 2015; Deloitte Access Economics estimates

Note: Comparable data for Western Australia not available. Consumption estimates based on a 2-person household, with neither gas nor pool usage.

Consumers from the Far North and Central West regions use significantly more electricity than SEQ, influenced primarily by the hot summer. A typical consumer in regional Queensland is likely to use almost double the amount of electricity than a consumer in SEQ.


Note: Consumption estimates based on a 2-person household with no pool, no main gas connection.
Household electricity bill: SEQ and Regional Queensland

Although regional residents use significantly more electricity than SEQ residents, they are not disadvantaged in terms of electricity tariffs. Under the State Government’s commitment to a Uniform Tariff Policy, the electricity price regional residents pay is pegged to the SEQ price (to reflect the cost of electricity provision in SEQ rather than the higher cost of provision in regional Queensland).

**Electricity tariff, SEQ vs. Regional Queensland, all usage vs. off-peak usage**

<table>
<thead>
<tr>
<th></th>
<th>All usage</th>
<th>Off-peak usage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fixed charge (c/day)</td>
<td>Variable charge (c/kWh)</td>
</tr>
<tr>
<td>SEQ (Origin Energy)</td>
<td>116.47</td>
<td>23.26</td>
</tr>
<tr>
<td>SEQ (Energy Australia)</td>
<td>115.2</td>
<td>22.68</td>
</tr>
<tr>
<td>SEQ (AGL)</td>
<td>98.51</td>
<td>24.61</td>
</tr>
<tr>
<td>Regional Queensland</td>
<td>89.57</td>
<td>24.61</td>
</tr>
</tbody>
</table>

Source: SEQ tariff sourced from various energy retailer websites; Regional Queensland tariff sourced from Queensland Competition Authority, Final Determination, Regulated Retail Electricity Prices for 2016-17, May 2016.

The average electricity bill is predominantly variable charges and, as such, consumers can significantly reduce their electricity bill by reducing consumption. Based on typical usage, hot water contributes $321, cooling and heating contributes $278 and appliances contribute $246 to the variable component of the typical SEQ annual household energy bill.

Note: Calculated based on a 2-person household assuming a split of 70/30 for all usage/off-peak usage for both SEQ and regional Queensland residents. The bill for SEQ are calculated based on a simple average of the estimated bill with the top three retailers listed in the table above.
Household electricity bill: state and territory comparison

The relatively low levels of electricity consumption in Queensland as compared to other states and territories is reflected in the relatively cheaper household electricity bill.

Based on electricity consumption benchmarks for average households, the typical annual expenditure on electricity in SEQ is lower than other states and territories considered, aside from the Northern Territory.

These rankings are primarily driven by usage, with most regions facing similar tariffs. Northern Territory and ACT residents benefit from the lowest tariffs, while South Australian residents face the highest rates (resulting from a reliance on renewable energy sources and importing electricity from other states to meet peak demand).

Average household annual electricity bill, states and territories comparison

Source: Australian Energy Regulator, Electricity consumption benchmarks for residential customers, March 2015; Deloitte Access Economics estimates

Note: Typical electricity usage based on a 2-person household with no gas and no pool. In regions where heating is driving energy consumption, there may be greater availability of gas, reducing the effective cost of utilities.

Queensland annual electricity expenditure is calculated based on SEQ usage and tariffs. Comparable data for Western Australia was not available.
Energy

What can consumers do to reduce their energy bill?

There are a number of strategies that households could explore to reduce their energy bill:

- While there is a fixed cost component of household electricity bills regardless of energy usage, the variable cost (based on energy usage) makes up the majority of the energy bill. It follows that the most effective way to minimise electricity bills is to reduce consumption. There are a range of actions possible to reduce usage, such as: taking shorter hot showers, reducing the use of air conditioning (perhaps opting for a pedestal or ceiling fan) where possible, or switching to energy efficient lights and appliances.

- From 1 July 2016, SEQ residents have started to enjoy retail competition following the deregulation of energy prices. Residential customers can remain on a standard retail contract or shop around to find the best competitive market contract. A number of services are available to help consumers find the best energy deals in their area, including the Australian Energy Regulator’s “Energy made easy” website.

- All energy retailers offer off-peak/controlled-load tariffs at up to a 50% discount off the standard tariff. Electricity supply to connections on these tariffs are only provided during restricted times (e.g. 8 hours during 10pm-7am), however this could be ideal for appliances such as hot water and pool pumps. The easiest way to work out if you are already connected to an economy tariff is to check your energy bill. If you have electricity charges listed against Economy tariff 33 or Super Economy tariff 3 (although your specific retailer may refer to these as something else) on your electricity bill – then you already have an economy tariff connected. If it’s not clear on your bill, ask your electricity retailer.

- When it comes to the availability of alternative energy sources for households, traditional fuel – particularly gas – is not a significant substitute for electricity, given the low penetration rate of reticulated mains gas connection to households (just 12%, the lowest of all the states and territories). If you are lucky enough to be on the connected network, mains gas can work out to be less expensive in general for cooking and water heating purposes. LPG/bottled gas is also an option for some households who are not on the reticulated gas network, however it requires frequent refilling of gas bottles.

- Renewable energy sources such as solar can be used to supplement electricity usage. Solar energy systems, however, require a significant upfront investment and can not be installed at all premises.
Household water usage

In Queensland, water is predominantly used outdoors and in the bathroom.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Litres (L) used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shower (standard shower head)</td>
<td>15-25 litre per minute</td>
</tr>
<tr>
<td>Toilet (dual flush toilet full flush)</td>
<td>6 litres</td>
</tr>
<tr>
<td>Washing machine (front loader)</td>
<td>50 litres per cycle</td>
</tr>
<tr>
<td>Garden (sprinkler)</td>
<td>1000 litres per hour</td>
</tr>
<tr>
<td>Car washing (hose washing)</td>
<td>180 litres per wash</td>
</tr>
<tr>
<td>Dish washer (3-star rated)</td>
<td>18 litres</td>
</tr>
</tbody>
</table>
Household water consumption in Queensland

SEQ households use less water on average than their regional counterparts. This may, in part, be driven by larger backyards in regional areas. Households in Townsville consume the most water.

Average household annual water consumption, top 12 population centres in Queensland

Source: Council websites; Deloitte Access Economics estimates
Household water tariff and sewerage access charge

Unlike electricity, where you live does have an impact on what you pay for water. The table below compares the water tariffs for the largest population centres in Queensland.

Residents in regional Queensland are levied higher fixed charges for access to water. In comparison, the variable charge for SEQ residents is noticeably higher. This is largely due to the additional bulk water charge levied by the State Government to recover costs associated with the period of significant investment in the SEQ water security assets built from the 2006 water crisis (during the drought).

Water and sewerage tariff, top 12 population centres in Queensland

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Brisbane</td>
<td>$192</td>
<td>$3.51</td>
<td>$522</td>
<td></td>
</tr>
<tr>
<td>Gold Coast</td>
<td>$212</td>
<td>$3.83</td>
<td>$725</td>
<td></td>
</tr>
<tr>
<td>Moreton Bay</td>
<td>$308</td>
<td>$3.42</td>
<td>$700</td>
<td>$0.67</td>
</tr>
<tr>
<td>Logan</td>
<td>$299</td>
<td>$3.76</td>
<td>$706</td>
<td></td>
</tr>
<tr>
<td>Sunshine Coast</td>
<td>$245</td>
<td>$3.11</td>
<td>$536</td>
<td>$0.67</td>
</tr>
<tr>
<td>Townsville</td>
<td>$337</td>
<td>$1.35</td>
<td>$759</td>
<td></td>
</tr>
<tr>
<td>Ipswich</td>
<td>$322</td>
<td>$3.64</td>
<td>$603</td>
<td></td>
</tr>
<tr>
<td>Toowoomba</td>
<td>$590</td>
<td>$2.27</td>
<td>$446</td>
<td></td>
</tr>
<tr>
<td>Cairns</td>
<td>$256</td>
<td>$1.15</td>
<td>$758</td>
<td></td>
</tr>
<tr>
<td>Redland</td>
<td>$264</td>
<td>$2.95</td>
<td>$676</td>
<td></td>
</tr>
<tr>
<td>Mackay</td>
<td>$348</td>
<td>$1.70</td>
<td>$842</td>
<td></td>
</tr>
<tr>
<td>Fraser Coast</td>
<td>$490</td>
<td>$1.73</td>
<td>$767</td>
<td></td>
</tr>
</tbody>
</table>

Source: Various council websites.
Note: Only the first tier tariff for the variable charge component has been reported here, as household water consumption levels come under the threshold for second tier for all councils.
Household water and sewerage access bill

Brisbane is the cheapest city to live when it comes to water and sewerage access expenses, as a result of both lower water usage and a lower tariff. The most expensive places are the Fraser Coast and Moreton Bay.
What can consumers do to reduce their water bill?

Households spend more on energy than water.

Compared to electricity, the fixed cost component of a typical water bill is larger than the variable component. However, with the variable component ranging from 40% to 75% of the bill (excluding sewerage access charges) there are opportunities for households to reduce their bill.

SEQ residents’ water consumption levels have significantly reduced since the introduction of water use restrictions during the drought (beginning in 2006). Stringent water consumption limits combined with compliance monitoring and enforcement not only reduced water consumption during the drought period, but also led to long-term changes in water consumption behaviour.

Potential ways to reduce the household water bill include:

- Using recycled water for garden maintenance.
- Taking shorter showers and installing water-saving shower heads.
- Using a bucket when washing the car (rather than the hose).
- When choosing plants for the garden, consider low water consumption/drought resistant varieties.
- Only use water dependent appliances – such as washing machines and dishwashers – for full loads.
- Sweep footpaths and driveways with a broom rather than hosing them down.
Limitation of our work

General use restriction

This report is prepared for the use of RACQ. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose of estimating the cost of living in Queensland. You should not refer to or use our name or the advice for any other purpose.