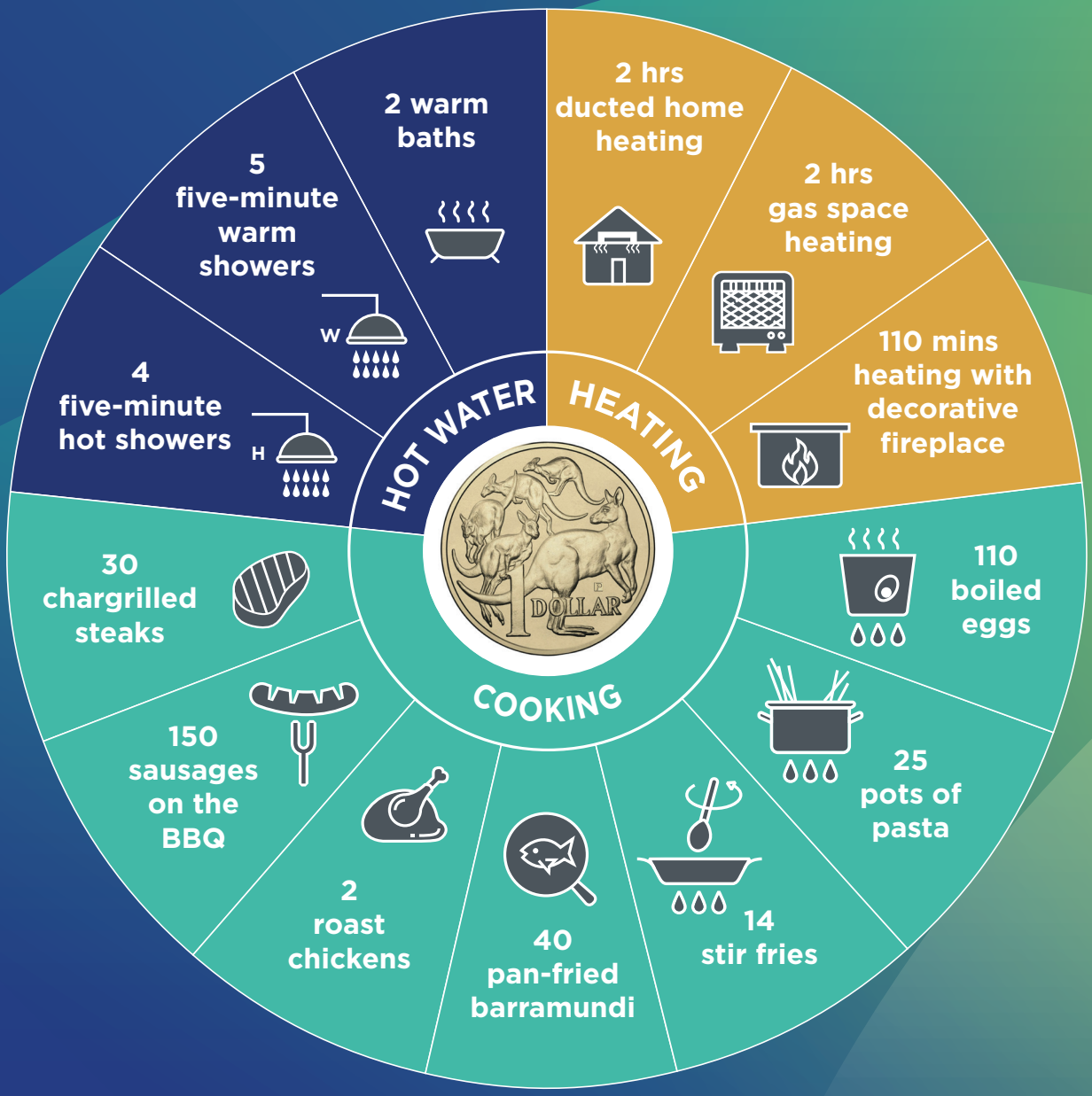
$1 of gas in WA gets me...

Energy Networks Australia



and 70% less CO_2 emissions compared to average South West Interconnected System grid electricity

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How we calculated '$1 of gas in WA gets me...'

To determine the price of gas, we use the **regulated price** in the Mid-West/South-West area of 15.18 cents per unit and applied a 'standard' 35% discount achievable in the market. 1 Unit is 3.6 MJ, meaning $1 can purchase just over 10 units, or 36.5 MJ of gas. Only variable usage charges are considered.

110 boiled eggs
Figures provided by the Australian Gas Association indicate a small burner uses 4 MJ per hour, so 7 hours using a small burner costs $1. Assuming 3 eggs are cooked at once, 5 minutes to boil the water and 10 minutes to boil the eggs, you can boil around 110 eggs.

25 pots of pasta
Figures provided by the Australian Gas Association indicate a medium burner uses 6 MJ per hour, so 6 hours using a medium burner costs $1. Assuming pasta takes 15 minutes to cook, you can cook around 25 pots of pasta.

14 stir fries
Figures provided by the Australian Gas Association indicate a wok burner uses 13 MJ per hour, so just under 3 hours using a wok burner costs $1. Assuming a stir fry takes 10 minutes to cook and 2 minutes pre-heating the wok, you can cook 14 stir fries.

40 pan-fried barramundi
Figures provided by the Australian Gas Association indicate a large burner uses 9 MJ per hour, so 4 hours using a large burner costs $1. Assuming one barramundi takes 5 minutes to cook and 1 minute to preheat the pan, you can cook 40 pan-fried barramundi.

2 roast chickens
Figures provided by the Australian Gas Association indicate that typical oven consumption uses around 10.5 MJ per hour. Assuming a roast chicken takes 80 minutes to cook, you can cook 2-3 roasts. We round to 2.

150 sausages on the BBQ
Figures provided by the Australian Gas Association indicate that barbequeue burners can use between 10-15 MJ per hour. We use 12.5 MJ per hour per burner, or just under 3 hours for $1. Assuming 10 sausages can be cooked on a single burner with 2 minutes pre-heating and 10 minutes cooking, you can cook 150 sausages for $1.

30 chargrilled steaks
Figures provided by the Australian Gas Association indicate that a closed-top weber barbequeue uses 12.7 MJ per hour, meaning you can cook for 2.9 hours for $1. Assuming 2 steaks can be cooked at once with 5 minutes pre-heating and 6 minutes cooking, you can cook 31 grilled steaks. We use 30.

2 hrs ducted home heating
Usage based on maintaining 20 degrees. **Sustainability Victoria** analysis. 6-star gas ducted heating for a 4-star 160 m² Melbourne house would cost $1285 p.a running 15 hrs/day weekends and 9 hrs/day weekdays. Adjusting for temperature difference in WA and gas cost, assuming full winter use and 1/3 autumn and spring use indicates 2,537 hrs of use for $1285, or ~2 hours per dollar.

2 hrs gas space heating
Based on the **4.4 star Rinnai Ultima 2** using 15 MJ per hour to actively heat a room.

110 mins heating with decorative fireplace
Based on the **Rinnai 5.5 star 1250 Gas Fireplace** using between 10-34 MJ per hour. We have assumed 20 MJ per hour usage of a gas fireplace.

5 five-minute warm showers Instant
The **Rinnai infinity 20** instant hot water system uses 156 MJ per hour to heat 20 litres per minute 25 degrees hotter. Adjusting linearly for a 9 litre per minute showerhead and heating water 30 degrees hotter uses 84.24 MJ per hour, meaning 36.5 MJ gets you 25 minutes for $1.

5 five-minute warm showers Storage
The **Rinnai GHF4135** hot water storage system uses 17 MJ to heat 74 litres of water 45 degrees hotter, meaning 36.5 MJ heats 174 litres of water 45 degrees hotter. Assume no heat losses from storage. Adjusting linearly, you can heat 238 litres of water 30 degrees hotter. Using a 9 litre per minute showerhead gets you 26 minutes for $1.

4 five-minute hot showers
Using either storage or hot water calculations, but adjusted linearly for 45 degree rise instead of 30 degree rise leads to ~18 minutes in the shower for $1. We use 20 minutes.

2 warm baths
We assume 100 litres as per **GWM Water figures**. Using storage hot water, 74 litres of water heated to 45 degrees uses 17 MJ. Adjusting linearly to heat 100 litres of water 30 degrees uses 15.3 MJ, and $1 gets you 2.4 warm baths. We use 2.

CO_2 The **National Greenhouse Accounts Factors** show natural gas has an emissions factor of 51.4 kg CO_2/GJ (p.12) and the South West Interconnected System has an emissions factor of 0.69 kg CO_2/kWh (p.20). 1 GJ is equivalent to 277.8 kWh, meaning natural gas has an emissions factor of 0.185 kg CO_2/kWh, 73.2% lower than grid electricity.

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