Octopus Energy
Time of Use Tariffs; the next step for smart meters and innovation

Philip Steele
7th February 2019
Octopus Group (Octopuses / Octopi / Octopodes)

- Launched 2016
- 400,000+ customers
- 100+ employees

- Launched 2017
- EV experts
- 10+ employees

- £8bn funds managed
- £2.1bn in renewables
- 600+ employees
We use technology to bring lower and more transparent pricing, better service and more sustainable energy to customers.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Provider</th>
<th>'Great'</th>
<th>'OK'</th>
<th>'Poor'</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (3)</td>
<td>Octopus Energy</td>
<td>93% (90%)</td>
<td>6% (6%)</td>
<td>1% (3%)</td>
</tr>
<tr>
<td>1 (1)</td>
<td>Zog Energy</td>
<td>94% (96%)</td>
<td>4% (2%)</td>
<td>2% (2%)</td>
</tr>
<tr>
<td>3 (2)</td>
<td>Bulb</td>
<td>90% (95%)</td>
<td>8% (3%)</td>
<td>3% (2%)</td>
</tr>
<tr>
<td>4 (4)</td>
<td>Tonik Energy</td>
<td>76% (86%)</td>
<td>17% (10%)</td>
<td>7% (5%)</td>
</tr>
<tr>
<td>5 (5)</td>
<td>Ovo Energy</td>
<td>76% (80%)</td>
<td>16% (16%)</td>
<td>9% (5%)</td>
</tr>
<tr>
<td>6 (6)</td>
<td>Avro Energy</td>
<td>66% (73%)</td>
<td>26% (20%)</td>
<td>7% (7%)</td>
</tr>
<tr>
<td>7 (10)</td>
<td>SSE (i)</td>
<td>53% (44%)</td>
<td>31% (35%)</td>
<td>16% (21%)</td>
</tr>
<tr>
<td>8 (7)</td>
<td>First Utility</td>
<td>53% (60%)</td>
<td>26% (24%)</td>
<td>22% (16%)</td>
</tr>
<tr>
<td>9 (9)</td>
<td>EDF</td>
<td>43% (46%)</td>
<td>34% (34%)</td>
<td>23% (19%)</td>
</tr>
<tr>
<td>10 (11)</td>
<td>Flow Energy</td>
<td>48% (44%)</td>
<td>20% (22%)</td>
<td>32% (34%)</td>
</tr>
<tr>
<td>11 (13)</td>
<td>E.on</td>
<td>36% (36%)</td>
<td>42% (36%)</td>
<td>32% (28%)</td>
</tr>
<tr>
<td>12 (15)</td>
<td>British Gas</td>
<td>28% (30%)</td>
<td>41% (33%)</td>
<td>41% (37%)</td>
</tr>
<tr>
<td>13 (16)</td>
<td>Scottish Power</td>
<td>29% (29%)</td>
<td>30% (31%)</td>
<td>46% (41%)</td>
</tr>
<tr>
<td>14 (17)</td>
<td>Npower</td>
<td>23% (27%)</td>
<td>31% (31%)</td>
<td>46% (41%)</td>
</tr>
</tbody>
</table>

Order calculated by 0 points for 'poor', 1 for 'OK' and 2 for 'great'. 4,305 votes in total – we've ignored providers with fewer than 100 votes. The percentages may not add up to 100% due to rounding. (i) Includes Atlantic, Scottish Hydro, Southern Electric and Swalec.
Consumers know energy cost varies through the day

Agile gives them the tool to take advantage

Car charge at night

Washing machine use on a sunny day

Agile Octopus: Powering the way to a low carbon future
Agile: innovation in energy

Explore how shifting your electricity use could save you even more, using the profiles beneath the chart.

Half-hourly unit rates over the last 12 months, averaged across all regions (including VAT).

Select a profile to see how your costs change, based on when you use electricity

Working 9 to 5

https://octopus.energy/agile-report
Octopus Energy
Plunge pricing alert!

You'll be paid for any electricity you use between 2:00 - 3:00 am tonight 😊
Your Charges In Detail

Supply Address:

Agile Octopus (2nd January 2019 - 1st February 2019)

<table>
<thead>
<tr>
<th>Date</th>
<th>Reading (kWh)</th>
<th>Energy Usage</th>
<th>Energy Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Jan. 2019</td>
<td>3944.6</td>
<td>291.5</td>
<td>£36.02</td>
</tr>
<tr>
<td>2nd Feb. 2019</td>
<td>4236.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Energy Used</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>291.5</td>
<td>@ 12.36p/kWh</td>
</tr>
</tbody>
</table>

Standing Charge: 31 days @ 20.00p/day = £6.20

Subtotal of charges before VAT = £42.22

VAT @ 5.00% = £2.11

Total Electricity Charges = £44.33
Sunday
18th March 2018

For electricity meter 17P3001648

Total cost
£2.26

Total consumption
13.82 kWh

Weighted average unit rate
16.36 p / kWh
Friday
1st February 2019

For electricity meter

Total cost
£ 2.04

Total consumption
18.14 kWh

Weighted average unit rate
11.26 p / kWh
Total cost
£ 3.51

Total consumption
34.97 kWh

Weighted average unit rate
10.05 p / kWh
<table>
<thead>
<tr>
<th>Agile customer cohort</th>
<th>Annual savings vs Octopus 12M Fixed Tariff</th>
<th>Annual Savings vs Big 6 average SVT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full sample</td>
<td>£45</td>
<td>£188</td>
</tr>
<tr>
<td>Top 25% most engaged</td>
<td>£91</td>
<td>£229</td>
</tr>
<tr>
<td>Bottom 25% most engaged</td>
<td>£0.80</td>
<td>£170</td>
</tr>
<tr>
<td>EV drivers</td>
<td>£132</td>
<td>£338</td>
</tr>
</tbody>
</table>

EV drivers demonstrate the greatest sensitivity to price signals.
Agile Octopus consumers shifted consumption out of the peak period by 28% and reduced CO2 emissions (UK Carbon Intensity data).
EV drivers demonstrate the greatest sensitivity to price signals

Electric Vehicle Agile Octopus customers reduced their peak-period consumption by 47%
Comparing Agile to all Octopus Customers

Agile Octopus customers have a markedly different consumption profile compared to all other Octopus customers – Agile works.
Why does this work?

5p plastic bag tax = 95% reduction in use
Challenges

- Technology
- Complex for consumer
- Impact on different consumer types
- Cannot give accurate projections
- Consumer behaviour change
Try it for yourself

Explore how shifting your electricity use could save you even more, using the profiles beneath the chart.

Half-hourly unit rates over the last 12 months, averaged across all regions (including VAT).

Select a profile to see how your costs change, based on when you use electricity

<table>
<thead>
<tr>
<th>Family home</th>
<th>Working 9 to 5</th>
<th>Night chargers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agile Octopus</td>
<td>Octopus 12M Fixed</td>
<td>Avg. Big 6 SVT</td>
</tr>
</tbody>
</table>

A home with one or more school age children, with energy use rising from 3pm to a 6pm peak, then tailing off quickly.

£42.09

£40.56

£48.43

Enter your actual consumption to see what you would’ve paid over the last 12 months.

 USAGE
3100

Or choose an average:

Low Med High

Update
Agile Octopus is the first tariff of its kind, so there's a few things you really ought to know:

1. **Agile Octopus is not for everyone.**
   Unit prices are set at 4pm for the following day according to wholesale costs, with a different price for every 30 minutes of every day. Prices may rise as well as fall.
   If you prefer the security of fixed prices, you should consider our Fixed or Super Green Octopus tariffs.

2. **The variable nature of Agile Octopus means any prediction of future costs will be inaccurate and historical data will not predict future performance.**
   The cost explorer above is based on the average unit rates for the last 12 months, and in no way constitutes a guarantee of future rates.

3. **In the absence of half-hourly smart meter data, we will charge you as we would a customer on our Flexible Octopus variable tariff, based on typical Profile 1 usage attribution.**

4. **The in-home display of your smart meter will not display realtime prices, but it will show your consumption. You can check your prices at any time, from anywhere, in your online account.**

Make sure you've read and agree to the above

Sign me up
Octopus Hackathon; May 2018 100 engineers, 22 companies
“Alexa, can you do my washing when it’s cheapest?”

A Hack Day for the future of energy

- Electric Vehicle Chargers
- Washing machines
- Ground Source Heat Pumps
- Home Battery Storage
- Smart Home Platforms
If price exceeds
If price is below
If consumption

Set my heating
Activate a plug
Play music
Save money
8th December 2018

17p
Saturday
8th December 2018

For electricity meter

Total cost
£ 0.80

Total consumption
35.20 kWh

Weighted average unit rate
2.29 p / kWh
Tuesday
25th December 2018

For electricity meter

**Total cost**
£ 0.54

**Total consumption**
26.41 kWh

**Weighted average unit rate**
2.03 p / kWh
PowerLoop
Where to from here?

- The analysis shows us Agile has significant benefits
- Adoption is there
- High-energy consuming devices are a good driver
- We want to connect many products and services
- Storage is going to play a big part in this

- Watch this space…
HOW IT SHOULD BE