

Evoenergy Energy Consumer Reference Council (ECRC)

Meeting 29

Minutes June 19 2019 9.30am

CIT Fyshwick

Attendees

Allan Williams
 Susan Helyar
 Rick Lord
 Kevin Cox
 Prof Barbara Norman
 Michael Hopkins
 Nick Clarke
 Adina Cirson
 Glenys Patulny
 Ron Thompson

Representation

Chair
 ACTCOSS
 Council on the Ageing (COTA)
 Gungahlin Community Council
 Canberra Urban and Regional Futures
 Master Builders Association
 Engineers Australia, Canberra Division
 Property Council of Australia (ACT)
 Tuggeranong Community Council
 Canberra Business Chamber

Evoenergy

Fiona Wright	General Manager
Leylann Hinch	Branch Manager, Asset and Network Performance
Emily Brown	Manager, Regulatory Pricing
Chris Bell	Manager, Price Review
Giuliana Baggoley	Consumer Engagement Manager
Phil Deamer	Manager, Regulatory Price Reviews
Barry Harvey	Acting Manager, Energy Markets and Contact Centre
Bruce Hansen	Branch Manager, Gas Networks
Samantha Lloyd	Evoenergy Brand and Communication Specialist
Janelle Waithe-Davison	Customer Liaison Officer
Scott Walters	Strategic Account Manager
Ed Gaykema	Special Projects, AAD
Gillian Symmans	Senior Economist

Guests

Didi Sommer	Tuggeranong Community Council
Helen Oakey	Conservation Council ACT
Leigh Watson	Master Plumbers ACT

Apologies

Evoenergy

Dennis Stanley	Branch Manager, Asset Strategy
Alison Davis	Program Manager, Customer Connections
Glenn Pallesen	Branch Manager, Customer Connections

ECRC

John Sullivan	Australian National University
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Papers distributed prior to the meeting:

- Agenda meeting #29
- Draft Minutes ECRC Meeting #28

1. Welcome and introductions

ECRC Chairman Allan Williams welcomed members and guests. Apologies were noted.

Mr Williams welcomed Evoenergy Acting General Manager Fiona Wright to the meeting. Ms Wright has attended and presented to previous ECRC meetings. Ms Wright spoke about the exciting times ahead for Evoenergy on the eve of a new regulatory period: she reassured ECRC members that their role is important to deliver valuable feedback that will continue to improve Evoenergy's business and services delivered for the community.

2. Review and ratify the minutes of meeting 28

The minutes and actions arising from ECRC meeting 28 were discussed. Actions have been included in the agenda for meeting 29 and meeting 30.

The ECRC Meeting 28 minutes were ratified.

3. ECRC member updates

- Professor Norman will miss Meeting 30 and will try and send along a CURF member as a proxy. After (maximum term) 8 years as Chair of the ACT Climate Change Council Prof. Norman is stepping down – upcoming years will review and contribute to further development on the ACT climate change strategy, and policy on ACT living standards.
- Nick Clarke has been invited to attend an Energy Consumers Australia webinar on ICT and Cyber Security 101 as Evoenergy's consumer representative and to provide feedback to the ECRC on emerging consumer trends.

4. Feed-in tariff (FiT) scheme update

Barry Harvey, Manager Energy Markets and Contact Centre, presented an overview of Evoenergy's feed-in tariff scheme because of recent media attention to scheme data. Mr Harvey said that Evoenergy satisfies auditing requirements around data collection and management but that the ACT Government was also conducting a separate audit to verify data.

Mr Williams asked about the veracity of the claims made in the Canberra Times – Mr Harvey responded that while Evoenergy has confidence in its processes, we shall await the Government audit outcomes before commenting further.

Kevin Cox asked where the money comes from (that pays people the tariffs). Mr Harvey (and ECRC members) explained that this money is built into general consumer energy tariffs.

Gladys Patulny asked when the FiT scheme ends and was informed that tariffs run for 20 years

Susan Helyar asked whether – should any remediation (in costs) – be required would this cost the community? Mr Harvey replied no. Ms Helyar also wondered whether, should Evoenergy be required to manage data differently, costs might exceed the AER determination amount? Again the answer to this was no.

ECRC members asked whether Evoenergy could circulate a copy of the audit report on completion to the ECRC members and this was agreed.

5. Hydrogen Test Facility site tour

Following a site safety induction led by gas networks branch manager Bruce Hansen, attendees visited the Hydrogen Test Facility on CIT campus, led by Ed Gaykema who explained the Facility purpose and elements. Information on the Hydrogen Test Facility is available on Evoenergy's [website](#).

Attendees were able to ask questions about the Facility and potential future gas networks scenarios:

Q: Ed mentioned that there has been some weeping of hydrogen from the model network (not enough to be able to light a flame or cause harm). On which test network elements has there been weeping?

A: *Minor weeping has only been detected on screw fittings, not of levels sufficient to light a flame or cause harm. This was easily rectified by remaking the connection.*

Q: What is the energy conversion efficiency comparison of electricity and hydrogen?

A: Ed said this was an interesting question, the answer to which is dependent on many variables including what appliance was used and more.

Q: What is the estimated or known water usage for hydrogen generation via electrolysis?

A: *For conversion nine (9) litres of water are used per kg of hydrogen.*

Q: What is the water recovery process in electrolysis?

A: *Water is released to the atmosphere during combustion. This then recycles through the atmospheric water cycle.*

Q: Can the current (test facility) pipes be used after initial testing?

A: *Initial indications are that the pipes are unaffected by 100% hydrogen.*

Q: What happens to it when it burns i.e. where does the waste (H₂O) go?

A: *Water is released to the atmosphere during combustion and cycles through the atmospheric water cycle.*

Q: Has Ed really slept on site??

A: No

Q: Did the hydrogen-powered BBQ need new jets to be able to work?

A: *No - the hydrogen BBQ in use at the test facility was made to burn hydrogen and is not a converted LPG or Natural gas BBQ.*

Q: Would the ACT community connected to gas need to replace or upgrade appliances and fittings?

A: *Whether appliances need to be replaced or simply converted depends on the final gas blend used in the network. Appliance conversions are likely as a minimum.*

Q: Are there regulatory changes required to introduce hydrogen into the distribution network?

A: *Some technical standards will need to be amended to allow for concentrations of hydrogen greater than 10-15%. Otherwise, there appear to be no major regulatory impediments to introducing hydrogen.*

Q: What are some of the other changes (to the distribution network) that would be required in introducing hydrogen?

A: *This will be determined through further testing at the facility.*

Q: What is this hydrogen site used for?

A: *This is the first Australian facility to test 100% hydrogen on existing materials, equipment and work practices, in preparation for application to the existing gas distribution network. It will help understand the impact of introducing hydrogen to the existing network which is important because this will have a major impact on any modifications or replacements that may be required to accommodate its use in the natural gas distribution system. Both Evoenergy and CIT will use the facility to train plumbing students in emerging technologies.*

Q: What is the diameter of steel piping versus plastic, and does plastic ever exceed steel? What are the costs of changing these over – can this be made ‘sellable’ and cheaper?

A: *Steel pipes on the secondary network (1050kPa) range from 50mm to 450mm. Plastic pipes on the medium pressure network (210kPa) range from 18mm up to 160mm. Steel pipes on the primary and transmission system (6,900kPa and 14,900kPa respectively) are all 250mm.*

Regarding changing these over and associated costs, more investigation is needed before we can fully answer this. At this stage, we intend to use all existing pipes in any future network and we are investigating the engineering implications.

6. Gas networks presentation (renewable gas / future gas)

Mr Hansen presented a gas network outlook with particular reference to the development of the gas network regulatory review submission due June 2020. The presentation covered the importance and value of seeking ECRC feedback; a recap on the background of natural gas; the energy challenge faced by the ACT region; information on renewable gas; how renewable gas might be introduced to the network; implications for the electricity network should the gas network be decommissioned.

On the last point, it was asked how home electricity connections are upgraded from single phase to three-phase, and what determines if this is necessary. Most houses have only single phase power but three-phase power is needed for larger (electricity) loads.

Attendees engaged in general discussion about uptake in gas connections and energy challenges that exist in high-rise apartments (details of gas connections and needs to heat large volumes of water and/or space). Attendees were surprised by the connection rate of around 90% across the gas network - even Denman Prospect which has mandatory solar PV on every house - and Helen Oakey asked why this was the case. All attendees contributed to this discussion suggesting a range of reasons why gas connections remain high – efficiency, comfort, cooking preferences, Canberra climate, culture.

Mr Hansen detailed the peak-y nature of our energy networks in winter and showed the gas network perspective of morning and evening peaks. Ms Helyar asked about what could be done about these peaks – why they’re so high, whether leaving heating on overnight would save energy and reduce network peaks. Nick Clarke wondered whether anyone had ever pushed on this approach to avoid the morning peak. This eventually led to a discussion about changing and improved building standards and

how better insulation reduces energy needs for heating and cooling. Better gas appliances, with good efficiency, also plays a part in this equation. Some attendees wondered whether any studies had been completed on this efficiency question but it was considered unlikely to be more efficient to heat overnight.

Trends towards reduced overall gas use per household/person was discussed. Barbara Norman suggested people may have concerns about safety although Mr Hansen felt this was misplaced.

Mr Hansen also compared the electricity and gas network and emphasised that the gas network is the bigger of the two in terms of peak capacity. He then discussed options for future gas network distribution of renewable gas.

Ms Oakey queried the cost of upgrading the electricity network and suggested that we should already be upgrading the network.

Ms Helyar said that she felt people have an appetite to understand and unpack the costs and impacts of these changes. Ms Helyar asked whether the ECRC members could hear from a source independent from Evoenergy on methodology of costing and impacts of the options and potential costs. Members agreed with this proposed action.

Prof. Norman agreed and suggested that what Evoenergy should present is 'some scenarios' – a lot of scenario planning (not so much case studies) but that we need to push the boundaries. Ms Norman felt this type of presentation from Mr Hansen was interesting and useful.

Ms Oakey asked about the transmission pipeline and where these come in, in the sense of the material and potential for cracking. Ms Helyar wondered about the funding and timeline for future network research. Ms Oakey asked about the potential of cracking in the high pressure steel pipelines due to hydrogen. Mr Hansen responded that Future Fuels CRC has significant funding and several research projects are investigating compatibility of materials with hydrogen.

There was a question about Ginninderry and what plans are in that suburb around gas. Ginninderry has reticulated gas distribution and residents will be able to connect to gas if they choose although the development is being promoted as all-electric. The only suburb in the ACT without gas is Swinger Hill and this is only because it is built on rock.

Attendees discussed the cost assumptions and early modelling Mr Hansen presented on projections of electrification (upgrading the electricity network, decommissioning the gas network).

Glenys Patulny asked where Evoenergy (and others) source the electrolyzers. Bruce responded that they are largely coming from Europe (e.g. Siemens) but there are other players entering the market from around the world and the price is coming down.

Ms Oakey asked about the work happening in Leeds in the UK. (In the 1960s and 1970s, the UK replaced 'town gas' with natural gas supplies. The former town gas was manufactured locally and contained more than 50 percent hydrogen: this proportion dropped to zero once the network was converted and about 40 million appliances were adapted for natural gas, delivered from the country's North Sea fields. Now Leeds is planning to switch its pipeline system to pure hydrogen and serve as a model for the rest of the country. Over 3.7 million homes and 40,000 businesses and industries in the north of England that are heated by natural gas could be converted to hydrogen by 2034. The project is detailed online. Prof. Norman has visited Japan where the country is exploring hydrogen use as well.

Mr Hansen was asked which energy source is preferable if the aim is solely emission reduction. Bio-methane stacks up well, and can be used now, although commercial incentives are not yet good enough and there is not enough mass production to power communities.

Mr Hansen was asked about the timeframe for necessary research to be undertaken to support these changes in gas network distribution (whether hydrogen / methane / bio-methane). He responded that we need to spend time during 2021 to 2025 in the next regulatory period to develop a network design to submit to the AER for approval in the 2026 access arrangement review: that would allow implementation from 2026 to 2045. Didi Sommer asked about the source of bio-methane i.e. what goes in. Mr Hansen replied that agricultural waste, food waste, green waste and sewerage can be used.

Prof. Norman mentioned she had attended a national crisis/emergency conference in the ACT in the last week and thought these considerations and discussions would continue to be important in the energy context.

7. Gas regulatory update

Phil Deamer revisited his April 2019 ECRC presentation and provided an update on the development and submission of the Reference Service Proposal (RSP). He reminded attendees that owing to a rule change (in March) Evoenergy is required to submit the RSP 12 months ahead of the access arrangement review submission, and as such Evoenergy will submit a RSP to the Australian Regulator by 30 June 2019.

The ECRC asked whether the RSP is seen by the public before being submitted to the Australian Energy Regulator (AER). It is not, though this does occur at a later date and the AER allows for this. There was some confusion among attendees about the content of the RSP Mr Deamer explained that the RSP was, put simply, Evoenergy's opportunity to propose the haulage of gas as the reference service, that this in itself is not contentious, it is simply the haulage of gas.

Mr Deamer then spoke about the GN21 regulatory submission due June 2020, noting that July 2021 is when this access arrangement take effect. Ultimately, this access arrangement provides consumers with a price for gas. Mr Deamer gave a high-level overview of the consumer engagement program of GN21. This will include a plain-English consumer summary of the draft submission and Mr Deamer explained to the meeting that this summary will provide sufficient details about the proposed submission for interested parties to provide comments. The consumer engagement program will also include a website, a citizen jury (at the time of the meeting not locked in)¹ and ACTCOSS will also deliver some engagement with vulnerable consumers during the coming year.

8. Electricity network regulatory affairs – network pricing and EN19 determination

Mr Chris Bell summarised the AER's April EN19 determination.

Emily Brown responded to questions from ECRC Meeting 28 in showing network pricing components over the previous five years (in nominal terms). In Meeting 28 a two year review was shown. The annual (nominal) increase in a typical residential network bill since 2015/16 roughly equates to 3%: CPI has been running at about 2%. ECRC noted the increase in the Jurisdictional Scheme component.

Glenys Patulny asked about the subsidy component, within the jurisdictional scheme block, and whether it was increasing? Mrs Brown said there has been an increase in large scale FiT payment in

¹ This has now been confirmed

recent years as the number of large generators - three solar farms and six wind farms – has increased. Once the ACT Government’s renewable target is met, this may stabilise.

Ms Oakey asked about whether the growth in the jurisdictional component includes residential, and Mrs Brown replied that it includes small domestic (which is steady) as well as large. Ms Helyar noted that the jurisdiction scheme has tripled over the five year period and wondered what Mrs Brown expected in terms of future projections. Leylann Hinch responded to this question initially, that this depends somewhat on the market price of energy. Mrs Brown added that it is a function of generation capacity and spot-price; that generation component should stabilise, yes, but the spot price may be less predictable.

Mrs Brown also presented a typical ACT residential retail electricity bills over the last five years. It showed the retail, energy purchase and network cost components separately. The doubling of energy purchase costs since 2015/16 was noted.

9. Energy Share SMS

Owing to time constraints, Eddie Thanavelil’s Evoenergy Energy Share SMS pilot update was provided out-of-session and within the slide pack. Another update will be provided at the August meeting including data analytics and some pilot outcomes.

10. Other business

Ms Sommers invited attendees to also attend RENEW meetings – Ms Sommers is a member of RENEW and they meet monthly.

Mr Cox shared that he is part of a consortium that is applying for renewable energy grants, and seeking gestures of endorsement/support to accompany their application. The application is at a planning stage only.

There were no other matters raised.

11. Next meeting – number 30 – will be held on August 14th 2019

The meeting closed at 12.30m