Attachment C.2

SAPN_NTF - Review of SACOSS-CBR Research

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SA Power Networks

C.2: Report on SACOSS Consumer Research

Prepared for SA Power Networks

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Review Team

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1. INTRODUCTION

1.1 Scope of this report

The NTF Group ("NTF") has been engaged to prepare this report by SA Power Networks ("SAPN"). The context of this report is the Distribution Determination being conducted by the Australian Energy Regulator ("AER") in relation to SAPN's Revised Regulatory Proposal for the 2015-20 period.

This report addresses the brief from SAPN to objectively examine the consumer research conducted by Colmar Brunton Research ("CBR") and relied upon by SACOSS in its submission to the AER titled 'SACOSS Submission to Australian Energy Regulator on SA Power Networks' 2015-2020 Regulatory Proposal, January 2015'. NTF's examination of the research includes an assessment of the sample, survey design, questionnaire sequencing and wording, as well as the analysis of results.

1.2 Expertise

The NTF Group is a leading Insights and Analytics firm, with expertise in, and a specialist focus on, *inter alia, "*willingness to pay" research. NTF has been in operation for nearly 20 years, and its clients count amongst some of the largest, most influential and reputable corporations in the region.

The consultants undertaking this review have over 70 years of combined experience in market research survey and analysis techniques and their application.

Curriculum Vitae of the NTF project team are appended.

2. REPORTED RESEARCH FINDINGS & SACOSS' CONCLUSIONS

SACOSS highlighted the following insights based upon the research undertaken on their behalf by CBR:

- *"93% of respondents would like to see a reduction in the price of electricity"*
- *"20% were concerned about their ability to pay their next electricity bill and 15% of bill payers indicated they felt 'very stressed' about their capacity to pay their electricity bills in general"*

SACOSS concluded from these research findings that they could not support the price outcome proposed by SAPN:

"Given the very high proportion of consumers who would like to see a reduction in the price of electricity and the related stress experienced by a significant number of consumers, SACOSS finds the price outcome of the SA Power Networks Regulatory Proposal is not possible to accept".

3. NTF REVIEW OF SACOSS RESEARCH

3.1 Contextual Data on Household Electricity prices

Before addressing our examination of SACOSS' consumer research, we note the following relevant facts:

- Electricity bills represent less than 4% of household expenditure in SA[1]. To put electricity costs in an appropriate context, a 10% increase or decrease in electricity costs has a less than 1% impact on average household expenditure in SA.
- As such, electricity bills as a class of household expenditure are swamped by expenditures on housing, transport and recreation costs.
- Approximately 6% of households have a debt relating to electricity[2]. This proportion has been relatively stable over the period from March, 2013 to December, 2014.
- The survey includes questions relating to 'heat wave' events, which CBR defines as days with a maximum temperature exceeding 40 degrees. According to the BOM[3], there have been 76 days where the temperature has exceeded 40 degrees in the 5,629 days between 1st Jan 2000 and 30th June 2015. Therefore, the incidence of heat wave events over this period has been 1.4 days in every 100.

4. SACOSS RESEARCH DESIGN

Our examination revealed a number of deficiencies in the design of the SACOSS research, including:

- The survey comprised sections on payment arrangements, extreme temperatures (six questions were devoted to these infrequent events), financial situation and demographics, as well as electricity prices. Most concerning from a respondent conditioning perspective is that <u>immediately prior</u> to the section on attitudes to electricity prices were questions on:
    - o Respondents' proclivity to switch electricity retailer
    - o How much respondents "*trust that your **energy retailer** is doing the right thing by you and has your best interests at heart*"
    - o Whether respondents agree or disagree "*energy companies should have the power to **cut customer supply if the customer is unable to pay a bill***".
- Conditioning respondents to consider these emotive (and arguably irrelevant) factors immediately prior to gauging their attitudes towards electricity costs is leading and biasing, particularly as no reference was made to other household costs.
- The survey asked a number of questions about household electricity bills, but did not specifically address any other area of household expenditure (e.g gas, petrol, telco bills), in spite of the fact electricity costs account for approximately 4 cents in every $1 of household expenditure. This could have provided an important context for respondents as they reflected on electricity costs.

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[1]Average HH electricity costs $1,992 pa / $38.31 per week (AER Preliminary Decision, SA Power Networks Determination 2015-16 to 2019-20, Table 1); Average HH expenditure $1044 per week (ASIC, Moneysmart)
[2] SA Energy Debt, AER, Market Performance Report, 2014.
[3] BOM Station Number 23090, Adelaide. Source: www.bom.gov.au

- No attempt was made in the research to elicit real world trade-offs between electricity costs and benefits for the consumer. For example, the survey asked: *"Would you like to see energy businesses reduce overheads and operating costs so that the price of electricity, and electricity bills, are reduced?"*   If consumers were presented with scenarios such as reduced overheads and operating costs contributing to: poorer long term supply reliability, less frequent tree trimming, job losses, etc, they may have responded differently.   It is unrealistic to expect respondents to meaningfully answer the question in a balanced and informed manner when no consequences were presented associated with reducing expenditure. The question is at the very least simplistic and lacking balance, especially as electricity costs were asked in isolation.

- Had the survey been appropriately designed with real-world trade-offs, the results would have likely mirrored the findings from the NTF Service-Price Study[4], which showed (consistent with results from other jurisdictions) that the vast majority (80%) of SA households would prefer to pay the current price for electricity and maintain the current reliability levels, 11% would prefer to pay more for a more reliable standard of service and only 9% would prefer to pay less for a less reliable standard of service. Therefore, with an appropriately framed question, around one-in-ten, not 93% of respondents, wish to see a reduction in household electricity prices.

- Furthermore, neither the question referred to above, nor the entire survey made any reference to distribution network prices or charges. There was no attempt to educate respondents about the different cost components of their electricity bill, nor the services delivered by SAPN. It is therefore arguably completely irrelevant to the distribution network sector, yet it was represented by SACOSS as key evidence in support of its submission.

- The research did not attempt to validate the level of financial concern respondents reported. The literature teaches us that household financial stress is multi-dimensional, potentially reflected in peoples' relationships, health and credit card use. Aldana and Liljenquist[5] have developed a reliable and valid measure of financial stress comprising some 18 questions. While we acknowledge this depth of coverage is beyond the scope of this study, some attempt should have been made to verify the level of electricity bill distress reported.

- Critically, the concern reported does not reflect respondents' own words, nor their selection of a semantic category ('very concerned'), but rather an arbitrary classification of responses captured on an 11 point scale. The researchers may have empirical evidence to validate their use of these thresholds, however, these were not reported. Critically, the researchers chose not to report the underlying rating data. For example, of the 15% of respondents they claim are 'very stressed', we don't know what proportion fell into 7, 8, 9 and 10.

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[4] http://talkingpower.com.au/wordpress/wp-content/uploads/SA-Power-Networks_Service-Price-Research-Findings.pdf
[5] Aldana & Liljenquist, Validity and Reliability of a Financial Strain Survey, 1998.

5. CONCLUSIONS

The central pillars of SACOSS' argument are not supported by robust research insights.

SACOSS argue	Limitations of their research
"Particular attention was given to impact of pricing changes, households that have experienced financial hardship and usage responses to extreme temperatures"	The conditioning of respondents with questions relating to retailers and forced disconnections prior to examining attitudes towards electricity prices is biasing and likely to mean the reported levels of bill induced financial distress are overstated. It contradicts conventional survey practice: **"questions at the very beginning of the survey should explicitly address the topic of the survey**, as it is described to the respondent prior to the survey"[6]
"The research found that 93% of respondents would like to see a reduction in the price of electricity"	The question that delivered this result is at best simplistic and unbalanced, as well as arguably leading. No real world trade-offs were captured, nor were electricity costs compared or contextualised with other areas of household expenditure. Neither was the question framed in the context of distribution charges.
"20% were concerned about their ability to pay their next electricity bill and 15% of bill payers indicated they felt 'very stressed' about their capacity to pay their electricity bills in general"	This is based on the researcher's arbitrary classification, as well as the significant limitations of the study outlined above.

For the reasons set out in this document, we regard the research design as simplistic and biasing. Respondents were conditioned with a sequence of questions relating to retailers (e.g. retailer having "*their best interests at heart*") and disconnection of household electricity supply, before being asked critical questions about electricity prices, upon which SACOSS' conclusions are based. This is contrary to industry best practice. Moreover, respondents were not given contextualising information about other household costs, nor information about SAPN, the services it provides and the associated cost (e.g % of a typical electricity bill accounted for by distribution).

As a consequence, the self-reported measures of electricity bill distress are likely to be inflated and therefore, SACOSS' conclusions and interpretation are incorrect and misleading.

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[6] Krosnick JA (2010) 'Question and Questionnaire Design' in: Handbook of Survey Research. 2nd Edn Emerald pp 263-313

6. APPENDICES

Greg Taylor CV

Joan Nelson CV

Tony Corke CV

GREG TAYLOR - DIRECTOR

Greg Taylor has over eighteen years' experience in the design, implementation and analysis of both qualitative and quantitative research. He is a member of the AMSRS. Before co-founding The NTF Group with Joan Nelson in 1995, he was the General Manager of the Financial Market Research division of a national market research agency, with a team of researchers specializing in financial markets. He has particular expertise in the areas of customer segmentation, value proposition development, customer selection and targeting, database modelling and choice modelling and demand projections.

Greg has been involved in numerous econometric and discrete choice modelling studies for transformational studies in both infrastructure and services. His experience in quantitative research is essential for segmenting and sizing the market. He has implemented research in many organizations and has played a key part in organizational transformation.

Greg has been an Adjunct Professor of Boston University and has lectured at the Australian School of Government (ANZSOC) on the use of quantitative methods in government policy development as related to decision making under uncertainty.

Over the past years he has managed assignments in Australia, China, New Zealand, the United Kingdom, and the United States for major Australian and multinational clients.

Major projects for which he has conducted research include:

- Customer satisfaction modelling for Telstra
- Customer segmentation and organizational transformation for Australia Post
- Customer satisfaction modelling for Suncorp
- Analysis of customer data and customer segmentation for Department of Human Services
- Demand projections for transport and housing in Shanghai
- Regulatory pricing: Willingness to pay for new water infrastructure, Yarra Valley Water (2 re-sets)
- Regulatory pricing: Willingness to pay for electricity infrastructure, Citipower
- Regulatory pricing: Willingness to pay for electricity infrastructure, SAPN

Greg has been involved in numerous econometric and discrete choice modelling studies for both infrastructure and services. His experience in quantitative research is essential for segmenting and sizing the market.

He has developed expertise in online quantitative research, particularly in the area of choice modeling, using NTF's own software.

In recent years he has become a regular speaker at 'Big Data' conferences and has taught groups at the AGSM the fundamentals of dealing with large data sets.

JOAN NELSON – DIRECTOR

Joan Nelson is a highly experienced qualitative researcher, member of the MRSA, and the American association of qualitative research consultants, QRCA. She was previously NSW General Manager of a national research company and was responsible for introducing choice modelling to the Group. She has special interests in social policy research, infrastructure, and the use of choice modelling techniques in a social context.

Major infrastructure projects for which she has conducted qualitative research include:

- Sustainable Sydney: Community Attitudes to sustainable transport and planning in Sydney
- Friends of Sydney: community attitudes to public transport
- Bishop Austrans: Evaluation of attitudes to new ultra light transport
- Demand for accessible transport – people with various disabilities
- Women's transport needs – multi-trip transport
- Transport for Greater Sydney: Attitudes amongst transport decision-makers to what the public wants of public transport, compared to what the public wants
- Personal Public Transport – Perth; Gold Coast
- Queensland Rail: freight customer attitudes
- Attitudes to transport and housing needs in Shanghai
- Feasibility study for VFT (South Coast route – Sydney to Melbourne 1990)
- Willingness to pay for new water infrastructure – Victoria and South Australia
- Willingness to pay for new electricity infrastructure - Victoria

Joan has been involved in numerous demand projection studies for infrastructure, new services and new products. Her experience in qualitative research is essential for these quantitative studies as her work assists in segmenting the market and defines the attributes on which customer decisions are based.

TONY CORKE – HEAD OF MODELLING & ANALYTICS

Tony Corke is responsible for a team of experienced, in-house analysts and for sourcing and managing suppliers of world-class modelling services from a range of prestigious institutions.

His experience managing the analysis for large and complex projects in eHealth, e-commerce, banking and finance sectors well qualifies him for analysing the data across a wide range of client organisations. He has developed customised algorithms for numerous clients to append on their own internal databases and provide predictive selection of data for internal use. He believes strongly in knowledge transfer and is a valued member of Analyst First, an organisation that works closely with a number of government departments to support higher level analytics within those organisations.

Tony's impressive work history has helped him gain expertise in information architecture and management, data warehousing, customer relationship management, as well as data-driven and internet marketing. Previous roles have included Vice President Information, for a US internet startup company, Chief Manager, Information Management for one of Australia's 4 major banks, and Programme Director, Group Information Programme also for a major Australian bank.

Modelling and analysis projects include:

- Customer segmentation and profiling for Department of Human Services

- Customer demand modelling for electricity infrastructure

- Willingness to pay for electricity infrastructure (SAPN 2015 re-set)

- Modelling ROI of Wireless infrastructure in a major hospital in NSW

- Analysis of benefits of a Radiology information Service in hospitals in Queensland

- Willingness to pay for water infrastructure in Victoria and South Australia

- Willingness to pay for electricity infrastructure for Victoria

- Modelling environmental attitudes for a large project on sustainability in Victoria

In addition to these projects, Tony has been head of analytics for a range of studies where his background in econometrics, and as a former CIO of a major Australian bank has been invaluable.