Attachment C.7

SAPN_The NTF Group Report on Oakley Greenwood Peer Review

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C.7: Report on Oakley Greenwood Peer Review

Prepared for SA Power Networks

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Review Team

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1. INTRODUCTION

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 2015-2020 period.

This report addresses the brief from SAPN to objectively examine the Peer Review Report of NTF's WTP research, conducted by Oakley Greenwood (OG) on behalf of the AER.

2. Expertise

The NTF Group is a leading Insights and Analytics firm, with expertise in, and a specialist focus in, *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 for the NTF project team are appended.

2. OVERVIEW OF OAKLEY GREENWOOD FINDINGS

2.1 Key Conclusion

Oakley Greenwood's key finding is that the methodology deployed by NTF is sound and should leave no cause for concern regarding the validity of the findings, but they caution the Willingness to Pay (WTP) results can not be extrapolated beyond the specific service improvements tested:

"The assumption that the only services that needed to be submitted to WTP considerations were those concerning undergrounding of power lines and vegetation management was addressed in Section 2.1. As noted, that assumption could lead to the view that these service areas are the only ones in which service level improvements are worth considering.

Other than that, ***the review did not find any assumptions in the WTP research that caused any concern regarding its methodological soundness or that would potentially compromise the validity of its results****."*[1]

NTF concurs entirely with Oakley Greenwood's caveat that the findings in terms of willingness to pay cannot be generalised beyond the specific service improvements tested. Consumer willingness to pay may have been higher or lower in response to other improvements, however, NTF is not aware of any reporting associated with this research which extrapolates consumer WTP beyond the specific scope of this study.

2.2 Key Issues raised

Oakley Greenwood discuss three germane issues:

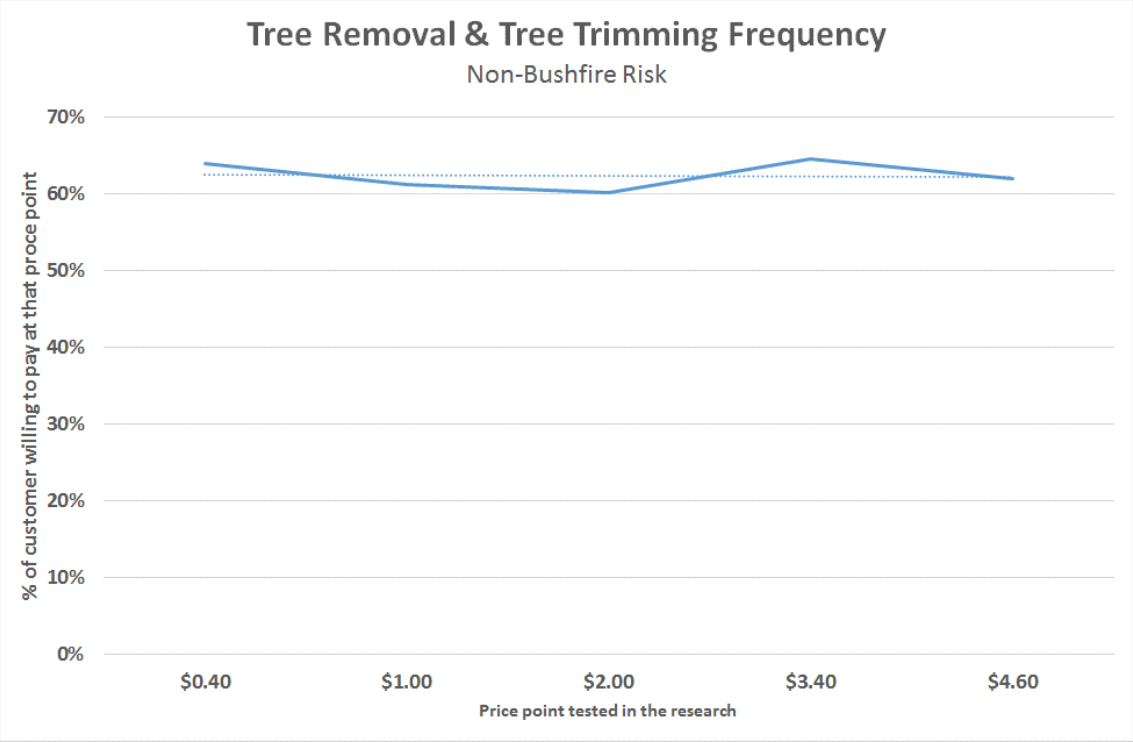
1. The scope of the study
2. Why the choice scenarios didn't explicitly state quantified outcomes
3. The adoption of service improvements based on consumer WTP estimates.

[1] Oakley Greenwood, Peer Review of the SA Power Network willingness to pay research

3. NTF RESPONSE TO KEY ISSUES

3.1 Relevant Background

For context, it should be noted that consumer WTP was price inelastic for vegetation management. In other words, consumer WTP didn't diminish significantly as price increased, within the price range tested.



This leaves open the possibility that had SAPN tested higher price points, or had SAPN chosen to augment the existing study with an experimental design comprising higher price points, consumer willingness to pay could have been even higher.

It also demonstrates the fact that in relation to all aspects of survey design, SAPN and NTF elected to take a conservative, prudent approach.

3.2 Scope of the Study

Oakley Greenwood perceive the scope of the 'targeted' WTP study to be too narrow. It is important to recognise that the WTP research was just one component of a much larger body of work (please refer to SA Power Networks' TalkingPower Customer Engagement Program (CEP)). Accordingly, SAPN only tested service improvements which had been identified by consumers and their representatives through their extensive CEP.

3.3 Presenting quantified outcomes in choice scenarios

In relation to linking attribute levels to quantified outcomes, we agree this is desirable, but only where it is possible to do so robustly. In accordance with the philosophy of conservative prudence, SAPN did not include any content in the research it could not objectively verify. While in an ideal

world we agree it would have been desirable to be able to state likely outcomes, it was not possible to establish causal links between the service improvements tested and real world outcomes. For example, it is not possible to establish a causal link between the number of kilometres of undergrounding in high-risk bushfire areas and the expected reduction in the number of catastrophic bushfires which will occur over the next decade. In the absence of robust, verifiable linkages between attribute levels and expected outcomes, these estimates were excluded from the research design, in line with the overriding principle of prudence and conservatism. Finally, it should be recognised that the attribute exhibiting greatest consumer willingness to pay was vegetation management and the aesthetic benefits of the service improvement were visually depicted for respondents, which to the largest practical extent possible, did indicate expected outcomes. So while NTF agrees with the theoretical principle espoused by Oakley Greenwood, it was not practically feasible in this instance.

3.4 Adoption of service improvements based on consumer WTP estimated

Oakley Greenwood propose an interesting alternative to the conventional majority 'threshold' test approach used to determine which initiatives are to be funded based on WTP. To simplify the approach proposed by Oakley Greenwood, using an electoral analogue, we understand Oakley Greenwood's model implies the party winning the greatest number of seats should not be elected per se, but that additionally the party who if elected, causes least grievance amongst those who didn't vote for them should form Government. NTF could propose other alternatives to the conventional 50% WTP rule commonly deployed (for example, Environmental Economics Research Hub[2] and Australian National University[3], who exercised a 50% threshold to endorse WTP), but clearly any departure from accepted practice would require endorsement by decision makers, such as the AER. It is important to stress that in line with the principle of prudence and conservatism, NTF imposed a more stringent test than the generally accepted 50% threshold. NTF required a 55% majority in all three key behavioural segments, including hardship customers.

It is, however, important to address Oakley Greenwood's observation, in defence of their proposed new model: '*we think this is particularly warranted given SAPN customers' concerns about future electricity prices*'.

Consumer concern about future electricity prices was predicted on preconceptions that simply didn't eventuate[4]. Prior to the AER Preliminary Determination, the majority of consumers assumed that electricity prices would: a) increase, and b) at a rate far outstripping inflation. For example, ORC International report (in a recent survey for SAPN) that 67% of respondents (from a random sample of SA households) believed electricity prices would increase, by an average 15% (median expected increase of 10%).

This assumption on the part of consumers is inconsistent with the price reduction actually proposed by SAPN in the WTP research, let alone those reductions in the AER Preliminary Determination which were much larger again. Accordingly, these price concerns are no longer grounded in the current

[2] Gillespie, R. & Bennet, J. Environmental Economics Research Hub Research Reports (2011), Willingness to pay for kerbside recycling in the Brisbane Region

[3] Crawford School of Economics and Government, ANU (2010), Households' willingness to pay for undergrounding electricity and telecommunications wires

[4] In the NTF WTP study, the attitudinal question relating to price concerns was asked at a point in the survey prior to administering the choice tasks, where possible future pricing scenarios were revealed.

reality. That is, the choice scenarios reflected realistic possibilities at the time, and respondents made their choices accordingly.

That these choices do not accord with some observers' expectations does not mean that the WTP outcomes are flawed.

3.5 Other issues raised by OG

Finally, to address several miscellaneous points raised in the report:

- Regional representativeness of the sample. The actual sample composition was broadly similar, but not identical to the ESCoSA regional breakdown. These small differences were immaterial, if anything leading to a slight understatement of WTP (as consumers residing in the under-sampled metro areas have a higher stated WTP). The major quota to manage, and indeed the most significant behavioural insight from the result was the very different (significantly higher) willingness to pay reported amongst solar households. Significantly, solar households (which are randomly distributed with respect to income, or even negatively correlated) exhibited higher willingness to pay, regardless of their household income.
- Counter-intuitive (or what Oakley Greenwood describe as 'puzzling') results. As professional market research practitioners (and students of behavioural economics) will attest, it is common to observe non-linear findings which run counter to conventional 'rational' economic assumptions. One interpretation of the strong support for treatment of 30 blackspots (where all four options where presented to all respondents) is that consumers ('even core hardship customers') thought the service improvement represented compelling value for money, therefore, the majority elected 30 blackspots.
- As Oakley Greenwood note themselves, consumer WTP is particular to the initiatives tested, so we disagree with OG's expectation of observing similar response patterns in entirely different scenarios (e.g. for high bushfire versus non-high bushfire scenarios).
- Oakley Greenwood question why solar customers receiving and not receiving concessions were grouped together, "in spite of an apparent difference in income". This decision was made on purely empirical grounds. The following table shows the average willingness to pay for: a) all improvements tested in that scenario, b) the highest level of vegetation management, and c) the highest level for undergrounding. Respondents are broken down by concession holder status and solar. Additionally, respondents aged over 65 are shown separately.

  As the data clearly illustrates, solar households have a more similar willingness to pay profile, regardless of whether the households receive a government concession or not.

Average Willingness to Pay Across All Improved Packages Test						
Concession		✗	✗	✓	✓	Aged 65+
Solar		✗	✓	✗	✓	
BFRA	Average for all improvements	54%	67%	49%	59%	63%
	Highest VM [1]	56%	65%	51%	60%	62%
	Highest Underground [2]	47%	63%	53%	57%	67%
Non-BFRA	Average for all improvements	55%	64%	53%	61%	63%
	Highest VM [3]	56%	64%	53%	56%	66%
	Highest Underground [4]	44%	57%	44%	61%	59%

= Top 3

1 – 10% tree removal & replacement; 2 yearly trimming cycle

2 – 375kms

3 – 5% tree removal & replacement; 2 yearly trimming cycle

4 – 190kms

- This data demonstrates that factors other than apparent income differences are driving willingness to pay for enhancements to the network and associated services. The stereotypical arguments presented to the AER that suggest lower income households are monolithic, with universally lower willingness to pay and lower solar penetration, are not supported by the survey or industry data. What emerges is a richer, more complex picture where there are pockets of lower income households with a very high demonstrated willingness to pay (and indeed relatively high solar penetration).

4. CONCLUSIONS

- NTF welcomes Oakley Greenwood's endorsement of the WTP methodology and its unequivocal statement that ***"the review did not find any assumptions in the WTP research that caused any concern regarding its methodological soundness or that would potentially compromise the validity of its results."***
- Oakley Greenwood's criticism of the narrow scope of the 'targeted' WTP study doesn't recognise the WTP research was one component of a much broader Customer Engagement Program. In the context of the vast majority of SAPN service provision being a regulated obligation, SAPN targeted key areas of high customer interest in SA which did not conflict with existing regulated obligations.
- We understand why Oakley Greenwood has raised the issue about not linking quantified 'output' outcomes with choice tasks, and while NTF agrees with the theoretical principle espoused by OG, it was not feasible to do this robustly. Wherever possible, tangible output benefits were identified. For example, vegetation management and the aesthetic benefits of the service improvement were visually depicted for respondents.
- Oakley Greenwood has proposed an interesting alternative to the conventional 50% majority 'threshold' test for recommending service improvement on the basis of community WTP. Any departure from accepted practice would require endorsement by decision makers, such as the AER. It is important to stress that in line with the principle of prudence and conservatism, NTF imposed a more stringent test than the generally accepted 50% threshold. NTF required a 55% majority in all three key behavioural segments, including hardship customers.
- Oakley Greenwood repeat the mistake of other submissions to the AER in not recognising consumer concerns about price increases are predicated on a majority consumer expectation (67% of SA consumers) of electricity prices increasing well ahead of inflation (average expected increase amongst this 67% is 15% based on SAPN research). This assumption on the part of consumers is inconsistent with the price reduction actually proposed by SAPN in the WTP research, let alone those reductions in the AER Preliminary Determination which were much larger again. Accordingly, these price concerns are no longer grounded in the current reality. That is, the choice scenarios reflected realistic possibilities at the time, and respondents made their choices accordingly. That these choices do not accord with some observers' expectations does not mean that the WTP outcomes are flawed.

5. 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.