

INDEPENDENT PRICING AND REGULATORY TRIBUNAL

REVIEW OF SOLAR FEED-IN TARIFFS

Tribunal Members

Mr Peter Boxall AO, Chairman
Mr James Cox, Full-Time Member
Ms Sibylle Krieger, Part-Time Member

Members of the Secretariat

Ms Anna Brakey
Mr Alexis van der Weyden

Held at IPART Offices, Level 8, 1 Market Street, Sydney

On Monday, 12 December 2011, at 10am

1 chairman's Opening Remarks

2

3 THE CHAIRMAN: Good morning, everybody. My name is
4 Peter Boxall. I am the newly appointed chair of IPART. On
5 my right is Jim Cox, the CEO and full-time member of IPART.
6 On my left is Sibylle Krieger, who is the tribunal's
7 part-time member. We also have Anna Brakey and Alexis van
8 der Weyden, from the IPART Secretariat.

9

10 First, thank you all for coming today. We are
11 grateful for your assistance in undertaking what is a
12 difficult and complex review.

13

14 In recent years, there has been a strong uptake of
15 small-scale solar panels in New South Wales and across
16 Australia. This rapid uptake has come largely as a result
17 of falling capital costs of these units and from the
18 availability of subsidised government schemes.

19

20 In 2010, the former NSW government introduced a
21 relatively generous feed-in tariff through its solar bonus
22 scheme. Over 140,000 customers signed up under this
23 scheme, many more than the government expected, and the
24 costs of the scheme will feed through to higher electricity
25 prices. The NSW government closed its solar bonus scheme
26 to new participants on 1 July 2011.

27

28 In August 2011, the government asked IPART to
29 recommend a fair and reasonable value for the energy
30 that solar panels feed into the grid. This would apply
31 to around 10,000 customers who have already installed
32 solar panels and who are not eligible under the solar
33 bonus scheme and any future customers who install similar
34 panels.

35

36 Importantly the terms of reference require that our
37 recommendation should not increase electricity prices in
38 New South Wales and should not require funding from the
39 New South Wales government budget.

40

41 The government also asked us to undertake two related
42 tasks: one, to examine the impact of solar panels on the
43 costs of distribution network businesses and recommend
44 whether further detailed modelling is warranted to
45 understand this impact; and, two, to recommend a
46 contribution that retailers could make towards the costs of
47 the solar bonus scheme reflecting in the benefit they

1 receive from solar electricity. This contribution would
2 lessen the electricity prices required to cover the costs
3 of the solar bonus scheme.

4

5 Our draft report was released on 24 November. We have
6 made a number of recommendations which we believe balance
7 the needs of industry and home owners who plan to install
8 solar panels. Our recommendations mean that on average
9 customers would not pay higher electricity prices to
10 subsidise people who install new solar panels.

11

12 We invite submissions on our draft report until
13 23 January 2012. We will consider these submissions and
14 will publish our final report by early April 2012.

15

16 Today's forum is an opportunity for stakeholders to
17 understand, seek clarification and provide comment on our
18 draft report. The forum is divided into three sessions:

19

20 1. Establishing the future fair and reasonable feed
21 in tariff benchmark;

22 2. The impact of solar panels on network expenditure;

23 3. Contributions from retailers to the costs of the
24 solar bonus scheme.

25

26 There will be a short presentation by members of the
27 IPART Secretariat at the beginning of each session. I will
28 then invite stakeholders at the roundtable to make
29 comments.

30

31 To ensure that everyone has an opportunity, each
32 stakeholder at the roundtable will have up to five minutes
33 to comment in the first session and up to two minutes for
34 the second and third session. Following comments from
35 stakeholders in each session, I will then invite comments
36 from the floor. We have allocated two hours for the first
37 session and 30 minutes each for the second and third
38 sessions.

39

40 Today's workshop is being transcribed. Please
41 introduce yourself and state which organisation you
42 represent and speak clearly and relatively slowly for the
43 benefit of the transcriber. Thank you very much.

44

45 The first session covers establishing the future fair
46 and reasonable feed-in tariff benchmark. The IPART
47 Secretariat will now begin the first session and make a

1 short presentation.

2

3 Session 1: Establishing the future fair and reasonable

4 feed-in tariff benchmark

5

6 MR van der WEYDEN: Thank you, Mr Chairman.

7

8 As the Chairman noted, IPART was asked to undertake

9 three tasks and this first session covers the first task -

10 setting a fair and reasonable feed-in tariff for customers

11 who export electricity to the grid but are not eligible for

12 a subsidised feed-in tariff under the solar bonus scheme.

13

14 There are three main elements to this task: firstly,

15 considering the fair and reasonable value of the energy

16 exported to the grid by solar PV; secondly, determining how

17 best to implement this feed-in tariff; and, thirdly,

18 establishing a benchmark range for the fair and reasonable

19 feed-in tariff.

20

21 I will briefly step through each of these elements and

22 outline the analysis we undertook and how we used the

23 analysis in forming our draft decisions.

24

25 However, I would, firstly, like to place the

26 discussion in some context. We have undertaken

27 considerable analysis of the PV generation and electricity

28 consumption across households in New South Wales. As part

29 of this exercise, we were able to build a good picture of

30 the amount of electricity that a typical PV customer is

31 likely to export to the grid.

32

33 Our main finding is that, on average, between

34 one-third and a half of the electricity generated by the

35 units is consumed on a customer's premises. Therefore, for

36 future customers with no metering, the feed-in tariff that

37 we are discussing today relates to less than half the

38 electricity generated by a typical customer's PV units.

39 Rather, the most significant source of ongoing financial

40 benefit to new PV customers is savings on their retail

41 electricity bills resulting from reduced energy purchased

42 from the grid not the revenue from a non-subsidised feed-in

43 tariff.

44

45 In considering the fair and reasonable value of the

46 energy exported by solar PV, we used two approaches.

47 Firstly, we considered the direct financial gain which

1 retailers make from electricity exported by their solar

2 customers; and, secondly, we considered the wholesale

3 market value of solar exports at the time of day that PV

4 units export electricity to the grid.

5

6 We also considered whether there were other potential

7 benefits as a result of PV customers exporting electricity

8 to the grid and whether this could be captured by retailers

9 or network operators given the current market arrangements.

10

11 We estimated the direct financial gain to retailers

12 based on the changes in the standard retailers' costs and

13 revenues arising from the PV exports of customers on

14 regulated prices.

15

16 To ascertain which costs retailers can and cannot

17 avoid when the customers export electricity to the grid, we

18 considered the various costs retailers normally incur in

19 supplying electricity to customers. This includes all

20 costs we normally consider in determining regulated retail

21 tariffs, including energy costs, network costs, retail

22 costs and the costs of green schemes.

23

24 We found that for each kilowatt hour that PV customers

25 export to the grid, retailers can avoid the electricity

26 purchase costs, NEM fees, and the costs of energy losses

27 that they would normally occur in supplying electricity.

28 However they cannot avoid other costs including retail

29 costs, network costs and green scheme costs.

30

31 Based on this approach, we derived a value for the

32 direct financial gain to retailers in 2011/12 in the range

33 of 8.3 to 10.3c/kWh. We have not yet estimated a value for

34 2012/2013. We will not have the necessary data until we

35 have completed our next annual review of prices and

36 retailers have set their regulated prices in June 2012.

37

38 Our estimate of the financial gain to retailers

39 reflects the fact that, in contrast with what many

40 stakeholders believe, retailers cannot avoid all costs of

41 supply. Indeed, they still incur two of the most

42 significant costs - network costs and the costs of

43 complying with green schemes. So their gain is not a

44 one-for-one equivalent to the retail tariff; rather our

45 estimate of the financial gain to retailers represents

46 approximately one-third of average regulated retail tariffs

47 in 2011/2012.

.12/12/11 5 Session 1

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1
2 Our second approach to estimating the fair and
3 reasonable value of electricity exported by solar customers
4 was to consider the wholesale market value of these exports
5 based on the price these exports would receive if they were
6 sold on the National Electricity Market at the time they
7 were exported. This is also the price that other
8 generators would achieve if they sold electricity on the
9 NEM and the price retailers would pay if they bought
10 electricity on the NEM at this time.

11
12 To do this, we used historical half hourly data on PV
13 exports to understand when and how much solar electricity
14 customers are likely to export to the grid. We then
15 considered historical and forecast data on half hourly spot
16 prices in the NEM. Frontier Economics was engaged to
17 assist us in this task.

18
19 The outcome is a wholesale market value in the range
20 of 5.2 to 7c/kWh in 2011/2012 and 7 to 9.8c/kWh in
21 2012/2013. This is lower than the relevant figure under
22 the financial gains approach.

23
24 This wholesale value is higher than average spot
25 prices in the NEM given that PV units export electricity
26 during the day when prices tend to be higher than average.
27 However, there is significant variation in this value for
28 any given year depending on the PV unit size.

29
30 There is also variation between different financial
31 years. The higher value in 2012/2013 reflects higher pool
32 prices as a result of a number of factors including the
33 introduction of a carbon price from 1 July 2012.

34
35 It is worth noting these values include the value of
36 avoided electricity losses given that PV exports tend to be
37 consumed close to where they were injected into the grid.

38
39 As I outlined earlier, the primary direct benefit that
40 retailers receive when the solar customers export energy to
41 the grid is the avoided costs of purchasing wholesale
42 electricity in the NEM. However, solar PV customers may
43 also provide a number of indirect benefits to retailers,
44 network businesses and the wider market. In considering
45 the fair and reasonable value of energy to the grid, we
46 have considered a range of other potential benefits.

47

1 It is important to note that for these potential
2 benefits to be reflected in the feed-in tariff, they need
3 to be able to be captured by individual retailers or
4 network businesses as opposed to benefits that are shared
5 by all customers. If an individual retailer with solar
6 customers cannot capture these incremental benefits, then
7 it is unlikely to be in a position to share them with its
8 PV customers without affecting its financial viability.

9
10 The only other way for these potential benefits to be
11 reflected in the feed-in tariff is through a subsidy from
12 government or other electricity customers. The terms of
13 reference are clear that that is not an option.

14
15 We have considered whether solar PV is likely to
16 reduce network expenditure and whether there is a case for
17 a generally available feed-in tariff to reflect any
18 potential avoided network costs. While this is the topic
19 for discussion in the following section, I will just note
20 that our draft finding is that any benefits that arise are
21 likely to be location and time specific. However at
22 current levels of PV installation, these benefits are
23 likely to be small; therefore, we are of the view that a
24 generally available feed-in tariff should not include an
25 allowance for avoided system-wide network costs.

26
27 Further we have considered whether the feed-in tariff
28 should reflect any benefit that solar PV provides to all
29 electricity customers in the form of lower wholesale
30 prices, reduced energy losses and changes in a retailer's
31 load shape. While there may be benefits to customers
32 associated with these effects, they cannot feasibly be
33 captured due to the current arrangements within the
34 electricity industry.

35
36 For example, because of the arrangements within the
37 NEM, any positive effect that solar PV has on wholesale
38 prices is enjoyed by all retailers, including those without
39 PV customers, and ultimately all electricity customers.
40 This is consistent with outcomes that would be expected in
41 any competitive market when a new entrant has an effect on
42 marked prices. Therefore, we have not included the values
43 of these other potential benefits.

44
45 We also note that the environmental benefits
46 associated with avoided carbon emissions will be captured
47 by the feed-in tariff from 1 July 2012 following the

1 introduction of a carbon price. The carbon price will
2 place a cost of carbon emissions and will increase the
3 price of wholesale electricity. Therefore the gains that
4 retailers make from solar customers in the form of avoided
5 costs of purchasing wholesale energy will be larger from
6 1 July next year. We will be in a position to update this
7 value in 2012.

8
9 However, households installing solar PV are still able
10 to access subsidies under the RET for the renewable energy
11 that they generate. These subsidies reduce the up-front
12 costs of installing PV units and are funded by other
13 electricity customers and were one of the key drivers of
14 electricity prices increases on 1 July this year. Given
15 that solar PV customers are already capturing this benefit,
16 it is not appropriate for the feed-in tariff to include a
17 further subsidy to reflect these environmental benefits.

18
19 Our second step was to consider how to implement this
20 feed-in tariff. Our Issues Paper outlined three broad
21 options for the form of regulation, in addition to no
22 regulation at all. These options range from heavy-handed
23 through to light-handed regulation.

24
25 In making our decision, we have considered which
26 option is likely to improve PV customers' chances of
27 receiving a fair and reasonable feed-in tariff for the
28 energy they export to the grid without undermining
29 competition in the retail market, without undermining
30 product diversity, and without involving undue expense or
31 complexity.

32
33 We found that the form of regulation that best satisfies
34 these guiding principles is to publish a benchmark range of
35 values for a feed-in tariff for the upcoming financial
36 year. In particular, this package provides the best
37 balance between the risk that regulatory intervention could
38 undermine competition in the market - for example, by
39 deterring competition for PV customers or encouraging those
40 customers to return to the regulated tariff - against the
41 risk that PV customers may not receive the fair and
42 reasonable value of the electricity they export to the grid
43 without regulatory intervention.

44
45 To strengthen our recommended approach, we have
46 outlined a range of supporting actions to improve the
47 information available to customers about the financial

1 consequences of installing solar PV as well as information
2 in regards to retailers' feed-in tariffs offers. This will
3 improve the competitive pressure on retailers and is an
4 important part of a recommended package.

5
6 We also consider there to be a role for government and
7 the solar industry, including retailers who are
8 increasingly involved in the installation market, to play
9 in customers' understanding not only in relation to feed-in
10 tariff offerings but also in relation to PV customers'
11 rights and obligations.

12
13 Finally, we are still considering whether standard
14 retailers should be required to offer a feed-in tariff to
15 their regulated customers and we are seeking stakeholders'
16 views on this issue.

17
18 Our final step was to establish the benchmark range.
19 We have decided to base our draft finding on the benchmark
20 range on the financial gains approach as we consider this
21 is more consistent with the terms of reference of this
22 review. In particular, by reflecting the financial gain
23 that retailers make from PV exports we are of the view
24 that:

25
26 The resulting value will not interfere with
27 competition in the market for PV customers:
28 It will not lead to increased retail electricity
29 prices by making PV customers more costly to supply; and
30 It is fair for PV customers as it returns to them the
31 benefit that their exports provide to the retailers.

32
33 However, we have rounded down this range to reflect
34 the discounting that currently occurs in the market; that
35 is, many retailers offer tariffs that are lower than the
36 regulated price.

37
38 We are recommending that this range be updated
39 annually particularly to reflect the introduction of a
40 carbon price from 1 July next year and we should be in a
41 position to do this in June 2012.

42
43 THE CHAIRMAN: Thank you very much, Alexus.

44
45 I call now for comments from the stakeholders. Please
46 limit your contribution to a maximum of five minutes. Who
47 would like to go first?

1
2 MR D HOLLAND: My name is Dave Holland and I represent
3 the Australian Solar Roundtable. It is a group of CEOs from
4 some of the larger solar companies in Australia.

5
6 I would like to make a number of points. The first is
7 to say that we fully support a rational and responsible
8 approach to providing the mechanism for PV-generated
9 power. It should not be too much or too little. We agree with
10 the government's objectives, as set out in page 111 of the
11 draft report; namely, that the government is committed to
12 providing a fair and reasonable value for PV-generated
13 power and that such value should operate to support a
14 sustainable solar PV industry. We also recognise that the
15 government has a number of objectives in having the
16 program.

17
18 The first point about the draft report is that the
19 terms of reference, as set out in page 109, specifically
20 say that they cover the benefits gained from customers and
21 retailers, and we think that the report has left out the
22 benefits to customers. It talks about PV generators as
23 stakeholders, it talks about power generators and grid
24 operators as stakeholders, but it does not look at the
25 benefits in terms of the general customer base within the
26 power market.

27
28 The second point is that the draft report, on page 75,
29 sets out that there is no basis for paying or for the merit
30 order effect. The rationale for is this is that it does
31 not fit with the way the market operates today. The
32 reality is that now is the time to change. We cannot keep
33 locking ourselves into the way things have been done in the
34 past. We have to look at how we can get the maximum
35 benefit going forwards. Blocking the introduction of new
36 technology, blocking the introduction of benefits to the
37 overall community should not occur for the reason that
38 it is not the way we do things or it is not way we have
39 done things in the past.

40
41 My next point relates to the requirement that there
42 should be no increase in electricity costs. You can look
43 at this very simplistically or you can look at it in terms
44 of its real impact. The reality is that there will be
45 increases in the price of electricity as a result of
46 investment in networks, increases in fuel costs, the carbon
47 price and increasing demand. So the question then becomes,

1 if the merit order effect is reducing some of those
2 impacts, then how do you compare what would have been the
3 price with what is going to be the price? While that is
4 not a simple equation, it is overly simplistic to turn
5 around and say that an item on an account that is related
6 to solar power generation should be treated as a
7 stand-alone thing. It should be treated in the context of
8 what it does to electricity prices in general and overall.

9
10 I'd like to leave it at that in terms of the pricing,
11 thank you.

12
13 THE CHAIRMAN: Thank you very much, Dave. Who
14 would like to go next?

15
16 MR T SONNREICH: My name is Tim Sonnreich. I am from
17 the Clean Energy Council. We are the peak industry body for
18 the renewable energy sector in Australia. We have around
19 300 solar companies who are members of our council,
20 including a large number who are in or operating in New
21 South Wales.

22
23 I will make one specific comment just to add to the
24 comments from Dave Holland in particular about the
25 question of whether a tariff should be mandatory or whether
26 should there be a public range for public consumption and
27 consideration. We feel this is a very critical issue.

28
29 While we do not expect that a group like this could
30 agree on a specific tariff number in its entirety, we do
31 feel that it is very important that a minimum benchmark be
32 set and that that is guaranteed to consumers, even if that
33 is slightly less than the range that IPART published, to
34 make sure they do not overestimate the number and lock in
35 retailers. There is already sufficient confusion in the
36 market right now about whether solar customers are getting
37 a good deal because of the number of rapid-fire policy
38 changes that have happened in the course of this year and
39 there is uncertainty about the solar market generally.

40
41 I would like to make three points about the mandatory
42 or required tariff question. First, on the question of the
43 fear of getting it wrong, which is a reasonable concern, as
44 expressed by IPART in its draft report, we think this has
45 been a pretty long and thorough process. It is not even
46 finished yet. There are several more months to go and this
47 is only a draft report. We think that the risk of getting

1 it wrong in a way that is quite significant to the retail
2 competition sector is very minimal. That is why processes
3 like this are happening to make sure that that is the case.
4 It is a very small risk and not one we should be so afraid
5 of that we err on the side of putting consumers at risk.

6
7 The second point is that the competition in the market
8 at the moment is not sufficient to protect consumers. That
9 is not an ambit claim. We have had six months to test that
10 theory since the solar bonus scheme was closed, and we have
11 only had the retailers' view on the profitability of
12 competing for solar households as the benchmark for what
13 they pay. Yet, essentially we have not seen any change in
14 the offers made by retailers to consumers compared with
15 what was available when the solar bonus scheme was in place
16 and retailers were making voluntary contributions on top of
17 that.

18
19 That is not to suggest anything untoward on the part
20 of the retailers; it is just to suggest that there clearly
21 is not enough demand or belief that that share of the
22 market is significant enough to change what they, from
23 their perspective, have already decided is a reasonable
24 amount. We should not believe that that will change six
25 months from now if it has not changed in the last six
26 months.

27
28 Finally, I think we should err on the side of
29 protecting consumers. This is a process about deciding
30 what is fair and reasonable not what is generous or what is
31 hoped for. If something is deemed as being fair and
32 reasonable, we should not allow a situation where consumers
33 end up being dealt with in a way that is unfair and
34 unreasonable.

35
36 As I have said, there is already enormous uncertainty
37 in the market right now about whether solar customers are
38 getting a good deal. A number of solar companies have gone
39 through enormous financial hardship. A number have closed.
40 A number are potentially at risk of closure. We don't want
41 to create any further reasons for consumers to hold back on
42 a product and a technology which, I think we all agree, is
43 a good thing and something we should be encouraging.

44
45 That is all I wish to say, thank you.
46
47 THE CHAIRMAN: Thank you very much, Tim. Who would

1 like to speak next?

2
3 MR A DILLON: I am Andrew Dillon from TRUenergy
4 Australia. We obviously have a lot of comments to make and
5 will be putting them in our submissions, so I will try to stick to
6 the main points here.

7
8 First of all we absolutely support the benchmark
9 approach that has been proposed. We don't think there is a
10 market failure here. To the extent there are customers out
11 there who are confused, we think it is a role of government
12 to inform those customers, to run comparator websites and
13 to do various other things to help them engage in the
14 market.

15
16 A couple of years ago, the New South Wales government
17 decided, for customers that were still on the regulated
18 tariffs, that it would be appropriate to continue
19 regulation for the current period. Those are customers
20 that, for various reasons, be it issues accessing the
21 market or simply laziness, are not engaging in the
22 competitive market. By definition, customers who are
23 putting solar panels on their roofs are choosing to engage
24 in the market, so I think they are a different class of
25 customers.

26
27 In terms of the merit order effect that David Holland
28 mentions, first of all that absolutely is a real effect;
29 there is no doubt about that. However, I don't see how it
30 can be passed through in terms of a solar tariff without
31 increasing everyone else's electricity prices. Secondly,
32 I really don't see why one group of generators deserves to
33 be compensated for that when no-one else is.

34
35 With regard to the costs build-up and the financial
36 gains to retailer calculations, there is a bit of an
37 underlying assumption in the paper essentially in its costs
38 to solar customers relative to non-solar customers.
39 I would say from a retailer's point of view that that is
40 absolutely not the case. It is difficult to quantify the
41 extra costs, there is no doubt about that, but to assume
42 they are not real I think is incorrect. At the very least,
43 that would suggest that the lower end of the range be
44 chosen.

45
46 I will not spend too long on my last point as it is a
47 bit of an EnergyAustralia issue. The first chart in

1 Alexis' presentation had those numbers quite a bit higher.
2 The reason behind that, I understand, is the time-of-use
3 tariffs that many of the solar customers are on. My
4 concern with that is that is the tariff that the generating
5 households are on, but if the generating household then
6 gives us energy and we are selling it next door, it is the
7 tariff that those next door are on that really counts, and
8 most of EnergyAustralia's customers are on flat rates.
9 Obviously we will go into that in our submissions, but
10 I thought I would flag it now.

11
12 MS KRIEGER: Could I ask a follow-up question? Just for
13 the benefit of some people in the audience who may not be
14 familiar, could you tell us very briefly to what you
15 attribute the higher cost to a retailer of serving PV
16 customers?

17
18 MR DILLON: Let us assume household A does not have
19 solar and is on a simple flat rate tariff. In terms of the
20 metering data that comes through from that customer and our
21 billing processes, the potential for billing issues and
22 ongoing queries about their bill, on all of those factors,
23 is much lower than the household next door which has solar.
24 That household would have at least two data streams coming
25 through to us. It may have net or gross and is bound to be
26 changing meters somewhere along the line as well. Those
27 households generally tend to check their bills much more
28 closely and, even if the bill is right, they are much more
29 likely to be calling us up with a query.

30
31 MS M WATTS: Muriel Watts from the Australian PV
32 Association. We represent a range of photovoltaic
33 stakeholders from researchers through government agencies
34 and photovoltaic businesses.

35
36 The first point I would like to make is that I feel
37 the discussion about specific treatment of photovoltaic and
38 photovoltaic customers goes against the NEM objective of
39 technology and participant neutrality. The discussion we
40 should be having is how we deal with distributed energy
41 generally and how we deal with customers who choose to
42 install technologies at the distribution end of the market.

43
44 We feel that rules could be set today for
45 photovoltaics. Next year the electric vehicle roll-outs
46 will start and we may have a separate set of rules for
47 electric vehicles. The year after that, fuel cells will be

1 rolled outside and we will have another set of rules for
2 that. We already have rules for demand management and we
3 certainly should be having more of those, but we feel that
4 the whole area needs to be treated equally and that
5 photovoltaics should not be treated separately as a
6 distinction technology. We therefore believe that the
7 costs and benefits of PV should be treated as other
8 technologies are treated.

9
10 The second point I would like to make is that the COAG
11 recommendations for distributed energy customers receiving
12 a fair and reasonable value for their electricity are not
13 being followed at the moment. Several retailers are not
14 offering anything for electricity being sent back into the
15 grid. Therefore the IPART recommendation that the tariff
16 should be a voluntary one does not bear up, because if
17 there really were a competitive market operating now, then
18 there would be tariffs on offer - and they are not on
19 offer.

20
21 So we think a mandated minimum tariff should be set
22 and competition above that can occur, but at the moment,
23 the market is not sufficiently competitive, with two-thirds
24 of New South Wales customers on regulated tariffs, for it
25 to be a voluntary tariff.

26
27 The third point I would like to make is that there are
28 a range of benefits which are discussed in the IPART report
29 including the merit order effect and who gets the value for
30 that. At the moment, the value of the merit order effect
31 is being captured by the retailer. It is not being passed
32 on to customers because the retailer is allowed to charge a
33 tariff based on the higher of the long run marginal cost
34 and the spot price. The long run marginal cost therefore
35 sets the tariff and the retailer is gaining that benefit.
36 It is not being passed on to the customer base.

37
38 The final point I would like to make is that the more
39 photovoltaics we have in our grid, the lower those spot
40 prices will be over time; therefore, there will be benefits
41 to all consumers in one way or another, if they are passed
42 on by the retailer. Secondly, the more photovoltaics we
43 have on the grid, the lower the impact of any carbon price
44 will be, which will benefit all customers.

45
46 This is a technology that should be being encouraged.
47 We should be looking at ways to enhance its use and to give

1 customers the correct signals in the market about how best
2 to use it; for example, whether to, for instance, face west
3 to have a better impact in the afternoon peak and those
4 sorts of signals, whether we should be providing signals
5 for PV inverters to provide voltages. There is a whole
6 range of things that are not happening at the moment that
7 could be benefits provided by PV. There is a real market
8 for distributed energy. Thank you.

9
10 MR COX: Muriel, this question has come up quite a few
11 times and I would like to ask you about it. You are
12 concerned that not every retailer offers a solar PV tariff
13 but some do. How much does it matter? If you want to, you
14 can go out to the market and get a feed-in tariff. That
15 not all retailers offer it, how big a problem is that and
16 why do you think it is a bit problem?

17
18 MS WATTS: I think it is a problem because there is not a
19 huge interest in the customer base to change retailers
20 specifically for one aspect against another. There are a
21 whole range of issues they would consider. I don't think
22 that, at that margin, it is enough of a signal for PV
23 customers to move from their current retailer across to
24 another one because another one be offering averaging
25 6 cents versus zero.

26
27 Over time, maybe that would happen, but I feel that
28 offering nothing is against the COAG recommendations
29 anyway. If the market were to be operating correctly,
30 there should be no-one offering zero if that value is more
31 than zero, so it should be mandated to be a real value.

32
33 THE CHAIRMAN: Thank you, Muriel. Next, Cameron?

34
35 MR C O'REILLY: I am Cameron O'Reilly, the chief executive
36 officer of the Energy Retailers Association. Welcome,
37 Mr Chairman, to your first public hearing.

38
39 THE CHAIRMAN: Thank you.

40
41 MR O'REILLY: There are certain ironies in having a solar
42 summit today when we look at the weather outside.

43
44 I would like to address some of the comments that have
45 been made by representatives of the solar industry. I will
46 not make specific comments about what is a fair and
47 reasonable rate. As the ERAA represents virtually all of

1 the retailers on the east coast of Australia, and indeed
2 throughout Australia, we do not discuss pricing issues
3 under competition consideration, so I will leave it to my
4 member companies to make specific comments on the fair and
5 reasonable value, but I want to address some of the
6 principles at stake here.

7
8 First, in terms of the discussion about solar - I am
9 coming back to the solar bonus scheme and its legacy -
10 there were claims that retailers could have been able to
11 pay a full retail rate for electricity generated from solar
12 PV. I welcome the fact that the IPART report has made
13 clear that that is not the case, that you do pay network
14 tariff and green scheme charges on solar customers. That
15 therefore brought the debate back to what is the fair and
16 reasonable rate beyond the full retail rate, so that
17 context is welcome.

18
19 Second, retailers vary from very large publicly listed
20 companies in the top 20 companies in Australia to very new
21 entrant retailers with quite small customer bases, and that
22 is relevant to the discussion on mandating. You are trying
23 to create, as identified by Alexis, consideration for
24 retail competition in this market which benefits everyone.
25 Price competition for all consumers is a benefit for the
26 whole of society.

27
28 Here we are talking about a particular category of
29 customers. Talking about mandating a rate for what would
30 represent 5 per cent of households would not be an approach
31 that would encourage competition in this market. If
32 anything, it would encourage new entrant retailers to treat
33 those a solar household as a red flag household and they
34 might not then benefit from competition.

35
36 The reality is that the legacy of the solar bonus
37 scheme, which was ill-thought out and overly generous,
38 interacted with federal subsidies in a way that created a
39 boon, which was predictable and was identified in the
40 Auditor-General's report. The ministers concerned were
41 warned about it by the bureaucracy.

42
43 The legacy of that particular scheme is that all
44 consumers in New South Wales will be paying for the solar
45 bonus scheme for a number of years going forward. As a
46 result, the government, quite rightly, is looking at
47 approaches that do not discourage retail competition and

1 also that do not push up overall electricity prices which,
2 of course, are regressive.
3
4 One of the legacies of the solar bonus scheme, as you
5 said, is that there 140,000 households on that scheme, and
6 it provided a kick-start to the industry here. That 5 per
7 cent of customers will benefit from society going forward.
8 I think the legacy that we need to consider is that
9 whatever approach we put in for the future is not paid for
10 by the whole of society. Therefore, in the absence of any
11 evidence in the market, a non-mandating approach is a wise
12 thing.

13
14 Creating a competitive market will ensure that the
15 retailers who battle for market share, who have the
16 capacity to offer a solar rate, will do so. Believe me,
17 the more competitive you make the market, the more likely
18 it is to be offered by companies with the capacity to
19 absorb that electricity and share it across their customer
20 base. It is a much higher burden on a new entrant retailer
21 who will not have the customer base to spread that
22 electricity cost if they are required to.

23
24 I think, therefore, that the onus should be on
25 learning the lesson of the solar bonus scheme, encouraging
26 competition in New South Wales for the benefit of everyone
27 and ensuring that, in the absence of a market failure,
28 there is a fair and reasonable rate being provided by the
29 market. Information should be provided to solar customers,
30 which is what has been recommended - benchmarking rates
31 and so on, comparator sites; that is the way forward. The
32 onus is then on the industry and if there is a market failure
33 going forward, then obviously the government would look
34 that.

35
36 At the end of the day, we have had a painful lesson
37 here. The emphasis of whatever is recommended by IPART
38 should be about the whole of New South Wales not a specific
39 category of customers. I think the overall draft report
40 sets a good way forward. Thank you.

41
42 THE CHAIRMAN: Thank you, Cameron. Who's next? Who
43 would like to be next?

44
45 MR D CALDER: David Calder from Origin Energy. I would
46 like to begin by saying that we endorse some of the
47 comments from Cameron O'Reilly and from Andrew Dillon

1 from TRU. Obviously this is a difficult issue. From our point
2 of view, we believe there is a market for the services we
3 are talking about in terms of competition based on
4 voluntary feed-in tariffs.

5
6 Going back to Muriel's point about proliferation or
7 potential proliferation of regulation based on the entry of
8 these new technologies, I actually endorse the idea. We
9 don't want to see that proliferation in any way, shape or
10 form.

11
12 From our perspective, though, on the market question,
13 retailers do offer voluntary top-ups, if you like. They
14 have been referred to as premiums and have a number of
15 other monikers. If then a customer does not transfer to
16 another retailer based on the strength of that premium, it
17 is possibly because of transaction costs or a personal
18 decision. But I can assure you the cost to the retailers
19 of losing such a customer based on that is a lot more than
20 they would be prepared to bear. So it is in the interests
21 of retailers to compete on that basis.

22
23 We do support the benchmark concept that IPART has put
24 forward. We welcome the light-handed approach that has
25 been suggested. I think it is refreshing, based on our
26 experience in other jurisdictions, where some of the
27 requirements have come up in a hurry and caused major
28 disruption.

29
30 We understand it has been a difficult transition from
31 the solar bonus scheme to where we are today and we
32 support the continued work of IPART in this area. Obviously,
33 we think that the 8 to 10 cent range is possibly at the
34 generous end of what we would consider fair and reasonable,
35 but that is based on our view.

36
37 Apart from transaction costs that Andrew mentioned in
38 terms of dealing with customers, costs to service,
39 et cetera, it does not really take into account individual
40 hedging circumstances of retailers. If you treat solar PV
41 as generators, then we had better go the whole hog.
42 Everyone has a different position. What might seem to be
43 good value, because I am supplying energy in the middle of
44 the day, is not much use if you are over-hedged; in fact,
45 the customer should be paying you.

46
47 However, that is a separate argument. I think that is

1 over-complicating it. I think the general direction that
2 the consultants and IPART are taking is correct. As
3 I said, we endorse the comments of ERAA and TRUenergy.
4 Whilst there are a number of issues we think are
5 outstanding, the general thrust of whether it is the
6 voluntary or the benchmark contribution set is correct.
7
8 THE CHAIRMAN: Thank you, David. Andrew?
9
10 MR A DUDGEON: Andrew Dudgeon from AGL. Further to
11 David Calder's comments, in terms of the broad mechanism
12 recommended by IPART being the benchmark approach, we
13 would agree with that approach.
14
15 As a non-incumbent second-tier retailer offering
16 contracts in the market at a discount to the regulated
17 price, we see that mandating at any particular level in
18 terms of the benefits that will go to retailers is
19 problematic in terms of being able to reflect what is going
20 on in the market on an ongoing basis and the different
21 circumstances which each retailer will find itself in.
22
23 With regard to the way the mandate is set, whether it
24 is the wholesale market value or the financial benefit
25 received by retailers, the fact that there is competition
26 in the market in terms of how those market contracts are
27 pulled together and the range of discount incentives that
28 retailers always offer, there is always a risk that, by
29 setting that mandated amount based on the regulated level,
30 you will not be reflecting what is going on in the market
31 at that point in time or over a period of time.
32
33 I think that is probably the broader comment we would
34 make in terms of the approach and we will make more
35 detailed comments in our submission.
36
37 THE CHAIRMAN: Thank you Andrew. Who would like to
38 go next?
39
40 MS K HOLE: I am Katharine Hole, executive director of
41 national policy and sustainability with the New South Wales
42 Department of Trade and Investment.
43
44 I want to reiterate a few points, Mr Chairman, that
45 you have already made about the importance that this review
46 does not result in any further costs to customers or to the
47 New South Wales budget. I think the government has been

1 pretty clear about those priorities and they are the
2 parameters that we are operating within.
3
4 There was a further report, I understand, in council,
5 on energy resources, last Friday, about the cost impacts of
6 the renewable energy target on customers. So it is not
7 just the solar bonus scheme; there are a number of costs
8 feeding through to the customer base. I think everyone is
9 very cognisant of this impact on customers and the
10 difficulties that this is causing.
11
12 The government, in its terms of reference, has also
13 touched on a number of issues that have been raised today
14 about network benefits, competition, and a sustainable
15 future for the industry. They are all conflicting
16 objectives, in some senses, and we are looking forward to
17 IPART's recommendations on the best balance for those terms
18 of reference.
19
20 One other thing I would like to note particularly in
21 regard to competition is that we have very large retailers
22 in New South Wales. That is another factor to take into
23 account as well as the fact that, from 1 July 2012, we are
24 moving towards a harmonised national framework and
25 ideally that should be reducing barriers to entry for new
26 retailers.
27
28 Finally, the New South Wales government has put quite
29 a lot of information about solar on various websites
30 including our department's website and New South Wales
31 Fair Trading, but that is more around the technical and
32 building aspects.
33
34 We would certainly welcome any suggestions from IPART
35 about what else and what other additional information is
36 required, again also in that context of moving to the
37 national framework so we can make sure that all parameters
38 or all requirements are appropriate to that. Thank you.
39
40 THE CHAIRMAN: Thank you, Katharine. Anybody else?
41
42 MS C HODGE: I am Carolyn Hodge and I am the senior
43 policy officer with the Public Interest Advocacy Centre's
44 energy and water consumers' advocacy program.
45
46 First I would like to support the provision of the
47 information to consumers so they can make informed choices

1 about offers with and without feed-in tariffs. I think it
2 is really important that consumers know what they are
3 moving to and that they know from when you are considering
4 a change. People on a standard contract may not even
5 really understand what that contract does offer them in
6 terms of the price regulation protection.

7

8 The second point I would like to make is that I think
9 it is very difficult to arrive at a position presently
10 about the standard retailers offering the feed-in tariff
11 because we don't know where we will be after 30 June 2013.
12 We don't know whether or not we will have price regulation
13 in New South Wales. I think that mix actually makes it
14 quite difficult to work out whether the standard retailers
15 should offer this tariff.

16

17 I guess for us, we predominantly would want equity so
18 that people across New South Wales would have access to a
19 feed-in tariff. It is a little bit difficult to think
20 people have to make a choice. In some areas, they may have
21 to make a choice between receiving this value as a feed-in
22 tariff outside the solar bonus scheme or going on to a
23 market, or being on a standard contract.

24

25 Because we are in a period of change or potential
26 change, this is quite a vexed issue and we will probably
27 make more comments in our submission later in the process.
28 I just wanted to say that without that surety of price
29 regulation, it is difficult to make an assessment of the
30 value to consumers of having that assurance.

31

32 It is very good to see that the terms of reference
33 have stipulated that there should be no cost impacts on the
34 price of providing electricity. It would be interesting to
35 know from the retailers what the systems required would be.
36 If that was an ongoing cost and provision, that might be
37 something that could spread over a number of years; but if
38 that was only for a period of 12 months, that could be
39 quite different. We might need some more information from
40 the retailers before we can understand, but I do
41 acknowledge that the terms of reference have stipulated
42 there should be no price impact, so that will be up to
43 IPART to decide. Thank you.

44

45 THE CHAIRMAN: Thank you, Carolyn. Mike?

46

47 MR M MARTINSON: I am Mike Martinson, from Endeavour

1 Energy. First of all we welcome the IPART report.
2 I guess, probably in particular, the section of the terms
3 of reference that identifies that the government is really
4 after no cost impact to customers is very important in the
5 current climate. We certainly welcome that aspect of the
6 terms of reference looking at no cost to customers arising
7 from IPART's review.

8

9 As a network-owning business, similar to Cameron
10 O'Reilly, it is probably not appropriate for us to be
11 commenting on the benchmark rates that IPART has been
12 identifying.

13

14 In particular, our comments will be limited to the
15 impact of PV on network expenditure, which is the following
16 segment, with particular interest also on the impact of the
17 solar bonus scheme and potentially retailer contributions
18 to that and possibly some thoughts on the operational
19 aspects of how we all make that work.

20

21 I will limit my comments to that, thank you.

22

23 THE CHAIRMAN: Thank you, Mike. John?

24

25 MR J THOMPSON: John Thompson from Ausgrid. I was
26 actually not proposing to say anything in this section.
27 The section on network expenditure seems more relevant to
28 us. Thank you.

29

30 THE CHAIRMAN: Thanks, John. We have somebody here
31 from Essential Energy, I think.

32

33 MR C USHER: Col Usher from Essential Energy. The same
34 as John Thompson, I will keep my comments for the network
35 expenditure section.

36

37 THE CHAIRMAN: Thank you. We have a question from
38 Anna.

39 MS BRAKEY: I was wondering if the standard retailers could
40 respond to the position put by Carolyn Hodge about whether
41 there should be a requirement on the standard retailers to
42 offer a feed-in tariff at a rate that they set themselves.

43

44 David, maybe you would want to respond?

45

46 MR CALDER: Thank you, Anna. I understand the issue. At
47 the moment, we are dealing with two elements to feed-in

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1 tariffs. The last section we will talk about today is
2 contributions to cover costs of the SBS that might
3 come from the retail sector. I suppose there is a bit
4 of an intersection there, but just limiting it to the
5 idea that the standard retailers offer something based on
6 their assessment, the principle, the concept makes sense.
7

8 From the perspective of what that level should be,
9 whether it is around the benchmark rate or not, certainly
10 we would want to look at customer confusion. I think the
11 issue you are trying to get at is for customers who are not
12 engaged in the market or not willing to go into market
13 contracts, there might be a different feed-in tariff rate,
14 or whatever that might be. Is that the thrust of what you
15 are asking?
16

17 MS BRAKEY: What we are saying is that in order
18 for a customer in, say, Country Energy's area to access a
19 feed-in tariff, they have to leave the regulated tariff.
20 So we are asking this question: what are the sorts of
21 costs that would be involved in a standard retailer having
22 an obligation to offer a feed-in tariff?
23

24 MR CALDER: Obviously I can't go into too much detail on
25 that at the moment. We have considered that issue, to some
26 extent. There will be systems changes and there will be
27 costs; but that is a policy decision Origin has not made at
28 this stage.
29

30 MR COX: I think I understood most of what was being
31 talked about in this session, but one thing I wouldn't mind
32 hearing a bit more discussion about is the merit order
33 effect. I think Muriel Watts said there was benefit to
34 retailers that was not being passed on. Other people were
35 saying that it is not only to do with solar PV and it's
36 only half the retailers that pass it on anyway. I wouldn't
37 mind having a discussion about that issue and the pros and
38 cons because I am not sure I completely understand it.
39

40 MS WATTS: I can start with that. The impact of
41 generators such as wind and solar on the spot price is
42 starting to show up now because they can generate a zero
43 marginal cost and therefore can bid into the NEM at a low
44 cost, and sometimes even a negative cost if they have a
45 regular supply. The impact on the spot market is starting
46 to be seen. With wind it has been well established and it
47 is starting to show now because we have over 1GW of

1 photovoltaics installed in Australia now. That is why it
2 is starting to show up.
3

4 Our feeling is that that is reducing the spot price
5 but because the retailers are allowed to calculate their
6 tariffs on long run marginal cost, they are actually
7 getting the benefit of that reduction and that is not
8 necessarily being passed on across the board to all
9 customers.
10

11 MR HOLLAND: Can I perhaps add to Muriel's comment.
12 The merit order effect has been around for some time. It has
13 been used to explain market behaviour in various markets
14 including in Australia, particularly in the South
15 Australian wind market several years ago.
16

17 What it is delivering is a reduced total cost of
18 electricity to the market over a period of time. So the
19 wholesale price is being reduced at peak times and that
20 ends up with a reduced total cost to the market for energy.
21 Whether or not that gets passed on, there are competitive
22 effects, and you would expect some of those things to
23 happen.
24

25 However, as Muriel points out, there are legislative
26 things which effectively remove the transparency of that
27 because pricing is done based on a fixed thing rather than
28 something which is running with the general market as you
29 would expect in market behaviour.
30

31 The other thing to remember is that we talk about -
32 and we have talked here about it - competitive behaviour
33 should be relied upon. All the retailers in the market
34 that we are discussing today participate in another market.
35 We can look at how that behaviour works perhaps. That
36 market is the small technology certificates market set up
37 by the federal government. The government set a target
38 price of \$40 per certificate. It set the expectation and
39 it maintains that expectation that the certificates are
40 worth that price of \$40.
41

42 However, the certificates get traded and since the
43 inception of the small technology certificate market, the
44 STC market, the price has traded between \$18 and \$32. This
45 demonstrates something about setting a benchmark price in
46 this market. We need to be careful about the term "market"
47 because this is something which has some of the attributes

1 of a market. It is not a market in the true sense in that
2 there are a small number of players that have a very large
3 percentage of the market in terms of buying. It is nothing
4 against those players, but the reality of their behaviour
5 is that where things don't need to be passed on, they will
6 not be passed on.

7
8 Setting a benchmark and not making it mandatory is a
9 perfectly good thing to do in a true market situation, but
10 we have demonstrated on a number of occasions that this
11 particular market needs a little more help to hold the
12 price, at the objective of the government.

13
14 MR DILLON: May I follow up on those two points. With
15 regard to what Muriel was saying, I probably would not
16 dispute the logic of what she was saying other than to
17 observe that it is quite a short-term effect and only
18 applies to regulated customers.

19
20 To the extent that, at the moment, it is the long run
21 marginal cost setting the price, what Muriel is saying does
22 hold, but there is no expectation that that will be an
23 ongoing enduring.

24
25 On the other side, as I am sure AGL can tell you,
26 there is a very competitive market out there at the moment
27 in New South Wales. Over the long term, benefits from the
28 merit order effect absolutely will be getting passed
29 through to everyone - whether that comes from solar, from
30 wind, from gas or anyone else - where we have increasing
31 supply in a market at a fixed level of demand.

32
33 MR O'REILLY: The other thing, Jim, that I would point out
34 is that, in trying to establish a value for that
35 extraordinarily complex modelling exercise, you would have
36 to allow for the fact that there may be some effects of
37 wind and solar on overall wholesale prices over a long
38 period of time. However, at the end of the day, it is an
39 intermittent form of generation that has to be backed up in
40 case it is not available.

41
42 Yes, there are examples in South Australia where the
43 availability of wind power has brought down overall
44 wholesale prices and in some cases it has made them
45 negative. But what happens on a scorching hot summer's day
46 and the wind is not blowing or what happens when we have
47 days like today where you are not getting maximum

1 photovoltaic output? Retailers themselves are still
2 exposed on days of extraordinarily high temperatures to
3 \$12,500MWH, and those are the things that really are a risk
4 for us.

5
6 Engaging in this sort of exercise to capture a benefit
7 would be very hard to identify. For the questionable
8 outcomes, I don't think it is worth the effort.

9
10 THE CHAIRMAN: Is there anything else that anyone would
11 like to add before we throw the discussion open to the
12 floor? Dave?

13
14 MR HOLLAND: Thank you. I would like to make a point
15 that it is difficult, and part of the protection needs to be
16 that what is passed on is fair and reasonable. To try to
17 take every benefit of every second of every day does not
18 make sense, and we recognise that.

19
20 The other thing is this is a very complex market. It
21 deals with very complex things all the time and it finds a
22 way to do it. The most simple example of that is network
23 charges. We all get them in our accounts and we have found
24 a way to figure them out and allocate them. There is no
25 reason at all why the same level of thought, perhaps even a
26 better level of thought, cannot be applied to merit order
27 effect. The fact that it is difficult or is not the way we
28 have done it in the past does not make a lot of sense.

29
30 MR SONNREICH: May I add one quick point? There are two
31 issues here. The first is: is there a merit order effect
32 and what is the scale of the merit order effect and its
33 durability? Everyone agrees that those are complex
34 questions but not insoluble problems to resolve.

35
36 The second question is: can it be attributed and
37 valued back to customers in some fairly practical way?
38 Just because the second part is hard, that does not mean
39 the first part is not relevant. It is relevant to a range
40 of questions.

41
42 In the last session today, we will talk about trying
43 to recover the costs of the solar bonus scheme in an
44 equitable way. Part of that is about understanding what
45 the costs and benefits of solar have been to New South
46 Wales. Even if it does not change the way that we
47 attribute costs in a feed-in tariff to consumers, and maybe

1 it should or maybe it shouldn't, having an outcome that
2 says, "Our best estimates are that the value of solar to
3 all of New South Wales has been X" is important to setting
4 consumers' understanding of what it is they paid for
5 through the solar bonus scheme, who should be paying for
6 that because who got those benefits, and how much and what
7 is a fair balance?

8
9 Just because the second question is hard about how you
10 could capture it and deliver it back to consumers - some
11 people may have different views about how hard that is -
12 doesn't mean, as we made this point in our original
13 submission, there is significant merit in a body like IPART
14 or someone similar doing that very complex piece of work to
15 figure out what is the value of the merit order effect so
16 it can be part of the public debate about what consumers
17 have paid for for solar in the past and potentially in the
18 future.

19
20 THE CHAIRMAN: Thank you, Tim. Is there anything else
21 from the stakeholders?

22
23 MS HODGE: I was also thinking about people who are
24 considering installing panels on their roof once this
25 review has made its final decision. I think it is really
26 important. There is some discussion in the paper about
27 retailers explaining how these offers may be delivered and
28 whether people have access to feed-in tariffs or not. When
29 people are actually considering making the investment
30 around putting those panels on their roofs, it is really
31 important that they can understand what offers they have
32 access to.

33
34 I understand that might be a little bit beyond IPART's
35 realms, but it would be really important to engage with
36 other stakeholders and ensure that the information gets out
37 to consumers and government, and programs such as the one
38 I work for may have a role in that.

39
40 I think it is really important. We all talk about
41 these issues quite regularly. They are very complex and it
42 is very difficult for people who are making decisions
43 especially when they were being marketed to. There needs
44 to be a general raising of the consumer education levels
45 around these issues, and a simplification as well. We need
46 to make sure that people can understand what they are
47 choosing. Thank you.

1
2 THE CHAIRMAN: Thanks Carolyn. Let's take some questions
3 from the floor.

4
5 MR G BRAGG: Geoff Bragg from the Solar Energy Industry
6 Association. Our members design and install solar PV
7 systems.

8
9 In listening to all this discussion about attributing
10 this value, I am keen to talk a little bit about sending a
11 price signal. Whatever that figure is set at, and whatever
12 that will do to our industry, we will respond. We are
13 quite an innovative lot and we will find a way of
14 maximising the benefit for our potential customers. Some
15 of those things could involve onsite storage of energy.
16 When you set the value at, for instance, a third of the
17 retail price, if people are able to store the energy onsite
18 and then not have to buy in the full retail price, they
19 will get a greater benefit. So it introduces a sort of
20 signal.

21
22 For instance, if the regulated retail price is up at
23 28 cents and, on export, the customer is only getting
24 10 cents, there are 18 to 20 cents to spend onsite storage
25 per kilowatt hour. With the fall in price of lithium
26 batteries, particularly those made in China, these sorts of
27 options will start coming into play.

28
29 The making of this decision will impact what our
30 industry will do. Our customers are already finding ways
31 of gaining the maximum benefit from the energy; in other
32 words, how to find ways of consuming the energy on site
33 rather than exporting it. That involves load shifting.

34
35 There are already people with off-peak hot water
36 services who are taking them off the off-peak supply and
37 putting them on to normal supply with timers in the middle
38 of the day to make sure that consumption is changed for the
39 time of PV production. So people are making these
40 decisions already because the market signal has been sent
41 that exports are not worth as much as the retail price.

42
43 I think we all need to be aware that the impact of
44 setting this figure at a considerably lower than the retail
45 rate will change the way in which PV will be installed
46 where that is the case, because the market looks for where
47 is the best benefit for the dollars. Of course, we all

1 know that costs are falling and PV will not go away just
2 because people get paid less on exports. It will just
3 transform.
4
5 So my question is: have IPART and the retailers
6 considered the cost impact of changed load shifting as a
7 result of setting a low figure?
8
9 THE CHAIRMAN: Thanks, Geoff. Would anybody like to
10 respond?
11
12 MS BRAKEY: I will respond from IPART's perspective.
13 We have regard to the terms of reference given to us by the
14 NSW Government. The terms of reference refer us to the
15 COAG principles for feed-in tariffs. The COAG principles
16 state that in setting a fair feed-in tariff, you must not interfere
17 with distribution regulation. We are not, at this stage,
18 interfering with the way distribution and transmission
19 are regulated.
20
21 Having said that, one of our recommendations is that
22 there should be a review of the national electricity rules
23 and guidelines that surround small-scale embedded
24 generation. If that review were to happen and the types of
25 innovations that you have talked about deliver benefits
26 to the network, then it is possible that those benefits
27 could be captured within the regulatory framework.
28
29 One of the questions that we will come to in the next
30 session is whether detailed network modelling is required.
31 We think that detailed network modelling would be required
32 when the framework is being reviewed and modified. At that
33 time you can see how the framework will change and then
34 model the costs and benefits are to better inform that review
35 and support any required changes.
36
37 MR BRAGG: It is almost like we are at the next wave. We
38 have had this boom and crash in our industry. As we have
39 seen through history, every time some a solar scheme, or
40 whatever it may be, is set and then the market takes off,
41 it is often the case that governments don't realise how
42 much these things will run.
43
44 If consumers run in that direction in terms of load
45 shifting and onsite storage, there will be all sorts of
46 environmental and compliance issues. If, in five years
47 time, we are sitting here saying, "Quick, we have to stop

1 them because they have gone berserk and there is embedded
2 generation everywhere and onsite storage and there are all
3 sorts of load shifting going on", I don't want people
4 saying, "Well, industry didn't tell us." Setting low
5 signals will change the way we find value for our
6 customers.
7
8 MS BRAKEY: I think, in the absence of the subsidy, you
9 are a lot less prone to changes in the regulatory and
10 policy framework because large costs are not accruing.
11 To the extent that there is no subsidy and
12 these benefits accrue and the framework is set
13 up to redistribute those benefits, then I think you are a
14 lot less prone to a change in the regulatory framework.
15
16 THE CHAIRMAN: Thank you, Anna. Do you want to say
17 something else on this topic, Muriel?
18
19 MS WATTS: Yes. I would like to extend what Geoff Bragg
20 has said, because it has implications for the regulation of
21 our whole retail market.
22
23 If customers increasingly put in PV with storage, our
24 retail market will not operate in the way it currently
25 operates, because there will be fewer and fewer kilowatt
26 hours sales going through. The response will be to have
27 higher and higher standing charges, because the only two
28 options you have are a standing service charge and a
29 kilowatt hour charge. If people's kilowatt hour usage is
30 zero, that is zero energy load, then how does our retail
31 market operate? This will happen very quickly over the
32 next few years and we need to be aware of it.
33
34 THE CHAIRMAN: Are there any other questions from the
35 floor?
36
37 MR D ALLEN: My name is Dave Allen. I am a productivity
38 consultant. I look for numbers in these sorts of reports.
39 The numbers I look for are not in there. Not only that,
40 but the whole goalposts seem to have changed as well for
41 solar energy compared with what the previous government
42 was doing a little while ago.
43
44 One of the numbers I looked for was what was the price
45 of electricity in Australia. It has more than trebled
46 since 1985. Electricity in Australia is expensive compared
47 with electricity overseas, I think compared with every

1 country, and our usage is very high in Australia compared
2 with usage overseas.
3
4 The whole market mechanism does not seem to be
5 working. People are saying, "Competition will drive the
6 prices down", but it is not driving the prices down. We
7 seem to have a market failure here. We do not seem to have
8 the numbers in here to determine what is fair and
9 reasonable either for the government to make a decision or
10 for individual households or retailers to make a decision.
11 So my question is: How did we get to such a situation?
12
13 THE CHAIRMAN: Any more comments or questions?
14
15 MR G HAMILTON: My name is Graeme Hamilton. I am
16 from Origin. I have two questions backing up the comments
17 from David and Andrew about retail prices.
18
19 Solar customers are more likely to contact retailers
20 and, when they do, the issues are likely to be more
21 complex. That is acknowledged, to some extent, in the
22 report, but it is not clear whether or not that has
23 actually been accounted for. Is that the case and, if not
24 is that on the basis of lack of information, which is
25 certainly something we can follow up with?
26
27 MS BRAKEY: We would be happy for you to provide us with
28 further information.
29
30 MR HAMILTON: Was a value actually attributed to that?
31
32 MS BRAKEY: No; there was no adjustment.
33
34 MR HAMILTON: So it is acknowledged that it was not in the
35 calculation?
36
37 MS BRAKEY: Yes.
38
39 MR HAMILTON: Okay, we can help with you that.
40
41 The second point is in relation to option 2, that the
42 standard retailers would be required to provide the feed-in
43 tariff, there is no rationale in terms of the difference
44 between option 1 and option 2. Option 1 is dismissed and
45 option 2 is on the table. The comment is made that the
46 costs exceed the benefits. I would have thought that would
47 apply to option 1 as well. I want to understand the

1 rationale behind why option 2 is still on the table and not
2 option 1?
3
4 MS BRAKEY: Do you mean whether it applies to all
5 retailers or to Standard Retailers --
6
7 MR HAMILTON: Yes, the rationale as to why --
8
9 MS BRAKEY: The rationale is so that the customer
10 can remain on the regulated tariff and can access a
11 feed-in tariff. The point is whether they get
12 protection with regulated price together with a
13 feed-in tariff.
14
15 MR HAMILTON: Well, in that context, what is the relevance
16 of the protection of the regulated price? It is higher
17 than the market price in any case.
18
19 MS BRAKEY: I guess what we are saying is that all
20 customers have a right to a regulated tariff. In New South
21 Wales, you don't have the right necessarily to a regulated
22 tariff with a feed-in tariff. We are asking the question:
23 should that be an obligation on the standard retailers to
24 offer a feed-in tariff?
25
26 MR HAMILTON: I understand that's what you are asking,
27 but again there is no rationale in terms of why that would be
28 on the table and option 1 is not.
29
30 MS BRAKEY: It is a more light-handed approach.
31
32 MR DILLON: Can I make a quick comment on the same topic.
33 If, in certain areas, the standard retailer was not
34 offering any feed-in tariff, I don't think you would have
35 any trouble getting another retailer to offer you a feed-in
36 tariff at the same price as the regulated price and all the
37 conditions.
38
39 THE CHAIRMAN: Thank you, Andrew. Are there any more
40 questions from the floor? Geoff?
41
42 MR BRAGG: Could you explain more the rationale around
43 the system capacity limited by kilowatts and what is the
44 intention above that size of system?
45
46 MS BRAKEY: The system capacity in a benchmark
47 environment is not binding, it is a benchmark only. The

1 retailers could offer their feed-in tariff to any
2 sized customer.
3
4 One of the requirements of the terms of reference was
5 for us to look at what could be rolled out in a nationally
6 consistent manner. We did consider arrangements in the other
7 jurisdictions and the most common threshold in other
8 jurisdictions was 5kW. What we are saying is that,
9 under the benchmark approach, the 5kW is not binding.
10 Above 5kW it would be up to the retailers to make an offer, but
11 with a view to national consistency in the longer term, if
12 that is where it heads, then the most consensus is around 5kW.

13
14 THE CHAIRMAN: Thanks, Anna. Carolyn?

15
16 MS HODGE: Could I go back to what Andrew Dillon was
17 talking about. I think consumers value surety. We have
18 had a lot of discussion around the solar bonus scheme and
19 feed-in tariffs because there have been some policy changes
20 and for the industry and consumers there has been some
21 difficulty managing that. I guess what I am thinking is
22 that, even though it may be true that consumers could
23 access a feed-in tariff at similar conditions to the
24 regulated tariff, it is not a sure thing.

25
26 If consumers were to go on to a market contract, the
27 price could change unless it was stipulated in the contract
28 that it wouldn't; whereas, if it was for an authorised part
29 of a regulated tariff, at least they would know that,
30 within that period, that would be the price that they would
31 be paying for the electricity they bought.

32
33 I am not sure where the feed-in tariff price would be
34 a benchmark or a set price under those arrangements, but
35 I think sometimes we undervalue the need that consumers
36 have for surety. They are making an investment and if it
37 was a standard retailer that provided it, at least they
38 would have that surety. So even though the market may step
39 in, it is not a sure bet.

40
41 THE CHAIRMAN: Any more questions?

42
43 MR J GIBLIN: James Giblin from Lake Macquarie City
44 Council. I have a couple of comments, to start with, first
45 around competition and competition with retailers. Anyone
46 who thinks that there is competition within the retailers
47 in regional Australia obviously lives in Sydney. What we

1 find in our area is that even if they do offer pricing,
2 they are definitely not marketing it. Our residents are
3 not aware that they can have a choice in retail. Something
4 we need to remember here is that a lot of the households
5 that are suitable for solar are in regional New South Wales
6 and competition is not the same as it is in metropolitan
7 areas.

8
9 We also should address not just competition with
10 retailers but competition with solar PV providers. That is
11 something that will push down the price of solar PV. If we
12 are talking about the energy costs of households, that is
13 quite important.

14
15 In Lake Macquarie, we had 47 accredited installers.
16 The majority of them are no longer trading since the
17 stopping of the feed-in tariff. I think that is important
18 to note if we are looking at jobs in regional Australia,
19 and also there is the question of competition to push down
20 the price of household electricity bills.

21
22 I have one question in regards to the federal
23 government's roadmap on decentralised energy which is being
24 released next week and whether that is being considered as
25 part of the review.

26
27 One of the big issues we have, as a local government,
28 with solar panels is residents wanting to either cut down
29 trees or complaints about a two-storey building being put
30 up next door, all due to solar access.

31
32 If we look at commercial buildings, they have a lot of
33 roof space with good solar access. This would be an ideal
34 place for residents to be able to invest in solar and have
35 it on a commercial roof space. For this to work, there
36 needs to be a feed-in tariff for commercial sites. Has
37 this been considered in the review?

38
39 MS BRAKEY: While we have this graph up (Graph headed:
40 "Estimated financial gains for standard retailers"), I can
41 answer that question. This shows residential and business
42 customers. You can see that there is not a lot of
43 difference in the financial benefit between the residential
44 and business customers.

45
46 On that basis, and given the requirement for
47 simplicity, we didn't see a need for a separate

1 residential and business tariff. We did consider it, but
2 we decided that it was not necessary. However the feed-in
3 tariff will apply to both residential and business
4 customers. A retailer could distinguish between its
5 customers and offer different rates. One of the benefits of a
6 benchmark range is that if a retailer sees a different benefit
7 between its business and residential customers, it can set
8 a different feed-in tariff.

9
10 THE CHAIRMAN: Thank you, Anna. Are there any other
11 questions?

12
13 MR GIBLIN: Thank you for answering my second question.
14 The first question was in regards to the federal
15 government's roadmap for decentralised energy and whether
16 that is being considered?

17
18 MS BRAKEY: We have regard to the terms of reference when
19 we conduct a review. If there is some piece of relevant
20 information that comes up, and particularly if it is
21 submitted to us, then obviously we will have regard to
22 that. The terms of reference are not directing us
23 specifically to look at that Commonwealth government
24 document,

25
26 MS A BRUCE: Anna Bruce from the Australian PV
27 Association. I was wanting to clarify whether or not the
28 8 to 10 cents benchmark is inclusive of GST.

29
30 MS BRAKEY: No, it is not inclusive of GST, and we do
31 expect that it will increase on 1 July with the
32 introduction of the carbon price as well.

33
34 THE CHAIRMAN: Are there any other questions from the
35 floor or are there any last comments from stakeholders at
36 the table?

37
38 MR HOLLAND: In relation to the question about commercial
39 power or base systems, on the one hand, it makes sense to
40 treat it the same; but, on the other hand, the reality of
41 many commercial customers is that their relationship with
42 their retailer is quite different from that of a
43 residential customer in that they pay effectively a
44 capacity charge and a lower volumetric charge than would a
45 residential customer.

46
47 If you combine that with the fact that the demand that

1 they have for electricity is more in line with the
2 generation profile of solar PV, then their ability to
3 export power is significantly different and less than a
4 typical domestic customer. That has the result that they
5 have less power to sell for a system that is installed and
6 the value that they generate by consuming that power rather
7 than exporting it is also less. So the chance of
8 encouraging attractive commercial-based generation is very,
9 very low unless that is looked at as a separate issue.

10
11 THE CHAIRMAN: Thank you for that comment, David. Are
12 there any last comments, questions? No. Thank you very
13 much.

14
15 Let us move on to the next item on the agenda,
16 session 2, which is the impact of PV on network
17 expenditure. First we will have a short presentation from
18 Anna.

19
20 Session 2: The impact of solar panels on network
21 expenditure

22
23 MS BRAKEY: Thanks, Mr Chairman.

24
25 We considered whether PV exports are likely to lead to
26 significant network cost savings and whether these cost
27 savings should be included in the fair and reasonable value
28 as we have just discussed. Also, as required by the terms
29 of reference, we considered whether comprehensive network
30 system modelling is warranted.

31
32 Ausgrid provided us with the most detailed information
33 on how PV generation affects costs. PV generation has
34 contributed 0.3 per cent to system peak demand for
35 Ausgrid. However, on a more locational basis, for its 11KV
36 feeders with the high PV penetration rate, the reduction in
37 peak demand ranged from 0.1 per cent to 2.9 per cent with
38 an average of 1.2 per cent.

39
40 After considering the information that was provided to
41 us by the three distributors, we found that PV exports are
42 unlikely to provide system-wide benefits that will
43 materially reduce network costs in New South Wales. Any
44 benefits that are likely to arise will be location and time
45 specific. However, at the current levels of PV
46 installations, these are likely to be small and, in
47 addition, these benefits may be offset by costs resulting

1 from PV uptake.
2
3 The potential for location and time-specific benefits
4 and costs may increase with further PV deployment. As
5 I mentioned earlier, we are recommending that the National
6 Electricity Rules and frameworks be reviewed to ensure that
7 small-scale renewable generation is appropriately
8 incorporated into the regulatory and policy framework and
9 that the appropriate benefits attributable to PV units can
10 be directed to those customers.
11
12 I have one other slide I wanted to show. (Slide
13 headed, "A typical residential customer"). I want to show
14 this picture which illustrates PV generation and a
15 household's consumption. This picture is a half hourly
16 average of generation consumption over a year for 2kW
17 customers in Ausgrid's area.
18
19 This graph shows that, on average, generation does
20 little to offset the evening peak. In summer, the peak
21 occurs earlier than it does, on average in winter. It occurs in
22 mid-to late afternoon, when PV is contributing relatively
23 more to the peak; whereas in winter, the peak occurs after
24 the sun has gone down. However, PV could offer more
25 benefits on substations or feeders with a high proportion
26 of commercial and industrial load. This is because they
27 tend to consume electricity during the daylight hours.
28
29 With that, Peter, I will pass back to you to start the
30 discussion.
31
32 THE CHAIRMAN: Thank you, Anna. Contributions from the
33 stakeholders. Does anybody volunteer to go first?
34
35 MR THOMPSON: Again without repeating the inputs that we
36 made to IPART, I guess to bring in some prospective on it
37 as well, that curve would probably hold true if every
38 person had a solar panel on their roof, but we are talking
39 about down at the 1 per cent level of the whole of the
40 system. So in order for the network to be able to defer
41 expenditure, for even as little as a year, which is the
42 shortest period you can look at, really, when you take into
43 account the relative volumes, with the best will of the
44 world, that is an exercise in futility.
45
46 I think one of the challenges is to look ahead at a
47 time when the relative penetration might be a lot higher

1 which does also introduce, unfortunately, some
2 complications. We have already had instances where
3 we have had to send crews out to adjust tap settings
4 and transformers to prevent people's inverters actually
5 tripping off. These are sort of hidden things at the
6 moment, but if the penetration of solar is to increase -
7 and we will stick to solar because that is our topic -
8 then those impacts will also need to be taken into account.
9
10 The distributors - well, certainly Ausgrid is doing
11 this, and I think our colleagues are as well - are looking
12 into redesigning and lowering the LV designed voltage for
13 the networks from 240 to 230 volts not solely because of
14 this, but it is one of the factors that we ought to be
15 taken into account.
16
17 There are, unfortunately, a lot of rather technical
18 implications, which are a bit beyond the scope of this
19 report at the moment, but we have had a bit of a window
20 into those caused by the solar bonus scheme and the boost
21 that that gave, which we might not have seen for many
22 years, were it not for that excessive stimulus.
23
24 THE CHAIRMAN: Thank you, John. Mike?
25
26 MR MARTINSON: I'll have fun with the microphones again.
27 This one seems to be working.
28
29 From Endeavour Energy's perspective, we welcome the
30 IPART report, in particular the considerable analysis that
31 was done on the impact of PV and what it means for a
32 network business. The slide on the screen is a summarised
33 version of the profiles of PV versus the consumption of an
34 average customer.
35
36 There is a lot more information within the reports -
37 within the Frontier report, within the IPART report - and
38 certainly with what the businesses have provided. I think
39 that slide on the screen really provides a snapshot. A
40 network business builds capacity to meet the demand of
41 its customers. If you look at that graph showing what PV
42 does, it is not aligned to the peak. So from our
43 perspective it does nothing in terms of deferring
44 expenditure or avoiding expenditure because of the PV
45 investment.
46
47 In particular, you would have to recognise that PV is

1 intermittent. There has been a bit of discussion about
2 looking out the window and seeing what the weather is like
3 out there. The reality is this is really doing not much
4 for the retailers in terms of anything. Certainly from a
5 network perspective, PV is not really offering anything to
6 us, even though in theory if it were to be applied to all
7 our customers at a particular point in time, it could have
8 potentially some an impact. The peak itself is not
9 aligned.

10
11 As to the magnitude of the PV that is out there
12 currently, I guess that does not necessarily show the scale
13 of the PV that is out there versus total consumption of the
14 network. The IPART report was quite good in highlighting
15 that a very small percentage of the peak is met through PV.

16
17 That is one of the issues that was also flagged by
18 John Thompson. It is very important, because even though
19 from the perspective of the peak not aligning to our
20 network peak, there are a lot of costs involved in things
21 like voltage fluctuations. If a customer has 10kW units
22 that are all of a sudden coming on line in an area, that
23 results in significant voltage fluctuations for us. That
24 means we will have invest and spend money in order to
25 accommodate the PV coming on to the network. Not only
26 from our perspective does it not address the peak but also it
27 introduces cost.

28
29 In meeting the terms of reference, we think IPART has
30 done a very credible job in looking through the analysis
31 and identifying that we are not looking at trying to build
32 in subsidies and trying to identify how we can encourage
33 the markets; we are looking at identifying the costs and,
34 from a network perspective, we don't believe that there are
35 really benefits to the network from PV at this point in
36 time.

37
38 THE CHAIRMAN: Thank you, Mike. Are there any other
39 comments from stakeholders?

40
41 MR THOMPSON: Could I add something to continue on with
42 that. I had a discussion with a network business north of
43 the border. That business is looking at the penetration of
44 solar to the extent that when the penetration and the
45 percentage of the load gets to a certain level in a
46 particular area, they are, I understand, contemplating
47 blocking any further solar.

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1
2 They look at it on an area basis because the condition
3 of the network is not uniform across the whole state or
4 across a whole area, and there are what one might loosely
5 call hot spots. They are approving them on an individual
6 basis and looking at particular distribution or parts of
7 the distribution network with a view to possibly
8 restricting the number of solar systems that come online
9 because of the impact on raising voltage in local areas
10 that this concentrated generation can have. These are just
11 more actual examples of the sort of practicalities I was
12 referring to before.

13
14 THE CHAIRMAN: Thanks, John. Anybody else? Col?

15
16 MR USHER: I agree with the comments made previously
17 about the disruptive effects of PV. Some time ago Essential
18 Energy recognised that, with the typical design of our
19 network, we would be facing the same kind of disruptive
20 effects. This microphone is not working either.

21
22 MR van der WEYDEN: I think they are powered by solar
23 panels.

24
25 MR USHER: I was going to make the point that the bell
26 curve on the chart is a nice theoretical curve. PV is
27 quite intermittent and causes the network performance to be
28 quite transient, I suppose, and has quite a disruptive
29 effect on the network.

30
31 MR MARTINSON: Sort of like the microphones here.

32
33 MR USHER: Yes, like the microphones. We recognised that
34 sometime ago and started to pour some research and
35 development into trying to overcome that. We would like to
36 think that we won't get to the point where we restrict the
37 amount of solars on a feeder or at least we can raise the
38 bar on that and not hit that point early, but it is true
39 that when you cluster PV together, you will get voltage
40 stability issues. You will get inverters tripping over.
41 You will get over-voltage from people who are sharing the
42 same network, so it has to be addressed.

43
44 We see it as something we aspire to get on top of and
45 actually work to the point where we can be renowned for
46 facilitating renewables as opposed to sitting back and
47 watching the disruptive effects increase over time. We

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1 have an appetite to encourage renewables on to the network
2 and we see our role as facilitating that. I acknowledge
3 that there is a change required to the National Electricity
4 Rules to do that properly. That is not holding us back on
5 the research and development we are doing. We can see the
6 time coming when we can harness the electronics that are
7 inside the PV inverters to provide network support for
8 reactive power support thus minimising losses and actually
9 smoothing out the smoothing out the voltage performance of
10 the network.

11
12 There is always a flip-side. There is always an
13 opportunity, and we are looking at that side as much as we
14 are conscious of the disruptive effects that we are seeing
15 at the moment.

16
17 THE CHAIRMAN: Thank you very much. Are there any
18 other further comments?

19
20 MR HOLLAND: Firstly, we would like to acknowledge the
21 fact that, in general, network operators are trying to work
22 with the solar industry and minimise the problems that
23 arise and we are looking to the future as to how to fix
24 them. So we say thank you for that.

25
26 I would like to make a couple of points. One is that
27 the reality of our situation is that the network we have
28 today will not support the generation and the demand
29 profile of our nation in the future. We are in the process
30 of investing tens of billions of dollars in enhancing that
31 network. That process should be brought into the thinking
32 of what we are talking about today.

33
34 Distributed and embedded generation is a reality. It
35 will grow and nobody in this room will stop that process.
36 The vast majority of the investment into generating
37 technologies and increasing efficiencies that is happening
38 in the world today is around distributed and embedded
39 generation, and if Australia is going to maintain access to
40 low-cost energy, it will have to be positioned to do that.
41 So we should encourage, support and direct the investment
42 and the network to enable these new technologies, be they
43 solar or other things.

44
45 The other point is that network operators are today
46 having to tune their network for solar and go out and
47 adjust taps - just like they have always had to for demand

1 and other things. It is a reality of only the network that
2 we have today that spiky demand and spiky generation within
3 the network have an impact on the network and those things
4 have to be adjusted.

5
6 What we are seeing with solar is that it is
7 highlighting some of these issues. Solar and the networks
8 are colliding with each other a little. It is a bit like
9 looking at a public transport network and saying, "The
10 trouble with the public transport network is with the
11 commuters; there are too many of them." That does not make
12 rational sense. We need to be encouraging those users and
13 we need to be enabling the network to support them.

14
15 We have a network that is very hierarchical. It is
16 designed to supply electricity at the ugliest time on the
17 ugliest day and we can't afford to do that. We need to
18 invest in making sure that we reshape demand and generation
19 and distribution.

20
21 I support the draft paper in saying that we should be
22 looking at this as a longer term strategy; but we should be
23 looking at it hard and fast rather than this being a soft
24 thing into the future. The biggest single impact on the
25 cost of electricity to the community in New South Wales
26 will be defined by the network and how we address it.

27
28 THE CHAIRMAN: Thanks David. Cameron?

29
30 MR O'REILLY: I want to make a couple of comments here on
31 behalf of the retailers.

32
33 As you are aware, in the general regulated tariff
34 determinations in recent years, network charges have been
35 the major component of price rises throughout this state.
36 There have been discussions about the merit or otherwise of
37 some of those rises, but that is just a fact.

38
39 What we are discovering in this section is that if you
40 look at the reality, the first thing is that what you see
41 there in terms of the consumer behaviour is not likely to
42 change. The generation capacity of the solar PV and its
43 ability to meet the afternoon peaks, particularly in
44 winter, is not likely to change in terms of consumer
45 behaviour or photovoltaic behaviour.

46
47 The second thing is that we are hearing from the

1 networks that the capacity of solar photovoltaic to
2 actually offset network expenditure is very much in doubt;
3 in fact, I think it is argued that it may even be causing
4 some increased expenditure for networks in certain
5 circumstances. Therefore, bringing the whole argument
6 together from a societal point of view, in looking at solar
7 PV incentives to be imposed on retailers, the question is:
8 what societal benefit will there be from these incentives?
9 The answer appears to be, in terms of avoided network
10 charges, 50 per cent of overall retail price - very little.
11
12 Therefore I think it is germane, in terms of whatever
13 approach IPART chooses to adopt, having regard to the aim
14 of the government to minimise the impact on overall
15 electricity prices for the whole of society, to look at one
16 of the claimed benefits of increasing solar penetration.
17 With avoided network expenditure the major component of
18 retail prices, there is no evidence that that is the case
19 at this point in time.
20
21 I believe that that reinforces the argument that a lot
22 of the benefit of the solar incentives is captured by the
23 individual customer and paid for by the whole of society.
24 I think, therefore, that we should be making sure that
25 whatever subsidies exist for solar are not being paid for
26 any more by society and are kept at very reasonable levels
27 because they will not do anything at the moment to stop the
28 overall increase in electricity prices.
29
30 THE CHAIRMAN: Thank you, Cameron. Are there any other
31 comments from the stakeholders around the table? Muriel?
32
33 MS WATTS: I would like to comment on the customers'
34 interest in or likelihood of changing their behaviour. We
35 have had a view that electricity use is pretty inelastic
36 and that the load patterns are set in stone and so on.
37 I think that we need to rethink that view because, for the
38 first time, we now have electricity available from our own
39 generators that is cheaper than the electricity that we can
40 get from the grid. We have not had that option before for
41 customers to make a choice.
42
43 We have already heard Ausgrid say that their retail
44 electricity use has been dropping for the last four years.
45 With the price increases we have seen this year and are
46 likely to see for the next two years, we expect that to
47 continue to drop.

1
2 We are not talking about subsidies here for solar; we
3 are talking about a fair and reasonable price for solar.
4 If there is not a fair and reasonable price, you will get
5 perverse market outcomes and people will, as Geoff Bragg has
6 already mentioned, put in storage and do other things to
7 avoid being penalised.
8
9 Solar is part of our future. We need to be setting
10 the correct signals now, and feeling like this is something
11 for the future and that maybe in 2013, we might not have
12 regulated tariffs, well, we also might have regulated
13 tariff. That is also still on the cards. We will have, we
14 estimate, at least 6GW of PV on our networks by 2020. We
15 need to be setting the guidelines now for how we, as a
16 society, want to deal with that. The era of the incumbent
17 electricity system being the one that dictates everything
18 is over because customers now have their own choices.
19
20 THE CHAIRMAN: Thank you, Muriel. Jim has a question.
21
22 MR COX: I wanted to ask you to speak a bit more about
23 storage. This question has come up a couple of times. It
24 seems to me this might alter the discussion a bit because
25 it de-links the consumption and production if storage is a
26 real possibility. It would be interesting if you could
27 speak a bit more about that and how it might be relevant to
28 this discussion.
29
30 MS WATTS: I'll try. At the solar conference last week,
31 for the first time I would say that every second
32 presentation mentioned storage and there were displays on
33 the floor of the types of storage for customers on the
34 grid. So it is not some future concept; it is available
35 now. It is being marketed now and there is a lot of
36 interest in it.
37
38 We expect, next year when electric vehicles start to
39 roll out, that that interest will automatically increase.
40 We think that kind of changes what consumers are likely to
41 do with their PV and with their vehicles and we need to be
42 prepared for that by setting the right regulatory signals
43 so that you don't get perverse outcomes.
44
45 Some of the perverse outcomes might be that the
46 retailers just cannot make money out of the current
47 regulatory environment because customers are reducing their

1 usage at the times when the retailers would otherwise be
2 making money and customers are only buying the 8c/kWh
3 off-peak rate - for instance, that would be one likely
4 outcome. So how does our regulatory arrangement meet that?

5
6 Similarly our network businesses will be reducing the
7 kilowatt hours flowing through. You can't just say, "We
8 will increase our standing charges." We already have, in
9 some cases, a \$1 a day fixed charge. You can go to \$10 a
10 day fixed charge and if you have a customer using 1kWh hour
11 a day, how long do you think, with current available
12 technology, that such a customer would stay connected to
13 that network? They are just some points I wished to make,
14 thank you.

15
16 THE CHAIRMAN: Thank you. Tim?

17
18 MR SONNREICH: I don't want to add anything to what
19 Muriel said, but I will go back to the network question for a
20 second. We take this issue very seriously. We are not
21 going to pretend that there have never been issues with
22 voltage anywhere on the grid with PV or any of those
23 things.

24
25 Last week, for example, we hosted a forum with a
26 number of our members, with representatives from Ergon
27 Energy, Energex and Essential, to discuss these issues with
28 the industry. The tone of that discussion really was that
29 there are issues here. It is not a myth that there are
30 voltage concerns and other sorts of issues.

31
32 But there were two points that all three of them made
33 themselves and one was that these occurrences are very
34 isolated and confined to particularly kind of
35 rural/residential areas, that, in an urban setting, these
36 are very, very rare. Overall, each of the networks
37 companies we had there were talking about the number of
38 complaints or issues with things like voltage being
39 numbered in the hundreds in a year when they each have tens
40 of thousands or, in some cases, over 100,000 systems
41 connected.

42
43 That is not pretending that these things are not real
44 and we should not whitewash them, but at the same time, we
45 should not build up in our minds the idea that there are
46 gigantic expenses that need to be taken away from what we
47 think is the fair and reasonable price overall. We need to

1 take them seriously, but we also should not exaggerate
2 them.

3
4 THE CHAIRMAN: Thanks, Tim? Anybody else?

5
6 MR CALDER: On the issue of storage, we actually welcome
7 that as an innovation. Australia has one of the worst load
8 profiles of any developed country on earth, so any move
9 away from that is probably a good thing. We are servicing
10 a large area with a limited number of customers. That is
11 our challenge. I do not see that as a negative, actually,
12 and we support innovation in this area and competition to
13 deliver it. It is not always necessarily a
14 regulatory response which will deliver the benefit to the
15 community.

16
17 THE CHAIRMAN: Thank you, David. Are there any
18 questions from the floor on this topic, solar networking?

19
20 THE CHAIRMAN: No?

21
22 Any final comments around the table? Katharine?

23
24 MS HOLE: A lot of the issues that have been touched on in
25 this session, and earlier as well, are broader than this
26 review. The government is currently running a renewable
27 energy action plan process. I would encourage all of you,
28 or those who are interested at least, to familiarise
29 yourselves with that. Obviously you will use your
30 discretion about whether or not to make a submission, but
31 it is something for people to be aware about.

32
33 THE CHAIRMAN: Thank you, Katharine.

34
35 If everybody is comfortable, then we will move on to
36 section 3, which is requiring retailers to contribute to
37 the costs of the solar bonus scheme, thanks Anna.

38
39 Session 3 - Requiring retailers to contribute to the costs
40 of the solar bonus scheme

41
42 MS BRAKEY: The combination of generous state and federal
43 subsidies combined with the reduction of capital costs has
44 lead to a strong uptake of PV units in New South Wales.
45 The costs of the solar bonus scheme are now much larger
46 than was originally estimated when the scheme was first
47 designed. The New South Wales government has indicated

1 that it will recover the costs of this scheme through a
2 levy on electricity customers, and that includes both
3 residential and business customers.
4
5 We think that all appropriate measures should be taken
6 to reduce future electricity price increases; therefore, we
7 are recommending a mandatory contribution from retailers to
8 offset the costs of the solar bonus scheme. We are
9 recommending that the retailers contribute to government
10 7.5 cents for each eligible unit from its solar bonus
11 scheme customers.
12
13 Solar bonus scheme customers would continue to receive
14 their statutory rates, however those customers who are
15 receiving premium tariffs of around 6 to 8 cents from their
16 retailers may see those premiums reduced or eliminated.
17 The retailers who do not offer the voluntary premiums are
18 currently making a financial gain from their solar bonus
19 scheme customers.
20
21 Requiring the retailers to make the 7.5c/kWh
22 contribution will lessen the price increases for all
23 electricity customers.
24
25 We welcome your comments on our recommendations.
26
27 THE CHAIRMAN: Thank you, Anna.
28
29 Who would like to start off with questions or comments
30 from around the table? Are there any volunteers?
31
32 MR MARTINSON: I might jump in while the retailers are
33 trying to collect their wits here. From a network
34 perspective, I will not comment on the rate and how you
35 arrived at that other than I guess the report provides some
36 information as to why there is a different rate for this
37 than there is for the benchmark rate, but I will set that
38 one aside.
39
40 From a network perspective, there a couple of issues.
41 One is that the report flags that it may or may not be
42 retrospective. I was not exactly clear on that. From a
43 network perspective, I think we need to know at some point
44 in time how we will actually administer that. Also
45 whatever the rate ends up being for a particular year,
46 there are potentially some implementation issues around how
47 we make sure that customers see the benefit of that in the

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1 end. I am just flagging that, whatever the rate is,
2 potentially there will be some implementation issues to
3 make sure that we achieve the end result and also, I guess,
4 some clarity around whether it is retrospective.
5
6 MS BRAKEY: We were not recommending that it be
7 retrospective; it was a prospective contribution.
8
9 MR MARTINSON: Thank you.
10
11 THE CHAIRMAN: Anybody else around the table?
12
13 MR CALDER: This is probably more of a question for IPART.
14 I think I grasp it, but I want to understand this. With
15 regard the mechanism to reduce the overall scheme costs,
16 very broadly, how do you see that playing out? So the
17 retailer who receives the benefit for existing SBS
18 customers, obviously, they are not actually interested in
19 the financial price per se, but how does it materially
20 impact on the scheme costs? I think I know the answer,
21 but I wanted to make sure I have paraphrased it correctly
22 in my mind.
23
24 MS BRAKEY: Using the 60 cent customer as an example, the
25 distributor currently pays the retailer the 60c/kWh. The
26 retailer then pays the customer. That distributor
27 therefore is accruing a cost that needs to be recovered.
28 The government has indicated that that cost will be
29 recovered through the Climate Change Fund, and that is a
30 levy on all electricity customers.
31
32 To the extent that the retailers would contribute
33 towards the cost of a solar bonus scheme, that would lower
34 the overall costs and will therefore require a lower levy
35 on all electricity customers so that the future price
36 increases could then be lower.
37
38 MR CALDER: First of all, we are not particularly
39 comfortable with the idea of fundamentally changing a
40 scheme midway through. We understand the political reasons
41 behind that, but in terms of broader sovereign risk issues,
42 we are not sure if that is particularly good governance.
43
44 Many of the customers who are on 60 cents, the
45 mandated 60 cents, are currently getting 66 or 68.
46 Effectively they will be dropping to 60. To be honest, I
47 don't think many of them will have major issues because of

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1 that; however, at the 20-cent end, you are talking about
2 customers going from 26 or 28 down to 20. For many of
3 them, the fact that they were getting not just the 20 but
4 the extra retailer contribution may well have been a
5 determining factor on whether they went gross or net
6 metering. This will have some major implications at that
7 end and we encourage perhaps IPART - and this will
8 definitely be a role for government - to help customers
9 that will be caught in that if it goes through.

10
11 Lastly, can we look at the graph that was up before
12 while we were having the network discussion. (Slide
13 headed: "A typical residential customer").

14
15 As most of the customers we are talking before here
16 are gross metered, we are not talking about the bit above
17 the line here; we are talking about the whole generation
18 profile. We think, therefore, that it will be slightly
19 different and we are not sure that 7.5 will be the right
20 number for that. We suggest that might be a bit lower.

21
22 MS BRAKEY: In terms of how we arrived at the 7.5 c/kWh,
23 we used the financial gain to retailer approach.
24 It is not the value of the energy on the spot market
25 at that time. So we chose the retail financial gain
26 approach. The range was 8.3 to 10.3 based on the
27 regulated price and that is the same analysis that we used
28 to determine the 8 to 10 benchmark range. We have
29 discounted this to 7.5 c/kWh to recognise the mandatory
30 nature of this recommended obligation and the fact that we
31 do not want to interfere with retail competition

32
33 MR HOLLAND: I have a question following through on
34 Andrew Dillon's point. Does that mean that the 7.5 cents, or
35 whoever it ends up being, will be applied to every kilowatt
36 hour generated on the site?

37
38 MS BRAKEY: It depends whether that customer is a gross or
39 a net customer. It is every eligible unit under the solar
40 bonus scheme. Whether that is gross or net, it depends on
41 that particular customer

42
43 MR HOLLAND: So that means that it is applied based on
44 some quirk of fate or historical legislation, which is
45 unfortunate, but also it suggests that there is a value -
46 I am not sure that this is right - of 7c/kWh generated
47 whether it is consumed or exported to the retailer, and

1 that is significantly in conflict with the position on what
2 a fair and reasonable price should be paid on exported
3 power.

4
5 MS BRAKEY: In terms of the way that the historic subsidy
6 was applied, the customer had a choice of whether to have a
7 gross or net meter. Customers typically responded to the
8 incentives that were provided under that scheme. The
9 customer under a net arrangement is saving the whole retail
10 tariff in its house. That is how the customer gets the
11 benefit of its own production. So the customer is saving
12 20 to 30 cents on what it produces and consumes instead of
13 earning 8 to 10 cents on the amount that it is exporting.

14
15 MR HOLLAND: But the converse to that, saying that
16 charging the retailers 7 cents for someone that is on a
17 gross meter is fair and reasonable, suggests that, on
18 exported power going forward, it would be a much higher
19 number applied to exported power.

20
21 MS BRAKEY: No, I think that we should have regard to the
22 metering arrangements and the arrangements within the NEM.
23 If a customer wanted to be on gross and earn that 8 to
24 10 cents on all of its production, that is what the
25 customer would do. That customer is better off not being
26 on a gross but being on a net and getting to save the
27 whole retail price on the energy that it produces and
28 consumes. We are not saying that the retailer is making a
29 financial gain on energy that is produced and consumed
30 within the house. The retailer is not making that financial
31 benefit. The customer saves the whole prices when it consume
32 what it produces.

33
34 THE CHAIRMAN: Thanks for clarifying that, Anna. Are
35 there any other questions or comments? Muriel?

36
37 MS WATTS: I wish to make a quick comment to say that it
38 seems that when the benefit is going to the government, it
39 is a firm benefit and when it is going back to the PV
40 customer, it is an optional potential benefit.

41
42 MS BRAKEY: It reflects that there would be no benefit to the
43 retailer in the market from a mandatory contribution. You
44 cannot make it a voluntary contribution to government
45 because a retailer could then choose not to offer anything to
46 government but to offer a tariff to customers because it is
47 a competitive market, using those same funds on customers

1 would win market share. So if you were to make
2 it voluntary, no retailer would offer anything to
3 government.
4
5 MS WATTS: And that is the situation now, with it not
6 being compulsory and several retailers choosing not to
7 offer --
8
9 MS BRAKEY: Except that some retailers are offering a
10 voluntary rate in the market now. So the option is there
11 for those customers to get a feed-in tariff.
12
13 THE CHAIRMAN: Thank you. Any other comments?
14
15 MR CALDER: In terms of coverage and the application of
16 7.5 cents, my recollection is that no decision has been
17 made on whether it is standard or retailers who enter
18 competitively into the market. What is the scope that you
19 think we might be looking at?
20
21 MS BRAKEY: It would be a mandatory obligation on all the
22 retailers; that is, all retailers who have solar bonus
23 scheme customers. So it would affect every eligible unit
24 of a solar bonus scheme customer. There would be a
25 mandated contribution to government.
26
27 MR CALDER: I understand, thank you.
28
29 THE CHAIRMAN: Thank you. Andrew?
30
31 MR DILLON: I have one more minor point on mechanics.
32 The final decision is not expected till April. Assuming this
33 part does go ahead, you are talking about a \$29 million
34 saving for the whole year. You are talking more like
35 \$5 million for a couple of months there. Can we suggest
36 that it might actually be easier just to start this from
37 1 July next year with the new rates going forward into next
38 year?
39
40 MS BRAKEY: We did that calculation for illustrative
41 purposes only. We never recommended any retrospective --.
42
43 MR DILLON: No, I am just saying that, for the two months,
44 you are looking at about \$5 million. I suggest the costs
45 to double adjust would be expensive, and government
46 adjustment might be more than that. It might be easier to
47 start it from 1 July next year.

1
2 MR DUDGEON: Further to Andrew's comments before about
3 the potential impact of the mandatory contribution, I know
4 IPART has flagged within the report that they work with
5 retailers and the government to be able to roll out
6 communications and get good communications out to
7 customers. That is the sort of thing we would be really
8 interested to encourage and follow up.
9
10 THE CHAIRMAN: Is there anything else from anyone around
11 the table? Katharine?
12
13 MS HOLE: On this discussion, I would like to point out
14 that this is a draft report and the final report is still
15 to come. Also this is not about payments to government;
16 this is about reducing customer electricity bills.
17
18 THE CHAIRMAN: Thank you, Katharine. Is there anything
19 anybody else around the table would like to say?
20
21 Are there any questions from the floor?
22
23 MR HARRISON: Jamie Harrison from Port Macquarie. I have
24 one quick question in relation to what actually happens to
25 the retailers' power contribution. If a kilowatt is left
26 over, they are expected to pay 7.5 cents for, does, for
27 instance, someone like Essential Energy then profit from
28 the redistribution of that through their localised network
29 and does the government then profit from that and the GST
30 from the 60 cents where it gets paid to the retailer?
31
32 MS BRAKEY: The metering arrangement within the National
33 Electricity Market is that the distributor
34 reads the meter. A solar meter has two readings, the
35 import and export readings. It does not matter whether
36 the meter is gross or net; there are the two meter readings.
37
38 AEMO, when it comes to settle the retailer's bill in
39 the wholesale market, sums those two readings together. The
40 retailer, therefore, faces an energy bill for the amount
41 that the customer imported minus the amount that the
42 customer exported. That is the major source of the
43 financial benefit to retailers and the value of that
44 energy.
45
46 In addition, by doing that, the losses are avoided
47 on the exports or generation and NEM fees are avoided as

1 well. So the benefit flows to the retailers and
2 that is why we have focused our recommendations on the
3 retailer paying this feed-in tariff.
4
5 MR HARRISON: Thank you.
6
7 MR ALLEN: I understand that the cost of actually
8 generating this electricity in Australia is very, very low
9 compared with other countries in the world. There should
10 be a bit of leeway in the price people are getting charged.
11 People say the costs are in the network. The network
12 already exists. There should not be a great cost. Perhaps
13 there is a cost of technology. We have seen with the
14 microphones around the table that it is difficult to make a
15 new technology work and all fit in together.
16
17 Nobody has really spoken about technology. My
18 impression is since we do not put a large focus on
19 educating people in technology in the education system,
20 perhaps the technology has got away from us and we cannot
21 really manage a new technology in a cost-effective way.
22
23 Taking all that into account, is there enough profit
24 still in the electricity price to pay for this subsidy
25 without passing the costs on to any individual consumers? .
26
27 THE CHAIRMAN: Thank you, David. Geoff?
28
29 MR BRAGG: I have a comment to add to what Muriel said
30 when talking about the retailer contribution of 7.5 cents
31 towards the solar bonus scheme. If that is mandatory, and
32 I understand why it has to be mandatory because other
33 things would happen, it seems odd that you could have a
34 situation where it is a mandatory value of 7.5 cents when
35 the retailer has to pay it to the distributor to fund the
36 solar bonus scheme, but it is a voluntary contribution of
37 anything down to zero if it is going to the PV customer.
38 It could be that market could decide that it wants to pay
39 3 cents even if you were to recommended 8 cents. If that
40 were to happen, I wouldn't say that that is fair and
41 reasonable. That is just a comment, thank you.
42
43 THE CHAIRMAN: I think Anna has already had a go at
44 answering that, Geoff.
45
46 Is there anything else. Are there any other comments?
47

1 MR HAMILTON: In terms of the mechanics of it, will the
2 retailers be invoiced or will the bonus payment get
3 adjusted for that amount?
4
5 MS BRAKEY: We have not been that specific. We are
6 talking about it in concept. Ultimately, that
7 would be a decision for government as to exactly how to
8 implement the payments, and I would imagine that they would
9 do that in consultation with the distributors and
10 retailers.
11
12 MR HAMILTON: Any ideas, Katharine?
13
14 MR MARTINSON: Certainly between now and the final
15 report, we would be interested in working with the tribunal
16 and other stakeholders as to how to implement that.
17
18 One of the ways could be similar to what happened in
19 the ACT where there was a charge basically for the cost of
20 electricity that retailers were to be picking up.
21
22 In effect, one model, and I am not saying this is the
23 best one or the optimal one, could be where we currently
24 adjust our tariffs. We have 60 cents for the top of the
25 solar bonus scheme. Effectively, that would now be
26 52.5 cents, but the retailers, when they pass that on to
27 the customer, would have to make sure that their bill is
28 reduced by the 60 cents. What would happen is that we
29 would be recovering, through other means, I guess,
30 52.5c/kWh and not the 60 cents.
31
32 I think in terms of flow-through, that is one model
33 that could potentially work, but obviously there are some
34 implementation issues and things we have to work through as
35 part of that.
36
37 MR HAMILTON: I understand why that might be appealing
38 to you but --
39
40 MR MARTINSON: That is our point.
41
42 MR HAMILTON: I agree with what you are saying. But the
43 overall point is important, that we need to work through
44 those implementation issues because if it is required off
45 that total tariff, that may require system changes. If you
46 are looking at a change in the short term, that may not be
47 able to be accommodated.

1
2 THE CHAIRMAN: Sure. So we take on board the point about
3 the implementation being an important issue and the need
4 for consultation. Thank you.

5
6 MR O'REILLY: With your indulgence, Mr Chair, I realise
7 that IPART is responding to its terms of reference here, so
8 I address my comments to Ms Hole, who is on my left, as
9 much as anything.

10
11 I want to make clear that we understand the political
12 context in which the terms of reference were issued. We
13 understand the costs of the solar bonus scheme have become
14 a major issue for the New South Wales government and
15 therefore IPART had to look at options to help to manage
16 that cost. But the reality is that, just as it was not a
17 good idea to be changing the scheme for consumers, it is
18 not good to change the scheme for business.

19
20 You are changing the scheme halfway through for
21 business, for the retailers - retailers who bought into
22 this market in some cases on the basis of a particular
23 market environment - therefore, you are changing a policy
24 here, which does have some commercial impacts.

25
26 Also in terms of market incentives, the voluntary
27 contribution that was being offered by retailers as a sort
28 of retention strategy or an added incentive to particular
29 customers on the solar bonus scheme is a totally different
30 obligation when you are saying that you have to pay a
31 direct amount to the government. I am sure it will
32 increase the administrative cost and complexity of the
33 scheme. It will obviously generate some revenue to the
34 government, but I want to make it clear that the retailers
35 were not happy with this particular recommendation or in
36 terms of the proposed approach, while recognising that
37 IPART was given its terms of reference.

38
39 THE CHAIRMAN: Thank you, Cameron. We note your
40 comments.
41 Are there any other questions or comments from those
42 around the table or anything else from people on the floor?

43
44 Concluding Remarks

45
46 THE CHAIRMAN: Thank you very much. We have now
47 come to the end of the third session.

1
2 Thank you all very much for your contribution.
3 I thank the stakeholders, people on the floor and from the
4 IPART Secretariat, for what I think was a very useful
5 discussion.
6
7 May I remind you that submissions on the draft report
8 are due by 23 January. All submissions, comments and
9 questions should be made directly to IPART. Anyone who has
10 questions regarding how to make a submission should contact
11 Anna Brakey from the IPART Secretariat.

12
13 The next stage of this review is the release of
14 IPART's final report in April 2012, therefore we do ask
15 stakeholders to ensure that their submissions are received
16 by the due date.

17
18 The transcript of today's proceeding will be available
19 on IPART's website in a few days. Thank you very much.

20
21 AT 12.12PM, THE TRIBUNAL ADJOURNED ACCORDINGLY

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