INDEPENDENT PRICING AND REGULATORY TRIBUNAL

RECOMMENDED MAXIMUM PRICE FOR ETHANOL USED IN AUTOMOTIVE FUEL BLENDS

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Members of the Secretariat Mr Hugo Harmstorf, CEO, Ms Fiona Towers, Mr Cato Jorgensen, Mr John Smith and Ms Jenny Suh

Level 15, 2-24 Rawson Place, Sydney NSW

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1 **OPENING REMARKS** 2 3 THE CHAIRMAN: Good morning, my name is Peter Boxall and 4 I am the Chair of IPART. With me are my fellow tribunal 5 members, Catherine Jones and Ed Willett, and members of the 6 IPART secretariat. 7 8 I would like to begin by acknowledging that this 9 public forum is being held on the traditional lands of the 10 Gadigal people of the Eora Nation. 11 12 Welcome, and thank you for making time to attend this 13 morning. 14 15 Today's public forum relates to our recent draft report and recommendations on a maximum price for ethanol 16 17 used in automotive blends like E10. 18 19 The New South Wales government asked IPART to 20 recommend a maximum price for ethanol as part of the exemptions framework for the ethanol mandate in New South 21 22 Wales. The ethanol mandate requires that major fuel 23 sellers ensure ethanol accounts for at least 6 per cent of 24 fuel sales each quarter. 25 The minister may exempt a major fuel seller from 26 27 complying with the mandate if it can satisfy the minister that the price at which it purchased ethanol for the 28 29 production of E10 exceeded the price determined by IPART. 30 Other grounds for exemptions would continue to exist including that a major fuel seller has taken all reasonable 31 32 steps to comply with the mandate. 33 34 Our terms of reference ask us to have regard to 35 protecting consumers from potential abuse of monopoly power and to the efficient costs of supplying ethanol. 36 37 38 In making our recommendations, we consulted with a wide range of stakeholders and considered a large amount of 39 40 information. We commissioned expert advice from AECOM on 41 efficient new entrant ethanol production costs. 42 43 We developed a framework to guide our approach to 44 recommending a maximum price. Our framework takes into 45 account the fuel choices available to consumers and 46 competition in the wholesale ethanol market. We will go 47 through this in more detail shortly. .22/11/2016 2

1 2 Our assessment is that, currently, a light-handed 3 approach to recommending a maximum price is appropriate. 4 We found that there is enough consumer choice in fuel and 5 competition in the wholesale market to protect consumers. 6 Low oil prices are also imposing a market constraint on 7 ethanol prices. 8 9 We consider that an import parity price methodology for a maximum price would support a sustainable biofuels 10 11 It would also allow emerging competition in the industry. 12 wholesale ethanol market to continue to develop. We are 13 proposing to monitor and report annually to ensure our 14 approach remains appropriate. 15 We are keen to hear from stakeholders on our framework 16 17 and proposed import parity price methodology. 18 19 Shortly, Cato Jorgensen, from the IPART secretariat, 20 will provide a short overview of our framework and draft recommendations. Then Mike Stoke and Simon Ward from AECOM 21 22 will give an overview of the advice they provided for this 23 review. 24 25 Following this, there will be an opportunity to ask questions or comment on the draft decisions. 26 27 28 There is a transcriber present to record the 29 proceedings and the transcript will be publicly available. So that we can have a complete record, please introduce 30 31 yourself when you start to speak. 32 33 I now invite Cato to make a short presentation. 34 35 OVERVIEW OF IPART'S DRAFT RECOMMENDATIONS 36 37 MR JORGENSEN: Thanks, Peter. 38 39 As Peter was just explaining, we developed a framework 40 to guide our approach to how we recommend the maximum price for wholesale ethanol and it is shown on the screen here. 41 42 Under this framework, the approach would depend on two 43 key factors which are: the degree of choice in retail 44 45 fuels available to consumers; and the extent of competition 46 in the wholesale ethanol market. 47

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1 A greater level of consumer choice and more 2 competition would suggest that a light-handed approach 3 would be appropriate, but if there was a lower degree of 4 consumer choice and little competition, we consider a 5 cost-based approach to determining the maximum price would 6 be appropriate. 7 8 In coming to our draft decisions we considered a wide 9 range of information and found that: 10 11 Consumers have a relatively high degree of choice 12 between retail fuel types; 13 There is emerging competition between the ethanol producers on the east coast with additional producers in 14 15 the pipeline; and Lower oil prices are also constraining current 16 17 wholesale ethanol prices. 18 On this basis, we consider it appropriate to use a 19 20 light-handed approach to determining the maximum price for 21 ethanol. 22 23 In our draft report, we proposed that the most 24 suitable light-handed approach to determining a maximum 25 price would be to use an impart parity price - IPP. 26 27 The IPP represents the upper limit of what a fuel wholesaler would be willing to pay for ethanol as it is the 28 29 price it would face if it imported ethanol from overseas. 30 31 By using a maximum price that effectively already 32 exists, we expect that our approach would have a minimal 33 impact on the market for wholesale ethanol. In particular, we expect that prices for wholesale ethanol will remain 34 below the IPP and our recommended maximum price. 35 We 36 consider that this approach will allow competition to 37 continue to develop and that it will support a sustainable 38 biofuels industry. 39 40 Our proposed IPP methodology includes the following 41 cost components: 42 43 The price of fuel ethanol at the international export 44 source, including local freight costs and port costs; 45 The costs of sea freight from the source location to 46 the east coast of Australia; 47 The costs of landing the ethanol in Australia, .22/11/2016

1 including import excise, customs value duty and wharfage; 2 Since we are proposing an IPP 3 for ethanol delivered to the fuel wholesaler's terminal, 4 it would also include the costs of storing ethanol at 5 an import terminal and transporting the ethanol to the 6 wholesale terminal. 7 8 We have also been asked to monitor and report on the 9 retail market for E10 and we are proposing to do that on an annual basis. As part of this annual process, we are also 10 proposing to monitor and report on the degree of consumer 11 choice and the extent of competition in the wholesale 12 13 market. This assessment will consider whether the 14 light-handed approach to determining the maximum price remains appropriate or whether a cost-based approach or no 15 price regulation would be more suitable going forward. 16 17 We will consult separately on our approach to annual 18 monitoring and reporting and we expect to release an issues 19 paper in March next year, with the first monitoring report 20 delivered by the end of the year. 21 22 23 THE CHAIRMAN: Thank you very much, Cato. 24 25 I now turn to Mike Stoke and Simon Ward from AECOM to provide an overview of their advice on efficient new 26 27 ethanol production costs. 28 29 PRESENTATION BY AECOM 30 31 MR STOKE: Thank you, Peter. 32 33 The report and the financial model are available to you all and I am sure you will all have had a look at it. 34 This will be just a quick summary of the approach that we 35 took, the findings we made, and I would be happy to take 36 questions at the end of the presentation. 37 38 39 The report focuses on new entrants. It does not look 40 at existing players. It was designed that way by IPART. 41 In order to get the impact for new entrants, we have effectively had to build up the cost models from the ground 42 up; in other words, we have not used any confidential 43 44 material from any of the existing players. It is highly likely that there will be some differences in costs between 45 46 our models and the local existing players for their own 47 special circumstances.

2 The slide that is in front of you at the moment gives 3 you a very quick overview of how we did it. We were able 4 to use plant designs that were sourced from the United 5 States and Europe as a starting point. We used our own 6 quantity surveyors to estimate the costs of materials and 7 plant and worked up from there. 8

9 The next slide is a bit hard to see, but you can look 10 at the big picture. The first step was to try and work out 11 the mass balances, so we had a process engineer as part of the team, a chemical engineer who worked out the mass 12 13 balances for us.

15 From there we looked at the structure of a plant. In the appendices to the report are the details of the plant 16 17 that we considered a new entrant would have to put in place in order to produce ethanol from a particular feedstock. 18

Moving to the next slide, we have chosen here as the 21 example grain because currently it is the major source of 22 biofuels in Australia. We have looked at six or eight different feedstocks, grouped loosely, of course, into 23 grain-based, sugar-based and water-based/cellulose-based, and we will comment a little bit about that later on.

27 Having looked at the plant size in order to do the valuation, we chose to do the production of ethanol for the 28 29 same size plant in all cases to give a feel for differences 30 between the feedstocks. In all cases thus far, we are 31 dealing with 100 megalitre plants, and later on we show the 32 impact of scale.

On the left-hand side of this slide are wheat exports. 34 You are well aware that wheat exports have been increasing 35 36 considerably over a period to a point of oversupply in the 37 market. On the right, is a chart which we have done for 38 all the feedstocks to show where we think the source of 39 feedstock is, how big it is, and what the yield could be. 40 Although we are dealing here with 100 megalitre plants, in 41 practice if you were to focus on a plant on that source of 42 feedstock, the plant would have a different size and therefore the economics would be different. 43

45 In order to do the comparison, all our costs are 46 expressed in per litre terms - per litre of ethanol - so 47 you have a set of charts like that. With this one, for

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example, for new entrants into grain, it assumes that you have starch available, so there is a purchase cost. Then there are other cost elements building up towards the return on the investment, on the capital, offset finally by co-products because they can be sold depending on the feedstock. So you arrive at the final price, in this case, of 64 cents per litre delivered to Sydney.

9 Some of the feedstocks are not present in New South 10 Wales in sufficient quantities, so some of the ethanol 11 production is assumed to be in Queensland. In all cases, 12 we have included the shipping costs through to Sydney to do 13 a direct comparison, so we are talking here about the 14 delivered price to Sydney per litre of ethanol.

When you look across the feedstocks that we looked at, 16 17 you can see up there at the moment the comparative cost of the feedstocks on the left and then the comparative cost of 18 19 production, all in dollars per litre. What you see is that the cost of feedstock, for example, on cane trash is low. 20 Cane trash is a viable source of cellulosic. 21 It has no 22 other use, it is generally burned, so there would be some benefits to the environment if it were able to be used for 23 24 this purpose. Unfortunately, the capital cost involved is 25 quite high, so the cost to the market is high.

27 What we have here are three different forms of feedstock. The differences between them are largely the 28 29 extent to which existing processes contribute towards the cost of the ethanol. For example, if you have grain, the 30 fact that you have produced the gluten first and then you 31 32 use the starches means that there is a step in the process 33 that has already been taken care of and paid for by the production and sale of gluten. 34

36 If you look at the sucrosic, you get the same sort of 37 thing - the sugar has been sold, therefore affecting the 38 cost. The cellulosics, unfortunately, have no prior step, 39 so cellulosic options tend to be considerably more 40 expensive. Although the scale is there and the opportunity 41 is there, the cost of processing is higher.

Finally, we can move from looking at the 100 megalitre base case, if you like, to what would happen with scale. This chart here is to show what happens as you scale up. What you have is the price per litre - the delivered price per litre - decreasing on the left-hand side and the scale

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of the plant increasing on the right-hand side. There are significant economies of scale available, which means you are a bit reliant on the size of the actual plant that you can make associated with the feedstock in that location. It is quite clear that wheat-based ethanol has a substantial price advantage and you can see the ranges for the other products up there.

9 The final step was to say, "From Australia's point of view, what would be the cost of production of ethanol 10 bearing in mind the availability of feedstock?" What we 11 have on this slide is an average price for wheat-based 12 13 ethanol. That is slightly under 60 cents, registered across all sources, which could deliver in theory about 14 15 1,300 megalitres per annum.

17 If you then need more than that - so if the mandate is increased, for example, or if Queensland steps in and 18 effectively there is greater demand - the next step is the 19 sucrosics, the syrups from molasses, which is made in 20 Queensland, and the next step up would be the sorghums. 21 Then you finally get to the cellulosics, apart from, on the 22 right-hand side, the cane and the forest residues, where 23 24 there is more capacity but the price will be much higher.

This represents, as we have developed it, the most efficient price of production across each of the feedstocks based on the plant sizes actually available depending on the scale of the feedstock available.

We then have a couple of conclusions. The capital 31 32 investment involved is significant, especially with the cellulosics. The feedback from the industry is that some 33 form of market security may be necessary to encourage 34 investment. Security of access to some feedstocks may be a 35 problem. We have oversupply in some areas. We have some 36 37 feedstocks in significant demand in other parts of the 38 world, so they are exported in their own right and 39 therefore not available for ethanol production or not 40 available at a price that suits ethanol production.

The final point is that the cost of production may reduce in the future. So with cellulosic production, which is attractive in that the feedstock involved is plentiful in New South Wales but is expensive to manufacture, there is some prospect for that into the future. Thank you.

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1 THE CHAIRMAN: Thank you very much, Mike. Let us move on 2 to questions or comments. Would anybody around the table 3 like to go first, Peter? Greg? 4 5 QUESTIONS AND COMMENTS FROM STAKEHOLDERS 6 7 MR PETER STRETTON (Manildra Group): We have no particular 8 comments to make. We were very happy to contribute to the 9 findings in the report and to contribute and cooperate with IPART. We found the whole process to be very well run and 10 11 very well managed. We were also quite happy to provide 12 information on a confidential basis. We have been very 13 open with our information and we trust that the members of IPART could see that. 14 15 With regard to the report itself, we have a few 16 17 comments to make, which we will provide back in writing. However, on the whole, we thought the report was very well 18 19 done and very well prepared. It was guite accurate in its 20 findings, as with AECOM's report as well. We really have 21 no comments on that. 22 23 Everyone is a little bit different. With our costs we are obviously wheat, with offsets to that through starch 24 25 production - we are a little bit different. However, overall, we don't have any particular comments in relation 26 27 Overall, we thought the process was to the AECOM report. 28 very well done. 29 30 THE CHAIRMAN: Thank you very much, Peter. Greg, do you 31 want to raise any issues? 32 33 MR GREG HOUSTON (Houston Kemp): I don't have too much to say. There is one thing that caught my attention. 34 First 35 of all, I think the framework for thinking about the form or the degree of regulatory intervention is a good 36 37 framework. In that framework, you look at the consumer 38 choice and you look at the competition on the production 39 side, so that is sensible. 40 Under that framework, you only need to have, at least 41 on the production side, effective competition, and only one 42 of those things needs to be fully satisfied under your 43 framework to have a conclusion of no regulation. I guess 44 45 I can see, on the production side, that competition there 46 is an emergent circumstance. 47

1 On the consumer choice side, you said it was high or 2 very high, but you held back from a conclusion that 3 consumer choice might be unrestricted, which would tip you 4 into the no regulation conclusion. 5 6 I would be interested to hear a little bit more about 7 what circumstances you would hope to see before you could 8 conclude that there was unrestricted consumer choice 9 because it strikes me that it is hard to see how consumer choice is restricted at the moment. 10 11 12 THE CHAIRMAN: We said it was relatively high rather than 13 very high. It is a question of judgment, there is no 14 formula, but there is evidence that with the mandate, there 15 is restricted supply in terms of regular unleaded. 16 17 Indeed, as an example, the ACCC has just put out a review of petrol in Armidale. I just happened to get it 18 19 this morning. I will not go into the ACCC's conclusions but there is a note in here. There are currently eight 20 retail sites in Armidale - this is Armidale, New South 21 Wales, in New England. Only three of these retail sites 22 23 sell regular unleaded. The remaining retail sites sell 24 There is only one retail site which sells both E10 E10. and regular unleaded. All eight retail sites sell at 25 least one of premium unleaded - PULP - 95 and premium 26 27 unleaded 98, with six selling both. 28 29 The point I want to make is that it is possible without the mandate - if there was no mandate at all - that 30 you would have a different configuration of regular 31 32 unleaded across the eight sites in Armidale. Obviously the 33 mandates had an effect in terms of the types of fuels that are available and how widely they are available. 34 That is part of what the mandate is trying achieve - that is, part 35 of a mechanism in order to achieve the 6 per cent mandate. 36 37 38 We have formed a judgment that the consumer choice is 39 relatively high. If you live in Armidale and you are really hell bent on getting regular unleaded, you can get 40 41 it, but it might not be as convenient as might otherwise be 42 the case. 43 44 In terms of where would this tip over where it would 45 fall into, in a sense, the no regulation zone - in other words, very high or completely unfettered consumer 46 47 choice - that is a matter of judgment. One reason why we .22/11/2016 10

1 are proposing to review this each year is to take stock of 2 the situation and make a judgment about whether we think it 3 moved into the no regulation zone or indeed moved back 4 where we think cost of production would be more 5 appropriate. 6 7 Thank you. MR HOUSTON: 8 9 THE CHAIRMAN: Who else would like to make a comment? 10 Gavin? 11 12 MR GAVIN HUGHES (United Ethanol): We own the Dalby 13 Bio-Refinery, which is a sorghum-based plant. 14 15 I suppose my only real comment would be to echo the same sorts of things that Peter said. 16 The structure and 17 the approach that has been taken in thinking about this topic has been quite sound and solid. There are details 18 which we would see differently, but it is all within the 19 20 bounds of what is reasonable. So, yes, we support the process and we think it has been quite thorough. 21 22 23 Thank you very much, Gavin. THE CHAIRMAN: Mark? 24 25 MR MARK SUTTON (Biofuels Association): Mr Chairman, I would like to echo those comments about a thorough 26 27 process. Our members obviously participated in it. We believe you have come up with the right balance. 28 Obviously some of our members would preferably like to see 29 no intervention at all, but the structure of it and the 30 thought processes behind it have won support. 31 32 33 Through you, I am interested in what the terms of reference would be for the annual review of the process 34 going forward. If we could get some colour around that, 35 that information would be helpful. 36 37 38 MS TOWERS: That's what Cato was saying. We will put an issues paper out next year and we will raise how we will 39 approach retail monitoring. People will get an opportunity 40 41 to comment on that before we finalise that approach 42 43 MR SUTTON: Would that include collaboration with the ACCC 44 and their statistics? 45 46 Obviously the ACCC does quarterly reports. MS TOWERS: We 47 are conscious that, we are not just duplicating what

1 the ACCC does, but we will raise that in the issues paper. 2 3 THE CHAIRMAN: That will be one of the issues that we will 4 discuss. 5 6 MR SUTTON: I have one point through you, Mr Chairman. 0n 7 the last page, you talk about the US and Brazilian prices. 8 9 MS TOWERS: We are coming to that. Is that from the slides? 10 11 You will come back to that? 12 MR SUTTON: Yes. 13 14 MS TOWERS: We will come back to that 15 Sorry, for jumping ahead. I'll stop talking 16 MR SUTTON: now, I promise. 17 18 19 THE CHAIRMAN: Thanks very much, Mark. Lachlan? 20 21 MR LACHLAN MALLOCH (NSW Fair Trading): I am the policy manager for the reform project that is going on for the 22 23 biofuels mandate. Those new laws will be commencing on 1 January 2017. I am really just here as an observer, to 24 25 be honest with you, to hear the views of the industry and IPART. 26 27 28 THE CHAIRMAN: Thank you very much, Lachlan. Would 29 anybody like to ask a question or make a point from the floor? 30 31 32 Now might be a good time to do a bit of a rundown on 33 the Brazilian and US prices which will feed into the import price parity. 34 35 IPP METHODOLOGY 36 37 38 MR SMITH: We chose to use the ESALQ's source of prices 39 from Brazil in our report. One of the reasons we used that is because it is freely available and it improves 40 41 transparency and reduces costs for stakeholders. We did 42 say that, ideally, we would use a US source of prices as 43 well and perhaps choose the lower of the two, and we have 44 come across, since we released that draft report, a source 45 of US prices from the US Department of Agriculture. Weekly average ethanol prices are taken from nine of the top 46 47 producing states. Similar to ESALQ, they are mill-gate

1 prices, so we would need to include some transport costs on 2 top of them as well. 3 4 We have done some preliminary work on that, which 5 suggests that those transport costs are not too dissimilar 6 from importing ethanol from Brazil. We have put those into 7 our IPP model that we released with our draft report. 8 9 I would point out that we have used the same transport costs for the purposes of comparing the two price series, 10 but one difference is that, under the US Free Trade 11 Agreement, there would be no customs value duty on ethanol from 12 13 the US, so that makes about a 3 cents difference. 14 15 With that in mind, just comparing the IPP based on the US price and the Brazilian price, at the moment sourced 16 from Brazil, the price is around 140 cents a litre and that 17 compares to around 115 cents a litre from the US. You can 18 see that time series there, and, just at the moment, there 19 is quite a difference between prices in the US and Brazil. 20 This is something that we would like stakeholders to 21 22 comment on. 23 24 THE CHAIRMAN: We have updated the 135 in the report for 25 140. 26 27 MR SMITH: That's updated from our draft report, yes. 28 29 MS TOWERS: For the period to 4 December. 30 31 THE CHAIRMAN: Would anyone like to comment? Greg? 32 33 MR HOUSTON: How have you sourced and calculated the domestic land transport costs for both Brazil and the US? 34 35 It would seem to be quite a challenge to do that in a way that conforms with the transparency objectivity ideal. Can 36 37 you give us some details on that? 38 39 I think in our draft report, we used an MR JORGENSEN: estimate from an earlier report by EnergyQuest for the land 40 41 transport in Brazil. For the US, there is information 42 available and our preliminary analysis of that has shown that it comes out at about the same costs as we had in the 43 44 draft report for Brazil. But we are sourcing more 45 information on both of these to get more up to date 46 and accurate estimates. 47

1 MS TOWERS: We are purchasing data.

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MR JORGENSEN: Yes, exactly, so I think we are looking at potentially updating once a year the local freight costs at this point.

MR SMITH: On that scenario, we would certainly welcome any information being passed on that is relevant.

10 MR STRETTON: I am surprised that there is a big 11 difference between the two prices. From an economic point 12 of view, that is a bit weird in the way I would think about 13 things. At those prices out of Brazil, they would never 14 have exported ethanol. Between the US and Brazil they are 15 the two largest ethanol exporting countries in the world obviously. However, on that, Brazil would not export a 16 17 litre.

19 I think a little bit more work might need to go into 20 it, because, as I say, from a pure economic point of view, there seems to be too much of a gap. Whatever the gap 21 22 might become, if you are going to use always the lowest 23 one, I would not say that would be unfair, but I would 24 suggest possibly using an average of both Brazil and the US. because both Brazil and the US export ethanol, they 25 will continue to export ethanol and they will need to be 26 27 competitive to do it.

Our experience has been that there is a lot of Brazilian ethanol coming through the Asian region, but that would not happen on these prices. As I say, maybe just a bit more work needs to be done. Whatever the outcome is, I would also suggest you use an average of the two. Using an average of all the states, that's fine, but just make that a consideration.

MR JORGENSEN: I will give a little bit of background
information on that. Sugar prices in Brazil are apparently
skyrocketing, which is why you see higher ethanol prices
out of Brazil. Exports from Brazil are actually dropping
and have been in the last few months, so you see that
effect of the higher prices in transport as well.

44 MR STRETTON: I think you will see the future price for 45 sugar starting to come off.

47 MR HUGHES: I was actually one of the co-authors of that

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1 EnergyQuest report regarding Brazil's background, having 2 spent 15 years in sugar. I think the comment that Peter 3 makes is exactly right. That differential will not remain. 4 There might be something which is right there right now, 5 but it certainly will not remain because it is just not 6 sustainable from a market point of view, so those numbers 7 will come back together. Whether one lifts or the other 8 one falls, there is a demand and supply sort of curve which 9 actually underpins what changes in there. I think there needs to be a lot more serious thought in terms of the way 10 11 that that is actually put together.

13 I am also a little bit unclear as to how, with the 14 devaluation of the Brazilian real, you have actually looked at the currency effects on a lot of those costs of the 15 Brazilian industry. You have probably looked at this, but 16 17 I have not looked at it for a little while. I think it is getting up to fourfold from a historical 2.2 type of 18 19 exchange rate with the US dollar. That also will have a 20 massive impact on costs internally which will not be reflected in that EnergyQuest report, and you have to 21 22 actually go back and look at that stuff again as well. I think there is a bit of a structural element to that 23 24 also, with the change in currency, which is probably not 25 taken into account in your current analysis.

MR WILLETT: You can already see in that graph that there
is a fair bit of volatility and a fair bit of interchanging
between the two prices as to which one is higher and which
one is lower - which is what you would expect to see.

32 I think it is also worth recognising that these are 33 spot prices. They do not necessarily tell you what is in the contract market or a lot about what is in the contract 34 market. However, they are the numbers we have and we are 35 trying to use them as best we can to set a benchmark. We 36 37 could draw a more realistic parallel on contract prices if 38 we had them available to us - it might be lower than that; 39 it might be higher than that. Any suggestions on improvements on the methodology, we would be more than 40 41 happy to take on board.

I am not sure about using an average because I would tend to think that if you are benchmarking what a national price is from time to time, then the lowest price at that period of time would be the one to go for, but that is something we can think about.

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1 2 MR HUGHES: I suppose the comment that I would add to that 3 is that if there is a lower price in the market and it 4 starts to get flooded, then that price does not stay very 5 low for very long; it starts to go up. Unless you are 6 actually playing in the market and seeing that effect, then 7 it is probably not an appropriate methodology to just take 8 the lowest spot price at that particular point. There is a 9 demand response and you will find a response in the market as well. 10 11 12 MR WILLETT: So you would suggest a trailing average of 13 some sort maybe? 14 15 Yes, some sort of trailing average, or some MR HUGHES: other way of actually trying to reconcile the differences 16 between those two things. You can see over time, it will 17 come to an equilibrium in that pricing. 18 I suppose my 19 comment is that it just needs some more thought as to how that is actually constructed. 20 21 22 We agree and we will take that on board. THE CHAIRMAN: 23 We just discovered this the other day. 24 25 MR STRETTON: Following up on Gavin's point, there is a longer term thought. Gavin mentioned trailing averages, 26 27 I would think that is probably a very good thing to consider. If the market changes and suddenly we are at 28 that level where these prices are, if we are using the 29 minimum all the time on a month on its own, we could have a 30 situation where you will have wholesalers or wholesale 31 32 customers potentially coming to IPART on a very regular basis. One month they might be in the money, one month out 33 of the money, and they're in and out, in and out. 34 I think 35 Gavin's point is worth considering. 36 37 We have averages for calculating it. The THE CHAIRMAN: 38 question that I think you raised was whether we should 39 average Brazil and the US, in other words two sets of 40 averages. 41 42 MR STRETTON: Yes 43 In our draft report, we had a 15-week average, 44 MR SMITH: so we set a price for four weeks, which was based on the 45 46 15 weeks preceding it. 47

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1 THE CHAIRMAN: Greg?

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MR HOUSTON: Thank you. That is a disturbing graph from an economist's point of view, as has already been pointed out.

THE CHAIRMAN: We had a similar reaction.

9 MR HOUSTON: I will echo the sentiments that more 10 understanding needs to be gained. As Ed has commented, this price could be measuring a relatively small volume in 11 12 terms of the economic reality given that it is quite 13 probable a lot of this would be sold by contract. Either 14 that or it cannot reflect an equilibrium price. Not only should there be some kind of historical average but also 15 you should give serious thought to whether it is better to 16 17 combine them.

At the moment, it looks as though two-thirds of the time Brazil is higher and a third of the time the US is higher. Who knows what the future will bring, but I think a 15-week price is probably not that practicable or ideal.

The other thing is I don't know if you have given thought to the practicalities of moving from this information that has been presented here to your mechanism and actually implementing it because there is a bit of uncertainty created by this.

30 Once you start to go live and formally start determining this maximum price, there is a question about 31 32 how we get from now to what the methodology is precisely. Then once you establish that methodology, do you have any 33 34 capabilities to amend it as you go along in light of potentially absurd results that might materialise into the 35 36 I don't know if you have thought about that, but future? 37 it seems me that they are quite practical questions you 38 should consider.

THE CHAIRMAN: Sure. We have thought about that in that
we have a model set up where we could generate a price
every four weeks which would be based on the moving average
of the past 15 weeks.

The issue which Peter and Gavin have raised, and which we recognise, is whether you should base that on the lowest price - what has been the lowest price - or whether you

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1 should base it on a combination of the two, and that we need to 2 give much more thought to.

In terms of generating a price, we can do that and then we would review it every 12 months at least because every 12 months we would be taking another look at the state of the market. In the event that we decided to go ahead with the light-handed approach, we would take a look at how this was calculated and how it is tracking.

11 We do this in another area, which is the weighted 12 average cost of capital. We consulted on the methodology. 13 We came up with the weighted average cost. Every six months we put out a calculation of weighted average cost of 14 capital and the methodology is transparent so stakeholders 15 can actually calculate it themselves. Now, when Sydney 16 17 Water puts in a submission, they calculate the weighted average cost of capital themselves and they get the same 18 19 result as us, because it is so transparent.

That was another reason why we took a bit of time to find the price series - the international price series because we wanted to get a series that was freely and readily available so that stakeholders could actually calculate the price that we would be posting.

27 So we have thought about this, but we are happy to think 28 more about it and we would welcome any comments. 29

MR WILLETT: The other thing probably worth thinking about too is we are looking here at the Australian import parity prices. The Brazilian and US import parity prices would be different and that might explain some of the gaps that you see.

36 MR HUGHES: I am sorry, I just did not understand that.

38 MR WILLETT: This is a calculation of the Australian 39 import parity price.

41 MR HUGHES: Yes.

43 MR WILLETT: The import parity price for Brazil and the 44 import parity price for the US would be different to that, 45 which might explain some of the gaps in prices that you 46 see. So, in other words, you would not necessarily expect 47 to see a convergence to zero between those two graphs

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1 because to the extent that the Brazilian price is 2 conditioned by something, it is probably more conditioned 3 by the import parity price since we are taking a domestic 4 Brazilian price. 5 6 THE CHAIRMAN: That is the Brazilian export price - that 7 is the price that it would be exported at, so that would be 8 the price that our importers would then pay. 9 10 MR HOUSTON: What is this chart exactly? Is it landed in Australia, is it ex-plant in the relevant countries or is 11 I mean there are lots of different points to 12 it FOB? 13 measure. 14 15 This is landed. We have calculated --MR JORGENSEN: 16 17 But it is driven by the export price. THE CHAIRMAN: 18 19 MR JORGENSEN: But it is based on the domestic price in Brazil, which is the ESALQ. 20 21 You would expect the domestic prices in those 22 MR WILLETT: 23 countries to be driven by their respective import parity prices, not the Australian import parity price. Now, there 24 25 may not be a big difference between those things but --26 27 MR HOUSTON: Do we know whether they were importers or 28 exporters? 29 It is more to do with the actual destination 30 MR HUGHES: market and then you have a basis differential between the 31 32 two locations supplying into those markets which are 33 predominantly (inaudible) So those prices will actually be back to zero at those major destination points - which is not 34 35 Australia. 36 37 MR WILLETT: No, that's right. 38 39 MR HUGHES: That is the other thing that needs to be considered here as well. This is where these things are 40 41 fraught with danger. You get competitive responses with 42 the markets so I think the real price would be kind of different if those sorts of markets are attracted to (inaudible), 43 which is what is happening in the EU. Then it will also be 44 45 dependent year-on-year in terms of the size of the crop. 46 47 We have one of the largest crops of coarse grains

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globally, which is actually pushing down those prices. But 1 2 the odd thing with sugar is that the sugar season is not 3 that bad either. I think there will be a convergence, but 4 there is a good opportunity to make some money as a trader 5 in sugar at the moment. 6 7 You're right, Greg. If they are both MR WILLETT: 8 exporting at the same time, it might actually be their 9 export parity price that is driving domestic prices rather 10 than --11 12 MR HOUSTON: It could be. I mean if they were both net exporters and they were maybe competing to survive in 13 Europe, you would expect the delivered costs in Europe to 14 be the same. It doesn't look like it would be, and it is a 15 bit troubling. 16 17 I am not quite sure how you chose the 15 weeks, but 18 19 the question of a longer term trail might make more sense. 20 21 MR WILLETT: Yes, that is certainly something we can look 22 at. 23 24 THE CHAIRMAN: Would anybody in the audience like to ask a 25 question or make a comment? 26 27 MR BRENDAN QUACH (Houston Kemp): I just have one question, which is really around one of the methodologies 28 29 that you have set out for the cost of capital. 30 31 THE CHAIRMAN: I shouldn't have raised that, should I? 32 33 MR OUACH: You have used or had regard to the Blume and the Vasicek adjustment in terms of setting an equity beta 34 35 for this industry. Is that an approach now that is seen as the appropriate way to estimate equity betas from market 36 37 data? 38 39 THE CHAIRMAN: Jenny? 40 41 MS SUH: That methodology was used in our previous reviews, such as cruise ship reviews and others. We think 42 it is appropriate to have some kind of methodology to 43 44 adjust regression-based equity betas, but we do not have a formal methodology as to which adjustment methodology we 45 should use to revise regression-based equity betas, but 46 that is one thing we would consider in any future review of 47 .22/11/2016 20

1 2	the WACC methodology.
2 3 4	MR QUACH: Thank you.
4 5 6	THE CHAIRMAN: That is the WACC methodology.
7 8	MS SUH: Yes
9 10	THE CHAIRMAN: Yes, we are planning to do a review of the WACC methodology in 2017, which is
11 12	MR QUACH: But your last methodology didn't touch at all
13 14	on the equity beta and I
15 16	MS SUH: Yes, but that was not part of the scope of the review in our last review.
17 18 19	MR QUACH: Thank you.
20 21 22	THE CHAIRMAN: Is there anything else? Are there any other questions or comments?
22 23 24	CLOSING REMARKS
25 26 27	THE CHAIRMAN: Thank you all very much. It has been a very short but interesting session and thank you very much for your participation.
28 29 30 31	The transcript of today's proceedings will be available on our website in a few days.
32 33 34 35 36	Just a reminder that submissions on our draft report are due by the end of this week - that is, by Friday 25 November. We will consider all feedback received in submissions and at today's public forum and we will provide our final report to the minister by the end of December.
37 38 39	Once again, thank you very much and have a good morning.
40 41 42	AT 10.50AM, THE TRIBUNAL WAS ADJOURNED ACCORDINGLY
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46 47	
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