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IN THE COMPETITION APPEAL TRIBUNAL

Victoria House, Bloomsbury Place, London WC1A 2EB

23nd January 2009

Before:

VIVIEN ROSE (Chairman) PROFESSOR PAUL STONEMAN **DAVID SUMMERS**

Sitting as a Tribunal in England and Wales

BETWEEN:

NATIONAL GRID PLC

- v -

Appellant

THE GAS AND ELECTRICITY MARKETS AUTHORITY Respondent

supported by

SIEMENS PLC **CAPITAL METERS LIMITED METER FIT (NORTH WEST) LIMITED METER FIT (NORTH EAST) LIMITED**

Interveners

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HEARING (DAY 7)

Case No. 1099/1/2/08

APPEARANCES

<u>Mr Jon Turner QC</u>, <u>Mr Josh Holmes</u>, <u>Mr Meredith Pickford</u> and <u>Miss Laura Elizabeth John</u> (instructed by Pinsent Masons LLP) appeared for the Appellant.

<u>Ms Monica Carss-Frisk QC</u>, <u>Mr Brian Kennelly</u> and <u>Mr Tristan Jones</u> (instructed by Ofgem) appeared for the Respondent.

<u>Mr Christopher Vajda QC</u> and <u>Miss Kassie Smith</u> (instructed by Hill Hofstetter LLP) appeared on behalf of Siemens Plc.

<u>Mr Christopher Vajda QC</u> and <u>Mr Ben Rayment</u> (instructed by Slaughter and May) appeared on behalf of Capital Meters Limited.

<u>Mr Fergus Randolph</u> and <u>Ms Sarah Abram</u> (instructed by United Utilities Group plc) appeared on behalf of Meter Fit.

1 THE CHAIRMAN: Good morning. We have received your table, Mr. Turner. We assume that 2 the Ofgem team saw this at some point this morning. 3 MISS CARSS-FRISK: Actually last night, madam. 4 MR. TURNER: It was e-mailed to everyone at the same time, madam. What you have there is a 5 hard copy which I think has some of the supporting material at the back. 6 THE CHAIRMAN: Nonetheless, Miss Carss-Frisk, if you need more time in order to prepare any 7 questions on that, then, please do say. 8 Dr. MARK WILLIAMS, Recalled 9 Cross-examined by Miss CARSS-FRISK, cont'd 10 Q Dr. Williams, I would like to go back for a moment, please, to the topic of market 11 definition, focussing again on your paras. 19(a) and (b) in your first report at WS1, pp.867 to 868. When you were asked about this yesterday you suggested, as I understood you, that 12 13 it was appropriate to ignore the reality of the position at the time when the MSAs were 14 negotiated and to consider what would have been the degree of substitutability if Grid had 15 had in place contracts that provided for payment completion at that time. That is right, is it 16 not? A. I believe that is what I said, yes. 17 Q In answer to a question from madam chairman you said that this was effectively referring to 18 the so-called Cellophane Fallacy. A. Ah! Well, not quite. What I said was that for the 19 purposes of market definition one needs to ascertain this in a competitive world. In order to 20 get that across I gave an example which we are all familiar with of where, in another 21 direction, basically when you have the cellophane case -- where basically he's saying, "Just 22 because it's in the market, because it's monopolised it doesn't mean that's the appropriate 23 benchmark and one should look at it under competitive conditions". So, my reference to the 24 Cellophane Fallacy was a reference to the question from the chairman. But, if I can make 25 myself precise here, what I'm basically saying is this: in this case -- You will see in this 26 paragraph that I use the phrase 'economic price'. So, that is prices, which are prices as we 27 normally understand them. Then there is the economic price. The economic price under a 28 payment completion contract is essentially set so that it is effectively equal to marginal cost. 29 Under normal arrangements where payment completion contracts are in place, that is the 30 effective price. What I am saying is that for purposes of market definition, that, in a sense, 31 is what you would normally expect to be operating in the market and therefore that is the 32 price against which you judge whether or not the N and Rs are a competitive constraint. 33 Now, of course, separately, because of the unusual arrangements in this market there is a 34 period of time when in fact they do not have normal contractual arrangements in place,

which is why, in that period of time, in a sense there is an unusual and abnormal competitive interaction between the threat of replacement and the Legacy meters that have not yet got the subject of the contract.

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So, essentially one needs to separate two things out here. Basically, in market definition --In a sense, market definition is almost irrelevant. It is where do you classify competitive constraints. Nothing about the reality of a market or a case determined by where you classify it. For avoidance of doubt, my view is that on the substantive question of market power I believe that the threat of replacement was a powerful constraint. So, all we are talking about here is, "Where do we classify this?" What I am saying is that one of my reasons for why in this, to me, irrelevant exercise of where to classify a constraint I have put it as outside the market definition rather than inside is that basically if you evaluate it under normal competitive conditions it would be outside. I also stress that there are various other reasons given, including the one I gave yesterday - that in a sense these threats have got no mass and therefore are not measurable for why I hold that view, but that is one of my views. Q Dr. Williams, if you will bear with me, we will continue to engage for a moment still in this irrelevant exercise of market definition as you have described it. As I understood your explanation just now you are saying that there were in fact unusual and abnormal competitive considerations or circumstances at the time when the MSAs were entered into. So, you are saying, "Let's look at what would have been the case in normal circumstances". That is when you would have had payment completion. A. I'm saying that for market definition exercises, one is normally advised to look at this in a competitive world. Since I believe that in a competitive world those contracts would be in place, then, yes, that is the appropriate framework for undertaking the market definition exercise, understanding that that is a separate exercise from assessing market power.

25 Yes. Yesterday you did in fact, in response to madam chairman's questions say effectively, Q 26 'The Cellophane Fallacy, yes', but I understand that you have now elaborated on that in that 27 way. But, just looking at the idea behind the Cellophane Fallacy, as we understand it, it is 28 very much about disregarding any distorting effects of the conduct of the allegedly 29 dominant undertaking. Now, here, you are not alleging any such situation. We are not 30 seeking to avoid the consequences of Grid's conduct as a dominant undertaking, are we? 31 A. No. The abnormal situation here, in the Du Pont cellophane case -- The abnormal 32 situation is that *Du Pont* apparently had genuine market power. The abnormal situation here 33 is that one is in a market that was a statutory monopoly that was in the process of 34 liberalising, and for this brief period of time, in a sense, the contractual structures in the

market were not the contractual structures that would have been in the market had the market always been competitive.

- Q What I am suggesting is that if you are not in a situation where you need to guard against the possibly distorting effects of the conduct of the allegedly dominant undertaking, there is no justification for disregarding the reality and assuming certain conditions to apply that did not in fact. A. Sorry? Could you repeat that question, please?
- Q When you are in a situation when you are not concerned with guarding against the distorting effects of the conduct of an allegedly dominant undertaking -- when you are not in that situation there is no justification for assuming different market conditions to those that actually applied at the relevant time. A. No. I disagree with that. I believe that basically in thinking about market definition -- I believe that all the guidelines I have ever told said, "One should think about that as if it were competitive" and if, as a distortion of that, you modify those distortions before answering that question -- Again, I repeat, and maybe there is some legal reason why this matters, I don't think anything we are saying is about anything to do with whether this constraint exists merely about where it's classified. I stand by my position on this, which is one of my reasons for why I have it classified as outside the market. I have other reasons as well. I don't think I have further to say on this. I stand by my previous analysis.
- Q In relation to imagining what normal competition would be like on your thesis, you are
 assuming that normal competition inevitably would involve a contract with payment
 completion, are you not? A. Well, the question put to me is that I was 'assuming' that it
 would. Essentially, I believe that Professor Grout's report also says that some form of
 payment completion contracts would be a standard feature of normal competition. So, in a
 sense I don't think I'm assuming it, but, yes, I do believe that to be true.
- You would accept, would you not, that it might be the case that normal competition would Q be represented by a contract perhaps with no PRCs at all - one where there is competition A. Now, we're currently discussing market definition, and I'm aware that, in a on price. sense, the question that has just been posed to me is almost getting into the abuse questions. Therefore, there's a little bit of intertwining here. But, I will try and answer the question nonetheless. I believe that in the case of investments which are relationship specific and sunk, that basically those investments under normal competitive circumstances are only likely to occur if, in fact, some form of payment completion arrangements are in place, whether that is up-front payment or a PRC, which is basically up-front commitment to eventual payment, in the sense that the cheque may be written later, but the commitment is

made just as much as with an up-front payment. When the asset is relationship specific, I believe that is only plausible form which contracts will take. If it's not relationship specific it's quite different because you would have an alternative use, but when it's relationship specific I believe that that is by far the most likely contractual form and possibly the only plausible form.

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- 6 Q On that assumption then you are saying, effectively, that if there were in place a payment 7 completion contract there would be no substitution from new and replacement meters – is 8 that right? A. If payment completion contracts are in place then at that point the 9 economic price of continuing to use the existing meter is essentially the marginal cost, and 10 therefore if you were to think of substitution from a new and replacement meter, that would 11 basically have to incur not just its marginal cost, but also its fixed costs, which will of 12 course become sunk the moment they make the investment. For various of the reasons we 13 discussed yesterday, and other reasons, it is clear to me that it is extremely unlikely that that 14 would be able to compete. In a sense, the cost difference is just too great. One could 15 imagine circumstances where the cost difference narrowed in future. So, in a sense, my 16 claim is not a pure theoretical claim. It has built into it the factual assumption that in 17 present cost conditions, yes, it's true that new meters couldn't effectively compete with 18 existing meters. Yes, that is my view, that thinking of it the other way round, basically you 19 haven't got much of an argument to say that these new meters could economically compete 20 given the cost differential between them, yes.
- 21 0 Do you say that, although of course looking at the Legacy MSAs that are in place and do 22 provide for payment completion, there plainly is a competitive restraint or constraint from 23 new and replacement meter to some extent, albeit limited? A. Basically, for meters that 24 are coming to the end of their live, etc, when eventually they're going to replaced, so to that 25 extent, yes, there is competitive interaction, though whether this is actually substitution is 26 unclear. This is almost always going to happen economically when, in fact, the existing 27 meter is effectively not able to deliver services properly.
- 28 Moving back, Dr. Williams, to dominance, where we were yesterday, we had looked at your Q 29 first feature that you said prevented dominance in this case, which was sunk costs, and we 30 were going to move on to what you have identified as the second feature that prevents 31 dominance, which is that Grid was constrained by the price cap. A. Yes.
- 32 You get your reference to that in particular in paras.40 to 41 of your first report at p.874. 0 33
 - A. Yes, this is where we were last night, I think.

Q Fast forwarding to what you say about this in your second report, and you may just want to look at that in WS6, para.78, p.3084, you say at the end of para.78:

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"My core conclusion is that National Grid is no dominant because given the particular circumstances of the bargaining situation it <u>could not</u> have set price above the competitive level, as reflected in the obviously unobjectionable P&M returns."

That, as I understand it, is a summary really of what you had said about the second feature in your first report? A. No, I believe that is a summary of my judgment formed on the interaction of the three constraints. I have mentioned sunkness, I have mentioned regulation, I have mentioned the threat of replacement. In a sense, it is the three of these come together to provide the competitive constraint, so my view that basically National Grid could not essentially set an average price that would excess its costs, or what I call the competitive level, is a consequence of the interaction of these three points, not of any particular one of them.

15 Q I appreciate that is what you say, but just focusing on this particular point for the moment, 16 the one highlighted in the last sentence of para.78, I am sure you would accept that being 17 able to set prices above the competitive level is one instance of something that might 18 indicate dominance but it is not the only way in which dominance can be indicated – would 19 A. This is an interesting question. If one looks at almost all of the guidelines you agree? 20 and all of the practice of competition policy, dominance – I am not going to give the legal 21 definition, that is not my job – is almost always interpreted as essentially, does the firm in 22 question have the ability to set prices appreciably above the competitive level? It is thought 23 of in terms of price raising ability. So basically, in terms of how dominance is almost 24 always interpreted, that is my belief as to what actually happens in practice. I may be 25 reading more into this question than is there, but basically I think I am being asked, do I 26 believe that dominance entails anything beyond that. The answer is - I'm not giving a legal 27 judgment here – I have, personally, although I believe that what I've just said is a correct 28 description of how dominance works, some sympathy with views – let me give an example, 29 predatory pricing: suppose a firm basically does not have a dominant position, he engages 30 in pricing below avoidable cost, drives rivals out of the market and then acquires a 31 dominant position, then, in the USA under monopolisation standards, that would be caught. 32 I sometimes have a personal view that it's slightly curious that we have a dominant standard 33 rather than a monopolisation standard. So basically if we had a different standard then other things should be in, and whether we do, and I don't think we do, but that's not my judgment.

3 Q Would you accept, and we can go to it, if necessary, that, for example, in the OFT guidance 4 it refers to matters such as being able to weaken existing competition, raising entry barriers, 5 slowing innovation. Those are the sorts of conduct that might be taken into account as 6 well? A. The answer is, basically impacts on the competitive process, whether this is under dominance or other headings, are clearly important matters of competition policy. On 8 the other hand, the sub-text is there always that the weakening of competition is weakening 9 of competition that would be efficient on the merits, etc., so it is not purely that competitors 10 don't do as well as they would like to do. There has to be some reasonable and meaningful sense into which they are people who, absent abusive conduct, would have been active on 12 the market and justifiably so.

- 13 I think what you are saying then, Dr. Williams, is that you are accepting that we are not 0 14 confined here to looking at whether the allegedly dominant undertaking can raise its prices 15 above the competitive level. We can look at it rather more broadly than that? A. There is 16 a legal question here on which I cannot pass judgment. As an economist, as I've just said, I 17 have views that these sort of questions might be better under a monopolisation standard. So 18 I can't pass a legal judgment, but I am happy to take questions as if there were, if you like, a 19 slightly subtler standard.
- 20 Q I am not asking you to pass a legal judgment, but simply to accept that in assessing this 21 from an economist's perspective it is also relevant to consider other features than simply 22 being able to raise the price above the competitive level? A. I would need to have 23 specific features put to me for me to comment whether or not those features were relevant, 24 but yes.
 - You do not take issue with the OFT guidance presumably? A. The OFT guidance is the Q OFT guidance.

Do you take issue with it? Q

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28 THE CHAIRMAN: Let us not stray too far from the point here. What is being put to you is that 29 there are a lot of abuse cases which have nothing to do with excessive pricing. There is all 30 sorts of conduct which a dominant firm engages in which can been seen as evidence of its 31 dominance because its customers would not have voluntarily entered into a contract in those 32 terms if they had had any choice about it and sometimes one looks at the conduct as an 33 indicator of dominance and that conduct may be a number of different things, it is not 34 necessarily excessive pricing? A. With that clarification I have to give my view, which is

suppose one did undertake this exercise in the present case, i.e. essentially we have abuse which can be thought of as exploitative and exclusionary, so suppose one asked the dominance question with an exclusionary hat on rather than an exploitative hat on – I think that is as I understand your question. First of all, this is a screening process rather than, if you like a full trial on the abuse, but if one were simply to do a screening process on the matter at hand, most exclusion cases – basically you are thinking about some sort of pricing below marginal cost and, in this case, the marginal cost is actually zero. So in just a very high level this is not the sort of situation where actually inefficient exclusion is easily possibly simply because marginal cost is zero. So if I were to go down that route and just in a very cursory way do a quick screen of the sort that dominance is meant to be doing I would conclude that this was not a promising avenue for an exclusionary abuse. But, as I say, I don't go down that avenue simply because it is not what you normally do, but had I gone down that avenue that is the view I would have reached.

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MISS CARSS-FRISK: Yes, I think Dr. Williams, we will move on then to engage with your basic thesis being about the ability to price above the competitor level. First, you see the competitive level as being the P&M terms – that is right, is it not? A. I do not understand all the details of how the P&M terms work, but it is my belief that the price under the P&M is equal to the regulated price, so on that basis, yes.

- Q Now, the regulated price in fact is the price cap set to prevent Grid from recovering
 excessive profits that is right, is it not? A. I imagine so, yes.
- 21 So it is a price cap and it by no means follows, does it, that because the cap is there saying: 0 22 "Grid, you can charge up to that level", it by no means follows that that represents the 23 competitive level? A. No, on this I disagree. Again we have to go back to the 24 circumstances of this market and I think I need to explain why I think that the regulated 25 price is, in a sense, the relevant benchmark for the competitive price in this market. As we 26 have already discussed and are all aware, this is a market – there was a statutory monopoly 27 that was liberalised. Now, I have already argued that it is my belief that the most plausible 28 contractual forms in this market are that undertakings sign long run life of asset contracts, 29 and therefore one is in a situation so many years down the line, and we want to know what 30 would be the price list of those assets that had already been sunk had the market been 31 competitive at the time that they came into being.

THE CHAIRMAN: And that, as far as you are concerned, meant had there been payment
 completion terms in the original arrangement? A. Had there been something from the
 broad family of payment completion contracts at the time and moreover adding an

additional constraint the market was competitive at that point in time. So the thought experiment that I go through to reach this is something like the following. There is one moment in time when we have a reasonable approximation, subject to debates we heard yesterday, as to what the capital base was, what a reasonable rate for turnover was, and what the price coming out of that was. So basically I am a competition economist not a regulatory economist, but I take the price that came out of that process at the regulation point as being a reasonable approximation to a price that would have been a fair return on a fair assessment of the capital base. I am not an expert on the debates we had yesterday. So then imagine that that is so, which I think is reasonable, and then I ask: suppose, at the moment of that regulatory settlement, there had been competition in the market, but where that competition took – a thought experiment here, imagine the market was perfectly contestable, I do not claim markets are contestable, but imagine it was and that would give you an insight into how a fully competitive market would be, what would happen? Answer: there would be competition for long run contracts at that moment in time and basically somebody or other would win that contract at a price that basically reflected their costs. So on the assumption that Ofgem had got its calculations right you would expect long term contracts to be put in place at that moment in time at a price equal to the regulated price. Now, there is a wrinkle, which is of course in such a price suppose the capital cost is 100 and let us suppose that the life of the meter – keep it really simple – is 10 years, then let us take away from discounting that is £10 a year, but in fact there is an infinity of paths to payment completion – it could be 10 in each year, or 20 for the first five years and then nothing or zero for the first five years and then 20, etc. However, if you then add in an additional constraint, which is that in the early part of this National Grid was not allowed to set a price above the regulated price then that narrows you down from the entire family of paths that add up to payment completion to effectively saying they have to straight line it or at least straight line it up to the point where competition starts, and in that view the contract that would be put on to the market would be one that would be payment completion of the amount equal to the regulated price, but flat line because of the regulatory constraint. Therefore, if now you fast forward four years and say: what would you observe in the market at the moment of deregulation, what was the moment of deregulation? Had the market been competitive from the moment of the regulatory settlement then basically that is what you would find on the market – a series of payment completion contracts where the price in that contract was straight-lined at the regulated price. So that is my reasoning

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process as to why I believe that that is the appropriate benchmark for the competitive price against which to judge various other things we are looking at in this case.

Q Does that assume that there nothing included in the price cap to compensate for the risk of the asset being stranded? A. I have not thought deeply about this simply because, in a sense, that was a debate of other people. I would point out the following, however, which is that of course the test for whether or not one has got market power is whether you can raise your prices appreciably compared to the competitive level. Now, it is my understanding that the market facts are that the prices actually set by National Grid and the MSA where – I do not know the exact numbers – some significant way below that level, therefore in a sense my reasoning was simply that there was a sufficiently big gap there that even if there was some moderation, some allowance made there then the test of whether it is appreciably above would not be satisfied.

13 MISS CARSS-FRISK: So we make two assumptions. We assume that there was in place a long 14 term contract with payment completion dating back to the time of the supply of each legacy 15 meter, and we assume that the P&M terms then would be effectively the price – the 16 competitive price – included in that contract? A. I actually dated everything from this 17 magic moment of the regulatory review because that is the moment where all the 18 information was captured together, and the crucial thing here is the following, which is that 19 the regulated price on this view, one knows that the regulated price is the price cap and that 20 pricing can happen below that level, but the point is the way it is normally set under an RPI-21 X type system is setting a price where you are going to get your cost of capital, given 22 existing cost conditions, things might develop, but the key point is it is the moment at that 23 time that you are setting the contract; it is basically the reasonable price at that point in time. 24 Therefore, arguments: "Ah, but the price of contracts is lower four years later" is not 25 relevant to the question of what the price of those contracts would have been three or four 26 years ago. So a crucial point there, which is yes, the market may have moved on is 27 undoubtedly the case, as we can see, but the longer contracts are offered into the market 28 now are more generous to customers than the ones that would have been offered three or 29 four years ago, but the relevant test – those contracts do not disappear, those contracts serve 30 life of contract at the original price even though new contracts are offered through time at 31 lower prices.

THE CHAIRMAN: Yes, because the company, which is subject to the price control is offered the
 incentive that it can cut its cost and keep that benefit under the price cap that was set when
 its costs were higher? A. That is a regulatory perspective on it, but the competition

perspective I had on it, which I think leads to the same conclusion is simply that in the market where costs are falling through time, at any moment in time rental prices will be falling for long run contracts and any snapshot moment in time there will be a whole range of contracts of different vintages with different prices. Although we sort of rent them from ourselves, you know, there are many of us who are renting PCs and laptops from ourselves at prices we wish we had not committed to, but we rashly did, but we could get a better deal were we to re-sign a contract today.

- Q Dr. Williams, isn't the more meaningful assessment to consider to what extent Grid were actually able to set the prices in the MSAs, compared to what might be seen as a competitive level, or what is out there in the market at the time when the MSAs are made. That is, after all, what we are concerned with in this case whether there was abuse in relation to the setting of those terms. A. When assessing the issue at question, you obviously have to compare the prices actually set with some meaningful benchmark. I think I have just given my full reasoning as to what I believe the reasonable benchmark is, and I am not tempted to deviate from the view I have just given.
- But you accept - and perhaps this, in a sense, is a matter of fact rather than anything else -that MSA prices were actually higher than the CMO prices that were on offer in the market A. I am aware that there is some factual debate at the time when the MSAs were made. about this matter. I need to be clear here about my role. I am a professional anti-trust economist and I am trying to give insights about this case. I am aware of the basic factual matrix. I am also aware there has been some discussion on that. I am not involved in those calibrations, and therefore cannot accept the proposition that's just been put to me.
 - Q The third feature that you have mentioned as demonstrating that Grid was not dominant is the outside option for the customers of obtaining meters from the CMOs. A. Yes.
 - Q You deal with that in paras. 42 to 43 of your first report, starting at p.874. Now, you do recognise and I am looking particularly at your para. 43 of your first report that there are logistical constraints on the pace at which Legacy meters could be replaced so that replacement of the whole population could only occur over time. A. Yes, I am aware of that.
- Q That is a factor that clearly limits any countervailing buyer power, does it not? A. One
 needs to be quite careful about what one is saying here. I have argued that because of
 sunkness, etc. that National Grid is in a weak position because if its meters are ripped out,
 it's in a weak bargaining position. To the extent that its meters can only be ripped out over
 time, then clearly whilst its meters are being ripped out, it is able to get the regulated terms.

So, it is true that if it's meters are ripped out slowly, it's able to get the regulated price, but actually the way to think about it is more the price it needs to offer to the other side, which is basically that the other side can get the new CMO price from meters as they're replaced, but, of course, has to rent the Legacy meters whilst they're being ripped out at the regulated price. So, in a sense, the price they need to offer is a blend of these two. Provided any meters are being ripped out, that blended price will always be below the regulated price, but I absolutely accept that the slower that you rip those out, the closer the blended price will be to the regulated price. But, as long as there is some ripping out, the blended price will still always necessarily be below the regulated price.

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Q I am not looking for the moment at your notion of blended price, but, Grid, I think you would accept then on that basis, was a must-deal partner for the gas suppliers for some A. I think the proposition that is being put to me is that unless you rip considerable time. out all of the meters straightaway, then obviously there are National Grid meters that, if you want to serve your customers, you're going to have to rent. Now, at this point one needs to be careful about the phrase 'must-deal'. In the competition policy world, the word 'must-deal', you know, has a particular meaning here, which is that you have no choice but to deal with that party. There are two, however, important aspects of the situation here, which is that it's a one-on-one relationship. So, basically, yes, it's true that at no. 15 Arcadia Avenue that the gas company who has the contract with Mr. Smith who lives there needs to rent that meter, if that's one of the meters they can't rip out. But, the other way, as I explained yesterday, is that it's also true that British Gas is a must-deal for National Grid. So, it's actually a two-way must-deal, not a one-way must-deal, and that takes it from, if you like, a unilateral power to a bargaining set-up, as we described yesterday. So, that's one important element. The second point is, of course, that if somebody is a must-deal partner, the natural interpretation of that language is that they can charge you what they like - or, at least extract all of the value from the relationship. But, of course, here you have got the regulated price. So, it is a two-way must-deal but where one of the parties, National Grid, has a constraint on the limit to which they can exploit that arrangement.

Q Another way of looking at it would be that Grid was able to use to its advantage its huge
installed Legacy base to transfer risk to the suppliers. Yes, it had to lower its rental prices
to some extent, but it was able to use that huge installed base that it had to transfer risk to
the suppliers and to get a long-term deal - that was extremely beneficial to it in those
circumstances - indicating very substantial power on its part. A. There are two elements
to the question which has just been posed to me. First of all, I think the phrase I heard was

that National Grid were able to use it to their advantage. Now, I have already said that if their meter is to be ripped out straightaway, obviously they'd be in an extremely weak position, and to the extent they can't be ripped out straightaway the weakness is not as bad as it would be as if it were ripped out straightaway. So, when I hear the phrase 'used to their advantage' I believe the correct reading of this would be 'used to lessen, but not remove, their disadvantage'. Sorry, could you repeat the question? There was a second part of the question.

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I suggested to you that that involved an exercise of substantial market power by National Grid -- or the ability to do so. A. Sorry. Could you repeat the original question please? Is that possible?

The original question was that I was suggesting to you that there was an incumbent with a Q 12 very large asset base, able to use that to offer an across-the-board deal that involved transfer 13 of the risk to the suppliers, and then, as a result, a beneficial long-term contract for Grid. 14 The second part was that this involved the ability to exercise substantial market power. 15 A. Thank you. So, it was the transfer of risk phrase that I was referring to. I think this is a 16 mis-characterisation. Imagine a world where there was some risk out there - you know, that 17 a tornado will blow down your house -- That's an exogenous risk. If, currently, I bear that 18 risk and I say, "Can we pass this risk on to you" that is a transfer of risk and presumably 19 you would only let me transfer this risk from me to you if some money went with that risk. 20 Now, here, one needs to think about the risk in a very different way. The risk that one is dealing with here is not some exogenous risk. It is actually the strategic risk that British 22 Gas, or the equivalent, would actually threaten to rip these things out, even though it's 23 inefficient in order to use that, as we have seen, as a bargaining lever to drive the price 24 down. As I think I have already indicated, essentially the basic P&M terms, although they 25 can't be objected to in terms of their price, are actually inefficient contractual structure 26 because they generate inappropriate replacement incentives. So, yes, there is an 27 inefficiency in-built into the P&M contract. I argue that the MSA contract corrects for the 28 in-built inefficiency in that contract, and that when you move from an inefficient contractual 29 form to an efficient contractual form, the efficiency deriving from that is, if you like, a gain 30 from trade. So, in this case what happened was not that a risk of Size X was transferred from A to B, but that actually the risk which is a consequence of that inefficiency 32 evaporated. So there wasn't actually a transfer of the risk. There was, however, a transfer 33 of money. In the previous case I say you transfer the risk and you need to give compensation for that. In this case the risk evaporated because of a move from an

inefficient to an efficient contractual form, but of course why were British Gas doing this?
Answer, because by threatening to go out they could threaten National Grid with stranding.
National Grid basically took that into account and made the payment over. So, no, there was no transfer of risk; but, yes, that was used as a lever to extract the reduction in price terms that we observed in the market.

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- Q Which assumes that there was the kind of inefficiency that you have referred to in the P&M terms in the first place? A. As I have always said, the P&M terms, which do not have appropriate payment completion mechanisms, although the price in them is obviously unobjectionable, have this inbuilt inefficiency, yes.
- 10 Q You have made reference in your report also to the inability to guarantee the recovery of 11 sunk costs through the MSAs. What I would suggest to you is that the fact that you may be unable to recover your sunk costs is not going to mean that you are not dominant, if, in fact, 12 13 you are able to set your prices above the relevant benchmark, the market benchmark? 14 A. Clearly, I think we have already agreed that the primary element of dominance is 15 whether or not the party can raise the price above whatever is the relevant competitive level. 16 I think we've disagreed about what that relevant competitive level is. Basically, my claim 17 is that you are dominant if you can't raise your price above the relevant competitive level. 18 However, in this case we're saying the relevant competitive level actually is the return on 19 the sunk costs in the regulatory asset base. So in this case, in fact, you are not dominant, 20 but that is a special feature of this particular case.
- Q Would you accept that if an undertaking were able to set prices above the competitive level,
 the fact that it might not recover its sunk costs would not indicate that it is not dominant. I
 am sorry, there are a few double negatives there, but you see what I mean. A. I think I
 see what you're getting at.
 - Q Leaving the debate as to where the competitive level is. A. I think this is really just a definitional point, and, yes, I believe that dominance is ability to raise price above the appropriately defined competitive level, and where that is compared to sunk costs would then determine the answer to the question.
 - Q Moving on then to what you say about normal competition in your second report it may be worth just having that open and looking, first, at para.93 on p.3090, where you say that you agree with certain statements by Professor Grout, as far as they go:

"In summary, given the sunk cost nature of Meter provision, I would indeed expect to see payment arrangements that either involved up-front payment or some contractual provision that guarantees recovery of the total of providing the Meter,

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including the sunk costs of procurement and installation, <u>irrespective</u> of the period of time the Meter is eventually used for."

Just to pick up one point, would you agree that Professor Grout does not actually say that he would expect to see provisions that guarantee full cost recovery in normal competition?A. I can read through the paragraph above, and I'm guessing that doesn't say that. May I take it that he doesn't?

- Q You can, that is what I am suggesting. I am suggesting that he refers to a degree of protection. Are you prepared to accept that? A. I am prepared to accept, on my quick reading, that Professor Grout doesn't say it, but I would say that in a market where one's making relationship specific sunk investments, if one does not have a strong expectation of it, you either have a guarantee of it or one might only have an expectation of it, but where there's at least as much upside as downside, and normally only where the risks there exogenous risks rather that endogenous strategic risks. Professor Grout says what Professor Grout says.
- 15 In fact, perhaps an obvious point, but look at the CMO contracts in this case. You are not Q 16 going to get a guarantee of recovery of your costs in relation to everything. Take, for 17 example, faulty meters that, as you probably know, can be replaced free under the CMO 18 contracts? A. I have not studied the CMO contracts in extensive detail. If I can offer a 19 perspective as an economist, suppose one signs a contract for delivery, and the risk for 20 repairing faults stays with the vendor rather than with the customer, then if you know that 21 you've got a 10 per cent likely failure rate then it's true that you get no guarantee on the 22 individual TV set, or whatever, but if the risk remains with the vendor you will make sure 23 that you mark that appropriately in the price at which you sell. So no guarantee to the 24 individual but if you're retaining the risk there, it would be very unusual for them not to 25 factor that in.
- Q Looking at risk generally, your ability to recover your costs, your ability to deal with risk, it
 is all going to depend on the competitive conditions in the market, is it not? There is no
 such thing as a guarantee in a competitive market? A. I think that's right, yes.
- Q Otherwise, as Professor Grout says, it would all be a very one-sided bet? A. I would need
 to be shown the context of that particular comment.
- Q It is para.72 of Professor Grout's report, WS4, tab 9, p.2512. A. May I just read it,
 please?
- Q Yes, of course. A. Yes, I can comment on that paragraph. At the beginning he says that
 you need to be confident that on average you will be able to cover your costs. So this says

suppose your costs are 100, then it is true that you will sometimes go into a market thinking 2 you might make 95, as long as there's an equal opposite probability that you'll make 105, 3 assuming here risk neutrality. So I accept that point. The point about the one sided bet, it's 4 true that if, in fact, you could always get 100, so you would never get 95, you'd always get 5 at least 100, but you'd sometimes get 105, it would be a one sided bet, though I would 6 expect that to be competed away. Of course, there is a huge difference between investment 7 in a regulated context and investment in a competitive context here. In the competitive context there are the upsides and the downsides, you balance those risks. If, however, those 8 9 investments are made at a particular moment in time where there's a regulated context, 10 there's basically no upside. For example, to go back to my thought experiment, if there had 11 been some upside for British Gas in the period between their investment and deregulation 12 this type of analysis might have applied, but there wasn't.

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- 13 A. National Grid, sorry. If there had been THE CHAIRMAN: British Gas or National Grid? 14 some upside between the moment of investment at the regulatory point and the moment of 15 deregulation, one could accept, okay, they'll make this investment because there's some 16 upside and they'll bear some of the downside of it. But again I also stress there's a crucial 17 difference between what I call exogenous risk this endogenous strategic risk. The 18 exogenous risk is hopefully swings and roundabouts and you hopefully win as many as you 19 lose, but making investments when you are putting yourself at the mercy of the customer in 20 a relationship specific sunk investment actually is the sort one way bet that I think Professor 21 Grout is talking about, but the other way round where you'd be insane to put yourself in that 22 position.
 - MISS CARSS-FRISK: Just picking up your point about the huge difference between the regulated and the competitive context, and referring to whether there were any upsides, surely there is a very great deal of upside to being a monopolist with, in effect, a guaranteed revenue stream in that situation which was Grid's position? A. The upside I'm talking about is upside compared to the normal competitive price, and basically one wouldn't normally expect to get that in a regulated context.
- Paragraph 94(d) of your second report, p.3091, this is under the heading "Payment 29 Q 30 completion and efficient replacement incentives". A. Yes.
- 31 Q This is, as I understand it, really your central thesis about how the MSAs promote an 32 efficient market outcome, they provide for payment completion, prevents wastage of 33 working meters, and that is an efficient market outcome, roughly that? A. Roughly, but 34 one needs to be clear here. In essence because they provide efficient replacements in my

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1		judgment, that means that there will not be wasteful duplication but the reason why I
2		believe that the payment completion family of contracts, of which the MSA is one, is
3		precisely because the economic price that they set is, in a sense, almost first best optimal.
4	Q	So any contract that provides for payment completion generates efficient replacement
5		incentives and it would be misguided to ever call that "foreclosing"? That, as I understand
6		it, is what you are saying and I am referring particularly to para.106 here? A. Essentially,
7		focusing on the general point first of all, and then I will turn to the paragraph, if you have a
8		payment completion contract then the analogy here is that the incentives are as under
9		ownership. In fact, in a sense if you have a payment completion contract it almost is a
10		transfer of ownership and therefore basically, yes, I do believe that the family of payment
11		completion contracts are highly efficient. One never quite says "never", but I am struggling
12		to see the circumstances in which the contract would not be efficient if it were a payment
13		completion contract. I have been invited to look at?
14	Q	106 of your report at p.3093? A. Can I just read it for a moment, please?
15	Q	Yes.? A. (After a pause) Yes, sorry, is there a question.
16	Q	Just linking that, before I ask the question, to para.108:
17		"108. Arguments about the precise form of supply contracts and whether they do
18		or do not foreclose entry must be viewed against the backdrop of a situation where
19		replacement of good working Meters is inherently inefficient"
20		So replacing a working meter is inherently inefficient - yes? A. No.
21	Q	I thought that is what you said in para. 108? A. In 106 I make a claim about payment
22		completion. In 108 the point I say here:
23		"Arguments about the precise form of supply contracts and whether they do or do
24		not foreclose entry must be viewed against the backdrop of a situation where
25		replacement of good working Meters is inherently inefficient"
26		Now, that is not a logical claim, that is a contingent, factual claim. Obviously there are cost
27		functions of new meters, etc. functionalities of new meters under which replacement of
28		existing meters would be economically efficient. However, the point I am making here
29		goes as follows. It says that we are in a world where we have a legacy stock of meters. The
30		meters that are currently on offer to replace them are shinier but dumb meters which do not
31		have a materially additional functionality. So in that world, because the probable
32		functionality gain appears to be modest, but because there would be duplicated capital cost
33		were one to enter, then basically it is my conjecture – and I have heard various things in the
34		last days that other people may also form this view – that it is most likely (very likely

indeed) that it is not efficient to take a good working meter off the wall to replace it by something else essentially the same.

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So what I am saying here is obviously we are going to have to look at all the details of the contracts, etc. to form a view about whether or not there is foreclosure, but if we are focusing on what we have sometimes called "anti-competitive" foreclosure, in a sense suppose one forms a view that some aspect of a contract has some incentive properties that are not quite right, you then say so you would need to show that under that contract replacement will not take place, but to show that there is anti-competitive foreclosure you would have to say that were that contract absolutely perfect replacement would take place. Since I am saying that, given the cost conditions, etc. of the market, I do not actually think replacement would take place under any scenario then in fact if you think there is foreclosure you have probably got it wrong; even if there is some minor distortion in the contract it is very improbable that actually there is anti-competitive foreclosure when in fact replacement is probably not the efficient thing to happen anyway.

15 Q Well looking at why it is not the efficient thing to happen, are you not assuming here that 16 there is going to be payment completion in the contract? That is the assumption you make 17 when you assess the efficiency or not and the incentives to replacement? A. I have seen 18 similar in the skeleton. What is my job here? There is a contract before us in the market 19 which is a payment completion contract. My job, as an economist here, is to help think abut 20 the following question: does that payment completion MSA contract foreclose? Or at least 21 that is one of my questions. Now, that contract is a fact on the market. I have been asked: 22 am I assuming payment completion? There are two different ways I can be assuming things 23 here. One is am I assuming that that contract is a fact in the market? Yes, I am, that 24 contract is a fact in the market and I am taking it as a given and trying to analyse its effects. 25 There is a subtly different concept of assumption which is sort of creeping in here, which is: 26 Am I assuming that payment completion contract, though a fact on the market, is an 27 admissible contract which, in this context would basically mean that it does not violate 28 competition law. My point here is the following: In a certain sense at this stage of the 29 analysis one is, why? Because the question before us is: does this contract which, as a 30 matter of fact, exist, foreclose? At that point in a sense it is innocent. I then analyse its 31 effects. My claim is that when you analyse the effects of that contract you find that it does 32 not distort the placement incentives. So no, I am not assuming in the normative sense that it 33 is an admissible contract, I am starting from the assumption it is a fact and then, if my 34 analysis is correct, showing that it is an admissible contract.

Q Okay, I will put it slightly differently, your analysis as to incentives for replacement proceeds on the basis of the payment completion contract being in place? A. It proceeds on the basis that, as a matter of fact a payment completion contract, broadly speaking, is in place.

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- Q Whether we call it an assumption or not, right. So you say on that basis, going back to para.106, it would be misguided to brand a contract which provides, you say, socially efficient incentives, as inconsistent with normal competition - yes? A. Yes.
- 8 Q So you are really saying regardless of how anti-competitive such a contract may be in the 9 sense of its effects on the competitive process, because it results in socially efficient 10 incentives, it is acceptable in competition law terms? A. I understand the question that is being posed to me but believe it is fundamentally misguided. As I understand it, what is being put to me is – I am claiming that when you analyse the payment completion contract 12 13 it leads to non-foreclosing incentives, so in that sense where the question is: is there 14 foreclosure? This is, on my view, not an anti-competitive contract. 15 Now, the question I got was: aren't you assuming that this thing is okay, no matter how 16 anti-competitive it is?
- 17 THE CHAIRMAN: Is this the point, that you accept, I think, that if there is replacement of 18 meters, incentivised by the fact that the existing contract price is higher than the CMOs' 19 price, that should be avoided or at least it is not inefficient to prevent that from happening if 20 the reason why the price is higher is because it includes payment completion? A. No, no, 21 it is slightly different from that. I make the claim that if you have a payment completion 22 contract it generates appropriate incentives - efficient incentives. Obviously we can debate 23 that, but let's assume that's correct. I am then saying that suppose you have that contract in 24 place, and then suppose that when that contract is imposed upon the market some entrants to 25 that market do not get to make sales that they would perhaps have hoped to have made. 26 Okay? My claim is that any loss of hoped-for business that any entrant suffers, in a world 27 where the incentives for replacement are at the efficient level, is very for the entrant but is 28 not in any economic meaningful sense anti-competitive foreclosure. That is actually the 29 outcome that the market wants.
- 30 MISS CARSS-FRISK: If the rentals were set at the level that is in the Legacy MSA, those rentals 31 are still higher than are available from the CMOs. So, if you had the Legacy MSA rental 32 rates and you had no PRCs, say, there would still be an incentive on the gas supplier to take 33 out the existing meters and replace them with the CMOs meters because those are cheaper. 34 Now, I thought what you were saying was that it is not foreclosure to add in a contract term

which prevents that from happening because to remove that incentive that is generated by the difference between the MSA rentals and the CMO rentals -- to remove that by your other contractual is not foreclosure because that difference represents the payment A. No. There are elements of that in what I'm saying, but completion by National Grid. I think it's probably best if I try and re-put to you what I am saying. I'm saying that under a payment completion contract, the incentives are, absent externalities, absolutely efficient incentives, i.e. basically under that contract entry may or may not occur, but if it occurs it will occur because the entrant is genuinely able to compete on the merits and offer better. So, if those incentives exist - which I claim they do if it's a payment completion contract entry will occur precisely when it should occur, and will never occur when it shouldn't occur from the standpoint of an economist of an efficient outcome of the market. Now, P&M contracts are inefficient. Why? Because they do not provide for payment completion, they generate excess incentives. My characterisation - if I may offer my own characterisation of what this case is about - is that one had a set of contracts (the P&M) where although the price was inoffensive, the incentives for replacement were artificially skewed towards inefficient replacement. We heard various debates about various people believing that in addition to myself. What happened was that the market saw that these inefficient contracts were in place; the parties negotiated a better contract that removed the inefficiency, albeit it passing much of the benefit to British Gas; and moved us from a world where there were excess inefficient replacement incentives to perfect incentives. Now, in that process any entrant who was looking at the P&M-type contracts and thinking, "How much entry could I get under the P&M contracts?" would, quite naturally, be hoping for quite a bit of entry. It is true that once the market found a way from the inefficient contract to the efficient contract, that that hoped-for entry opportunity disappeared - and rightly so. One can understand why they are frustrated here. But, basically, that is what happened - they had inefficient excess incentives and the market found a way to correct those and at that point the incentives essentially were such that that entry was not going to happen.

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Q So, coming back then to the point you make in para. 106, you are saying, are you not, that in
this market with perfect incentives that you postulate, even though it may have the effects of
denying entry to would-be competitors or restricting competition by those who are in the
market at all, you are saying that that is effectively irrelevant for competition purposes
provided that you have what you call perfect incentives in place. A. I think I am saying
that. I think that, in a sense, there is a view that I think may be underpinning what I am

hearing here - that more entry is better than less entry. Now, my view is that one has to have a standard. I believe that efficient replacement incentives is the only standard I can think of as a sensible standard. If one says that it is foreclosing - anti-competitively foreclosing - in a meaningful competition policy sense of entry that does not occur on that standard -- I will strike that sentence - too many negatives there. If you have that standard, there will be entry where efficient. If it is argued that to prevent inefficient entry in this way is an anti-competitive abuse (a) as an economist I find that very strange, but I would also point out the following: which is that I don't know where you stop. That is basically, suppose you should allow one more meter to be replaced -- you should change the contract so that one more meter would be replaced in the efficient level. Okay? Well, what about that? That, on that standard, would also be an abuse because, of course, you could have a contract which allowed two more meters than efficient to be replaced. But, that would be no good because then, of course, that contract too would be anti-competitive because there would be another one that would allow three to be replaced. At that point, essentially, you just say that you have to allow everything to be ripped out. If that is the standard you adopt, in addition to it being totally inconsistent with everything economists understand about, in a sense, efficient outcomes, it is also not an implemental test simply because there is absolutely nowhere where it stops until, well, as far as I can see, a firm which is dominant and effectively has to cease to exist.

Q Dr. Williams, just going back to the starting point of this about efficient incentives and the need for payment completion, that is really, ultimately, in order to prevent replacement of a working asset -- of a working meter. That is the starting point of the analysis, is it not?
A. It is not to protect at all costs the working meter, but to protect a working meter where there is no superior meter which would be more efficient to replace it. Clearly, if a meter is not working it does not really apply. So, it is working meters that offer better value than any plausible replacement, including the capital cost of the duplication, yes.

Q On this analysis, are you not effectively ignoring the economic efficiency of competitors coming in, offering cheaper prices. Why is cheapness not a relevant consideration here?
A. I am trying to unpack the question. I think there are two elements there. Cheapness has to take into account not just the marginal cost, but also the fixed cost and the basic reason why entry is not possible here is that the entrants actually have to incur a duplicated capital cost and the incumbent does not because it is already sunk. So, the first point, I think, is already dealt with.

But, there is a second sub-text to this question which I also read in some of the pleadings. This sub-text - and I hope I am not falsely characterising it - says something like the following: that there are dynamic benefits of competition. That may be true. So, the sort of story here we have is something like, "Oh, there may be learning by doing effects, endogenous technical change, etc. If only you allow people into the market, then, in a sense, costs will fall -- production costs, etc. will fall faster than they otherwise would". I think I detect that sub-text in some of the later skeleton. Now, what would be my reply to that? Well, (1) it's not documented, but that's not my fundamental problem with it. My fundamental problem with it is just, "So what?" Essentially, this is saying, "Suppose there is a positive externality, taking into account all of these factors of additional entry". Of course, we know from our papers that actually there can often be excess entry, but let's ignore that. So, let us suppose that our positive externality is on dynamics of excess entry. Now, when I say that these incentives set the efficient replacement incentives, of course, I did have a footnote where I say, you know, as one always must here, "Assuming no externalities". So, now let us remove that assumption and assume that there are positive externalities of entry which I do not think has been demonstrated, but I am going to assume it..

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18 THE CHAIRMAN: That must be the basis on which it was decided that this sector should 19 become open to competition rather than be a regulated sector. A. I am assuming that, in a 20 sense, one is in a discovery process to find out whether they are there. Then I come back to 21 competition policy versus regulation. If there are dynamics in the market, etc, in particular 22 if there are positive externalities in the market of this nature, then basically what do you do 23 about it? Well, the first thing you do as a matter of public policy is you appoint regulators 24 or governments to subsidise those positive externalities. Secondly, even if you think they're 25 here, there may be other participants, like makers of smart meters or the people like the gas 26 companies who would be able to get rid of all their meter reading staff who have strong 27 incentives to internalise them. The fundamental point is the following: suppose there is a 28 positive externality in this market that is not internalised in the position that I've written 29 down, are we saying it is foreclosure or any form of market abuse for a firm to not 30 internalise positive externalities. If there are positive externalities there will be a social 31 deficiency. If you can find some market or plan a way to solve them, great; but if we can't 32 to say that it is incumbent upon the dominant firm to solve all positive externalities or 33 negative externalities in the industry seems to me to be - and this is almost a judgment on 34 the philosophy of competition policy – a serious extension of what competition policy is,

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and re-interpreting competition policy as implementing the outcomes of the regulatory/social planner.

MISS CARSS-FRISK: Could it not be something much more simple than that, which is that an undertaking in the position of Grid must be careful not to enter into foreclosing contracts that, on your view, would be socially efficient, but may, in fact, prevent that which competition law is surely all about, which is to achieve efficiency through a process of A. No, I disagree strongly with what I've just heard. There are various competition? elements of it. The first element is that part of the special responsibility with dominant firms to internalise externalities – I'm not a lawyer, but that seems to me not to be outside the scope of competition policy. The other point is this, actually it's not even foreclosing. Suppose you have a market where - let's take a simple example - there is a learning by doing effect. Basically when you go into a market and you gain experience in that market, you become more efficient. What is the normal market pricing mechanism that occurs when there is a learning by doing process? Answer, the firm that benefits from the learning by doing actually discounts its pricing. In many cases it's actually willing to make a loss in the early period in order to get down the learning curve and then will reap the benefits later. In fact, it's not even foreclosing because if these effects are present the parties who will benefit from them actually will be willing to lower their prices even more to get into the market. So, one, I don't believe its incumbent upon a dominant firm to internalise these; but I even dispute that it is foreclosing once you realise how, in the presence of those dynamic effects, the rational strategy of the firm that might benefit from them will actually change. So I dispute it's even foreclosing.

Q I see. Looking at your straight sale analogy, which you refer to in para.102 of your second report in particular, p.3092, a benchmark case. A. This is also in my annex from 2006 as well, but yes, 102.

Q I am sure it is, yes:

"To see why payment completion ensures efficient replacement incentives, consider the benchmark case of a payment completion contract, a straight sale."At para.105, as I understand you, you are suggesting that a long term rental contract with payment completion would be analogous? A. Yes.

Q Would you accept that there are some differences between a straight sale and a rental. For a
 start, an obvious one perhaps under a straight sale the purchaser gets all the benefit of the
 asset which does not actually occur in relation to rental? A. It is clearly the case that
 there some legal differences between straight sale, long term lease. People talk about

buying a house in Chelsea, but in fact they're just buying a long lease and it's actually the Duke of Westminster who ultimately owns it, etc. So I agree there will be minor differences between these. When I say look at straight sale as the analogy here, I am talking about the fundamental incentives for replacement under the payment completion contract and a situation where you own the asset. I am not disputing there will be some minor differences between them, but in terms of the fundamental incentive properties my argument is that the fundamental incentive properties for payment completion contracts, such as the MSA, is almost identical to that under ownership. I mention this simply because, to the extent that anybody is still trying to understand why a payment completion contract sets correct incentives, once one recognises the almost perfect analogy to ownership, it is much easier to grasp that my incentives to upgrade my television are not in any way distorted if I own my television.

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13 You say "almost identical to ownership". Looking at another difference, I would suggest to 0 14 you a difference, in a rental relationship of course it is an ongoing relationship where your 15 replacement incentives may be influenced by that ongoing relationship – for example, by, 16 say, increased or indeed decreased service provisions in connection with the rental? A. I 17 regard this as just a minor detail around the outside that does not affect the fundamental 18 point that the replacement incentives under an MSA and under ownership are essentially the 19 same.

THE CHAIRMAN: Another difference though, with the rental the payments continue after, sometimes long after, payment completion has happened? A. It's true that sometimes if you buy something on hire purchase you end up paying ----

23 0 I am not talking about hire purchase, I am talking about in these contracts. We have seen 24 that the gas meters stay on the wall for more than 18 years in many circumstances, and 25 rental continues to be paid. A. That is where I would come back actually to a point that 26 was raised by Professor Grout, that one has an expectation on average of recovery in these 27 things. Obviously meter life is an uncertain science and some live longer than others. In a 28 sense, some you'll get more, some you'll get less. The relevant question therefore as to 29 whether there has been over-recovery is to look at the portfolio as a whole. It's my 30 understanding that it's not alleged that there's over-recovery on the portfolio as a whole. 31 Even if, for example, one particularly long-live meter might have been a good investment, 32 there were others that weren't. So basically I believe that the question of over-recovery has 33 to be looked at on a portfolio basis.

MISS CARSS-FRISK: Another relevant difference, I would suggest, between ownership and rental is that in relation to rental you cannot assume, can you, that the rental is actually fixed at the time of supply regardless of competitive considerations as they may develop during A. I think, if you have a rental contract, for goods the continuation of that relationship? where there is a relationship specific sunk investment that actually the rental will be fixed. In the case of rental of goods where there is a much more fluid market in both directions, then one may well find that you just rent it at the current spot price, but that is in a wholly different factual matrix from where there is relationship specific sunk investment. Q So there are some differences, you would accept. Coming back to ---- A. Excuse me, you said there were some differences that I would accept. I think I've said that I accept there may be some legal differences, but I do not accept there are differences that affect my

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fundamental economic point. 13 All right, so be it. Looking at your notion of efficiency again, of course payment 0 14 completion would not be the only way of avoiding what you have described as an 15 inefficient outcome, i.e. replacement of working meters. You could avoid that by 16 competing on price, could you not, if that is going with the idea that it is inefficient to 17 replace a working meter? A. Right. First of all, a couple of things here. One, you've got 18 the vice that this is a different world, but I'll describe this now. Essentially, we talk about 19 payment completion here and there seems to be a misunderstanding that this is an objective 20 of National Grid. National Grid's objective, I would guess is profit maximisation subject to 21 non-breach of competition law, and I believe I have even seen documents to suggest that 22 that was the aim. So setting of efficient replacement incentives is not the objective of 23 National Grid, it is profit maximisation subject to breach of competition law. 24 So if one then were efficient replacement incentives then it is true that if you have payment 25 completion there is a whole family of payment completion contracts. All that says is that if 26 the rentals add up to 100 the PRC is 100, and if the rentals add up to £31, the PRC is £31. 27 There is a whole family of payment completion contracts. The view that is being put to me

here says – and there are some maths that shows the inequality that there is a price to which you could lower the spot price such that replacement would not take place and you would still have efficient replacement. I do not disagree with that. That is really just another version of saying there is a family of payment completion contracts. But there are two fundamental points that one now needs to make.

33 First, for any price reduction on a spot contract that is put to me, to say "Actually, couldn't 34 you just do that?" The first thing you need to do is to check whether that is actually profit

maximising, and the answer is it is almost certainly not, because given the way that rentals have come down, a better strategy from the point of view of profit maximisation is simply let them rip the meters out and take the regulated price. Obviously, you also need to do a quick check that that does not breach competition law but it is setting a price, a regulatory price and clearly does not. The first thing is that the alternative that is being put is in fact not profit maximising and there is a superior strategy from the point of view of National Grid that is (a) profit maximising; and (b) in my view competition policy compliant. So first, that is not a relevant scenario to compare it with, but now the second fundamental point. Let us imagine that in fact the price is put to me that would, in fact, generate efficient replacement incentives, would in fact be profit maximising – well they might have done it, but let's suppose not withstanding that, that exists, what are we saying? Consider the set of strategies available to National Grid, the complete set of commercial strategies in this arena, and then say: what are they allowed to do? Well, basically they must not breach competition law and crudely characterising it we can say there are the exploitative abuses and there are the foreclosure or exclusionary abuses. So clearly, they must not adopt any of the strategies that generate exploitative returns. Also, they must not have anything that is foreclosing, and obviously I have argued that the MSA is not in that set either. Then you are left with the set of competitive strategies that are not excessive, which I

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believe is not alleged, and on my analysis the ones that are not foreclosing which again I am saying is not the case for the MSA. Then you have everything else.

At that point we are saying in that set there is the strategy adopted by National Grid, which does not, on my analysis breach these conditions and then, although I do not think it is relevant, there is the strategy that is being put to me by counsel. At that point what are we saying? My interpretation says that under regulation, the regulator can go – in fact, they can go anywhere they want, probably not into the breach of competition law section – and choose any point they like in that space, that is what regulation is.

What is competition policy? Competition policy says you have the strategy space, you must not exploitatively abuse, you must not exclusionary abuse, but apart from that you can choose any strategy you like in the remaining set. So even if it were, which I deny, that there are two points in this set, the National Grid strategy, and the one that has just been put to me, which I do not think is in this set because it is not profit maximising, I believe it is a mischaracterisation of competition policy to say that one has not chosen the one that is

preferred by the regulator is an abuse of dominance, even if it would be entirely free for the regulator, under his regulatory powers to impose that outcome.

Q Well my question was simply whether it would not be possible to avoid what you would characterise as inefficient replacement by a policy of lowering price, and you started off by saying "yes" to that and that was my question? A. If I may clarify ----

Q I think you have done? A. Theoretically "yes", but it may or may not be profit maximising. I believe it is not, but even then I claim that would not make it an abuse.
Q It is not profit maximising because there is the alternative of the P&M contract and it is less profitable than that? A. Yes, in a world where in a sense t he price has come down, say, 30 per cent and they can only rip you out – we can haggle about whether it is five years, eight years, or whatever – they can only rip you out at that pace, basically in every year you are only losing 10 or 12 per cent of your base, therefore you may as well take the regulated price on that rather than cut your price all the way down – profit maximising, totally competition policy compliant.

- Q Still on your thesis about payment completion ensuring the efficient outcome, it would seem to follow, would it not, from that thesis, that no matter how inefficiently the costs of the relevant undertaking have been incurred, so long as all that happens is that you get payment completion in relation to those costs. There is nothing objectionable about such an arrangement, it still achieves efficiency, does it, on your view? A. There are two elements there. First, unless I am misunderstanding you, it seems to be repeating a point that the payment completion is of costs incurred, whereas payment completion when I use it, is always about payment completion of the agreed rentals. That is the first observation. The second observation is the following: if, in fact, the National Grid had incurred costs inefficiently then there may be a very interesting and separate inquiry we could have into that, etc. My understanding is that that is not what is alleged in this case, but it has nothing to do with the foreclosure issues in this case.
 - Q I see. Would it follow from your thesis that no matter how long term a contract that sought to ensure payment completion in the way you have described, and no matter then how exclusionary its effects, it would still be efficient and therefore not a abusive in your view?
 A. I should point out that the question assumed that it was exclusionary, which is a conclusion to which I have argued and denied, so just note that first in the question. Then secondly, the real substance of a question was saying: "What if this contract is very long, and the answer is: actually, if the incentives it sets at any moment in time are not

1		foreclosing or exclusionary then actually, from a point of view of foreclosure and exclusion
2		it does not matter how long it is, ownership lasts until the thing drops dead.
3		Now, of course, if in fact one has a very long run contract, etc, if you had a 100 year
4		contract at a rental that was a 20 year rental you might well, under that contract, way over
5		recover, at which point of course there would be an excessive pricing issue, but I believe
6		that is not the issue before us.
7	Q	Yes, thank you. Moving on to something slightly different in your second report, paras 114
8		to 115, p.3094. You say:
9		"114. First, as I show in section 3.2, there has in fact been competitive pressure
10		on National Grid's rental charges from the threat of replacing Meters. That
11		pressure manifests itself both in gas suppliers switching volumes to CMOs and
12		National Grid reducing rental prices below the regulated level across the board,
13		responding to the threat of Meter replacement. Thus the market exhibits both
14		actual replacement and the disciplines of threatened replacement on pricing."
15		115. Accordingly, since the Legacy MSA contracts to which Prof. Grout objects
16		have the same benefit – competitive pressure on rentals – that he sets out as a
17		benefit of age-related contracts, his argument as to why the Legacy MSAs do not
18		constitute normal competition does not stand.
19		So your starting point here, as I understand it, is you say there has been some competitive
20		pressure on Grid to lower its rentals in the MSAs, is that right? That seems to be what you
21		are saying in para. 114? A. That is what I say and what I believe to be the case.
22	Q	You then say therefore this provided the same benefits as the age-related approach that
23		Professor Grout refers to (para.115)? A. No, can I clarify here. My fundamental
24		argument as to why these contracts are not foreclosing are the arguments I have rehearsed at
25		some length. All I am saying here is the following. Professor Grout has a view that age-
26		related contracts would be better in a meaningful way, etc, and in the paragraph I quote he
27		says that they allow them to benefit from competition through appointment of CMOs,
28		competitive pressure on rental charges, etc. He is putting that forward as a benefit. As I say,
29		my fundamental defence of why I believe the MSA contract is not anti-competitive is what
30		I've given. I am here merely observing in a responding way that even if one ignores
31		everything I've said previously and believes the argument of Professor Grout that these
32		other age-related contracts are better, and pointing out that some of the benefits that he
33		attributes to his view are in any case present from the MSA contracts and therefore, in a
34		sense he is over-accounting for the benefits of his view compared to the MSA contracts.
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1 THE CHAIRMAN: There is another way of saying that: you would maintain that the MSA 2 contracts were not foreclosing, even if they had allowed for payment completion up to the 3 total net present value of the rental. We know that they have not achieved that. A. No. 4 My point about payment completion contracts not being foreclosing is payment completion 5 at any level of rental that has been agreed. Now, this is a fundamental and slightly subtle 6 point. Let me take an absurd example. Suppose that the rental contract agreed was $\pounds 1$ 7 billion for one meter. Okay? That would clearly be excessive. But, if in fact you had 8 agreed to rent a meter for £1 billion and then there was a payment completion term for it --9 This is, you know, what we have in the annex. Those numbers would actually cancel out. 10 So, the result that there is no distortion simply follows from the fact that the PRC does not 11 happen to equal the rentals - it is deliberately set to absolutely equal them. It's as if you've already bought it in a sense. They cancel out. That cancelling out - and there may be a 12 13 mathematical exception here for some sort of strange number - will happen whatever the 14 level of those rentals. Of course, if the rentals were way high, there'd be an excessive 15 pricing issue. But, they cancel out, whatever.

So, the argument that it is not foreclosing is completely divorced from whether or not the level of rental extracted in the MSA contracts is below, at, or above the regulated level. If we're above the regulated level, some of my earlier claims about not being able to raise prices above the competitive level would fall, at which point the argument that there is not dominance would fail. But, there would still not actually be a foreclosing effect ... There would be an excessive pricing issue potentially, but there would not be a foreclosure. Fundamental insight there of the cancelling out.

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23 MISS CARSS-FRISK: Dr. Williams, just going back to my question on paras. 114 and 115, and 24 looking again at what you say in para. 115 about the MSA contracts having the same benefit 25 of competitive pressure on rentals as he sets out as the benefit of age-related contracts, are 26 you not there ignoring his fundamental point about the age-related approach providing 27 greater incentives for suppliers to switch to the CMOs than under the MSAs, and therefore 28 providing a greater constraint on pricing? A. Right. There is an important point here. I 29 am going to say something, and then immediately add a caveat. (After a pause): The 30 analysis I have provided shows that the MSA does not distort incentives, but, in a sense, one 31 has done that at a level of an individual meter. There is a question as to whether this, if you 32 like, aggregates up into the entire contract. Now, there is an intuition that -- Let me give an 33 example. Imagine that meters are, on average, ten years old, and that the rental is £5 per 34 year. Then the PRC should be £50. But, let's imagine that, in fact, all meters are either

five years old or fifteen years old. So, obviously, one might think that on a meter that is five years old, there is fifteen years to go and so you should have a £75 PRC, and, the other way round, a £25 PRC. So, you've got this situation where on the old meter you should have a low PRC and on the young meter have a high PRC. But, because it is set at £50 it is too high for the young -- The £50 PRC is too high for the old meter - because that should be £25.

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Now, the caveat I must insert at this point is that what I am telling you is my understanding of how the contracts work, and I am doing this simply so as to alert you to this issue. But, the evidence supporting that view is due to the analysis of my colleague, Mr. Mathew, who you have the opportunity to examine later. So, I am not saying that this is true. I believe this to be true from what I have heard, but I am not a direct witness on this.

Essentially, the way it works on my understanding is that if you rip out a meter of whatever age, then what it does, if you pay a £50 PRC and the rentals are £5 per year, what that buys you out of, if you like, is ten meter rental years.

MISS CARSS-FRISK: Dr. Williams, I am sorry, but you are giving very long answers and I am not sure that this is really directed to my question which was whether you are not, in your para. 115, ignoring the greater incentives for replacement that would arise under the agerelated contract. A. The point that was put to me was that I was ignoring the greater incentives. I apologise that this is a complicated matter, but what I was in the process of explaining is that the supposedly greater incentives that I was ignoring are not in fact present. So, the line I was about to come to says that although it looks as if you sort of might have overpaid, when you pay a £50 PRC you buy yourself out of ten meter rental years. The entire glidepath shifts, and so in fact you have not got the bad incentive that is being suggested here. But, as I say, I make that point because it's in reply to a question put to me. But, ascertaining whether or not the glidepath shifts is Mr. Matthew's territory.

THE CHAIRMAN: We understand your caveat. A. I apologise.

27 MISS CARSS-FRISK: Can I put my question slightly differently on this? I understand that this 28 is between Mr. Matthew and Mr. Keyworth rather than between you and Professor Grout, 29 but assuming that there were in fact a greater incentive for replacement under the age-30 related approach, then it would not be right to characterise the MSA as having exactly the same benefit in terms of competitive pressure, which is what I understand you claim in para. 32 115. A. I want to be very careful in answering this question. I have claimed - and I 33 believe it generalises - that the MSA does in fact set those incentives. The question that's 34 being put to me is: If I am wrong and it doesn't set those incentives, and the incentives are

1	in fact ones that mean there is a distortion to replacement, do I agree that basically there's a
2	problem? The answer is that although I don't believe that arises, yes, in that circumstance
3	there would be a problem. In a sense, if our analysis is wrong, then, yes, our analysis is
4	wrong and there would be a problem.
5	Q Thank you. Paragraph 117 of your report.
6	THE CHAIRMAN: Can I just pause there. Mr. Williams, you have been going now for
7	something over an hour and a half. I know it is difficult to say, Miss Carss-Frisk, but
8	roughly how much longer do you have with this witness?
9	MISS CARSS-FRISK: Perhaps another twenty minutes. A. That's okay. I'm happy.
10	THE CHAIRMAN: We will continue then.
11	MISS CARSS-FRISK: Paragraph 117 of your report.
12	THE CHAIRMAN: Sorry. I think we will in fact take a five minute break at this point. Is that
13	convenient?
14	MISS CARSS-FRISK: That is fine.
15	(<u>Short break</u>)
16	MISS CARSS-FRISK: Dr. Williams, para. 117, please, of your second report, please, at p.3095.
17	You say, finally, concerns that,
18	"A firm can distort competition in the first instance by exclusionary conduct are
19	ultimately driven by the ability to raise prices later, after competition has been
20	eliminated".
21	Then you make the point that,
22	"The MSAs have a fixed price, and you say that this effectively prevents any
23	recoupment or future exercise of market power on these meters".
24	Perhaps a very obvious point, but even if that is so, of course, it does not stop the MSA
25	from being abusive to the extent that it may create a situation where Grid is able to exploit
26	its power in the future in relation to other meters than these ones. A. The point I'm
27	making in para. 117 is the following: the primary reasons I've given for why the contracts
28	are not exclusionary are the things that we have been discussing. However, this paragraph
29	is really almost a footnote. In many theories of exclusionary abuse - predatory pricing is an
30	obvious example - the entrant comes into the market, you have a skirmish, you drive them
31	out of the market, you get rid of them, and then you get payback. There is the obvious
32	interesting question about whether or not is or is not part of the test, etc. The point I am
33	making here is simply the following: this is just an add-on to everything else. It says,
34	"These are long-term contracts" The price at which all of these meters have been sold are

1 contracted for the remainder of life. So, any essence in which, for example, if it's perceived 2 one has distorted the competitive process, there is not going to be a payback of the 3 conventional sort that one sees in an exclusionary case (or even in extremis not for eighteen 4 years or whatever). So in a sense this is not a major plank of my argument, it's everything 5 that's come before. This is just if you have any residual concerns, this doesn't look the sort 6 of situation where this sort of exclusionary abuse has obvious plausibility. 7 So not a payback in relation to these meters, but that does not stop the potential payback 0 8 once everyone has been driven out in relation to other meters? 9 THE CHAIRMAN: You mean other than gas meters, or ----10 MISS CARSS-FRISK: No, other than the meters that are the subject of this particular contract, 11 which, as I understand it, is what Dr. Williams is actually referring to here. A. I don't 12 believe the contract is exclusionary. I believe that when new meters come up for grabs in 13 the market when there is an opportunity, e.g. for replacement, then all of the competitive 14 processes that one sees in events are likely to occur. I'm not making a huge point here. I 15 don't admit that it's the hint of the suggestion, but I'm not making a huge point here. This 16 is just a footnote saying that there isn't an obvious story here to do with "drive them out and 17 raise the price". That's all I'm saying. 18 Q For the final time, Dr. Williams, it is, however, a footnote that is confined to the particular 19 meters that are the subject of the MSAs? That appears to be what you are saying in the last 20 sentence of para.117? A. Yes. 21 Thank you. A. To the extent that in the price it's for those meters. Q 22 Q Very briefly, looking at what you say in section 4.4 of your report about age-relatedness, 23 looking particularly at para.125, you say: 24 "By and large one might find it preferable that old rather than new meters should 25 be replaced first, but suppose that this has not occurred, this might be a sub-26 optimal resource allocation but that does not constitute an obvious abuse of 27 dominance, specifically the abuse alleged is that of foreclosure, but Professor 28 Grout does not in any way show the link between poor estates management 29 incentives and foreclosure." 30 I would suggest to you that what he is showing is, in fact, a link between the foreclosing 31 effect of the MSAs, as he sees them, and the greater incentives for replacement that you get 32 under the age related approach. So he does, in fact, have the link that you claim he does 33 A. My reply to that goes back to some remarks I made earlier about whether or not not? 34 the lack of age-relatedness of the contract does actually, once you understand the shift in the

1	glide path, lead to inefficient meter incentives. So basically my comment that, as far as I
2	can see, Professor Grout has not established that that view is wrong. The point I am making
3	here is separate. It says, although, if that analysis is right, there have not been in aggregate
4	inefficient replacement incentives, then if $-$ and I personally believe this is a very complex
5	matter as to what are the right meters to rip out, etc, we heard some of that yesterday – at
6	the end of the day the Tribunal is not satisfied that the way in which policy meters, etc, are
7	selected is a first best optimal estate management process, I am saying that I believe that
8	that is a separate question from whether or not opportunities to enter the market have been
9	foreclosed. You might have the wrong meters there. That's for efficiency, etc, it might be
10	something you might want to look at, but it is not related to the foreclosure thing, that's all I
11	am saying here.
12	Q Thank you very much, Dr. Williams.
13	THE CHAIRMAN: Does either of the interveners have any questions?
14	MR. VAJDA: I do have some questions.
15	THE CHAIRMAN: May I suggest that we are very careful not to duplicate any of the matters
16	that have been covered already.
17	MR. VAJDA: Yes. Can I also say this: brevity is not a characteristic I have noticed in
18	Dr. Williams' answers, and I would ask, Dr. Williams, the questions I ask that you can be
19	brief and if the Tribunal might intervene because otherwise this cross-examination might go
20	on longer than otherwise. I am anticipating no more than 45 minutes or so, but obviously it
21	depends a bit on how Dr. Williams answers. What I am looking for is short answers.
22	Obviously if Dr. Williams feels it needs a long answer, do it, please, briefly.
23	MR. RANDOLPH: Madam, if I could just clarify my position, I have got some questions
24	planned, but they may well be dealt with by Mr. Vajda and in that case obviously I will take
25	what you have said with regard to duplication not only of Miss Carss-Frisk, but obviously
26	Mr. Vajda. I would hope very much that I would be focused, and I would just reiterate the
27	point that Mr. Vajda has made with regard to brevity.
28	THE CHAIRMAN: Thank you, Mr. Randolph. Dr. Williams, you have heard what has been
29	said. I know this is a very complicated matter, and of course you must explain your
30	position as best you can. If you can keep your answers brief that would help us to get
31	through this. A. I understand. Thank you, I'll do my best.
32	Cross-examined by Mr. VAJDA
33	Q Dr. Williams, I am going to start with a few questions on market definition. Do you agree
34	that the market definition issue here is whether new and replacement meters are in the same

1 market as Legacy Meters? A. I believe that's the question. 2 Q Do you agree that in answering that question one has to look at the facts that relate 3 specifically to Legacy Meters and new and replacement meters in the years 2002 to 2007? 4 A. In the interests of being brief, if I may, I will try and refer back to some things I've said 5 earlier. Basically, we had a discussion earlier about whether, in market definition as 6 opposed to market power about exactly whether one looks at certainly conceptual 7 benchmarks or the facts, I expressed the view there that one looks at certain conceptual 8 issues. So since we're still on the topic of market definition, the facts might have some 9 relevance, but I go back to my previous stated position. 10 Q I put it to you that in looking at market definition one looks at the position of the facts and 11 one does not look at the position in abstract. Do you agree or disagree with that? A. I 12 think I gave my views on that earlier, and I disagree with that. 13 Can I just summarise what I understand your position on market definition is at para.19(a) 0 14 of your first witness statement. In the interests of brevity I am going to summarise it and 15 perhaps you can just say yes or no. It is at p.868, it begins at 867. In a normal competitive 16 market installed meters are in a different market from uninstalled meters. That is the first 17 point you are making, is it not? A. I will, to assist the Tribunal, say yes as briefly as I 18 can, but I'm conscious that this is a complex matter and ----19 Dr. Williams, we really have to get on. In a normal competitive market are you saying that Q 20 installed meters are in a different market from uninstalled meters – yes or no? A. For the 21 reasons I stated earlier, yes. 22 Q Thank you. And the reason for that is because installed meters have sunk costs and so have 23 different characteristics from uninstalled meters – is that right? A. That's one of the 24 reasons, yes. 25 You look at it, as I understand it, by distinguishing between installed and uninstalled rather Q 26 than by reference to the date of installation. That was the evidence you gave yesterday? 27 A. Yes, that's what I said yesterday, and I agree. 28 That is effectively what you say at 19(a)? Q A. Yes. 29 Q If we now move to 19(b), I think, as I understand it, you are saying that the position here is 30 different because payment completion did not exist for NG's Legacy based meters. That is 31 what you are saying at 19(b), is it not? A. That's what I'm saying there, and that's what I said earlier, yes. 32

Q So on your view we were not – I say "we", there was not a situation of normal competition, that is, I think, what you are saying? A. Yes, I was saying that because of the transition and deregulation it was not a normal situation at that time.

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- Q I think your argument is that because there was no normal competition, it was for that reason that new and replacement meters were not substitutes for Legacy Meters? A. If I could go back to what I said yesterday, that was one of the parts of the reasoning but basically there are other parts of the reasoning which I stated yesterday.
- Q Do you accept that, as a matter of fact, in this situation of abnormal competition that you have postulated in 19(b), new and replacement meters compete with Legacy Meters? A. I accept that as a matter of fact in the circumstances following deregulation, that because of the absence of payment completion arrangements, there was a competitive interaction between them which led to the sunkness and hold-up problems that we've described at length, yes.
- 14 Thank you. If we just go to the Commission notice on market definition, which is at bundle Q 15 A1, tab 22, p.457, para. 17. You are obviously very familiar with this document. If we 16 substitute for "the parties", National Grid, the question to be answered is whether National 17 Grid's customers would switch to a readily available substitute, or to suppliers located 18 elsewhere. Applying that approach one can say in the situation of abnormal competition 19 that new and replacement meters were demand substitute for legacy meters? A. Yes, I 20 have said that in the circumstances of the abnormal competition that there was this 21 significant competitive interaction between them. I have of course, to repeat my testimony, 22 denied that that is relevant to market definition.
- Q Thank you, we can put that bundle away now. In the course of yesterday afternoon, the
 chairman raised what is known as the Cellophane Fallacy, which of course you are familiar
 with, Dr. Williams. Do you accept if I can just tell you what I think the Cellophane
 Fallacy is where you have excessively high prices you may suck into the market products
 that would not normally be in the market and you might get a wrong market definition. Is
 that accurate? A. Yes.
- Q Do you accept that the Cellophane Fallacy has no application in the present case, because
 the prices at which Grid was supplying its meters were price capped? A. No, there is a
 confusion here which I need to elaborate. The basis of my argument here about the market
 definition was about whether there was competition between new and replacement and
 legacy meters against the benchmark of what we have called ----

 this situation – yes or not? A. I am sorry, but this is a complex matter and "yes" and "no to questions Q Well perhaps you could say "yes" or "no" and then give your reasons. Is the answer "yes" or "no"? THE CHAIRMAN: Well I think that is a little unfair. What I understood you were saying yesterday was that it is relevant not because we have a monopoly pricing situation here, but there is another abnormality in the market similar in effect to, but in fact different from the existence of a monopolist pricing at the monopoly level, and it is that other kind of abnormality in this market that sucks in substitutes which, in an ordinary competitive market would not be considered substitutes? A. That is roughly what I am saying, yes. MR. VAJDA: I am grateful, madam. (To the witness): So the Cellophane Fallacy is not relevant, but the other point that the chairman put to you, that is relevant, it is the abnormality factor? A. I am sorry, I am
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15 slightly struggling with this line of questioning. I am not trying to be difficult but I do not
16 quite see
17 THE CHAIRMAN: Well whether or not it is the Cellophane Fallacy, what you are saying is that
18 because there is this abnormality in the market it might mislead one into including other
19 products in the relevant market which should not be there.
20 MR. VAJDA: Yes. Can I give you an example, and then ask you a question? Supposing you
21 have three producers in a market, all right? They are all producing substitutable products –
22 okay? One of them is receiving unlawful State aid. So that is a situation, I take it you
23 would agree with, of abnormal competition? A. So you have A, B and C and, say, firm C
24 is getting abnormal State aid – it is getting cost subsidies, or ?
25 Q It would shut its factory but for the aid? A. Yes.
26 Q That is a situation of abnormal competition, is it not? A. That is a reasonable
27 characterisation, yes.
28 Q Now when you then look at the relevant market when you are doing a market analysis, do
29 you take the products of firms A, B and C, or do you just take the products just of firms A
30 and B? A. If one were doing a merger analysis
31 THE CHAIRMAN: Can I just be clear, Mr. Vajda, you started off by saying that they were
32 producing substitutable products, but if they are substitutable then would they not be in the
33 same market?

1 MR. VAJDA: They would be in the same market but we have here the position that the witness 2 accepts that, as a matter of fact, the new and replacement meters are substitutable for legacy 3 meters, but he says that we cannot look at that because there is an abnormality in the 4 market. So I am putting to him the State aid abnormality, and when you do the market 5 analysis in that case do you exclude products from producer C because they are abnormal; 6 they should not be on the market? A. If you were doing a merger analysis, a merger 7 between A and B then clearly the fact that C exists would be a fact you would take into 8 account in looking at the competition with A and B, providing of course that you believe 9 that C is going to continue to exist i.e. that the State aid is permanent. If it were not 10 permanent or one had reason to believe it would be withdrawn you might not take it into 11 account, so I think it probably might depend on whether or not one believed the situation 12 was going to persist or not, as to whether or not you included it.

- Q The point that I am putting to you, Dr. Williams, is that when you do a market analysis in
 terms of relevant market you look at how the market is as a matter of fact, not whether there
 is normal competition from that market. Would you agree with that? A. What I have
 said is that certainly in the cases I have discussed in this case I disagree with that. I agree
 that it is a complex issue, but basically I broadly support my view from yesterday, but it is
 complex ----
- Q In a State aid case, in an Article 82 case, what would the relevant market be in that case?
 Would it just be the products of A and B, or would it be A, B and C? What is your evidence
 on that? A. Who is under investigation here?
- 22 Q At the moment we are looking at an Article 82 case and we are defining the relevant market 23 and what I would like to know is in your definition would you include products from 24 producer C, which were being unfairly State-aided, in that market definition or not? 25 A. What I am saying goes back to my previous point which is if I thought that C was going 26 to be around on a long term basis then I would probably include it, but if I thought because 27 of State aid that this was temporary and it was not, then I probably would not. The 28 analogy, of course, to the situation yesterday is that there was this abnormality in the 29 market which because of the MSA contract did not expect to be around for very long.
- 30 Q But you would not exclude C just because there was State aid? A. If the State aid were
 31 going to be permanent then I would probably factor it in, yes.
- 32 Q Now, we can move then to 19C, and I just want to clarify this. You see that at 868?
 33 A. Yes.

34 Q The sentence you begin:

1		"In particular I understand the majority of N/R meters currently being installed
2		are:
3		i. Replacement for faulty Meters".
4		Now, "faulty Meters" does that in your understanding include or exclude legacy meters?
5		A. Can I just read this again?
6	Q	Yes, of course? A. So the question to me is when I say that many of these are
7		replacement of faulty meters
8	Q	Yes, does that include faulty meters that are legacy meters? A. That were legacy meters
9		before they were faulty, yes.
10	Q	So is the answer "yes" or "no"? A. I think the answer is yes.
11	Q	"Replacement for Meters whose accuracy may fall short of the requisite standard", was that
12		legacy meters, or non-legacy meters, or both? A. Well these were
13	THE	CHAIRMAN: These were meters which were recovered by the Legacy MSA. A. It
14		depends on the particular timing, of course, as to whether they were, or were not, part of the
15		MSA at this time. These were meters which existed and whose costs had been sunk.
16	Q	They are not simply meters which are installed under the new and replacement.
17	MR.	VAJDA: I think, Dr. Williams, when you were writing this - and this is your language, not
18		my language - replacement meters or meters whose accuracy may fall short of requisite
19		standard, and you put, "i.e. most policy meters under the MSA" I assume you include in
20		that the Legacy MSAs? A. I think I mean this quite generally.
21	Q	Do you include Legacy MSAs or do you exclude? A. I think I do include them.
22	Q	You include them. A. I didn't think very carefully about it, but I think I include them.
23	Q	If we then go to the next category at (iii) - replacement of a credit meter with a prepayment
24		meter. Is that prepayment meter a Legacy meter or not a Legacy meter? A. (After a
25		pause): Again, it's a meter that's already been installed. So, if we're in a world which
26	Q	This is a switch? A. This is a switch. Yes. Absolutely. So, whether it's a Legacy or not
27		I mean, under the contract it depends on when exactly we're talking about. The point I'm
28		making here is simply that when meters are replaced, sometimes there is The point I am
29		making here is this: we're asking, "Are new meters"
30	Q	Sorry. Dr. Williams, I am asking you a simple question and we want to get on in this case.
31		When you are talking about what I think is called 'customer requested exchange', do
32		Legacy meters fall within that replacement category. Yes or no? A. They are a sub-set
33		of it.

- 1 Q Thank you. (After a pause): Now, the point that you then make at the end of para. 19(c), 2 I think, is that Legacy meters which are already installed into fixed locations and generally 3 cannot be transferred for use are clearly not substitutes for new and replacement meters. I 4 think the point there which you then take up in your second report is effectively that there 5 may be a separate market for each Legacy meter. Is that right? That is the logic of that 6 argument. A. What I'm saying here is that if there is a premises where you need to 7 replace the meter because it's gone wrong, or whatever, then a Legacy meter at another 8 address is not going to do the trick of replacing it at the other address.
 - Q Yes. But, that does not go to the question of whether a new and replacement meter is a substitute for an installed Legacy meter, does it? A. That's a question about whether a Legacy meter is a substitute for a new and replacement meter. So, it's the other half of the coin, yes.

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- 13 Now, I think you made the very fair point at para. 12 of your first report that market 0 14 definition is not an end in itself, but a tool for identifying competitive constraints. Are you 15 suggesting in this case that in terms of finding a tool to assess the competitive restraints on 16 National Grid it makes sense to look at an individual Legacy meter market where one 17 Legacy meter is in a market of its own? A. It depends upon the precise question that is 18 being posed. Market definition is not a sort of homogenous answer. Market definition is 19 indeed a tool in competition policy. Whether or not it makes sense depends on exactly what 20 competition policy question one is being posed. I am sorry if this appears -- but, this is the 21 reality of market definition.
- Q I can take you to the passage if you hesitate about this, but you seem to be saying in your second report that you are not criticising Ofgem for having failed to do the market analysis in para. 19(c). Do you accept that? A. Can you take me to where I say this, please?
 Q Yes. If you go to your second report in WS6, at p.3068, para. 30 (which is actually at
 - p.3070) -- -- A. Yes. What I say there is that I have given the analysis of a narrow market, but I do believe that for many practical purposes it might be reasonable to add them up.
- Q Yes. Yes. Thank you. Can I just ask you a few questions on sunk costs? This is again
 focusing on the argument you put forward at para. 19(a) of your first statement. This is the
 argument about payment ... You remember that. A. Where are we?
- Q Paragraph 19(a) of your first statement, which is p.867. How does your argument about
 sunk costs apply to a meter that is over twenty years old? A. (After a pause): My
 analysis of sunk costs says that if you have already sunk the costs it is there, and you can

1		continue to use it. This is nothing to do with whether you have under-recovered or over-
2		recovered. My analysis of the competitive interaction between a Legacy meter that's
3		twenty-five years old, whose costs are already sunk but which is still working, is the same
4		as that of one that is, say, fifteen years old. So, my economic analysis of the competitive
5		interaction does not depend upon the age of the meter, though obviously if it's old it still
6		needs to be properly working.
7	Q	But your argument on sunk costs, as I understand it, does depend on age, does it not? I
8		mean, there is a period after which you have recovered the cost. A. No, it is not that.
9	Q	It is not that. A. No.
10	Q	Can you explain what it is then? A. Yes. Sunk costs are costs that have already been
11		incurred and where you cannot get the money back, and it's basically where the asset in
12		question is in the market without needing to incur that cost.
13	Q	Perhaps I can ask you a slightly different question: would you regard, on your theory of
14		normal competition, new and replacement meters as substitutes for meters that have been
15		installed for more than twenty years?
16	THE	E CHAIRMAN: Is that on the assumption that the rental that has been paid over that twenty
17		years is at least equal to the amount of the sunk cost?
18	MR.	VAJDA: yes. A. Okay. I gave the view before that I believe that a new and replacement
19		meter is not a good substitute for a working meter whose costs are sunk, provided that it's
20		protected by payment completion arrangements. So, on the assumption that this twenty-five
21		year old meter I'm being asked to consider is still a good working meter, then it falls into
22		the category of everything I've said before - I don't regard the new and replacement as
23		being an economically relevant substitute given the contracts in place, providing it's
24		working well.
25	Q	Even though its payment has already been completed. A. Yes. There seems to be a
26		misunderstanding here. My analysis is to do with the sunkness of the costs and its ability to
27		serve the market going forward, and is nothing to do with whether there's been under-
28		recovery or over-recovery.
29	Q	I think you also mention, if we just look at your report, sales as being an economically
30		equivalent arrangement. Do you accept that? A. I say that sale gives
31	Q	You say, if we just look at para. 19(a), "The result that new meters are not good substitutes
32		for installed meters supplied under normal and competitive conditions, i.e. that provide for
33		payment completion or an equivalent arrangement such as sale". So, you introduced the
34		equivalent arrangement Supposing there had been a sale and the meter had been sold
	l	

more than twenty years ago. Would you regard a new and replacement meter as a substitute for a meter that had been sold more than twenty years ago A. My analysis says that the incentives for replacement are the same under a payment completion contract and under sale. If the meter in question is still a perfectly good working meter, then for the reasons given earlier I hold by my previous view, and if it's not, then in a sense there's no meter there to be constrained because the meter doesn't exist.

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- THE CHAIRMAN: Then the incentive is whether, as far as the purchaser of the meter who is using it to generate its own income stream in the market in which it is competing, using that asset, is concerned -- whether they would think, "Well, it has been going for 20 years now so I have earned as much as I can using that meter, so I should have another meter", but you are saying if the choice is, "Well, I will continue earning the same earning stream using that meter by using the one I have got rather than buying a new one", the sensible thing would be to keep using the one you have got? A. One of the phases often associated with sunk costs are bygones are bygones, and if you've got this meter and it's lasted longer than you thought, but it's still working, there isn't something massively superior available on the market, you carry on.
- MR. VAJDA: That brings me to my next question, Dr. Williams. Would you accept that a new and replacement meter is a substitute for a meter that is less than 20 years old when the cost saving and technology gains in acquiring the new and replacement meter exceeds the level of unrecovered sunk cost? A. Could you repeat the question, please?
- Q It is a rather long question and I apologise for that. Would you accept that a new and
 replacement meter is a substitute for a meter that is less than 20 years old when the new and
 replacement meter offers a cost saving which exceeds the level of unrecovered cost and also
 has technological features that the existing meter did not have? A. I'm not sure I've fully
 got the question, but if I can convert it into language that I'm familiar with ----
- 26 0 It is effectively, you have got something on the market which is both cheaper and better? 27 A. Okay. In my analysis I have this very simple condition. You want money to use. It's 28 like the functionality gain, including any cost savings, and whether or not the functionality 29 gains of the new meter, of a new widescreen TV, is greater than the duplicated cost to K1. 30 If that condition is satisfied, that is the sort of first part of the rational upgrading decision. 31 In those cases you would switch. In that case the old meter would be switched out. So 32 conceptually since that condition can sometimes be satisfied a new meter could replace. 33 However, in the facts of the case, my argument from earlier was that, in fact, the gains 34 currently available are generally regarded as being quite small and are therefore, the U1

1		minus U0 term is likely to be sufficiently small that it is highly unlikely to exceed K1. So I
2		admit the question has a theoretical possibility but I actually do not believe it to be true in
3		the facts of the market.
4	Q	But I think you would agree with me, Dr. Williams, whether that gain is small or large is a
5		question of fact, is it not? A. Yes, absolutely.
6	Q	Thank you. We can now forget about market definition, at least so far as I am concerned,
7		and move on to the question of dominance. I just want to see that I have understood your
8		argument on dominance correctly. What I am proposing to do is to summarise it and you
9		tell me if I have got it wrong – all right. The starting point of your argument is that
10		National Grid is constrained by the price cap, so it could not charge super-competitive
11		prices – that is the starting point of your argument, is it not? A. It's a three prong
12		argument and that's one of the three components.
13	Q	The next limb is that the P&M terms do not reflect market power because they are
14		constrained by the price cap? A. No.
15	Q	I am sorry, I have obviously got it wrong. Tell me what I have got wrong. A. The P&M
16		terms are constrained by the price cap, but why does that matter? The reason that matters is
17		the argument I gave you earlier about why that is a reasonable approximation to the
18		competitive price.
19	Q	We will come to that in a moment. The next step in the argument, I think, and please
20		confirm this or tell me if I have got it wrong, is that to induce suppliers to enter into the
21		Legacy MSAs, National Grid had to offer something that was more favourable than the
22		P&M contracts? A. It had to offer something that was more favourable than the best
23		contract available, so clearly it had to be better than the P&M because that was available,
24		but it would also have to be better than any other contract that was offered to them.
25	Q	You then conclude that on that basis National Grid could not exploit, it had no market
26		power to exploit? A. If you put those things together, I say that they could not achieve a
27		price that exceeded the P&M regulated price, and from that, given my previous argument,
28		they could not exploit.
29	Q	What I would like to do is just to take you to an important passage in your second report,
30		which is at WS6, flag 22, 3073, para.40. It is the second sentence I want to ask you a
31		question about. In the second sentence you say:
32		"It is widely accept that market power is intertwined with the ability profitably to
33		sustain prices above competitive levels."

 widely accepted in the competition policy community and certainly amongst competition policy economists, and it's my view as well. Q You are obviously familiar with the case law of the European Court, are you not? A. I have some familiarity, but I am not a legal expert. Q Let me put a proposition to you and if you disagree with it, tell me. If you take the <i>British</i> <i>Airways</i> case – are you familiar with the <i>British Airways</i> case? A. I have some familiarity with it, but I did not work on the case. Q You are familiar with the <i>Michelin</i> case, are you not? In fact, you annex it to your own report, so you are clearly familiar with it. A. I am not familiar with all the details of it, 	
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10 report, so you are clearly familiar with it. A. I am not familiar with all the details of it,	
11 I'm familiar with the case.	
12 Q You rely on the <i>Michelin</i> decision, do you not? A. Rely on, for what purpose?	
13 Q In relation to market definition? A. I cite it, yes.	
14 Q You cite it, yes, so you have obviously read it? A. I have in my time read it, but not in	
15 detail in the context of these enquiries.	
16 Q I am not aware that either in <i>Michelin</i> or in <i>British Airways</i> it was a requirement for	
17 dominance that it was necessary for the Commission to prove that the undertaking in	
18 question was able to charge supra competitive prices? A. My view is – two remarks.	
19 One, this is primarily, I think, a legal question, though I did give you some remarks earlier	
20 about how I personally do have some sympathy, e.g. in predation cases, with a slightly	
21 wider view of dominance. Whether it is wider or not is a legal question, and I do not know	,
22 but I think I have given my view on that before.	
23 THE CHAIRMAN: Yes, I think we are covering ground	
24 MR. VAJDA: To some extent, because effectively, and this is as I read your report, your report i	S
25 very much focused on prices, and what I am putting to you is focused on what one might	
26 call exploitative abuses, which we are not dealing with here. We are dealing with	
27 exclusionary abuses. A. I believe we covered this ground earlier, and I thought I gave an	1
28 answer to that, which is even if I had asked the exclusionary questions, actually I didn't	
29 think this was a market which was particularly ripe for an exclusionary abuse, but I do	
30 believe I answered extensive questions on this earlier and I refer to my previous answers.	
31 Q All right, on the "widely accepted" your evidence is that it is widely accepted by	
32 economists, but you accept that the legal position may be different? A. The law is the	
33 law.	

Q That is a pretty safe answer, I think! You will not get into any trouble with that. The second assumption that that makes is the price cap – and this is something that you have said again in evidence today – reflects the competitive price. Now, I put it to you that the price cap does not reflect the competitive price? Do you agree with my question?
 A. Well there was a long debate between experts in the matter ----

THE CHAIRMAN: Sorry, is your question whether it does now, or whether it did when it was set?

- MR. VAJDA: At any time. What I am asking this witness, because this witness appears to have equated price cap with the competitive price and I say that is (To the witness): well, am I right that you have equated the two, a price cap and a competitive price? A. I have said that the regulated price at the time of a price cap is a very good approximation as to what the competitive price would be. In most cases we haven't got a clue what the competitive price is, and it is incredibly difficult to work out and there is no real way of doing it. What I am saying is that here is a market where, without us having to worry about this, we have a regulator who went through a long process to say: "This is the capital base, this is a fair return on capital" and what I am saying is that that is a closer approximation to what the true competitive price, if anybody could ever work it out, is than we are ever going to get, I think that is what I am saying.
- Q I put it to you that the price cap and the approach that Ofgem did, wearing its regulator's
 hat, was to reach a price that was a reasonable price for the regulated company, taking
 account of its historic cost base, and that is a different exercise from determining and it
 does not equate to the competitive price? A. First of all, I believe that this is effectively
 the subject matter of yesterday's debate, but if you want me to offer an answer I will do so.
 THE CHAIRMAN: Is your point that the price cap was not set on the basis of efficiently incurred

costs, but on costs in fact incurred?

MR. VAJDA: No, my point, madam chairman, is that the price cap is simply a cap, which is what is a reasonable amount of money, or a reasonable price that National Grid should be able to charge for its meters based on its costs, but it is a completely different point as to what the competitive price in the market is, because the competitive price in the market is effectively what people are offering out there, that is the point I am making, but I am cross-examining, I am not actually making submissions, but it is very important, because what I want to explore with this witness is how he perceives the price cap, because running through this great theme of the report is that there can be nothing anti-competitive going on here, because effectively what is happening is that prices are lower than the price cap. So it is

important that we get Dr. Williams' evidence and not my submissions as to what he thinks the price cap does do and what it does not do? A. As regards what it did and did not include I have to defer to things yesterday because I have no expert knowledge of those matters. I go back to a remark I made a few minutes ago, in most competition cases we do not have anything that would give even a clue as to what the competitive price at a particular moment in time is. In my analysis earlier I said that I believe that the relevant point in time was in a sense when the costs are incurred, but that the wonderful thing abut the regulatory thing is it did give us a snapshot at a moment in time, almost as if they all came into existence at that moment in time.

So in a sense I really cannot add much more to what was added yesterday on this; this is not my expert testimony. I work, however, on the following points. In assessment of market power my understanding is that market power is a situation where you are able to appreciably and sustainably raise prices about the competitive level, and since the empirical evidence appears to be the price is significantly below that level, what you would need from market power is to have the ability to raise appreciably above that level, there seems to me to be here a wide gap between what has happened and where you would need to be for there to be significant market power.

- Q That evidence, of course, depends on you being right that for there to be market power you need to price supra-competitively, does it not? A. We had a debate five minutes ago about whether market power is just about supra-competitive pricing or whether it also includes what I earlier described as the monopolisation issues, and obviously to the extent that I give analysis on price raising power then that is only fully decisive if correct in a world where price raising power is the only question; that is a question for you. I did also remark that if, in fact, you want to look at the other issues, in a broad brush way I did not think that the features were conducive but one might prefer simply to do your full analysis of whether they are or they are not exclusionary.
 - Q Looking at the market as it was, say, in 2005, with the CMOs coming in, is your evidence that the price cap is the same as the competitive price or different from the competitive price? A. I gave evidence earlier that basically in a market where you have ----
- Q Can you just answer the question? It actually does admit of quite a simple answer. In 2005 with the market as it is, do you regard the price cap as being the competitive price "yes" or "no"? A. I am sorry, I am not prepared to give a "yes" or "no" to that. What I said earlier was that we have generations of contracts and basically I regard the regulated price in 2002 as being the competitive price at which long term contracts would be offered in

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1		2002, but which would still be active on the market in 2005, and so when I am asked: "Is
2		that the competitive price in 2005?" Answer: Yes, for all contracts still on the market in
3		2005 that were signed in 2002, but I agree that if there has been a fall in cost that it would
4		not be the price at which new long term contracts in 2005 were being issued. I believe I said
5		that earlier and I maintain that position.
6	Q	Yes, well I think we are making some progress here. If we look at, say, and I know as an
7		economist you need to look at the period over time, if one looks at the position between
8		2005 and 2008, contracts that are entered into, I think your evidence is that the competitive
9		price is lower than the price cap? A. I am not a witness of fact here, but since I believe
10		that costs have been falling I believe that the price at which long term contracts are now
11		entered into are below the price cap, yes.
12	Q	Could I ask you to turn to p.877 of your first report, para. 58? This is under the heading:
13		"Market evidence", do you see this? A. Yes.
14	Q	Can I just ask you to read to yourself, and the Tribunal, para. 58? A. (After a pause) Yes,
15		I have read it.
16	Q	Now, I put it to you that the price cap is not a relevant benchmark because it is above the
17		competitive price. Do you agree with that? A. No, I disagree with that for the reasons I
18		have elaborated several times, because you have to look at the relevant period of time.
19	Q	Well I am looking at 2005/2008, would you agree with that or not? A. What I am saying
20		is the following: if, in fact, there were some new contracts issued, supposing you were
21		looking at the new and replacement market, and you were wanting to wonder whether or not
22		those prices were competitive, and those contracts were being issued in 2008, then since in
23		this world we are in 2008 then what was the reasonable approximation for competitive
24		pricing in 2002 is probably no longer relevant.
25	THE	E CHAIRMAN: So is your answer then that it is a competitive price for National Grid's
26		contract because that was entered into at the earlier date but it would not be a competitive
27		price for a new contract to be entered into? A. Yes, the evidence I gave earlier is when
28		you are investing in these long assets with long contract lives basically they have to be
29		competitive at that time, but that if you now take a snapshot in time of the market in 2009
30		you will find that if this market has been running for a long time there are contracts of all
31		sorts of vintages and obviously assuming prices falling continuously through time the ones
32		that were signed very recently are going to have low rental prices, and going back through
33		time, but they will all be present in the market at this point in time. But if you want to know
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1		whether or not they were reasonable one asks about that in the context of the time in which
2		those costs were incurred.
3	MR	. VAJDA: Thank you. I think we can move on to another topic, which is the "hold up" point
4		– do you recall the hold up point? A. Yes.
5	Q	I hope we can do this simply by reference to your second statement, which is in WS6.
6		Myfirst reference is at 3077. Do you recall there is a debate between you and Professor
7		Grout as to the relevance of sunk costs? Professor Grout says, "Well, actually it's a barrier
8		to entry", and you say, "Well, actually it's the hold-up point". I am over-simplifying, but I
9		am a mere lawyer amongst these distinguished economists. Is that a fair summary A. I
10		recall that debate. We discussed it yesterday.
11	Q	Yes. Now, you say, in disagreeing with Professor Grout,
12		"My conclusion rests on the concept of the hold-up problem - a widely recognised
13		result in economics".
14		Do you agree that whether or not there is a hold-up problem depends on the facts of a
15		particular case? A. Yes.
16	Q	Just to give an example, supposing a I built a nuclear reprocessing plant. I have enormous
17		sunk costs. All right? I have the only plant in the world. All right? Nobody else Just let
18		me finish. There is no other plant being built. There is not going to be a hold-up problem in
19		that case, is there?
20	THE	E CHAIRMAN: Who is holding up who?
21	MR	. VAJDA: The argument, as I understand it The hold-up problem, as I understand it, and
22		again correct me, Dr. Williams, if I have misunderstood your evidence, is that I think you
23		are saying that once somebody has sunk a specific cost - and the larger the cost that has
24		been sunk, if you like, the bigger the effect - that person is vulnerable to being, as it were,
25		almost held up to ransom by somebody who is going to deal with him because he has
26		actually sunk the costs. That is your argument. A. Yes.
27	Q	That is the hold-up point, is it? Yes. Dr. Williams accepts that whether there is a hold-up
28		point in a particular case depends on the facts of that case. A. Yes.
29	Q	Then let us go to para. 58 where you discuss the whole hold-up point on the facts of this
30		case. Can I ask you and the Tribunal just to read to yourselves para. 58 before I ask you a
31		question on it? (Pause whilst read): The question that I would like to ask you, Dr.
32		Williams, is that you say in the last sentence,
33		"For Legacy meters it [that is, National Grid] had sunk its costs whereas the gas
34		supplier was free to walk away and contract with a CMO".

- 1 I would like you to expand on the words 'free to walk away' and 'contract with a CMO'. 2 A. I meant - and I think I'm talking about this in the context Did you mean immediately? 3 before the MSAs have been signed - that basically they would be free to start contracting. 4 Q Putting this in time, this would be --? What year would you be looking at? 2001, for 5 example? A. At any point before the MSA was signed. 6 Q Can you recall when? They would have signed in January 2004. So, your evidence is that 7 you are looking at the period -- We obviously need to be fact-specific here, do we not? So, 8 we are looking at a period before January 2004. A. I can't remember exact details of 9 when every contract was signed, but if that's when they were signed, then, yes. 10 Q So, the important point is that you are looking at the period before the Legacy contracts 11 A. That's when the whole of the problem ---were signed. 12 Yes. Yes. Yes. Now, I just want to focus on the words 'free to walk away'. Can you just Q 13 explain what you meant by that? A. Yes. That basically they were renting meters and 14 that for some of those meters they were free to walk away, i.e. they didn't have to buy them 15 or make any payment for them. They could just leave them on the wall earning no return 16 because they were going to get their services from metres installed by a CMO. I think that 17 is what I meant. 18 Q Did you mean that they could do that overnight? A. No. I think it's clear in my report 19 that I fully understand that this will occur over a period of time, but the first one ----20 Q What period of time did you have in mind? A. When I wrote this report I was aware that 21 there was a lot of interesting debate about exactly what period. My analysis here does not 22 depend upon the precise period. My conclusion is that basically they will recover less than 23 their cost. I have already said that, of course, the quicker they walk away, the less they're 24 going to recover, but my generic conclusion that they will recover less than their costs 25 stands. Quite how much less depends on how quickly they would walk away. 26 0 I am slightly puzzled. You say your analysis does not depend on how quickly they would 27 walk away. Supposing that they could only walk away in twenty years. Would that not 28 A. Sorry. I must have mis-spoke. Quite how much they are affect your analysis? 29 vulnerable depends on how quickly they believe that they can walk away. 30 Right. You are giving expert evidence. You tell us all the material that you have read Q 31 before producing this report for the Tribunal, to assist the Tribunal. What did you have in 32 mind here when you said 'free to walk away'? How many years? I think your evidence is 33 that you did not have overnight in mind. How many years did you have in mind when you 34 used the words 'free to walk away'? One year? Two years? A. What I had in mind here
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was -- There's a generic point here that simply means they could move away over some period of time. I was fully conscious that there was a major factual debate about exactly how long, and I wanted to ensure that the evidence that I gave here basically was robust, depending on all of the plausible answers to that. The precise numbers will of course vary with whatever everybody decides was the reasonable period, but my, if you like, conceptual point here does not depend on that number. The only exception would be if it was impossible to substitute over any period of time.

Q I am analysis -- or, asking you, in a sense, the robustness of your assertion at para. 58. You accept that the longer it would take them to walk away, the more marginal it would become.
 So, I come back to the question: How many years did you have in mind when you drafted that at para. 58? Was it five years? Ten years?

THE CHAIRMAN: I think, Mr. Vajda, he has answered. His answer is that he did not have any figure in mind. As long as they can move away before payment is complete ----

MR. VAJDA: That is not his evidence, madam, with respect. Dr. Williams, what is your A. My evidence that here I am making a conceptual point about them walking evidence? away. Basically, as I have already said, and I apologise for repeating, I was aware that there was debate about what was a realistic timetable. My conclusion, I think, stands for any of the answers to that debate. As to exactly how big the stranding risk was would obviously depend on which of those answers one goes with. Technically, actually, it's more what was in National Grid's mind about those rather than the actual truth. So, basically, my generic result is, I believe, robust to all of the answers that one hears, but the precise numbers - and I don't have any numbers here - would obviously depend. I deliberately did not form an expectation precisely because I was aware that there was factual debate. I made a statement that was basically true under all of the possibilities that were being argued here. Is this a fair way of looking at para. 58: that this is just an expression of theory, but not with Q reference to fact? A. No. Obviously my analysis here is ----

Q Well, it is either theory or fact. If it is fact, can you tell us what facts it was based on? A. It's clearly economic theory. The question is: It has an in-built assumption.

Q What is that inbuilt assumption? A. The in-built assumption is that it is possible to replace meters over some period of time. I was aware that there was a factual debate about what that was, which is why I basically made a general statement. I fully accept that the precise numbers would depend on that. I don't know what more I can say on this. I think I'm very clear.

- 1 Q I do not think I can take that further. That is very fair of you, Dr. Williams. I think we can 2 put that away. I am coming to the end. I have got a few more questions on your first report. 3 (After a pause): If we could take that up at p.871 -- We are still on the issue of dominance, 4 Dr. Williams. What I want to explore now are some of the other factors on dominance. 5 The first question I want to explore with you is the issue of market share. All right? 6 A. Yes. 7 Q Can I just ask you to read to yourself para. 27 of your report? (Pause whilst read): 8 A. Yes, I've read it. 9
 - Q Yes. The point you make there is that the existence even of a high market share does not necessarily imply the existence of market power. Would you accept that consideration of market share over time is important when assessing market power? A. It depends critically on the nature of the market, the form of the competition there. Sometimes yes, sometimes no.

A. Sorry, I think I said not yes, I said sometimes yes, sometimes no. Q Yes.

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- Q You must agree, I take it, that market share is important. If we just look at 869 of your report, you set out very helpfully the OFT guidelines at 21(a), which talks about market share. I just want to get your evidence on this. You accept that it is important to look at market share. It may not be the only factor, but you accept it is a factor? A. No.
- 19 A. Can I say, I accept that there are some market circumstances where Q You do not ----20 market share is important, and there are some where it's actually not important at all. Which are which follows from very careful examination of the facts.
 - Q Would you think it would be safe to do a dominance analysis without looking at market A. I'm not a lawyer, and my brief knowledge tells me that sometimes ---share?
- 24 Q Would it be safe for an economist to do a market power study without looking at market 25 A. Absolutely. share?

So you disagree with the OFT guideline then? A. Yes. 0

27 Q I see, thank you. I take it you also then disagree with the OFT that you need to look at 28 disparity in market share. You would regard that as being irrelevant as well? A. No. I 29 need to go back to what I said before. I said that whether or not there is market power, you 30 have to do a careful analysis, blending economic analysis and facts in any particular case. 31 In some of those cases, in a sense, yes, market power is a concept. If we equate it, for 32 example, with price raising ability, then market power, you ultimately are looking at prices 33 compared to cost.

1	THE	E CHAIRMAN: Can you just answer the question. Do you accept or not that disparities
2		between the market share of one company, whether it is an oligopoly or whether it is a
3		fragmented market, do you consider that looking at that is relevant to the assessment of
4		market power? A. Sometimes yes and sometimes no.
5	MR.	VAJDA: Thank you, madam, I am grateful for your intervention on that. Can we then move
6		to barriers to entry, which are dealt with at – you set it out in the OFT guideline, which is at
7		869, do you see, at the end they refer to barriers to entry? A. This is where it says low
8		barriers to entry?
9	Q	Just a little bit higher. Let me put the question to you, Dr. Williams. Do you accept that
10		barriers to entry are relevant in assessing market power? A. In circumstances where
11		there's a large incumbent then I accept the analysis of barriers to entry, properly understood,
12		is relevant.
13	Q	Thank you. Can you tell me where in section 4 of your report you deal with barriers to
14		entry? A. I don't think I explicitly deal with it in section 4.
15	Q	No, I do not think you deal with barriers to entry A. Can I make a remark, however,
16		which is of course that the key barrier to entry alleged in this market is the MSA. Basically,
17		the entire case, including all of my evidence about its properties, is essentially evidence
18		about whether there is or is not a barrier created by that point. That is the key barrier to
19		entry which I believe is alleged. So, yes, it's not dealt with here, but I believe that my
20		evidence contains ample discussion on that fundamental question.
21	Q	You say that the key barrier to entry alleges the MSA. Could I ask you to take up CB1, the
22		Decision at p.56. Could you just give a quick skim to paras.3.66 to 3.71. A. There are
23		various things mentioned there, yes.
24	Q	You have obviously read this because you said in your report that one of the things –
25		obviously a pretty key document in this case is the Decision, is it not? A. I've read this,
26		yes.
27	Q	How does that square with the evidence you have just given me and the Tribunal for that
28		matter that the key barrier to entry here is the MSA? A. I should perhaps explain.
29		Suppose these other factors were irrevocable barriers to entry, in that circumstance entry
30		would not be possible for reasons nothing to do with the MSA, in which case the MSA
31		could not actually be preventing entry that otherwise would have occurred. So I apologise,
32		there are other factors mentioned here, but it was my assumption that the issues in this case
33		is that these factors mentioned here would not have stopped entry occurring, and that the
34		thing that stopped entry occurring is the alleged – the anti-competitive MSA. So, sir, I
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1		apologise in the sense that these factors are here, this is my interpretation of what I distilled
2		as the essence of this case.
3	Q	Where is it in your report that you address the facts at para.3.68 of the Decision? A. I'm
4		not sure I discuss these issues.
5	Q	I do not think you do, do you? A. I'm not sure I do. I may do, but I'm not sure I can
6		point to it.
7	Q	I have no further questions.
8	THE	E CHAIRMAN: Mr. Randolph, do you have anything you want to ask?
9	MR.	RANDOLPH: Madam, yes, I do. Fortunately Mr. Vajda has covered a number of areas or a
10		number of questions that I was going to ask, so I do not need to ask them, but I still have a
11		few, if that is all right. Looking at the time, I fear that it might go slightly beyond one
12		o'clock, so perhaps it might be possible to rise slightly early then come back slightly earlier
13		than usual.
14	THE	E CHAIRMAN: Yes, I think that makes sense. We will resume at two o'clock. Thank you.
15		(Adjourned for a short time)
16	(Aft	er administrative matters)
17		Cross-examined by Mr. RANDOLPH
18	Q	I can promise you one thing, Dr. Williams, we are not going to go into any algebraic
19		formulae – at least I am not going to, maybe you will.
20	THE	E CHAIRMAN: They crop up when you least expect them! (Laughter)
21	MR.	RANDOLPH: Indeed, let us hope in the next 10 minutes they do not. Dr. Williams, a
22		general question first. Would you agree with me that your approach at the least could be
23		described as unorthodox in this case, your reports are unorthodox? A. I believe that I
24		have applied my skills as a micro-economist to the facts of the case, and derived
25		conclusions on that basis. I believe that is what I have done and some conclusions might
26		come out that might surprise people but I believe I have just done what I normally do.
27	Q	You have done what you normally do, but I put it to you that on the basis of the evidence
28		that you have given over the last day, where you have admitted that in parts you have
29		ignored reality, you have said this morning I think that market definition was "almost
30		irrelevant", and you said that market shares with regard to dominance was irrelevant. I am
31		not getting into whether these are right or wrong. Obviously you understand that I do not
32		accept and I do not agree with your conclusion, I am just saying that it is unorthodox.
33		Those approaches where you have ignored reality for the purpose of market definition, you
34		say that market definition actually is almost irrelevant in a dominance case, and you say that
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market share analysis is irrelevant in effect – I am not saying whether it is right or wrong it is just unorthodox - yes? A. No.

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- Q Okay, fine. So do you agree with me that in Article 82 and Chapter II cases and we are looking at a Chapter II case here, yes abuse case? A. Yes.
- Q That you need to look at market definition, you need to define the relevant market? A. There is a legal question about whether you have to define the relevant market, and obviously that is the legal view. In terms of my claim about the relevance of market definition I think if you look on the transcript you will see I make remarks like the important thing is, is there market power? Are there competitive restraints? My remark about "irrelevant" was that where you classify those cannot affect any substantive outcome, and that was the basis of that claim.
- Absolutely, Dr. Williams. This is where I shall be coming to. Your concern is about 12 Q 13 market power. In much of your report your concern is about market power, and that is what 14 you just gave an answer to saying the key point here was market power, but I put it to you 15 that in order to get to issues of market power you really do have to look at and examine the 16 logically prior question, be it legal or economic, of the definition of the relevant market. 17 You cannot just hop over that and go straight to market power, would you agree with that? 18 A. As a matter of law I make no comment, but I am aware of what the process is. As a 19 matter of economics I believe market power in a sense is a fundamental concept and that 20 frequently one can and does hop over market definition in order to answer the fundamental 21 question.
- Q I see, so your approach would be that you can analyse market power without previously
 analysing the market in which the power is to be analysed? A. The idea of direct estimate
 of market power is now quite well understood in the economics' profession.
- 25 Good. You say, Dr. Williams, and you admit very fairly both in your written report and Q 26 orally, but certainly orally, that there was a certain paradoxical nature – you were going 27 through this yesterday in your evidence - where, on the one hand, you were saying that 28 legacy meters and new and replacement meters were in different markets - that is the one 29 hand; and then the other hand that new and replacement meters exercise [quote] "a 30 significant disciplinary role" with regard to legacy meters. You said that was slightly 31 paradoxical, you admitted that, which is fair enough, but then you said that effectively that 32 did not really matter because – certainly your evidence yesterday was it did not really 33 matter because of the basis of the exercise of Grid's monopoly power, and then you went 34 into what you might want to look at and why reality was not terribly relevant. Do you

A. That summed up quite a lot of things, but basically I said what I said accept that? yesterday and I remain of the view that the fundamental questions here are about whether there is market power rather than market definition and I maintain my view that how you classify competitive constraints does not change reality, and therefore there is a certain degree of irrelevance of market definition; I have said this several times and I maintain my view.

0 And that approach entails, you have admitted, a certain seeming paradox; you do not seek to explain it but you admit that there is a paradox? A. When I refer to the paradox, yes, several people had, in proceedings said, "hang on a minute, you are saying this is powerful competitive constraint and it is not in the market." Actually, the way in which I think I ultimately characterised this is that it was actually the threat of replacement that was doing the discipline here and, as such, I saw that naturally as entry to the market especially as the entrants had not yet sunk their costs in the household. So it was actually for that reason that I classified it in my mind more of an entry threat and entry threats are naturally classified as outside the market. But it remains my view that, in a sense, where you classify things will not affect the answer to the fundamental market power question. I was hoping to try and explain why ----

Q That is fine, that is where we diverge. We said that you need to look at the relevant market, and that is not irrelevant, and then you can go on to market power, but that is fine. I wonder if we could stray from the ivory tower – the theoretical approach – and go into the real world, if you do not mind, during the relevant time period? So I am looking at the time period after January 04. So we have MSAs in force? A. MSAs signed and in force, yes. Q A. They had been signed and in force. Sorry, in?

0 Yes, they are in operation, and we have at least one CMO contract, my client's CMO contract, Meter Fit's contract which was signed in 2002 and came into operation in 2002. Let us take your example of Mr. Smith at Acacia Avenue. Mr. Smith has a Grid gas meter in Acacia Avenue, and that would be a legacy meter on your term of origin because it was installed? A. It was already installed there, yes.

Q Consequently its costs are sunk? A. Yes.

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30 Now, the enlightened gas supplier to Mr. Smith decides to sign a contract with my client, Q Meter Fit, because of its better pricing; that enlightened gas supplier wants to swap out the 32 Grid meter and go to a new Meter Fit meter for Mr. Smith. In your terminology that Meter 33 Fit meter, before it was installed, would be a new and replacement meter, would it not, because it had not been installed and therefore its costs had not been sunk? Yes?

- A. Before it was sunk it was a new meter, whether it was a replacement I don't know, but yes.
- 3 Q Okay, N/R we can call it, so you agree with that, good. Now, to the extent that -I do 4 not think you have denied this – to the extent that that gas supplier, that enlightened gas 5 supplier has swapped an old legacy for a new Meter Fit N/R there is clear substitutability 6 there between the legacy, the installed meter and the N/R meter, and I think the evidence 7 you gave to Mr. Vajda just before the short adjournment was not dissimilar to that you said, 8 the N/R legacy to that extent could be interchangeable, could be substitutable? A. After 9 it was sun k it was used for the functions of the previous one, yes.
- Q On the supply side, if you will, the position is pretty much the same, and staying in the real
 world, away from Mr. Smith though, but in the real world, someone in the gas meter supply
 business I wonder if you could turn up WS5 and turn to Tab 17, p.2824. Have you had an
 opportunity to read all the witness statements in this case? A. I believe I've read -- I
 cannot remember, to be honest.
 - Q Absolutely. This is not a memory test. If you cannot remember, you cannot remember.
 You are probably doing your best. There have been a number of witness statements. This is the only one on behalf of Meter Fit. This is Mr. King who has made the witness statement. At paragraph 2824,

"From a CMO perspective, all meters are a homogenous group with no sensible distinction between Legacy and N/R meters: meter manufacturers produce credit and prepayment gas meters, not Legacy and N/R meters, and both are subject to customer-driven activity such as functionality exchanges that does not distinguish between legacy and N/R meters and domestic credit meters and prepayment meters".

- Would you agree with that as a matter of fact? You have no reason to deny it? A. He's saying how he sees it from a CMO's perspective.
- 27 Q Yes. A. He said what he said.

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28 Q Yes. That is the real world. A. That's how he sees it.

Q Yes. In the real world. So, from Mr. Smith's perspective - Mr. Smith in 16 Acacia Avenue
- he has a swap-out. You have got Mr. King, in the real world, thinking, "There's no
distinction". Now, you say first of all that market definition is not terribly important here,
or irrelevant, because you have got to go straight to market power and, in any event, the
critical distinction you seek to draw between N/R and Legacy meters is - and do tell me if I
have got this right or wrong - this horrible word 'sunkness'. It does not really exist as a

1		word, but Sunkness. The distinction that you seek to draw - certainly in your witness
2		statement at para. 10 between Legacy meters on the one hand which have sunk costs and
3		N/R meters on the other which do not have sunk costs. Is that right? A. I discussed
4		sunkness at great length.
5	Q	Yes. You would agree with the summary I have just given. A. Broadly, yes.
6	Q	Yes. Good. Just a small point, and you may be able to explain this, but I have not been
7		able to explain it Could you turn to the Decision which obviously is quite important in
8		these proceedings. That is CB1, para. 3.1 at p.43. This is the section in Ofgem's decision
9		on market definition and dominance. At the top of the page it says, '3 - Market Definition
10		and Dominance'.
11		"The Authority finds that National Grid holds a dominant position in the market
12		for the provision of installed domestic-sized gas meters and the ancillary service
13		of meter maintenance in Great Britain".
14		So, the main market is the provision of installed domestic-sized gas meters. I think in your
15		report you refer to paras. 3.13,
16		"The Authority's view is that the characteristics and intended use of Legacy and
17		N/R meters do not differ. Legacy meters are meters which have been installed
18		before a certain date; N/R are those installed after a certain date"
19		You also refer to para. 3.52, which is a few pages on. This is pretty much the same thing, I
20		am glad to say. There is no internal inconsistency.
21		"For the reasons set out above, the Authority has concluded that the relevant
22		market is the market for the provision of installed domestic-sized gas meters"
23		Yes? A. It says that.
24	Q	Now, my question is this, and, as I say, I do not know the answer: the market is defined as
25		installed gas meters. Now, your whole thesis your whole theory with regard to sunkness
26		and the distinction between Legacy and N/R meters depends on the difference between
27		installed and non-installed meters. The Decision is predicated, insofar as market definition
28		is concerned, on meters that have already been installed. So, on its face, Dr. Williams, your
29		distinction as to installed and non-installed meters would seem to be an irrelevance to this
30		case. A. Well I was talking about the threat of replacement.
31	Q	Sorry. The? A. Threat of replacement. The competitive constraint of the threat of
32		replacement. Where are those meters? The meters that were doing the threatening - they
33		don't exist. So, they're not installed. That's why in my mind I see those meters as outside
34		the set of installed meters. They're a potential threat. They, in my judgment, had a
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significant disciplinary role, but they never actually existed. I think that's what I'm saying here.

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Q Okay. But, you will not deny that the Decision is based, insofar as this is concerned, on installed meters alone. If that were right, then all of them on your definition -- It is not the legal definition. We do not need to go there. All of the meters in question would be, under your terminology, Legacy meters. There would be no distinction because all of them would have been installed. So, there would be one big market. There would be no distinction between Legacy and N/R, would there, on that basis? A. Well, first of all, I repeat, all the ones that exerted the competitive discipline, which are the ones I was saying, although I believe it makes no difference, should be classified outside the market have never come into existence.

12 The Decision, of course, is based, looking at the question of time -- You are looking at the Q 13 abuse. The abuse derives from the operation of the MSAs over the relevant period, and 14 effectively the cut-off period is somewhere 2007/08 But, the start period is 2004. It is the 15 operation of the MSAs. As I say, the market defined is installed meters N/R and Legacy, 16 insofar as there is a distinction. To that end it seems to me that this cuts across completely 17 your theoretical approach with regard to sunkness because it does not reflect the reality of 18 the Decision. A. I don't accept where this is going. I would just also remark that there 19 are various reasons given in my reports for why I believe that they're different. Something 20 which hasn't really been discussed is different conditions of competition. It's extensively 21 set out in my report. Basically I say that for meters that have been installed, essentially there 22 is a bargaining game between National. Grid and the gas supplier, albeit there is one in 23 which there is the threat of going outside. However, when you look at what I believe they 24 call new and replacement market that is a situation where various companies are competing 25 with each other to supply new meters. That has many of the characteristics of a more 26 normal market where companies are bidding to see who is going to get the supply. Then 27 there is the third set, of course, which is the threat of replacement which never actually 28 happened.

So, basically I've given various reasons, but I do believe, ultimately, as I say, the classification is somewhat irrelevant, but I do believe that as an economist one would want to look at these segments quite differently. There are quite different mechanics of competition there.

Q Very good. Anything else can be a matter for submissions. My last question to you is this:
do you accept that what you have done in your reports is to – I think "confuse" is not a fair

word – "conflate" market definition with market power. You have made it clear in your answers to me that you are focusing in on market power. You have agreed that in your approach you can hop over – my words, which you accepted – market definition. Would you agree, going further on – and do not answer yet – that issues of sunkness might be relevant to market power – I am not going to market power, I am not going to question you about that – but they do not go to issues of market definition, and what you sought to do is bring in issues of sunkness to try and distinguish and differentiate the markets when, in effect, sunkness goes to market power, which is, as I have previously said, or put to you, something that has to be dealt with after market definition. Market definition must come first. What you have done is used sunkness in market definition, whereas it should have been used, if at all, for market power? A. I agree that sunkness is part of market power, and I have used that extensively. It is suggested in a sense that I have improperly imported it into market definition. It's clear that I have imported it into market definition, but I gave reasons earlier today for why I did that, so I dispute that I have done it improperly.

Q I am very grateful. Thank you, Dr. Williams.

PROFESSOR STONEMAN: Dr. Williams, the Appeal Tribunal gets training, and in our last training session we had a talk by a very reputable Appeal Judge, and he said that in his opinion for any case all the economists should be shut in a very small room together and locked in until they could come to some agreement, and then that would help the constraint enormously. I think there is something of that going on here today, that people might prefer that we were all locked away until we came to some agreement. I do want to talk to you from the point of view of an economist. I only want to address one point, but it is quite an involved point. In your second report – it is a section that you have already been taken to – at p.36 you say:

"To the extent that the Legacy MSA establishes payment completion (...) the replacement incentives it provides are equivalent to those of a straight sale of a Meter."

As you know, that is a very strong result for a economist, because a straight sale provides the sort of incentives we might expect to find in a competitive market, and if we can reproduce that incentive structure with a contract then it tends to mean to us that the contract is really quite desirable. It is a contract to which we, as economists, cannot really object. Would you agree? A. Absolutely.

Q The foundation for this is in the same bundle at p.3122/3123. This is the little bit of
 mathematics, algebra, that most of the lawyers are not really happy about, and our

transcribers are going to have some problems with in the other room. It is this section which I think is basically at the bottom of p.3122 and the top third of 3123. Would you, very briefly, just for the benefit of the non-algebraic people in the audience say what this A. Yes, if I can maybe give an analogy it may help. Essentially, you are tells them? deciding whether to upgrade something, e.g. your TV set. Essentially you get benefits, what economists always call utilities, from a good, and you have got this existing piece of equipment and we will call that "equipment zero", so you get utility or benefits UO from that. That might include minimising costs of operating. Then at that moment in time you have basically got the possibility of upgrading to a new piece of equipment, and that one will give you utility level, we'll call it U1, which generally will be expected to be higher than the old level of utility. So what are we saying here? We are saying, "Well the benefit of upgrading is the difference between the two, U1 minus U0". However, it is not that easy because, of course, the problem is that if you want to upgrade then you actually have to buy the new piece of equipment, and that is going to cost you an amount which in various places I call different things. In some cases I call it K1, I think on page ----

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Q I think on this page you call it G, so it is probably better that we use that. A. Okay, so we call it G for the cost of upgrading. So that says basically that as an ordinary individual you would decide to upgrade your TV if the extra functionality benefits, including any costs savings from upgrading, exceed the capital cost of the new machine, assuming you are not going to get any money back on your old machine, which in the facts of the case is a reasonable assumption. So essentially that is what you might call the condition for efficient replacement, and I know you will want to talk about whether it is the full set of conditions, etc, but that is the basic profitability condition.

The second thing that I've done in this analysis is to say, okay, now let's look at what I call the private incentives. So those incentives I've just given there, (a), are the private incentives of an owner, but they're also absent any externalities, i.e. other things going on, if you like, that equate to the socially or economically efficient incentives, subject to the point I think you're going to want to discuss.

What I then have done is to say, okay, let's look at what happens under the MSA type contract. There, essentially, all of the real factors are exactly the same as I've just described – you get the functionality of a new meter over and above the functionality of an old meter, but you have to basically pay a capital upgrade charge. Provided that market is reasonably competitive then that will basically equal what was it, G, that I was calling it. But, when you actually look at the condition there are a couple of other terms slipped in there. The

other terms that are slipped in there are essentially the contractual payments that you have to make. On one side you have got the contractual commitments – this is assuming the MSA has been signed – that the gas company has made to National Grid. On the other side, we have the premature replacement charge.

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A key point: the whole essence of payment completion – it's nothing to do with the sunk costs – is that is that PRC is set equal to the rental commitment if they don't happen to be equal to each other. In a sense, the grand design of the whole of the MSA scheme is that they are set equal to each other. What that means, therefore, is that essentially they mathematically don't just happen to cancel out, they necessarily cancel out. When they cancel out what happens is that the conditions facing the firm essentially collapse to the case under ownership which we had before. So the essential argument here is that once you realise these things cancel out the very complicated schemes they seem to be facing actually collapse into something unbelievably simple and, by the ownership analogy, innocent.

- Q I think that will do. A. I think that's the essence of the argument. May I make one further point. The PRC is often in the case characterised as a switching cost. The reason why this algebra has appeared in various places is during the case, in SO 1 the PRC was described as a double-payment, and this analysis goes to show that's not true, and the switching cost equally is not really a cost of switching.
- 19 The essence of this is that PRC is equal to the cost you would have had to pay if you had Q 20 stuck with the meter that you are replacing. Just a little of background, I just want to 21 establish this and I think you will agree with that it is not a matter of argument between us: 22 you have set this problem up such that you replace when the benefit from replacement is 23 A. If we look at footnote 13, 3122, this is a note I wrote a couple of years ago positive? 24 for them, and what I did there was essentially abstracted from an issue, which is the 25 equation, the inequality side that we have here is what's generally known as the profitability 26 requirement. Is it profitable to upgrade -i.e. is the utility benefit U1 minus U0 greater than 27 the capital cost. To go back to the TV example, one may be deciding today whether or not 28 to get a new widescreen TV, and you think, how much extra utility will I get, I'll have to 29 throw the old TV, and how much is that TV going to cost? That may well be positive, at 30 which point you should rush out today and buy it. Hang on a minute, no, actually you may 31 think, especially with the recession, that there's going to be a big sale on next month and 32 it's going to be even cheaper next month. So then there is - and this is sometimes called the 33 inter temporal arbitrage condition ----

 temporal arbitrage condition, in layman's language I would say that the first condition, the profitability condition, is what I would call the "whether" condition – whether to upgrade and the second one, which only applies if the "whether" to upgrade decision is answered 	e – vith
4 and the second one, which only applies if the "whether" to upgrade decision is answered	vith
	vith e
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5 positively, is the "when" to upgrade decision.	e
6 PROFESSOR STONEMAN: We are in complete agreement on that, so there is no argument w	
7 that. So let us park that on one side for a moment, and let us go back now to the example	
8 you have here – as I say, we will put the arbitrage condition on one side for the moment.	
9 The example you have here is given the way you have set up this framework the incentiv	es
10 to a renter, given a payment completion contract is exactly the same as the incentive to t	ie
11 owner to change at the same date? A. Yes.	
12 Q So there is as much profit going to the renter as there is to the owner? A. Yes.	
13 Q Fine. Now, the way you have set this up is that the rental agreement finishes in year 20 -	-
14 this is a matter of fact, not a matter for response – the rental agreement finishes at exactly	1
15 the date that meter terminates its life, it is no longer physically operating after the end of	•
16 the rental agreement? A. Yes.	
17 Q What you are saying is that in year 12 of the either ownership or renting, you have an	
18 option, you can either stick with the meter to the end of its life, another eight years, or yo	u
19 can replace in year 12 with a new meter for eight years? A. In year 12 you can either	
20 stick to the end or upgrade?	
21 Q Yes. A. You make this decision every year, basically.	
22 Q Yes. And you are saying it is exactly the same result would be the outcome because the	
rental saved is equal to the PRC that has to be paid? A. Yes.	
24 Q You make this decision every year, 12, 13, 14, 15. What is happening to the PRC as you	go
25 from 12, 13, 14, 15? A. I am just trying to remember – in this case it is falling.	
26 Q It is falling because the rent still to be paid through to year 20 is getting less and less?	
A. Yes, it is just equal to however much rent you owe until the end of the contract.	
28 Q I agree entirely with that. Now, is that an age related PRC? A. Okay, I have to be car	eful
29 here. It is not related to the age of the meter, but clearly the amount of the PRC that you	
30 still have an obligation to pay goes down every year and the meter goes up, it is – like u	s all
31 – one year older every year, so there is a sense in which PRC is a function of the age of t	
32 meter, that that is assuming the particular age of the meter at the start. I am sorry if I am	not
33 getting	

- Q I think that is a different way of saying it is an age related PRC, because the PRC to be paid
 declines as the meter gets older. The whole purpose of your construction here is that the
 PRC has to equal the rental still due, and the way you set it up is that the rental still due
 depends on the remaining life of the meter? A. Yes, though that is a different sense, I
 thin, of age relatedness from what I believe I have been hearing elsewhere.
 - Q I do not think so, because I think in that you are in complete agreement with Ofgem it is a long time ago now I think it was last Friday Ofgem told me that age related PRCs were perfectly acceptable, they would not foreclose. What they were objecting to were PRCs that were not age related. I want to take your example a little bit further, to see if we can adapt it to PRCs that are not age related. Let us say that the agreement now is not to the end of the life of the meter, this is the rental agreement. Let us say that the rental agreement is that you continue paying rental, but if you leave the contract before year 18 you have to pay a PRC? A. To the ----
- Q You will pay something but it will not be equal to the remaining rental through to the end of
 the life of the meter, you would pay the remaining rental through to year 18. So the exit
 charge would be a rental due to the end of the contract, not due to the end of the life of the
 meter does that make sense? A. I think the PRC is always the rental due to the end of
 the MSA contract not to the end of the life of the meter.
- 19 Q Right, but the example you have here is to the end of the life of the meter? A. One
 20 should probably think of it, I think it should be to the end of the contract but that has just
 21 happened for simplicity here to assume ----
- Q Let us assume then it is to the end of the life of the contract, not to the end of the life of the meter, and just for argument's sake, it does not make any difference to the argument, let us say that the end of the life of the meter is 20 and the end of the life of the contract is 18. We consider year 12 should we replace in year 12. If we are an owner it is exactly the same as before. If we are renting then under the PRC you still will have to pay an exit contract based upon an 18 year MSA, so you will have to pay six years' ---- A. Yes, yes.
 - Q But the rental you will save will be an eight year rental, because the meter has eight years of life left?

THE CHAIRMAN: No it has not - eight years?

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PROFESSOR STONEMAN: Yes, so you will pay six years' PRC but you will save eight years'
 rental? A. But hang on a second, after six years the MSA has expired, so at that point
 you are free to renegotiate on that contract for that meter.

1 Q Well, I suppose you could do, but that has not been raised at this stage. I was assuming that 2 beyond that stage you would continue paying the rate of rental that you have been paying 3 for the previous 18 years? A. It is my understanding, though this is a factual matter, that 4 at the end of the MSA contract in a sense all bets are off, and then at that point you can just 5 renegotiate and/or replace, but I think it is a factual matter but that is my understanding. 6 0 Let us go forward on the argument because the issue of renegotiation at the end of the MSA 7 has not been raised as far as I am aware. 8 THE CHAIRMAN: No, and certainly before the end of the MSA, if you keep renting a meter 9 which you could have replaced, you continue to pay the rental as set by the ---- A. 10 During the life of the MSA, the MSA lasts 18 years, any time in the first 18 years you keep 11 paying rentals, or if you stop you pay the PRC which is calculated to be what you would 12 have paid in rentals had you not switched away. 13 PROFESSOR STONEMAN: Now, let us go to year 19, what do you think happens in year 19? 14 A. In year 19 the MSA is over. 15 Q So you do not have to pay any more rental to whoever owns the meter? A. At the end of 16 year 18 the MSA contract now does not exist, it is in a sense at that point, as I understand it, 17 you are now in a world where the party can renegotiate, this is economic analysis. I have 18 assumed that at the end of the MSA that basically the commitment is essentially over and at 19 that point there is free negotiation. 20 Q For the sake of argument, and as economists we are good at saying "Let's assume that ...", 21 so let us assume that in years 19 and 20 that although the MSA is over nobody has made 22 you wise to the fact that you can stop paying the rent and you continue to pay the rent. 23 There has to be some rent paid. All I am trying to do here ---- A. There has to be some 24 rent paid. Clearly there would have to be some new contractual arrangement. Now, it is 25 true at that point clearly by then you can sign another MSA with another CMO etc and the 26 payments that you would make in years 19 and 20 would then reflect the market 27 circumstances of year 19 going forward, so during today I have said basically the price of 28 contracts falls through time. 29 Q I was going to come to that point in a minute. What I am trying to say is we get to 18, we 30 have a meter that has another two years' life in it, although the MSA is now finished. You 31 do not have to, but you stick with the meter, and although you might change the rental, you 32 still have to pay something. A. If you choose to stay with that, I think you have to reach 33 a commercial decision.

1 Q The problem you have set out here on paper is, "Should we change in Year 12 or should we 2 change in Year 20? Should we change the meter in Year 12 or should be hang on to it in Year 20?" I am trying to say, "Let's do this example under the case where the PRC is 3 4 payable until Year 18". A. I.e. it's an eighteen year MSA. 5 Q Yes. Right. But, you continue to own the meter for another two years, and you continue to 6 pay the rental that you would have paid anyway, although you might reduce ----A. Yes. 7 0 You would pay something. A. Depending on what is the price of meters at that point in 8 time, assuming functionality has not moved on. 9 Q But would that not mean that in Year 12, looking forward, the PRC to be paid -- If you take 10 the meter out in Year 12 you have six years of rent -- You have eight years of rent still to 11 cover, although the last two years might be lower. A. I dispute that there are eight years. 12 I say we have six years left at that stage. 13 So that for the last two years National Grid will be giving this meter away for free. 0 A. 14 No. My claim is that at the end of Year 18, at the end of the MSA, essentially you're then 15 in a situation a bit like before the MSAs were negotiated. Now, if that meter has got any 16 value left at that point, in a sense there is a residual value to National Grid and they will 17 basically bid that into the market and get what they can for it. I think the question you are 18 asking is: What is the issue here? Is there a residual value at the end of the MSA? 19 Basically under ownership that residual value would go to the owner, whereas under an 20 eighteen year MSA any such residual value would then go to National Grid, if there were 21 such a ----22 Q No. That was not what I was asking. What I was trying to do was to draw a gap between the 23 payment completion charge payable and the rent saved. A. My claim is that there is no 24 rental commitment beyond Year 18 in this example. Basically, the PRC is equal to the 25 rental commitment. 26 0 Through to Year 20. A. Whatever the length of the contract, the PRC equals the rental 27 commitments for that period of time. What's happening here is that we're saying, "Well, 28 hang on a second! Suppose the contract was slightly shorter". Now, if the contract was 29 slightly shorter, then basically it would've been set up so that the rental commitments are 30 equal to the rents that are owed under the contract. But, what we were doing here was, in a 31 sense, assuming the contract lasts both eighteen and twenty years. That's where the gap is 32 coming from, but that is not meaningful in my view. 33 Q Just to clarify this, can we ask National Grid in some way as to what happens to the rental 34 of a meter after eighteen years on the MSA?

1 MR. TURNER: Yes. What Dr. Williams says is, in practical terms, correct, but not quite so 2 legally. In legal terms what happens is that there is a commitment reflected in these 3 progressively declining PRCs every year, down to Year 18, to rent the meter. If, before the 4 end of that eighteen year period, you remove it, then you have to pay an amount, getting 5 smaller every year, to reflect the commitment. At the end of that period it rolls on, but 6 subject to no commitment at all. So, in those circumstances, in a sense, the buyer is renting 7 on the payment terms, but can pluck out the meter at their discretion. So, in a sense, they 8 have an option to continue or to take out.

PROFESSOR STONEMAN: But if they stick with the meter, they still have to pay you rental.

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A. My response to that is that that is a pure option. This has MR. TURNER: Absolutely. value to the buyer. They are totally free to walk away. There is no exit payment at that point. So, the fact that the contract has got a price, and there's a roll-over in it, is actually a benefit to the buyer, and has no commitment.

- 14 PROFESSOR STONEMAN: I am not sure I agree with you, but let us move on, shall we? I 15 think I illustrated earlier that with the example -- No. Let us go back to this issue of 16 whether it is more profitable to replace. What we have is two conditions to meet: (1) is it 17 profitable to replace? (2) Is it not profitable to wait? Let us say that there is a PRC to be 18 paid -- or a payment completion payment of some kind to be paid. If that payment 19 completion is due in Year 18 and you are thinking of replacing your meter in Year 18 would 20 you think it might be better to wait until Year 19 when there is no completion payment to be 21 made, because the benefit would be greater in Year 19 than if you replace in Year 18, 22 everything else being held the same? A. (After a pause): Let me just think for a 23 (After a pause): Basically, when you're at the beginning of Year 18, if you moment. 24 switch then then basically you U1 minus U0 term from switching, and then you've got the 25 capital cost of the meter, and if you switch in Year 18 you have got a PRC. However, if 26 you wait until Year 19 - and I am really just setting up your point here - then at that point 27 you are out of the MSA.
- 28 Now, at that point then basically you are back into essentially a sort of P&M world in which 29 there is no such commitment. So, basically, at that point you are free to replace and there is 30 an excess incentive to replace in Year 19 because we have not at that point got an MSA in place. Okay? I can see where you're coming from, but I think the answer is the following: 32 It is true that in Year 18, because of the dynamic arbitrage condition, there are worlds where 33 you would replace in Year 18 where you think, "I would replace in Year 18 if payment completion was also required in Year 19, but since at the end of Year 18 I drop off the edge

of the MSA contract, then in that world I basically get my free replacement voucher, and so why don't I wait to get that?" Therefore, it is true - but I have a further point to make at the end - that towards the end game of this eighteen year contract then as you're coming up to the point there might be some very slight distortion of this nature - eighteen years hence. Not now, but eighteen years hence. Except, of course, that assumes that in Year 19 a P&Mtype contract is in place. But, of course, we know that those sort of contract structures are inefficient.. Therefore, as you are coming up to Year 19, then just as when we had an inefficient contractual structure at the time of de-regulation, the parties, to the extent there was an inefficiency, rashly re-contracted to an efficient contract, and then shortly before, or even long before, they would have a similar incentive to re-negotiate if the point that you rightly make, which is theoretically, I think, absolutely correct -- If it has any quantitative significance, they will re-contract around it.

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- 13 So, I think that the answer to both of my last two questions has been that -- What I am 0 14 saying is that theoretically correct, but what you would expect in the market is that some 15 sort of new contract form is introduced for meters over eighteen years old. A. Basically 16 as you approach that point, if there is any inefficiency expected at that point, then as you 17 approach that point, then just as before, they managed to re-contract to an efficient contract, 18 one would expect it then. But, if there was a prohibition on such re-contracting, there would 19 be these what I call end game effects. But, since there is not such a prohibition, then in any 20 world where those effects are material, there would be an incentive to re-negotiate.
- 21 0 One last point - and for this one I want to return to the equations -- I agree with you that if 22 this payment completion amount is exactly equal to the rental still due, then you reproduce 23 the ownership incentives. What I am interested in now is that we are talking about an 24 individual meter here. So, we want to know whether this contract is efficient for this 25 individual meter. You talk about the PRCs under the MSA contract. We are thinking here 26 of replacing in Year 12 or 13, or 14, or 15. Now, the PRC that will be due in Year 12 will 27 be dependent, for this particular meter, upon the proportion of the stock of meters that 28 existed as of January 2004 or 2003 - the original Legacy stock. That has been replaced by 29 Year 12. If a lot had been replaced you might be in the BLR band. If an awful lot have been 30 replaced you might be below the glidepath. If not many have been replaced you will be 31 above the glidepath. So, the actual price that you will pay - the PRC - will bear no 32 relationship at all to the age of this particular meter, it will just be related to the proportion 33 of stock that has been removed at that date – is that correct? A. The full details of how 34 the MSA contract works is a matter that has been studied in depth by my colleague,

Mr. Matthew, who you'll be able to cross-examine later. I have some understanding of this matter, but basically it is true, I think, throughout that the rental in a sense is based on the portfolio and does not depend upon the age the actual meter at 15 Acacia Avenue, so that is correct.

- Q So the PRC on this particular meter would bear no relationship to its age. It would just be dependent upon what proportion of the stock had been taken up to date? A. Twelve years down the line the PRC that has to be paid on my understanding of the contract is, if the contract is 18 years old then for any National Grid meters that are still in place of course many may have been ripped out over the course of the 12 years in year 12, then basically the PRC that is paid on those is six years worth of rental, irrespective of the age of that specific meter.
- Q That is an averages statement. This particular meter might be 12 years old, it might be 15 years old, but the MSA terms are that the PRC payable is not related to whether it is 12 or 15 years old, it is related to how much of the existing stock has already been removed. Can we have that confirmed?
 - MR. TURNER: Yes, that is correct, the assumption being of course the end of the term is likely to be very, very short.
 - PROFESSOR STONEMAN: That is a different matter, the point is that the PRC is related to the proportion of the stock that has actually been removed. Where I am going with this ----
 - MR. TURNER: I am sorry, I am reminded also to correct it by saying, and of course the remaining term of commitment under the contract. It is how many you have taken out relative to that term.
 - PROFESSOR STONEMAN: How many eighteenths you have removed. It is completely independent of the age of this particular meter? A. It's certainly independent of the age of that particular meter.
 - Q The rental due is not independent of the age of this particular meter? A. The rental ----
 - Q The rental that you would have paid through to the end of the life of the meter? A. I should give a health warning here that the issues of the aggregation into the aggregate contract and how the blends work is, I think, in the testimony of Mr. Matthew.
- Q I am not talking about the aggregate. You have given me a result based upon an example
 relating to an individual meter. That example shows, and it is a very strong result if true,
 that the incentives for that individual meter are exactly the same under ownership and under
 a rental agreement with a PRC, and you did say in your evidence "any PRC", and what I am
 saying to you is forget the averaging, does that result hold with an MSA where the PRC is

not related to the age of the meter but is related to the proportion of the population of meters that has already been removed? A. I will try and answer this. As I understand it, but as I say there are people who are closer to this than me so I want to caveat this much more than anything else I've been saying over the last day, in a sense the MSA is what I would call a giant payment completion scheme, that there is at the end of it a total amount of – ignoring avoidable cost, there is a total amount of money that will be paid, NPV adjusted one way or another. Therefore, at any moment in time, if one makes an adjustment to the number of meters that you rent then basically it is designed such that the PRC that you pay is equal to the reduction in rental commitments that you pay until the valid end of the contract – i.e. it is my understanding that the contract is designed such that this is always true. I have not studied all the details of the contract, and much of my belief here is actually from talking to other people, so I do need to caveat my factual knowledge here. I believe that that is true, that the total commitments just add up to a number if you ignore avoidable costs.

Q That may well be the case but that is not the evidence that you have given us. The evidence you have given us relates to an individual meter. A. Yes, can I clarify. I have given evidence that relates to an individual meter. If it's for a one meter population I think that it's all nice and simple.

Q What is the result if there is a one meter population? What is the simple answer? You said it is all nice and simple. What I am saying to you, if it is a one meter population and the PRC is not age related, does it still reproduce the incentive structure that you have under ownership? A. It's related to the remaining length of the – the PRC is related to the remaining length of the contract.

Q Not if it is an MSA?

MR. TURNER: Sir, I will endeavour to clarify. The MSA is an agreement to rent a portfolio, a whole group of meters. Every year there is a minimum scheduled number, so that goes down every year, and the payment completion arrangements relate to that cohort getting smaller every year. There is no agreement to rent any particular meter at all for any particular term. So Dr. Williams is right to look at it on a global level, whatever his example may have done by way of presentation of the point. I hope that helpful.
PROFESSOR STONEMAN: No, because the point here is that at the individual level the MSA

produces exactly the same incentives. This is the argument. A payment completion
contract reproduces exactly the same incentives as ownership.

33 MR. TURNER: That is right.

PROFESSOR STONEMAN: If it is an age related PRC then I would probably go along with that.

1	MR. TURNER: In the sense that it is coming down each year.
2	PROFESSOR STONEMAN: And I think Ofgem will go along with that as well because they
3	entered that into evidence.
4	MR. TURNER: There may be a
5	PROFESSOR STONEMAN: They did, I specifically asked, I said do you accept that an age
6	related PRC is non-abusive and they said, yes.
7	THE CHAIRMAN: Let us not get debate. We are asking questions of the witness at the moment.
8	You got to your feet to clarify the age of the contract.
9	MR. TURNER: Let us just clarify this.
10	PROFESSOR STONEMAN: The point is now is that the amount that has to be paid to get out of
11	the contract on this individual metering in year 12, bears no relation to how old that meter
12	is? A. It does bear a relation to how many more years of commitment you have on that
13	meter.
14	Q No, the amount that you have to pay on that PRC for that 12 year old meter depends upon
15	how many other meters have been cleared out?
16	THE CHAIRMAN: It might be free, you might not have to pay anything.
17	PROFESSOR STONEMAN: It might be free, yes.
18	THE CHAIRMAN: You might not have to pay any PRC.
19	MISS CARSS-FRISK: I am sorry, I just feel duty bound to state that Ofgem does not accept that
20	the analogy works for age-related PRCs either. I thought I should just flag that.
21	PROFESSOR STONEMAN: You do not accept that age-related PRCs are not abusive?
22	MISS CARSS-FRISK: Sorry, are analogous to ownership that the incentives are precisely the
23	same.
24	PROFESSOR STONEMAN: You did state, because I actually read it in the transcript, that you
25	do not consider age-related PRCs as abusive. I asked you specifically.
26	MISS CARSS-FRISK: Absolutely, yes, I am not going back on that all, it was just the ownership
27	analogy I thought I should clarify.
28	PROFESSOR STONEMAN: All I am trying to get at is that under MSAs the PRC you pay is not
29	related to the age of the meter that you are considering at the time. There is a future rental
30	commitment that is related to the age of the meter that you are looking at at the time, but the
31	PRC that you have to pay depends upon, for example, given how many meters you have
32	taken out previously, are you above or below the glidepath? That has nothing to do with the
33	age of the meter. That is all I am trying to say?
34	MR. TURNER: It is not the actual age of any particular meters, that is the point.

1	PROFESSOR STONEMAN: That is exactly what I am saying, it depends how many other
2	meters have been taken out relative to the glidepath.
3	MR. TURNER: But you can think of it then in terms, if you leave aside the actual ages of the
4	meters in the legacy group, you can think of it in terms of giving them contracted ages.
5	PROFESSOR STONEMAN: You may be able to set up a framework in the aggregate
6	MR. TURNER: Yes.
7	PROFESSOR STONEMAN: that gives you that result but that is not what we have in the
8	evidence. We have in the evidence here a statement that says that the level of the individual
9	meter, if the PRC is age related, which is basically what I argued, then we get an optimal
10	outcome, you get the same incentives as we get as if the meter is owned. What I am saying
11	is that the MSAs do not produce that result.
12	THE CHAIRMAN: Well can we let Dr. Williams now explain and comment on that? A. I
13	believe it is an issue about the aggregating up and the mixing effects and I am afraid that is
14	a territory which I do not feel qualified to comment on.
15	PROFESSOR STONEMAN: All right, with that I think I will finish. You are all agreed now we
16	should be shut in one room! (Laughter)
17	MR. TURNER: Professor Stoneman, if I might say, actually Mr. Matthew may be the right
18	expert to ask about this issue, because he is much closer to the mechanics of the MSA and
19	to this point.
20	PROFESSOR STONEMAN: The problem with that is that I cannot necessarily accept that Mr.
21	Matthew agrees with the evidence that Dr. Williams has put in on p.3123. He might say:
22	"Well that's Dr. Williams' issue and not mine."
23	THE CHAIRMAN: I have a couple of questions for you, Dr. Williams. Going back to the
24	question of market power, and the ability to price above the competitive level as an
25	indicator of dominance, you listed three factors, I think, which you say constrained the
26	ability to price above the competitive level on the part of National Grid, and one of those
27	was the price cap which has made its way into the P&M contracts. I do not know whether
28	you are aware that this Tribunal has, in a number of telecommunications' cases, considered
29	a similar question in which it has been expressed as relating to the "modified greenfield
30	approach", is that a term that you are familiar with at all? A. No, it is not.
31	Q Well perhaps I can summarise what it is and then see if you have any comment. What that
32	says is that when you are assessing market power you cannot take into account constraints
33	on the conduct of the putative dominant undertaking where those constraints arise because
34	the regulator has exercised a power to constrain that conduct when the precondition for

exercising that power is the existence of dominance, otherwise you get into a circular argument. You say: "I am not dominant because I have had a price cap imposed on me, the reason I had that price cap imposed on me was because I am dominant, and so you would never get into the situation of the company being subject to regulation because the potential for regulation would undermine the existence of the dominant position. Now, how do you rely on the existence of the price cap, which I understand was imposed on National Grid because it was a monopoly, is it right then to say because of that it cannot price above the competitive level and therefore it does not have market power, when the existence of the price cap is only there because it has market power? A. I think I understand what you are saying. The first remark is I am giving economic evidence about whether or not they can raise price, taking into account all the constraints they face. As I understand it what you are saying is that from a legal point of view you might argue that one of these constraints might not, from a legal point of view, be admissible as a constraint. Clearly, as an economist I can just take constraints and say: "What effect do they have", so in a sense I would, with respect, want to pass that one back to you as your decision not my decision. However, if one looks at what we are saying here, essentially the primary factor working here was the threat of stranding that was forcing National Grid to make significant concessions in order to retain the contracts. Now, of course, in the period it would take to rip out the meters those gas suppliers would need to carry on renting meters and therefore in that period of time presumably absent regulation National Grid can raise the price of those meters possibly to quite a high level. However, I should point out that because of the existence of the cap I did not perform – or feel the need to perform – this analysis. There is then the question as to whether the speed of rip out is itself indigenous, i.e. if there were any attempt to significantly raise those prices would there be any attempt to accelerate still further the process. So it may still be that even if one took away that price cap, that the eventual prices would still be below the regulatory price cap used now not as a market constraint in the market but as a benchmark for the reasons I gave earlier. So if one, for legal reasons, said one is not going to admit this constrain into the analysis then at that point I would say that in order to prove that basically there was market power somebody – and I have no idea whose burden this would be – would have to show that in fact there would be the ability to raise price and that that would not induce any form of supply response to accelerate still further. Does that answer your question?

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Q Yes, thank you. The second point is that you say that the P&M contract creates this artificial incentive for the gas suppliers to replace the meters in an inefficient manner, because it does not include a payment completion provision? A. Yes. Q We have seen in the evidence that when British Gas went out to tender for replacing the meters, which was before the Legacy MSAs came into effect, they contemplated a 13, 14 year replacement programme. My question is whether you would have expected, given what you have said was the artificial incentive created by the absence of a payment completion term, whether you would have expected them to be a bit more ambitious than that in wanting to replace the meters, or what factors do you think might have caused them to be rather cautious about the rate of replacement? A. Obviously I cannot speak as to what was in their mind, so it is a little bit difficult to say. What I do maintain is the following, that if moving to a world of negotiating a contract against the background of the P&Ms, then if British Gas want to extract the best possible price concession from National Grid, it would be commercially rational for them to create a threat of replacement, preferably as fast as possible, and as much uncertainty about "how fast as possible" in order to extract the best concession. So, you have told me what they did at the early stages. What I would say is relevant to the assessment of the situation at the time of the MSAs is, what were they actually contemplating and/or threatening around that time. You know, whether it's five years or eight years, I'm not the person to judge that. But, that was the factual matrix that I had in my mind, without taking a view on the five to eight when performing my analysis.

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22 Q Finally on this point about the new and replacement being a separate market from the 23 Legacy market, you have mentioned a couple of times something which struck me, which 24 was that the new and replacement threat, if I can call it that, has no mass in the sense that I 25 think you also put it that these potential threatening meters do not actually exist, but their 26 potential to exist is what asserts the competitive constraint on the conduct of National Grid. 27 You have had a debate with various counsel as to whether that means that they are in the 28 relevant market or outside the relevant market. You say that it does not really matter. 29 Nonetheless, the way that National Grid has put its case in the Notice of Appeal has been to 30 treat the new and replacement market as a separate relevant product market in which they 31 then give market share information. Because it includes all the contracts with the CMOs it 32 gives the rather different balance of market share from the Legacy meter market in which, 33 of course, National Grid has 97/98 percent. But, I wonder what your position is as to the 34 existence in fact, or as an essential element in National Grid of new and replacement meters

 struggling, I am afraid, slightly. I will offer some observations, but I'm not sure if they' directly answer your point. I am certainly saying that the shares that are provided of the new and replacement market on my understanding - though I didn't personally perform to calculations - is that in a sense you are adding up there how many meters are contracted be supplied. They may not yet have been supplied, but you add up how many contractual 	he to 1 n b) igh vho
 4 new and replacement market on my understanding - though I didn't personally perform t 5 calculations - is that in a sense you are adding up there how many meters are contracted 	to 1 n b) igh vho
5 calculations - is that in a sense you are adding up there how many meters are contracted	to 1 n b) igh vho
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6 be supplied. They may not yet have been supplied, but you add up how many contractua	n b) igh vho
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7 promises are made. Now, of course one can always have an interesting debate about (a)	igh vho
8 general terms what is the relationship between market share and market power (if any);	vho
9 whether in those sort of contexts it might actually be that instead of the person with the h	
10 market share having price-setting power, it's actually the person who sets the low price w	
11 gets the high market share, i.e. the relationship between share and price might be the oth	r
12 way round. Those are interesting questions which I don't think have been addressed by	
13 Ofgem. But, what I am saying is that the reduction in the price of the MSA, which arose	
14 from the threat of replacement The 'thing' that was doing the replacement threat is not	
15 reflected in those numbers, i.e. something that was doing apparently several hundred	
16 million pounds worth of competitive damage counts as a big You should almost add p	us
17 zero to everything, but then realise that that zero is actually doing a lot of competitive we	ork.
18 But, that zero, in a sense, almost by definition, is not in those numbers. I don't know if t	nat
19 helps?	
20 Q Yes, I think it does. Thank you.	
21 Q Any re-examination, Mr. Turner?	
22 <u>Re-examined by Mr. TURNER</u>	
23 Q Dr. Williams, you were asked whether it is a necessary or relevant feature of significant	
24 market power - or, to use the legal term, dominance - in the context of an alleged	
25 exclusionary abuse that a firm could profitably raise prices above the competitive level.	lou
26 recall that debate. A. Yes.	
27 Q Could you please be given Bundle A6. At Tab 20 you will find the recent guidance of the	e
European Commission. This is purely so that we can clarify your opinion.	
29 MR. VAJDA: I think if this document is going to be put to the witness - and I have no objection	n
30 to it - it needs to be made clear what this document is. It is an enforcement priority from	the
31 Commission.	
32 MR. TURNER: This is the enforcement priorities of the Commission in applying Article 82 to	1
33 abusive exclusionary conduct by dominant undertakings. If you go to p.6 and look at par	a .
34 11 you will see an expression of view by the European Commission in the context of	

1	exclusionary conduct. I would like to know whether you can clarify whether your view of
2	significant market power or dominance in an exclusionary context differs in any way from
3	this, and, if so, how. A. (After a pause): Well, the first sentence of it I surely agree
4	with. (After a pause): I think I broadly agree with this.
5	Q Thank you. If you drop down the page, while we are there, to para. 13, the Commission
6	states its view about the relevance of market shares in an analysis. Again, could you clarify
7	whether your view differs in any way from that, and, if so, how? A. (After a pause):
8	Right. On the first sentence it says, "Market shares provide a useful first indication" I
9	probably would add a 'sometimes' there. But, then, of course, they move on to say,
10	"However, it will interpret market shares in the light of the relevant market
11	conditions - in particular the dynamics of the market and the extent to which
12	products are differentiated".
13	I might add that some other factors there should also be included, but broadly agree with
14	that. Then, in the third sentence,
15	"The trend or development of market shares over time may also be taken into
16	account in volatile or bidding markets".
17	Then I would agree. I mean, I always agree one should look at all the facts of the case, and
18	those are sometimes, possibly including this case, relevant facts that should be looked at
19	So, basically I agree with that, yes.
20	MISS CARSS-FRISK: Madam, I am sorry. I am a little anxious that this is really straying into
21	adducing further material when the witness has actually expressed a clear view on matters
22	and it should not really be the opportunity to adduce further material in chief.
23	MR. TURNER: This is clarifying his view based upon what he had said and the questioning he
24	was given.
25	The second question: You were asked about whether the rental price that was agreed at the
26	time when National Grid struck the MSA terms in 2004 was at the competitive level. You
27	remember that debate. A. Yes.
28	Q There was an assumption that National Grid's price to some extent is lying above the
29	corresponding CMO price for replacement meters at that time. You remember that? A.
30	It was put to me Somebody put to me a sort of factual claim that the National Grid price
31	was above the CMO price. I think, if my memory is correct, the transcript will say that I
32	though there was some debate there and I didn't know absolutely the factual answer.

1	Q	Now, you remember also that the questioning extended to the relationship between the
2		amount of payment completion and the level of the rentals that were being required by
3		National Grid, the relationship between the exit charge and the rental? A. Yes.
4	Q	Could you pick up Ofgem's skeleton at para.113, which should be in CB2, tab 15. Do you
5		have that? A. This is the skeleton of Ofgem, yes.
6	Q	Could you go to p.39, para.113. Could you read that to yourself. A. (After a pause) Yes,
7		I've read it.
8	Q	Can you clarify any further what you were saying previously in answer to those questions
9		about your view on the appropriateness of either the level or the structure of the PRCs under
10		the Legacy MSAs? A. Could you repeat the question, please?
11	Q	Having read the proposition which is set out there about the level of the rental payments
12	MIS	S CARSS-FRISK: I am so sorry, madam, again I do not believe that this witness was asked
13		about this.
14	THE	CHAIRMAN: Your point is that this is not excessive pricing case, and it is not part of
15		Ofgem's case that the PRCs overall were set too high – is that your point?
16	MR.	TURNER: He was questioned about the relationship between the rental charge and the level
17		of the PRCs, and the question was whether, if the rental charge is accepted to be non-
18		excessive, this has any implications for either the appropriateness of the level or the
19		structure of the PRCs?
20	THE	CHAIRMAN: I think the comparison was being made between the rental charge under the
21		Legacy MSA and the rental charge under the CMO contracts.
22	MIS	S CARSS-FRISK: Yes.
23	THE	CHAIRMAN: And what you are saying is, well, you cannot rely on that as evidence of an
24		ability to price appreciably above the competitive level because that is not part of this case.
25		Is that the point?
26	MR.	TURNER: That is the point I am trying to ask the witness for his views on, madam.
27	MR.	VAJDA: (without microphone) not to lead the witness.
28	MR.	TURNER: This is not leading the witness, this is asking him an open question by reference
29		to a document.
30	MR.	VAJDA: I think this debate means that the value of any re-examination is going to be very
31		minimal on this point.
32	MR.	TURNER: I am in your hands, madam, about that.

1 THE CHAIRMAN: I think this can be dealt with by submission. We have Dr. Williams' in 2 respect of that and I understand where you are going but I am not sure it is something that 3 he can help us with further. 4 MR. TURNER: Yes, madam. One final question, madam. (To the witness) The Chairman 5 asked you a question about the situation in which, although there may be payment 6 completion arrangements in place which last 18 years, the meters might still continue in 7 place and being rented for some period after that. A. Yes. 8 Q Can you clarify any further your view of whether that possibility affects the payment 9 completion and pricing equation which you had been referring to in your evidence and its 10 A. I have always thought of this analysis in terms of payment completion implications? over the period of the MSA contract, and it has always been my belief that at the end of the 11 MSA contract one simply renegotiates. If there is a term in the contract enabling one to 12 13 extend, that is an option for the buyer, but not an obligation, and one would just see what 14 would happen at that point. I think that is the only extent to which I could possibly clarify. 15 MR. TURNER: I have no further questions. 16 THE CHAIRMAN: Thank you very much, Dr. Williams, I can release you from the witness box. 17 (The witness withdraw) 18 MR. TURNER: Madam, our next and final witness is Mr. David Matthew. 19 THE CHAIRMAN: I think we had better make a start on Mr. Matthew. 20 MR. TURNER: I respectfully agree. 21 THE CHAIRMAN: Although I appreciate that means that he will be in purdah over the week-22 end. Is that going to present you with insuperable difficulties? 23 MR. TURNER: It should not do, madam. However, before the Tribunal enters a break this 24 afternoon we did have some initial words about closing submissions. With the Tribunal's 25 permission – and my friends will say if they agree or not – it may be helpful if the Tribunal 26 were to rise for five minutes at some point for us to discuss what our proposals would be in 27 relation to that next week. 28 THE CHAIRMAN: That we rise for five minutes next week some time! 29 MR. TURNER: No, rise for five minutes before close of proceedings today. 30 THE CHAIRMAN: Why do we not do that now and come back at just gone 3.30. 31 (Short break) 32 THE CHAIRMAN: Mr. Turner? 33 MR. TURNER: I am very grateful. There are essentially two issues. The first is when we kick 34 off after the experts finish. The likelihood is that the experts are going now to soak up

1 most, if not all, of Monday and the question then is whether we go straight into closing 2 submissions before you, or whether there is a breather for a day given the indication that the 3 Tribunal may be prepared to sit until Thursday. Mr. Vajda is the counsel for whom that is 4 inconvenient, the rest of counsel can and would prefer a day's breather to assemble 5 everything and then have two days on Wednesday and Thursday. 6 The second question is one of structure of closings. All parties agree that National Grid as 7 the appellant have the last word. We favour a structure which has been followed in previous 8 such cases where we have our submissions first, they answer, and we have a short reply at 9 the end. 10 What is favoured on all sides apart from National Grid is that they kick off and have a day 11 between themselves - we do not therefore start with any closing submissions, and we 12 follow that for a day, and that concludes the oral proceedings. So those are the two issues 13 for the Tribunal and I have, I hope, summarised that accurately on behalf of all counsel, but 14 we are in your hands on those questions. 15 THE CHAIRMAN: Mr. Vajda, are you not available on Thursday, is that the problem? 16 MR. VAJDA: I am, in fact, due to be in Copenhagen on Thursday, but it is only affecting me, but 17 I just mention it, the Tribunal has to take an overall view and not just look at my position. 18 For that reason I am not in a position to consent to a day – we for our part would be happy 19 to do it without a break, but that is only my own personal position. I am not in any way 20 saying that it should determine the view of the Tribunal, there it is, and I do not think I can 21 say much more about it. 22 THE CHAIRMAN: But if we took the break on the Tuesday, then on either structure, as regards 23 closing submissions you are unlikely to be heard on the Wednesday? 24 MR. VAJDA: I would be here on Wednesday. I had anticipated that the trial would finish, as 25 indicated, on Wednesday, but I fully accept for all sorts of reasons it has taken longer and, 26 as I say, it is simply my position; the Tribunal has to look at the position of everybody and 27 so I am not saying it should be just done for my convenience at all, but I just mention that 28 because that is why I am not able to accede to the suggestion made by Mr. Turner. I also 29 accept that if, in fact, we have a break, and it may be that we go into Thursday whether we 30 have a break or do not have a break, I can see that there is a risk of that as well. 31 THE CHAIRMAN: This may become academic depending on how we get on with our witnesses 32 between now and then. Miss Carss-Frisk, do you have anything that you want to add to 33 that?

1	MISS CARSS-FRISK: As Mr. Turner has indicated, we are certainly happy and indeed think it is
2	a good idea if we can to have a break for people to put together their closing submissions as
3	efficiently as possible. If we do have that – particularly if we do have that – it seems to us
4	the most sensible course is then for us to go first followed by the interveners, and then for
5	Mr. Turner to have the last word. It seems to us that in the two days we are likely to have it
6	is not really going to work, and it is going to be inefficient to have Mr. Turner, then us, the
7	interveners and then him again and frankly it also seems to us that that does give him rather
8	too many bites at the cherry, given that way we have started, etc.
9	THE CHAIRMAN: Well he is the appellant, but it may be that if we were to go with your
10	structure where you go first and then the other parties make their submissions it may be that
11	we would run out of time if we had the break even sitting on the Thursday. I know in the
12	past the Tribunal has then asked for submissions in writing, but that creates its own
13	difficulties.
14	MR. TURNER: Yes, the way that my structure would work would be that instead of a day for
15	them a day for us, we would go until, say, 3 o'clock on the Wednesday, they would go until
16	3 o'clock on the Thursday and we would have then time for a short oral reply to close things
17	on the Thursday.
18	THE CHAIRMAN: I will think further about this over the weekend. Yes, Mr. Vajda?
19	MR. VAJDA: I have addressed you, madam, on my personal difficulties, I have not addressed
20	you on the other point and I would just stress that I support the position of Ofgem, because
21	the way that this has been done has been different from a normal High Court trial, the way
22	that one had factual witnesses together and one is going to have expert witnesses together,
23	and therefore it seems to me in terms of economy and, dare I say, the cost of these
24	proceedings it is much better that we just go Ofgem, us and Mr. Turner last.
25	THE CHAIRMAN: Let us crack on for the rest of this afternoon.
26	MR. TURNER: Our final witness is Mr. David Matthew of NERA.
27	Mr. DAVID MATTHEW, Sworn
28	Examined by Mr. TURNER
29	Q Mr. Matthew, do you have a bundle marked WS1? A. Yes.
30	Q Turn to Tab 5. On the first page, numbered p.905 do you see a document entitled
31	'Comparison of Contract Structures - Legacy MSA and Age-Related PRCs'. A. I do.
32	Q Would you turn on in that document to the final page, p.969? Is that your signature on that
33	page? A. It is.
34	Q Above that, is that your expert declaration. A. It is.

1	Q	Does the preceding document represent your first expert report in these proceedings? A.
2		Yes, it does.
3	Q	Would you turn next to Bundle WS6? In WS6 would you please turn to the third tab,
4		marked Tab 24? Look at the first page bearing the number 3489. Do you have that? A. I
5		do.
6	Q	Do you see there a document entitled 'Comparison of Contract Structures - Legacy MSA
7		and Age-Related PRCs - Second Report of David Matthew'? A. Yes.
8	Q	If you turn on in that document to p.3534, is that a copy of your signature? A. Yes.
9	Q	Above that is that your expert declaration? A. Yes.
10	Q	Is this your second expert report in these proceedings? A. Yes, it is.
11	Q	Mr. Matthew, if you wait there, other counsel will have questions for you.
12		Cross-examined by Miss CARSS-FRISK
13	Q	Mr. Matthew, focusing on your first statement for a moment, at para. 14 on p.915 you say
14		that:
15		"Under certain assumptions the costs of early replacement under the two contract
16		structures will be precisely the same. Relaxing these assumptions loses the
17		precise equivalence, but not the general thrust of the analysis or the conclusions".
18		Now, that is talking about the various stylised examples that you give in that report, is it
19		not? A. Yes, it is.
20	Q	Yes. As you say there, you are demonstrating that it is possible to construct replacement
21		scenarios whereby the total cost of replacement is the same under the MSA or an MSA-type
22		structure and an age-related-type structure. A. Well, I think what I'm saying is that
23		because early replacement under the two structures will be pretty much the same in a very
24		wide range of circumstances, I recognise that there is not precise equivalence and that there
25		are some circumstances where the equivalence will not alter.
26	Q	You make a number of assumptions, as you have said, in para. 14. You set those out in
27		paras. 37 to 39, do you not? Is that right? That sets out the assumptions that you make. A.
28		Yes. Paragraphs 37 to 39 set out my slightly simplified versions of an MSA-type contract
29		and what I think of as an individual meter-based contract.
30	Q	In particular, as one sees from para. 39(a), for an age-related contract you assume that PRCs
31		will always be paid on replacement regardless of the reason for replacement, i.e. including,
32		for example, replacement of a faulty meter. A. Well, perhaps I should explain
33	Q	If you do not mind, is the answer 'Yes' or 'No' to my question? A. Well, you'll have to
34		ask the question again.
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Q Is it right that looking at the age-related approach you do not draw any distinction between the reasons why a meter is replaced? A. I abstract from it.

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Q Yes. That is really what you say in para. 39(a). Yes. Overall, in your stylised examples, you do not distinguish between what Mr. Keyworth has referred to as non-discretionary replacements - those that have to be done, for example, faulty meters - and other replacements that he calls discretionary replacements. A. No. This stylised example essentially treats all replacements as, sort of, one group. So, it doesn't distinguish between the free replacements are free because they are faulty, policy, or functionality exchanges, or free because they happen to have reached a pre-specified age benchmark.

- Q But in fact, and I am sure you would acknowledge, the age-related counterfactual used in the Decision, which is based on the CMO and new and replacement-type contract, does have the feature that no PRC is payment for faulty meters. A. It does, and so does my stylised example.
- 14 Q These stylised examples that we looked at in your first report do not draw any distinction 15 between non-discretionary and discretionary replacements, as you have said. A. No. 16 What they are doing is they're saying in the particular way I've set out my population here, 17 is that this is a twenty-year contract. It has a glidepath for the MSA version. So, it's going to 18 allow -- It starts off with 2 million meters, but then allows 100,000 replacements each year. 19 So, you reach zero at the end of the glidepath. What I have done is I've tried to build up, 20 call it an age-related contract -- what I mean is a contract where each meter has an 21 individual contracted life. I've tried to build that up in such a way that, in aggregate, the 22 number of meters that you have contracted to rent in each period is the same as that implied 23 by the glidepath.

Now, to achieve that the age-related contract will need also to allow for 100,000 free replacements in each year because that is what the glidepath contract does. Now, in practice, that 100,00 would need to be built up of faults -- functionality exchanges, policy replacements and whatever we have specified as our free replacements by virtue of their age. Now, my stylised example doesn't break it down in that way. It just simply says, "I'm going to assume that we know which 100,000 meters would reach the end of their lives for any of those four reasons at each point in time, and that we have an individual contract linked to each of those meters". So, it doesn't separate out the different reasons why meters become free. But, the example is clearly intended to encompass that possible complication.

- 1 Q Yes. But, it is not actually set out. I understand what you are saying, but it is not actually 2 acknowledged in the examples as such, because, as you say explicitly at para. 39(a), you do 3 not draw a distinction. A. I think that's what para. 39(a) says - it says I do not draw a 4 distinction. I believe I wrote it, and I believe it's clearly implied that what I have just 5 described is precisely what I'm doing. 6 Q So, what we get, as I think you acknowledged right at the outset of me asking you questions 7 is that you are able to construct scenarios in which the total replacement costs are the same, 8 but of course they do rest on certain assumptions being made? A. To go back to the 9 conclusions, the conclusions of the analysis are that, and admittedly these are stylised 10 examples, the costs of early replacements are the same under both contract structures across 11 a very wide range of replacement scenarios. It says there are some wrinkles in that and that 12 there ware scenarios where that won't be cheap. For the most part, it's suggesting they are 13 essentially equivalents. 14 In the worked examples that you give? Q A. Yes. 15 0 Going back to this point about not drawing distinction between discretionary and non-16 discretionary replacements, of course Mr. Keyworth's analysis very much focuses on the 17 cost of the discretionary additional replacements that can be made, as you accept, I think? 18 A. Yes, that's a key theme in his report. 19
 - Q As you note in para.92 of your second report you may just want to have that open, WS6,
 p.3523 you refer to Mr. Keyworth's calculations and in the last sentence of para.92 you say:

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"These figures assume that the Gas Supplier has to undertake 850,000 nondiscretionary replacements every year, and that these 850,000 are not brought forward from future years to the early years."

So you are referring to his estimate there of non-discretionary replacements? A. Yes. Q Here there is a degree of dispute, as I understand it, between you and Mr. Keyworth as to the reasonableness of that assumption – is that right? A. On the 850,000?

Q Yes, as to that level of non-discretionary replacement? A. There is a factual question
about whether, in the context of his contracts, 850,000 is a reliable number. I think the
disputes – I think I'd probably stretch to even call it a dispute – the disagreements between
myself and Mr. Keyworth on that point is of third order relevance to the principal
differences between our reports. The principal differences between our reports relate to the
basic methodology one should use if you're trying to ----

THE CHAIRMAN: Just focus on this 850,000, rather than how important a dispute it is, or
 disagreement. Let us just focus on that.
 MISS CARSS-FRISK: Thank you, madam. We will just spend, if I may, a little while on this

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- third order dispute. First of all, I am sure you would accept that, of course, there will have to be some non-discretionary replacements in the years going forward? A. Yes, and I would generally expect them to be fairly substantial.
- 7 0 Fairly substantial, yes. Of course, the particular relevance of the non-discretionary 8 replacements is that they reduce the number of additional replacements that can be made 9 free under the glide path under the MSAs? A. The glide path allows 980,000 free 10 replacements each year, and the assumption of Ofgem, and I think it is a reasonable one, is 11 that gas suppliers use that allowance to undertake their non-discretionary replacements. So 12 simple subtraction tells you that if you have agreed to be able to replace 980,000 meters a 13 year for free, of which 850,000 are non-discretionary, that leaves 130,000 that are 14 discretionary.
 - Q One of the points you have made is that National Grid intends to change its policy as to non-discretionary replacements. Is that not right? A. That's what I understand to be the case.

Q If we look at para.98 of your second statement, please, p.3524, you say:

"Indeed National Grid is moving to an output based approach for policy replacement and I understand that for a period, policy replacement obligations will be well below the Maximum Replacement Number. This would reduce the volume of non-discretionary replacements required and therefore increase flexibility for meter operators to be increase replacement in one year and reduce it in the next. While this may not have been anticipated in the earlier years, as discussed in Section 7.1, it is unclear how realistic a much larger output expansion would have been in the earliest years of the contract."

You are not in a position, as I understand it, to give factual evidence as to that new policy that may or may not come into effect, or indeed have come into effect? A. No, I am not.

- Q But what you do acknowledge in para.98 is that this may not have been anticipated in the
 earlier years i.e. even if there is such a new policy, you appreciate that may not have been
 anticipated by the gas suppliers? A. I actually don't know whether they did or didn't
 anticipate it, but I have no reason to suppose they did anticipate it.
- Q It is reasonable to think, is it not, if you were to evaluate your possible replacement
 decisions shortly after you have signed the MSAs, just imagine this position, it is reasonable

1		for you to simply work on the basis of the contract, is it not, and what you know about
2		policy replacement at that point, and not anticipate a possible change in the future?
3		A. Well, as you pointed out, I am not a witness of fact on what gas suppliers did or did
4		expect at that time. The observation I make on the assumption that Ofgem draw, which is
5		they assume that gas suppliers expected there always to be 850,000 meters each year – as I
6		stress, I don't regard this as a central issue – they make that assumption on the basis of an
7		inference as to what they think gas suppliers would have expected. I have no knowledge
8		myself at all as to what they did expect, but in terms of the evidence for that factual
9		proposition, what Ofgem thought gas suppliers expected seems to me to be fairly weak – in
10		fact, I would have asked them, "What did you expect?" and got some answers.
11	Q	When you say what Ofgem expected that the gas suppliers would do, you mean what
12		exactly? A. I mean that the factual basis for Ofgem's view that there will always be
13		850,000 non-discretionary meters, and also Mr. Keyworth's calculations of assumption of
14		those parts, the factual basis for that seems to be Ofgem's inferences as to what they
15		thought gas suppliers expected, not facts what gas suppliers actually did expect.
16	Q	You do not dispute, as I understand it, certainly not based on your report, Mr. Keyworth's
17		explanation and evidence as to what he knows about what actually happened in the first
18		three years of the contract where that sort of level of non-discretionary replacement took
19		place? A. Sorry, could you repeat the question?
20	Q	Mr. Keyworth explains in his statement about the level of replacement that took place in the
21		first three years of the contract, and he gets to about 850,000 a year – yes? A. Yes.
22	Q	And he provides a basis for getting to that figure? A. Yes.
23	Q	You do not quarrel, as I understand it, with how he derives the figures he gets for the first
24		three years based on what actually happened? A. The figures for his assumptions as to
25		how many non-discretionary replacements were either obligated upon or decided to do by
26		gas suppliers in that period?
27	Q	Yes. A. No, I don't dispute that.
28	Q	You do not dispute that. So the only dispute then is as to whether it is reasonable to
29		consider that those sorts of replacements would continue at roughly that sort of level in the
30		future? A. In respect of the assumption that the 850,000 figure or thereabouts would
31		continue for the whole life of the contract, yes, that is the question I raise.
32	Q	That is the question you raise. Now, one possibility you raise in your statement is as to
33		advancing the following years' non-discretionary replacements into an earlier year and thus

 which particular Q It is paragraph 93 of your second report, p.3523. "If it is assumed that gas suppliers could advance next year policy non-discretionary replacements when they accelerate replacement, that would imply a much lower 'marginal cost' (using Mr. Keyworth's metric) under the Legacy MSA than the figures that he presents." A. Yes, this is the point that Mr. Keyworth says we are going to allow for 980,000 replacements each year, but 850,000 of them will be non-discretionary, leaving 130,000 discretionary. So he works out, and I have no quarrel with his calculations that if you do a substantial increase in discretionary replacement early on, and then continue to undertake 850,000 replacements afterwards, then the earlier replacement charges you end up paying start to mount up. I have no difficulty with the calculations that he has undertaken there. I think what he has in mind is if you were to accelerate those replacements in that early period, but then cut back by even more than going back down to 850,000, so the gas supplier assumes to possibly want to go right down to zero, you cannot do that under the MSA, because you always have to do this 850,000 – 1 think this is a slightly academic debate anyway, because it is not clear to me why you would want to go shooting up in three years and come down to zero in later years. Q Mr. Matthew, my question was related to your para. 93? A. Yes, so this paragraph is going to the question of in the rather unlikely circumstances that gas suppliers would actually want to do that, one way in principle that they might be able to do it is rather than bringing forward future discretionary replacements, they actually bring forward next year's non-discretionary replacements. So they might try and do all of next year's non-discretionary replacements. So they might try and do all of next year's non-discretionary replacements. S	1		gain a glidepath advantage, if you like, in that way. That is right is it not? A. Sorry,
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32 number is subject to a maximum, so effectively it caps the gas suppliers' exposure to having	30		under the MSA you have a policy pool effectively, and you also have an obligation to
	31		undertake replacements each year, which is the replacement number and that replacement
	32		number is subject to a maximum, so effectively it caps the gas suppliers' exposure to having
to do loads and loads of policy replacements out of their glidepath allowance.	33		to do loads and loads of policy replacements out of their glidepath allowance.

What I think Mr. Keyworth's point is, is that if you shoot up policy replacements this year you cannot stop your policy replacements next year because the maximum replacement number, as set out in the contract, does not have a provision to go below the number it would have been merely because you went over it in the previous year. That, so long as the maximum placement number is always binding, which is a factual question as to whether it actually would, could have the property that you end up not being able to bring forward next year's non-discretionary replacements in, as I said, the rather unlikely circumstances that you might want to do that. My observation is simply that if that is the factual position then what he says is potentially right. National Grid says it is not the situation. I agree with Dr. Williams that it is not on the face of the contract ----

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- You agreed, first of all, I think, with my original question that there is no provision so far as Q 12 you know in the contract for this to happen? A. As far as I understand the contracts there 13 is no provision for it, National Grid, I understand, relies on wider obligations to say in the event that somebody really did shoot up policy replacement in one year they would be 14 15 obligated, or would otherwise in any event allow them to cut back next year.
 - 0 You say in footnote 70 that National Grid has said that it would in fact allow this, but what is your evidence for that that National Grid has said so? A. Well I thought they had said that, I am sorry, I did not provide a reference, but I thought they had put it in.
 - You thought that they had said it, to whom, when ---- A. In their submissions in this Q proceeding.
- 21 0 That is the sole basis for your evidence here, that you thought they had said it somewhere in 22 these proceedings? A. Well I probably could find the reference if I had a bit more time, 23 but I am reasonably confident that they have made submissions in these proceedings saying 24 that that is what they would do.
- 25 Simply in these proceedings that is all – no other communication? Q A. I am not aware of 26 any other communications. I am, I think this is right, aware – at least I believe it is the case 27 - to date anyway, in relation to policy replacements, which is the variable that affects this 28 matter, the problem that British Gas has faced ,and apparently they are the only ones in the 29 frame where this might have an influence, has been that their CMOs have had a lot of 30 difficulty undertaking the policy replacements that they have been obligated to do up to 31 now and, in fact, the problem has been how are they going to do the number that they are 32 supposed to be doing? So in that context, and I do not know if it is the right context (but I 33 believe that to be a fair characterisation of what has actually been going on) it does not 34 surprise me that the matter of whether if British Gas were to do a much bigger replacement

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of policy meters would they be allowed to then cut back next year, does not seem likely to have arisen so far.

Q No, so far as you know it has not happened in practice? A. No.

Q And it would be reasonable for someone evaluating the contractual situation to work on the basis of the contract, what the contract provides? A. I do not think that is necessarily true. I think if I were to look at whether the absence on the face of the contract of provision for this particular mechanism to work was likely to have a significant effect in practice, (i) I would like to know first, is this sort of scenario quite realistic; and (ii) in the time frame we are actually talking about, is there evidence to suggest that it might have happened if it had been clear, and if you have got past that stage and said yes, it potentially would be relevant I think I would have raised the matter in more depth with National Grid and other parties to the contract to ask "Did people ask for it?" "Did they ask for a change?" "Was it refused". But the fact that it is not explicitly written in a contract does not amount to ----

14 Q If you just signed up to the contract you would be likely to say "This is the contract, what 15 does it say? This is what governs my rights", would you not? A. Well I am not a witness 16 of fact as to what it is to be a gas supplier, but my guess would be that if I was a gas 17 supplier signing up to this contract and I anticipated that I might want to do substantially 18 more non-discretionary replacements than 850,000 and then to want to cut back by a very 19 substantial amount so that I could get back to the glidepath in the next period, I would 20 probably note the contract does not provide for this, and I would probably approach 21 National Grid and say their contract does not provide for this. It's clearly not the spirit of 22 the contract that I should be denied the option to do this. Can we come to some kind of 23 arrangement that clarifies this?" So, I don't think the fact that it's absent from the contract 24 would necessarily be where I'd stop if I was manager of such a business. But, I am not a 25 manager of such a business. So, I can't be absolutely certain of this.

Q Turning to what I suspect you believe is a major issue between you - revenue neutrality that is, between you and Mr. Keyworth - and looking, please, at paras. 6 and 7 of your second report, at para. 6 on p.3494 you say,

"I understand that the case being advanced by Ofgem is that the structure of the Legacy MSA is contrary to competition law because it has a foreclosing effect". Then, at the beginning of para. 7,

"If Ofgem's objections are against the structure, but not against the level of revenue recovered under the Legacy MSA, it follows that in order to evaluate

whether the structure does indeed have a foreclosing effect the agreement must be judged against a counterfactual which is revenue neutral".

So, if the case is based on structure, then any counterfactual, you say, must be revenue neutral. A. Yes. I think that's a necessary, but not sufficient, condition.

Q But, if, in fact, the case is not simply about structure, but about considering the overall of the specific contracts here - the MSAs - if it is not just a structural comparison - then your objection goes away, does it not? A. Well, my reports and testimony are about the structure of the contracts. If there is some other basis for objection to the contracts, that is not something that I'm attesting to. I'm merely saying that if the objection is the particular way the MSAs are structured - so, the use of the BLRs, the glidepath, and the average PRCs -- if that is the objection I don't believe that objection to be valid because I don't believe there is much difference between that structure and an individual meter contract structure. If there are other objections, then my report doesn't really go to those issues.

Q So, if it is looking rather broadly at the particular contract here - not simply structure - then there is no problem (to put it that way) about a counterfactual that is not precisely revenue neutral. A. Well, I can't answer that question because my analysis of the counterfactual is related to structure as being the issue. If there are other issues, such as -- I don't know. Suppose the issue was simply that Ofgem alleged that the glidepath just simply didn't allow for a large enough volume of replacements, and so the claim was that it just should have been a larger number - 1.2 million not 980,000 on the ground that that would have helped CMOs, for example. My observation would be, "Well, I don't see what basis you have to say that, but if that's the nature of the objection, all this stuff about an age-related contract being different from the MSA is not where you should start". It may be said, "Well, okay. Let's adjust our MSA. Give it a bigger glidepath -- a shorter glidepath -- a bigger allowance and start from that point. Then if there's an age-related contract it can be related to that volume agreement over time". So, my testimony really can't go beyond the matter of contract structure.

Q Yes. Just to be absolutely clear then, I think it follows that if we get away from the purely
structural comparison then what you say about value neutrality also is not really relevant.
A. Well, as I say, my analysis is going to the matter of contract structure. I understand the
objection to be contract structure. To the extent that that is the objection, My analysis says
that that objection is not well-founded. To the extent that there are other objections, well,
my testimony doesn't go to those. I'm somewhat surprised that they're not rather more
prominent in Ofgem's case as put so far.

1 Q Mr. Matthew, it may or may not surprise you that those are my questions. 2 (The Tribunal confer) 3 THE CHAIRMAN: Mr. Matthew, we do have some questions for you from the panel, but we do 4 not want to do those now. We will hold those over until Monday morning. But, we do want 5 to decide now about the points on the submissions so that you know where we stand as we 6 go into the weekend. So, we will rise and discuss that amongst ourselves if I could ask you 7 to stay here until we are ready to tell you what the answer is, which I hope will not be 8 terribly long. We will tell you what the plan is, but we will not be asking you any more 9 questions this afternoon. 10 MR. TURNER: I am obliged, madam. 11 (Short break) 12 THE CHAIRMAN: What we have decided about closing submissions is as follows: Although we 13 mentioned that we were prepared to sit on the Thursday if the case had not finished by then, 14 that is not actually entirely convenient for the members of the panel. So, unless it is 15 absolutely necessary we do not wish to sit on the Thursday. That means that we will not be 16 taking a break, although certainly if we make good progress on Monday with the witnesses 17 and finish before the close of play, then we will finish early and we will not move straight 18 to closing submissions. However, we do want to hear closing submissions on the Tuesday 19 and Wednesday. 20 We do not see any reason to depart from the usual practice of appellant's closing 21 submissions, respondent and then any short reply unless it is agreed between the parties that 22 we should move to a different pattern of submissions. I do not know, Mr. Turner, whether, 23 now that there is not going to be a break, you would prefer to move to a different pattern, 24 but you can discuss that amongst yourselves. 25 MR. TURNER: It does mean that we move straight from cross-examining directly into closing 26 submissions, and so I would appreciate a little moment to think about that. 27 THE CHAIRMAN: Yes. Does anyone else have anything to say? 28 MISS CARSS-FRISK: No, that is clear, madam. What you have directed is that we stop, at 29 whatever time that may be, after cross-examination finishes on Monday and then start on 30 Tuesday with Mr. Turner going first. 31 THE CHAIRMAN: If that is what Mr. Turner wants to do. But, we will leave that to him to 32 consider further. 33 34

1	The only other thing I can say is that we certainly cannot finish later than four o'clock on
2	Monday. We will start at ten-thirty on Monday morning, continuing with Mr. Matthew.
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4	(Adjourned until 10.30 a.m on Monday, 25 th January, 2009)
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