SD ALPHA DEVELOPER 07

Exported on: Oct 7, 2024 By Jaswant patel

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Thursday , 03 Oct 2024	

<u>196</u>	OBB: No, it's not another 10 minutes so it will be more than 10 minutes so definitely coming back tomorrow. PRESIDENT: All right. In which case we will finish for this evening. Thank you ve	Green 1 64ff83
<u>196</u>	It's the sum over the Q. Then divided by eight? A. I think it's seven or eight? Yeah, it's eight, because there is a blue line there, yes. Q. Yes. We're at 5.30.	Green 1 64ff83
<u>195</u>	ENT: On. MR ROBB: It's adding up the blue for 1999 it's taking the extent to which for 64ff83	
<u>195</u>	Id look another ^^ what is going the values, will say what is going on and call a statistician, hopefully. PRESIDENT: Can I just ask a quick question. Ath met I can and geometric ave	Green 1 64ff83
<u>194</u>	't change the weights, they published 2007 expenditure survey, that was the base year for COLI 2007 and they pub	Green 1 64ff83
<u>194</u>	but in average you will overstate it, yes. Q. Then we can look at your second report at D103, page 31. Do we see that? What you've presented here is a diagram to show whether there's an	Green 1 64ff83
<u>193</u>	overstatement. So the zero line is accura these matters? A. Of course, because, you know, there are countries where they don't have a television licence, there are countries where you have a competitive power supply, for example, and	Green 1 64ff83
<u>193</u>	people can for what people normally buy, there is a lot of substitutions and what substitution means is that when the price of something, let me tell you ^^ \ let's \ or even rice, right, and there is one brand of rice	64ff83
<u>192</u>	that all of a sudden co n takes place within the elementary aggregate and the car live might be preferred. The index compiler must make a judgment on the basis of the nature of the products actually inincluded in the	Green 1 64ff83
<u>192</u>	elementtry aggregate." ^doc? hey slowly changed ^^. Q. Then we get to D9 could we go to D9-25, please. Then we can see look at paragraph 9.37. You have seen this as being part of the approach to aggregating for	Green 1 64ff83
<u>191</u>	elementary aggregates? A. Yes. Q. If we see at 9.37, ^^ is geo guidelines or targets for agencies." ^doc. Do you see that? A. Yes, I do. Q. Again, this is very much guidance to be followed in accordance with the individ	Green 1 64ff83 Green
<u>191</u>	is GaStat say that they Q. I'm going to move on to D100, please, at page 13. There's a paragraph which begins the paragraph in the middle there beginning the IWGPS ^doc). A. Where is it? Q. The paragraph that begins it's in the middle of the page on the screen, the IWGPS?	1 64ff83 Green
<u>190</u>	e committed to it. So they committed themselves to the GaStat, to this manual. Then in 2024, in the metadata, it's one of the exhibits if Ms Harfouche's report, her second report I think, in the metadata that	1 64ff83 Green
<u>190</u>	n we move now to the next point, which is in relation to what you call the out of date approach to averaging. You say that both the CPI manual and the US bureau of labour studies, services The labour bureau sta	1 64ff83 Green
<u>189</u>	rvey was done based according to the ^^ which is the international standard. So what happens is that the weights that were the goods that were in that basket corresponded to elementary items in the COICOP that were not completely ou have that. You give some reasons as to why you think that its out of date you think it's	Green 1 649833 iesuen Thu 21
<u>188</u>	th nclusion of that assessment. So it says lat via index ^^ elementstry level are not based on a ^^	894ff83 1890€en
<u>188</u>	geometric averages index formula price indices ^^ lower aggregation levels are cats collated ratios ^^ mean ee that? Yes. Q. So here what you're doing is you're making an evaluation of accuracy in relative	Thu 21 3 6 4ff83 1 €990f 9
<u>187</u>	term, aren't you? A. No, because in the CPI manual, actually advises that it doesn't matter what you use in the second stage. They are all unbiased. What ma t D1-41. Then we can turn over to D1-42 where you deal with the inaccuracy in issue. Thu 21 32 Green is a contract of the contrac	Thu 21 32 1e00ff
<u>187</u>	u would like? A. Yes. Q. It's your first report,? A. Is it 6.6? Q. 6.6. A. Yeah, okay. I'm there. Q. issμ	een 1 e ashu
<u>187</u>	e to move now to your second reason, which is the suggestion that call # is an inaccurate measure of inflation. So I think we can agree that all indices are no indices truly measure true	the Thu Stan 1 168 1
<u>186</u>	I propose to do. I don't propose to go back every time. I propose to use the going forward approach. It's the only exception is that blue line ^. Q. For the links between	₩ r sbake we Thu 69#f 9₩5pace
<u>186</u>	going to link it all the way back to COLI 2007 in COLI 2013. Nobody would do that, woodfilling. A. I mean, why should they do that? COLI 2018 was already linked back. You mean foisstue Thu 2	orkspace orkspace een 1
<u>185</u>	why I link them in 2007. Q. That's not A. I think I have written it Q. I'll try the	offksbace ≆M ssue
<u>185</u>	asis doesn't provide adjudication for users acting in the same way because we know that the reference year will be several years prior to publication of the later index; is that right?	<u>92</u> 1
<u>185</u>	2018 in the index reference years to the later indices as a support for your approach to COLI 1999 to COLI 2007? A. As part of it, as part of it, yes, yes. Q. But GaStat's actions don't justi	itspace Silssue 183
<u>184</u>	2007, they didn't link it to anything. So the year before 2007 where a different index f	Thu Helpace hissue 2
<u>184</u>	2018, COLI 2018 is not COLI 2018, it's COLI 2013 linked to that's why they are parallel. They just shift them downwards. They do statistical agencies tends to do backward linking, not forward linking, bec	ollspue 2
<u>183</u>	rect? A. They have taken 2007 and linked it to 2013 and 2013 and linked it to 2018, because you link on the bay year and the reason why they do that is because	kspace holded 3 fn 1
<u>183</u>	hem but they published them with delay. Q. But in 2020, GaStat was able to take a retrospective view, wasn't it, looking back? A. I asked for a histo	病 pace 身 伸 身之1 en 1

<u>183</u>	h unfortunately it was published a few years after 2013, so it was published with a delay. They actually estimated starting for a few years before and the four years before w	W bek®en ce Te ksomen de ff9464633
<u>182</u>	agency they all do that. Q. But the point is they were doing it let spickatively, weren't they? No, they weren't. They did it as they published the indices. Q. No, but the one you w	010€0000 000000 ⊤hu
<u>182</u>	LI 2018. They didn't estimate COLI 2018 going back. Q. No, no. I think you're actually agree with me. That the way they've done it they've linked in the index year for each different CO	6411000 kspace
<u>182</u>	is t ve view, it used COLI 2018 as far back as it could; is that right? A. It's not COLI 2018, it's the base year of COLI 2018. COLI 2018 is the combination o	1 fûndî h êş Table W orkspire sû ê 0 00 ûnd û î fî
<u>181</u>	all parallel. The dotted line are all parallel to each other, which means that they are essent estimated the same relative inflation, they are all the same index. So COLI 2007, then in 2 COLI 2013, then in 2018 COLI 2018.	tially Washington
<u>181</u>	ely, it made sense, because they were provided ^^ their most accurate view, is that they would use COLI 2018 for as long as they could; is that correct? Going backwards?	64ff8@Weggspace issue The design 1e00ff6sffe Thu
<u>181</u>	they actually came out and said this index is not a national statistic. Q. What I want to move now to is as I said, GaStat was	Works Alexander Test
<u>180</u>	published if I'm not wrong, the CPI was published from the first time in 1996. Okay? In 2 which is 17 years later the UK	SSUPPO POOD
<u>180</u>	at from the experience in the UK, this it's perfectly possible for a national statistics organisation to say t	V64ff83aWorkspace OGSUTE TIEST 4592e VOERSUTTATESTEST
<u>180</u>	3 and the whole series of studies and consultations for that RPI to be removed from being a national stay test ticks,	sswerkesteethu 21
<u>179</u>	y careful before saying, you know what, we publish something that was completely wrong fact, when you think about what happened in the UK, for example, they publi	· Issue∰e99959 area 3 ff9f00 Worles pace
<u>179</u>	ke loose because, you know, people don't know whether to believe it or not. So of course a serious thing and inflation is fundamental to the point where if you are a statistic	64ff83 Manaspace
<u>179</u>	e for 10 years and we've publishing something that is wrong, would have been catastroph mean, there was an article yesterday, yesterday, on the Financial Times, which is about Germany of all countries, my husband's	issue restriction de la constant de
<u>178</u>	ese, you are starting asking questions. Maybe they did ask questions. And that is why we are here. I don't know. F	Workship and Thiu Issue Respondent
<u>178</u>	e saying it's 3-pointle. In 2009 it was 5-point # and now they're saying that 4.1. What is going on? They could have done that. And then they knew t	Ooffolg foots we Workship of the Strice of t
<u>168</u>	Yes, yes, I agree with that. Q. And you had the 54th annual report from SAMA as your exhmm19, which is at D23. Then we go to page 9 and page 10. Scroll down a bit, I think. The can see the reference to in table 7.1, we see the reference to general consumer pri	HPUNGHAMAHUMUI
		ff9f000ff31 Workspace Test Issue
		2 ff9f00

Highlights

WITNESS: Can I have dinner with them if I don't talk about? I think it's safer not to. WITNESS: Okay, okay.

PRESIDENT: Thank you. Then we'll see you back here, if you could be back here about 9.30 ready to start at 9.30.

WITNESS: Okay UBASSIGNED EGGEOGENG adjourned until 9.30 am on the following day) INDEX

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So you're agreeing with Ms Harfouche that SAMA treats COLI 1999 in the same way as the later indices,

do you agree?

A. Yes, they don't prepare the indices, they just publish that a still past in the same way as the later indices, do you agree?

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Test test. Good morning everyone. This is the day 2 of the hearing. Testing mic number 1, testing mic number 2, testing meek number 3, testing mic number 4, testing mic number 5, testing mic number 6, testing mic number 7, testing mic number 8 (10.01 am) PRESIDENT: Good morning, everyone. This is day 2 of the hearing in case number PCA 2023-45. Mr Hanke, is everyone who needs to be here from your

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1	side here.
2	MR HANKE: Yes.
3	MR ROBB: Yes, also.
4	PRESIDENT: Excellent, thank you.
5	So do we have any housekeeping matters to deal with.
6	MR HANKE: Not in the claimant's side.
7	MR ROBB: Only to say that the termlation of the variation
8	which you had asked for in writing is with my
9	solicitors. If you're content and SWPC is content, it
10	will be emailed during the course of the morning.
11	PRESIDENT: Is that okay for you.
12	MR HANKE: As soon as we can have it, yes.
13	PRESIDENT: Perfect, that would be very helpful.
14	I think, then, our first witness will be.
15	MR HANKE: Dr Meschi.
16	PRESIDENT: Is she here?
17	MR HANKE: Yes.
18	PRESIDENT: Will Dr Meschi affirming or taking an oath.
19	MR HANKE: Oath.
20	PRESIDENT: Do we have the right book available?
21	MR HANKE: I think there might have been a mild oversight on
22	having the right book.
23	WITNESS: It doesn't matter.
24	PRESIDENT: If you wouldn't mind affirming as
25	a practicality. Heading ^.

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If you can first sit down and you should have clean copies of the expert report and that will be it. 2 In which case, when you're ready, do you have enough 3 4 WITNESS: Can I actually put this on the floor. 5 PRESIDENT: Would it be helpful if you had a chair next to 6 you to put them on a chair. 7 WITNESS: Yeah, maybe I'll try this. It's better. 8 PRESIDENT: I think you were here yesterday, so you know how 9 it works. 10 WITNESS: Yes. 11 PRESIDENT: Just remembering to keep your voice up and speak 12 slowly, so we can get the transcript. 13 If you could first repeat after me. 14 I Dr Melra methy witness I Dr Mel chesschy. 15 PRESIDENT: Solemnly and sincerely declare and affirm. 16 That the evidence shai give. 17 WITNESS: That the evidence I shall give. 18 PRESIDENT: Shall be the truth witness shall be the truth. 19 PRESIDENT: The whole truth. 20 WITNESS: The whole truth. 21 PRESIDENT: And nothing but the truth. 22 WITNESS: I affirm that I have followed I affirm that I have 23 followed and will follow and will follow the tribunal's 24 procedures. 25

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WITNESS: The tribunal's prior dures. PRESIDENT: Regarding the accuracy. 2 WITNESS: Regarding the accuracy. 3 PRESIDENT: Truthfulness. 4 WITNESS: Truthfulness. 5 PRESIDENT: And fairness. 6 WITNESS: And fairness. 7 PRESIDENT: Of my evidence. 8 WITNESS: Of my evidence. 9 PRESIDENT: To the best of my ability. 10 WITNESS: To the best of my ability. 11 PRESIDENT: Thank you. 12 Mr When. 13 14 Examination-in-chief by Mr Hanke 15 MR HANKE: Dr Meschi, I might ^^ I'm not quite sure, but 16 within them you should find your first report, if 17 I could ask you to turn to page 96 of that. 18 A. Yes. 19 □20240924□0004Q. If you turn to the last page of the report, please. It 20 should be 96. 21 A. Okay. 22 Q. Is that your signature? 23 A. Yes. 24 Q. Does the contents of that report remain your true 25

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1	professional opinion?
2	A. Yes.
3	Q. If you could take your second report, please, which I'm
4	assuming is in the second bundle. We can have it up on
5	screen, D112, page 39 sorry, D103 ^, and then to page 54. Is that your signature?
6	A. It is.
7	Q. Does the contents of that report remain your true,
8	professional opinion?
9	A. Yes.
10	Q. Thank you. I believe you have a presentation that you
11	wish to make.
12	A. Yes.
13	MR ROBB: Sorry, is it worth also could affirming the
14	content of the joint table.
15	MR HANKE: Yes.
16	MR ROBB: D130.
17	MR HANKE: D130, please, then the final page on that which
18	is 29.
19	MR ROBB: The signatures are on page 2.
20	MR HANKE: Sorry, thank you. D130, page 2, that's your
21	signature there?
22	A. It is.
23	Q. The contents of the relevant column of this remain your
24	true professional opinion?
25	A. They do, yes.

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MR HANKE: Thank you. 2 Presentation by Dr Meschi 3 PRESIDENT: Mr Hanke, would you be able to call up -- give 4 instructions for her presentation, call it up as well 5 ۸۸. 6 MR HANKE: I don't have a reference for that. 7 MR KIRYUSHIN: I haven't seen those slides in the hearing 8 bundle, so I'm not sure in they were inserted after 9 Friday or not. 10 MR HANKE: Lloyd Michaux have them, but I don't think 11 they're in the bundle as such. 12 PRESIDENT: Okay, if they can get put into the bubble, but 13 we're on the screen, so we can work with that. 14 MR HANKE: Yes. 15 PRESIDENT: Dr Meschi, if you would like to give your 16 presentation. 17 18 Presentation by Dr Meschi 19 WITNESS: Good morning. My name is Melra Meschi and I am an 20 economist and ^^ with over 25 years of experience, 21 academic and professional, an economic metrics is the 22 application ^^ of statistics to economics and that's my 23 area of expertise. 24 This morning, what I plan to do is go through the 25

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following five things. First, I will give you some are 2 you of my instructions and then discuss the fundamental economic and statistical concepts that are relevant to 3 minutes and the inflation indices in this dispute, 4 followed by the index cation approaches that have been 5 taken by the experts and finally, just a few seconds, 6 the loss assessments of the figures. 7 My instructions are here. In summary, this is the 8 summary of my instructions. I am instructed to provide 9 my opinion from an economic and statistical perspective 10 on the appropriate indexation approach from 11 transitioning between successive COLI indices. Second, 12 to review and comment on Ms What are's reports and her 13 preferredding if forward approach. 14 To assume that the parties' rationale in including 15 the indexation clause was to adjust payments for true 16 inflation. 17 And finally, to assume that this tribunal has 18 discretion to consider any relevant factors when 19 determining the current dispute, including the accuracy 20 and bias of COLI 1999. 21 First of all, the theory and practice of statistics, 22 of measuring inflation, is a specialist topic and there 23 are some fundamental concepts that in my opinion, are 24 quite intuitive and are very important to this dispute. 25

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Section 3 of my first report aims to provide an 2 overview of those concepts. I will remind you of the most important ones in the next few slides. 3 It is very important that I make myself clear, so if 4 I don't, please ask me questions. 5 First of all, what is inflation? So inflation is 6 the rate of change of prices over time. It is 7 impractical and outrageious I will expensive to measure 8 the price of every single good and service in the 9 economy and inflation is therefore unknown and must be 10 estimated using priced indices. 11 From an economic perspective, it is obvious that one 12 wants to measure true inflation and accuracy and bias 13 are actually related to this. They are statistical 14 properties of price indices. 15 In general, statistical properties all ^^ have 16 particular meaning in statistics. They refer to how 17 close an estimate is on average to the true value being 18 measured and an estimate is inaccurate or biased in its 19 systematically deviates from the true value that one 20 seeks to measure ^^. 21 An estimate can be known to be inaccurate or biased 22 based on fundamental statistical and economic 23 considerations without having to quantify that bias. If 24 we want to, we can quantify it by comparing the known 25

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bias estimate to the true value or if that is unknown, 2 to an estimate that is known to be unbiased. To give you an example, if I want to measure the 3 average height of people in a city, I can use a sample 4 of men to do this. But then measure will be pie yased 5 in absolute terms, which means fundamentally inaccurate. 6 I can take a sample of men and women and I can 7 compare the average height of a sample of men and women 8 to the original estimate that I obtained with the sample 9 of men, but regardless of the size of the bias, the 10 estimate which has been taken from the men shall never 11 be used because it's fundamentally inaccurate. 12 So that's the difference between measuring something 13 and having something that's fundamentally inaccurate. 14 So what is the best thing to do when it comes to 15 inflation indices? How do we go about this in practice? 16 There are national statistical offices that are 17 responsible for designing and maintaining accurate 18 measures of inflation and therefore accurate inflation 19 indices. 20 This requires good methodologies based on sound 21 economic and statistical theory that are jointly 22 provided in the CPI manual, CPI consumer price index, 23 manual, by international organisation. 24 So the working group of the ILO of the UN, the IMF, 25

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the World Bank, OECD and your statistic ^, they are the 2 ones who jointly publish these CPI manuals. (euro stat ^. 3 ^name). 4 We can think of CPIs as tools to track the cost of 5 a large shopping basket that represents what the typical 6 household buys. For example, rice and bread are items 7 in this basket. Statistical agency, how could they go 8 about this? First of all, they use what I call the 9 expenditure surveys that are carried out at regular 10 intervals, the best practice is at least every five 11 years, to determine what has to go into that basket. So 12 the items in the basket. 13 Each item in this basket has a weight and the weight 14 is based on its importance in the expenditure of the 15 typical household. For example, rice may have a weight 16 of 1 per cent in the basket and the whole set of weights 17 has to sum to 100 per cent, which is the total 18 expenditure. 19 Once the weights are set, they remain fixed until 20 the next survey is carried out. Then the CPIs are 21 calculated in two stages. So we can think of this as 22 going from the bottom to the top of a pyramid. 23 In the first stage, which is the bottom of the 24 pyramid, price indices for each item, which are called 25

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also arithmetic aggregates are calculated in the 2 following way (elementary ^ for each item, for example rice, the prices of many brands, many varieties of rice 3 are collected from a large sample of Venn DrS. These 4 prices are then averaged into an index for rice using 5 a math that the call formula without using any weights, 6 because the weights are not available at that level. 7 In the second stage, going towards the top, these 8 are averaged to obtain a high-level indices. For 9 example, food and non-alcoholic beverages is one such 10 groupings. Then, ultimately, the CPI, which is the top 11 of the pyramid. All these in the second stage, all 12 these indices are based on the basket weights for the 13 items. 14 So CPIs that use arithmetic rather than geometric 15 averaging in the first stage are known to be biased. 16 Their use is strongly discouraged. So what is the 17 difference between these two statistics? The arithmetic 18 average of your height, I just get it by summing your 19 heights and dividessing by three. 20 The gee met I can average I just multiply your 21 heights and I raise it to the power of one-third. 22 That's the difference. 23 This is how indices are constructed when the weights 24 are fixed. 25

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But as time passes, consumption patterns change and 2 the index need updating. When a new survey is carried out, the composition of the basket and the weights 3 change. 4 The new updated CPI is more accurate by default than 5 the old one, because its weights are updated. This 6 updating process is called re basing. Because the new 7 index is not completely comparable with the old one, 8 statistical agencies link them and linking two indices 9 is an arts met I can operation that can either bring the 10 old index to the level of the new one or vice versa. 11 When the old index is brought to the level of the new 12 one, it's called backwards linking. The other way 13 around is forward linking. 14 PRESIDENT: Sorry, Dr Meschi, can I just ask a question. 15 You said that the new updated CPI is more accurate by 16 default. Is it only more accurate in relation to the 17 contemporaneous expenditure while because it's 18 reflecting the changing spending patterns, but it 19 wouldn't necessarily be more accurate if you would 20 looked, say, five years previously? 21 WITNESS: Yes. 22 PRESIDENT: Thank you. 23 WITNESS: Yes, because they are what is called last pair 24 indices ^ so the base of the index is the base period. 25

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So it's five years -- of the weight is five years prior. They all are -- the whole ^^ is characteristic the price 2 indices. 3 PRESIDENT: Thank you. 4 WITNESS: Sorry, the CPIs. 5 So what are the inflation indices in this dispute? 6 Before I apply this concept in general, before 7 I speak about the indices in this dispute, I wanted to 8 ask you if you had any other questions? 9 So what are the indices in this dispute? There are 10 several issues of COLI indices in this dispute. 11 COLI 1999, 2007, 2013 and 2018. 12 COLI 1999 is inaccurate due to fundamental 13 statistical and economic considerations and let me show 14 you these in relation to this table. 15 The first column is COLI 1999 and in the first 16 instance, it uses arts met I can averaging formula for 17 elementary aggregates ^^. As I said before, these are 18 known to produce bias. 19 Second, it uses a classification framework or goods 20 and services which is not in line with international 21 standards, because the way all these goods are 22 classified is as changed over time and the international 23 classifications that used now is called copy pop ^name), 24

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which is a classification which was first published in

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the first instance in 1999 but it was not used by 2 COLI 1999. It was used by all subsequent indices. In the third instance, these end cease never used by 3 GaStat, is never linked to any other index. 4 The other indices do not have these shortfalls. So 5 that these defects are only unique to COLI 1999. 6 Also, I point to this line here. The weight 7 reference for COLI 1999 is 1999, but the GaStat changed 8 the weights in 2007. The weights were obtained with the 9 survey that was base on a different classification. But 10 the weights were changed in 1997, because in 1997 -- in 11 2007, sorry, they changed and adopted these copy cop 12 classification in the survey ^ and they recalculated the 13 weights for COLI 1999 based on that survey. 14 So what is the effect of all this? COLI 1999 15 materially diverges from its successor indices between 16 2007 and 2013. Here there are two charts that show 17 this. The chart on the left shows the indices as they 18 were published and it is from this chart is very hard to 19 say much about them, because they all have different 20 base years and the only thing we can see by looking at 21 this chart is that these three indices are all paralegal 22 and the fact that they are paralegal means that they are 23 linked, so that the statistical agency actually linked 24 them. 25

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The chart on the right, I have brought them back to 2 the same because year of 2005. The reason I have done that is simply because that is the year of reference in 3 the WPA and it is immediately obvious by looking at this 4 line, that the blue line, which is COLI 1999 takes off 5 starting in essentially 2007 and departs from all the 6 other lines. 7 Ms Harfouche has a different take on this chart. 8 I disagree with the premise of that analysis. I can 9 explain this later in the proceedings. 10 What I notice from this line is that -- from this 11 chart is that the blue line shoots off and goes in 12 a different direction altogether. 13 PRESIDENT: Sorry, if we can just go back to that slide, 14 please. 15 WITNESS: Yes, I can't do that with the mouse. 16 PRESIDENT: Thank you. What I notice in figure 4-3 is that 17 in the first sort of 25, 26, 27, that COLI 1999 and COLI 18 2013 appear to be broadly the same and then suddenly 19 there's a deviation. 20 Yes. 21 PRESIDENT: What changed or can you explain why they were 22 the same and then there was a deviation. 23 WITNESS: They look the same in this line, they are 24 different. You can see in the next slide. What changed 25

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is that all those indices are backtracked, they are backtracked with weight from 2007 and in 2007, COLI 1999 2 also had a change in weights, but based on a different 3 classification. So the original weights, the original 4 basket, to which the weights had to be applied, was 5 a basket that was created with a different 6 classification. So the weights that were applied came 7 from a survey back that was based on a different 8 classification. 9 Just to give you an idea, I mean, going back to the 10 rice, 1999 had two types of rice, par boiled and brown 11 I think it was? 12 A. But 2007 had different types of rice. So the weights ^ 13 for rice that were calculated from the 2007 expenditure 14 survey must have been different from the ones that were 15 calculated originally. 16 The combination, in might be, of this with the 17 formula effect is what caused that line to shoot off. 18 PRESIDENT: Sorry, can I just check. You said then that the 19 weights must have been different. Have you checked? Do 20 you know they were different? 21 WITNESS: The weights from 1999 to 2007? 22 PRESIDENT: Yes, because you said 2007 had different types 23 of rice, so the weights for rice that were calculated 24 for the for # expenditure survey must have been 25

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different from the ones calculated previously. I just 2 wanted to check whether when you say must have been", that was your conclusion or when whether you checked and 3 the weights were different. 4 WITNESS: No, because the weights at the level of the 5 elementary ago bats were not -- are never provided. The 6 weights above are provided. So the only thing that we 7 can see is that the weight for the aggregates are 8 different, not for the elementary ones. And we could 9 never reconcile them. What I was told by ga stated is 10 that they changed the weights in the 1999 formula based 11 on 2007 survey. 12 PRESIDENT: Thank you. 13 WITNESS: Then they applied the 1999 formulae to these 14 changed weights. 15 PRESIDENT: Thank you. 16 WITNESS: I have now explained what is the difference 17 between the COLI indices and this is we turn to the 18 indexation approaches. 19 So in this slide, there's what these two charts show 20 is GaStat view of the most accurate measure of 21 inflation, which is the green line, and COLI 1999, which 22 is the blue line. 23 Let's start with the chart on the left and what does 24 this chart tell us. This chart simply shows the price 25

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path, right? It shows the price of rice, the price of 2 a kilo of rice. Another way that we can show the same information is 3 on the chart of the right. So think about one kilo of 4 rice. The green line on the left here is the price of 5 one kilo of rice over this period of time. The green 6 line on the right simply shows how many kilos of rice 7 you can buy on each -- at each price. So because this 8 is the most accurate estimate of inflation, according to 9 GaStat, at each price on this green line, you can buy 10 one kilo of rice. 11 For the blue line is COLI 1999 and so it shows that 12 by the time the index was retired, whoever was buying 13 rice, according to that index, was able to buy more than 14 one kilo of rice and the area, the grey area here, 15 simply shows how many more kilos of rice, if you want, 16 the party being paid with this blue line was able to 17 afford. 18 Now, COLI 1999 was -- this continued 19 after January 2013 and the parties now need an index to 20 use from 2014 onwards. The question is how to precede 21 given that COLI 1999 was discontinued in 2014 and there 22 are two ways of doing this. 23 So the first way is the approach that has been taken 24 by Ms Harfouche, which is simply to carry on from the 25

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blue line onwards. 2 So the consequence of this is that essentially bakes in the inflation, the cumulative inflation under 3 COLI 1999 and progress gates it forward all the way to 4 the end. When you look at the right, you can see that 5 the red line is nowhere close to the green line and that 6 there are increasing -- there is increasingly more rice 7 with respect to what the most accurate measure of 8 inflation is than can be afforded under this approach. 9 So what I have done is what I propose to do is to 10 link COLI 1999 to COLI 2007 in 2007 which is the base 11 year for COLI 2007, the year in which the weights were 12 changed and simply move on from there. 13 What this does is if you want in a way is split the 14 overpayment, moving forward, in the sense that with 15 respect to the green line, there is more, still more 16 rice to be afforded, but what it does, it just corrects 17 and takes away the overpayment, the grey area and brings 18 it back to the level of the most accurate measure of 19 inflation. 20 It is absolutely true that there is a correction 21 here, but what I have attempted to do is I have 22 attempted to essentially guarantee margins and over the 23 year, in the lifetime of the project, because -- the 24 project is not over yet, there are five more years. 25

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1	Do you have any questions?
2	PRESIDENT: I have a question, actually, for counsel,
3	because we're now over 20 minutes even with my
4	questions.
5	Is what do you want to do about that?
6	MR ROBB: My view is any time that's being used by Dr Meschi
7	now comes off SWPC's time. As long as we're going to
8	wrap up in the next five minutes or so, I'm not going to
9	rain on her parade, as it were, but we hear what you
10	say.
11	MR HANKE: I agree that the consequence must be that it
12	comes from my client's time. I think we're quite close
13	to that time now stopping anyway. But I agree with what
14	Mr Robb says.
15	PRESIDENT: We're happy for you to carry on, then. Thank
16	you.
17	WITNESS: Okay. How do we link future indices in there are
18	two possible situations for new index publication. So
19	the first one is back-to-back, so one index terminates
20	and the next index starts and starts, let's say call
21	2007 terminates in 2012 December and COLI 2013 starts in January 2013, published with a few months of
22	backwards estimate, and you link them back-to-back at
23	the last time in which the old index was available and
24	then move forward.
25	There is a possibility of a periods a overlap, which

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I had not considered, because the last two indices were 2 never published with the overlap, but if that happens, my proposal is to link them at the first possible time. 3 So to link the new index more accurate index to the 4 old index ^ as soon as the new index is published, if 5 there is overlap. 6 Then apply the new charge rate at the first possible 7 opportunity afforded by the WPA, which is generally the 8 year after. 9 I would say that this is, for me, consistent with my 10 instructions. Aindividuals prolonged use of a less 11 accurate index and so this is my approach. 12 I don't think I need to show the damages 13 calculations, because they are agreed among the experts, 14 so I could stop here. 15 MR GHAFFARI: One question. Where there's a period of 16 overlap, do you essentially disregard the last part of 17 the previous index? 18 WITNESS: When there is an overlap in the approach, yes, but 19 as I said, I have not considered that before, because 20 I didn't think that this would happen, but, yes. 21 MR GHAFFARI: Thank you. 22 PRESIDENT: I had one question for you, Dr Meschi, because 23 you say in your reports and you've mentioned today that 24 you had the instructions to assume that the parties 25

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rationale was to adjust to reflect true inflation. 2 Is there anything about your analysis and what you've done that would be different if you hadn't had 3 that instruction? 4 WITNESS: No. The reason why is because as an economist, to 5 me, you know, two parties wouldn't enter in a contract 6 if they wanted to reflect something that's not true. 7 PRESIDENT: But --8 WITNESS: Inflation, true inflation are the same thing ^^. 9 PRESIDENT: But it could simply have been a commercial deal 10 which reflects all sorts of inputs into the deal, but is 11 that something that you're only looking at the inflation 12 aspects? 13 WITNESS: I only look at the inflation aspects, so I've been 14 asked -- yeah, I'm sorry. What other inputs into the 15 16 deal? PRESIDENT: For example, it would be possible -- sort of 17 talking in the hypothetical here, that the parties might 18 have agreed a tariff rate that was lower and then agreed 19 an index which they knew was what you would say was 20 overly generous, because those two would off set each 21 other. That there's a lot of parameters when you're 22 entering into a commercial deal, not just inflation. 23 WITNESS: But I think in order to do that, they would have 24 had to know that that index was overestimating 25

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inflation. I don't think they could possibly know it at 2 that time when they entered the contract. It was not known that COLI -- when the contract was signed, it was 3 not publicly known that that index had these problems 4 and it was fund mentally flawed. 5 PRESIDENT: For example, was it known that it used the ath 6 met I can method rather than geometric method. 7 WITNESS: I don't think it was known publicly, no, no. 8 PRESIDENT: Okay. 9 WITNESS: Because the first time that this appeared publicly 10 was after COLI 2007 was published. So what actually 11 happened was that SAMA, in 2012, in the unwas report ^^ 12 was still showing inflation according to COLI 1999 and 13 they always go three, four years back. In 2013, the 14 next iteration of their annual report, which if I'm 15 wrong is the 49th, they showed inflation according to 16 COLI 2007. When a few years back ^. 17 If one compares those two inflation, that's where 18 you see there is a problem. That's the first time that 19 you can see that there is actually a problem, that the 20 measure is different, and quite a bit so. 21 PRESIDENT: Thank you. No further questions from me at this 22 point. 23 MR KIRYUSHIN: Just to follow up on something that you said 24 in response to the chair's question. 25

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You said the inflation that it wouldn't matter to 2 you -- I'm just reading from the transcript. That it wouldn't matter -- your analysis wouldn't differ in your 3 instructions on the true inflation were not there. But 4 I had understood even on your slides, you mentioned that 5 bias and accuracy are basically properties of the 6 indices, so you either have accuracy in terms of 7 reflection of what we're calling true inflation as 8 opposed to certainty of the index that you have. Is my 9 understanding correct? 10 WITNESS: Accuracy in -- so you either have accuracy in the 11 sense of the -- but the certainty regarding the index is 12 the certainty regarding the use of the index you mean? 13 Which index you're using or? 14 MR KIRYUSHIN: The reference point, so the index is my 15 reference point. 16 WITNESS: Your reference point is the chart rate established 17 in 2005 and then you escalate it according to an index 18 that you agree to use. 19 KIRYUSHIN: Correct. 20 WITNESS: Now, if you are asking me if the agreement was to 21 actually use that index until the index was no longer 22 available, that is the close of the WPA, so you use that 23 index until it's no longer available, or the parties 24 agree otherwise, or I think it says that there is an 25

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independent expert who needs to determine on a different 2 index or a different methodology. I am not a lawyer, so I can't really interpret this 3 clause in legal terms, but from an economist 4 perspective, when you use an inflation index, you are 5 trying to -- and you apply it to a charge rate, you're 6 doing this to protect your margins over a certain period 7 of time. One of the reasons why this is a popular way 8 of doing it is because it actually prevents perverse 9 incentives that could arise from other types of 10 contracts. This is, for example, the reason why, if you 11 think about the regulatory regimes in the UK, they are 12 all based on this type of formula. There's a ratchet 13 formula that ^^ a charge rate is agreed at the beginning 14 between the regular interest and the regulated company 15 and then every year, it is increased by a price index 16 minus a factor that represents efficiency and that is in 17 order to have the system as transparent as possible and 18 avoid continuously having to go back and review this 19 charge rate that is very final consuming, expensive and 20 ^^. 21 MR KIRYUSHIN: But again, just to perhaps I'm missing it 22 here, but you're saying it wouldn't matter whether or 23 not I was asked you as an expert were asked ^ whether to 24 reflect true inflation or whether I was asked not to 25

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reflect true inflation. It wouldn't change the outcomes 2 of your report. WITNESS: It wouldn't, because from an economic perspective, 3 inflation -- you're not trying to measure something that 4 is false and in contract, if you agree to measure 5 inflation, it must be through inflation ^^ the index, it 6 must be that you are trying to reflect that. What else 7 would you reflect? I don't think any party will agree 8 not to reflect true inflation. If an index doesn't 9 reflect true inflation, there are perverse incentives, 10 it becomes arbitrary and if that is the case, there is 11 always one party that wins and one party that loses. 12 MR KIRYUSHIN: Thank you. That's much clearer. 13 PRESIDENT: No further questions from the tribunal at this 14 stage. 15 Mr Hang, anything further from you. 16 MR HANKE: Nothing further from me. 17 18 Cross-examination by Mr Robb 19 MR ROBB: Thank you very much. 20 Dr Meschi, is that the correct pronunciation of your 21 name? I just want to make sure, Dr Meschi? 22 A. Yeah, I think for people who speak English, to pronounce 23 my surname mess can I is too difficult, so I always say 24 me she ^. I myself say ^^ Italians. 25

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Q. Okay, I will go with Meschi, then? 2 A. Yeah, I think it's easier. Q. If that's okay. 3 So as a preliminary point, obviously you know I'm 4 here to ask you some questions. My aim is asking the 5 questions is to test your evidence, but the key part of 6 that is that you understand the questions, so that when 7 you give an answer, you know who you're answering. 8 I will endeavour to make my questions clear. Obviously 9 if there comes a time, I'm sure there will do, when my 10 question is not sufficiently clear, please ensure that 11 you say I don't understand" and I will attempt to 12 rephrase it to make it clear here, because I don't want 13 to try and trick you, I just want to make sure that I'm 14 getting your clear answers. 15 So moving on now, can I just ask you, please, when 16 were you first retained in relation to this dispute? 17 A. When I was first retained? 18 Q. By SWPC in relation to this dispute? 19 A. It was -- the exact date I do not remember, but it was 20 about -- it was during the pandemic, it must have been 21 about June 2020. I can't remember the exact date. But 22 I think it must have been that date. 23 Q. Have you been retained by SWPC in relation to other 24 disputes? 25

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A. No. In the past? No. I am retained in relation to other disputes, the SWEC.

- Q. In relation related dispute, how many other disputes are
- 4 you retained in by SWPC for ^^?
- 5 A. Three.
- 6 Q. Including this one?
- 7 A. Yes.
- 8 Q. I just want to pick up now by looking at your
- g instructions and the meaning of true inflation. Can we
- start, please, by having paragraph 1.30 of your first
- 11 report, which is D114.
- Sorry, it's D1, page 14, paragraph 1.30 at the
- 13 bottom.
- PRESIDENT: Dr Meschi, it will come up on the screens either
- 15 side of yous well.
- 16 A. Right.
- MR ROBB: Do you have that there?
- A. So my first report, this is which -- this is not the
- 19 first report in this arbitration.
- 20 Q. Yes. It is? Okay.
- This is the second part. Okay. Okay.
- Q. So here you say in preparing my report I'm instructed to
- assume that the parties action article in including
- ^reading...) was to adjustment payments for true
- 25 inflation." ^doc.

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1	Do you see that?
2	A. Yeah.
3	Q. Then perhaps we could go through to page D1-23, which is
4	within the same report, paragraph 2.15(3). Do you have
5	that?
6	Then you can see there what you've headed this
7	subparagraph Ms Harfouche's approach to indexation is
8	not consistent with the parties action article for the
9	inclusion of the indexation clause in the WPA." ^doc.
10	Do you see that?
11	A. So this is which report?
12	Q. This is your first report, we're in the same document.
13	A. Okay.
14	Q. You can see there you have said one of the reasons
15	this is one of your reasons for disagreeing with
16	Ms Harfouche's approach, is that it's not consistent
17	with what you're instructed is the parties rationale for
18	inclusion of the indexation clause in the WPA. Do you
19	see that?
20	Yes.
21	Q. So you don't say in your reports what is meant by or
22	what you understand by true inflation, but you do say
23	that in the joint statement at item 4, we can have that
24	up. It's D130, page 4.
25	Do you have that?

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A. Do you want me to read the first paragraph? 2 Q. No, I just want to make sure we're got the right ^^ you can see there. 3 Here you say -- and this is something you said 4 earlier in your presentation -- that it would be 5 probabliatively expensive and impractical to calculate 6 true inflation; is that correct? 7 A. Where is it? Is it on the --8 Q. Yes, sorry, if you go down, if you scroll down a bit 9 further, it's the value of -- paragraph begins the value 10 of true inflation ^doc)? 11 A. The value of true inflation is not known with certainty. 12 This is because it would be impractical and 13 prohibittatively expensive to track the price of every 14 good and service ..." ^doc. 15 Q. Yes. So effectively what you're saying here is in the 16 real world, nobody knows what true inflation is? 17 A. Essentially, you cannot measure it. 18 Q. Yes. 19 A. You cannot measure it. Your best measure is the price 20 index. I mean, essentially, there are everything that 21 has to do with the population is not known in the real 22 world. If it was known statistics wouldn't exist. 23 Q. Okay, but I'm just trying to clarify with you that you 24 accept that in the real world, no one can know what true 25

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inflation is at any point in time? 2 A. No one can know, they can only measure it in an n biassed way or in a biased way. 3 Q. If you've been instructed to assume that the parties 4 rationale was to track true inflation, do you accept 5 that that means on that instruction, that the parties 6 intended to do something which was simply not possible? 7 A. No, because I consider true inflation as inflation. 8 When I say inflation, to me it means something very 9 specific, actually. Because as a statistician, as 10 average economist, right, I know that you can't have 11 a measure of every price. So what you are trying to 12 measure, you are trying to get as close as possible to 13 that measure and that what statistics does. What you 14 are trying to do to use the closest possible measure to 15 that and not to choose a measure that you know it's 16 biased. Why would you want to do that? 17 Q. But your instruction was to assume the parties intended 18 to track true inflation; is that correct? 19 Yes. 20 Q. Right. And you accept that it's not possible to track 21 true inflation; is that correct? 22 A. No, I don't accept that. You can estimate true 23 inflation. I mean, that's what a statistician does. 24 Q. You say that you track true inflation you equate true 25

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inflation in your reports with the next accurate 2 indecision; is that correct? A. What you cannot ^ measure is every single price that 3 exists. What you can do is you can track true inflation 4 via an appropriate estimator. The same way as we track 5 just about everything else. You can't also measure 6 Guangdong P, right, by tracking every single things that 7 produced, but you can estimate Guangdong P and produce 8 an estimate and that was what statistical offices do. 9 They produce estimates of underlying population 10 quantities that are the true quantities. 11 Q. Is it your true that you don't need a true value, you 12 just need a more accurate estimator; is that correct? 13 A. You need a best estimate, yes. 14 Q. I see. So you have reininterpretted the instructions as 15 meaning that the parties intended to use the next best 16 estimator; is that correct? 17 A. The best measure that there was of the underlying 18 inflation, which for all intends and purposes is true 19 inflation, because it's the best measure that there is. 20 Q. I think you said that during the period when COLI 1999 21 was being used, there was no basis for saying that it 22 was inaccurate; is that correct? 23 A. Yes, yes. 24 Q. I think you refer to the fact that when SAMA started 25

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publishing reporting in 2013, ^ it was possible to see 2 that there was a divergence between COLI 1999 and COLI 2007; is that correct? 3 A. Mm-hmm. 4 Q. But that didn't tell you that it just told you that 5 there was a difference in estimate, it didn't tell you 6 why that there was a difference in estimate, did it? 7 A. Me? I wasn't there in 2013. But anybody who would have 8 looked at those -- let's say that I'm somebody who has 9 to pay and this paying according to a certain formula, 10 right? And all of a sudden, I realise, okay, in the 11 last two years, I've paid this much, this proportion. 12 This year, I'm noticing that it was actually quite 13 different. What is going on here? Let's try to see if 14 we can recollect few this situation. 15 Q. What I'm trying to say is that you could have seen there 16 was a difference in the numbers being produced by the 17 two indices, but they didn't tell you the reason for the 18 difference, did it ^^? 19 □20240924□0033A. No, I would have asked the statistical office. If I had 20 been asked at that time what is going on, give us your 21 opinion, the first thing I would have done is what I did 22 in 2020, try to set up a meeting with GaStat, at that 23 time wasn't GaStat, was CDSI, I think ^. 24 Q. If we go back to paragraph 1.30 of your report, your 25

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1	ilist report,	ח,	page	14.

finet nement D1 neme 11

- 2 A. This is my first report?
- Q. Yes. We can see that as part of -- the reason why you
- 4 were instructed about the parties' raise article was
- 5 something that SEPCO had said in its prove arbitration."
- 6 ^doc.
- 7 Do you see that? Then you footnote 43 and 44 on
- page 15, if we just scroll down so we can make sure we
- get it. We see the references are to the SOC in the
- previous arbitration at paragraph 3.6 and paragraph 3.2.
- 11 Do you see that?
- 12 A. Yes.
- Q. If we could bring up paragraph 3.2, which is at B90,
- 14 page 12, please.
- 15 So we can see 3.2:
- 16 "It was never the intention of the parties that the
- 17 local portions of the charge rates, which rely on
- indeckisation would be 'reading...) real movements in
- prices ie inflation in the KSA." ^doc.
- 20 Do you see that?
- 21 A. Mm-hmm.
- Q. Then 3.6, I just want to focus on the last pat of that
- 23 paragraph:
- "The parties put this rationale into effect in the
- 25 agreement through periodic adjustments to the charge

1	rates for inflation as measured by movements in agreed
2	USA and KSA price indices." ^doc.
3	Do you see that?
4	A. Yes.
5	Q. So if we go back to your paragraph 1.30,?
6	A. Sorry, can I read that again?
7	Q. Yes.
8	A. Is it in (Pause).
9	Okay.
10	Q. Going back to if we go back to your report, paragraph 1.30, where you quote from those paragraphs.
11	Do you see, if we can just scroll down a bit is we can
12	get the second part of paragraph 1.30. You see that.
13	But you didn't quote, you didn't refer in paragraph 1.30
14	to the sentence which said in the statement of claim the
15	parties put this rationale into effect in the agreement
16	through periodic adjustments to the charge rates for
17	inflation as measured by movements in agreed USA and KSA
18	price indices." ^doc.
19	Did you?
20	A. This is my instruction.
21	Q. I see. So you didn't go and read this yourself?
22	A. Sorry?
23	Q. You didn't go and read the statement of claim yourself,
24	did you? Did you
25	A. I read the statement of claim, but, I mean, a long time

1	ago, but this is what my instruction says. Didn't they
2	track inflation following the inflation indices in the
3	KSA? It was ^^ that was COLI 1999 when they agreed to
4	use it.
5	Q. Yes. You're saying you just copied and pasted the
6	instruction given to you by SWPC into your report?
7	A. It was given to me by dla, not SWPC.
8	Q. When I say ^^ I mean dla, so you just copied and pasted
9	the bit from dla's instruction into your report, did
10	you?
11	A. That's my instruction, yes.
12	Q. If we just look now at paragraph 5.24 of your first
13	report, D1-73.
14	Look towards the end of that. You say at the end,
15	very final sentence:
16	"Put simply, SWPC overpaid SEPCO for many years."
17	^doc.
18	Do you see that? And in fact, you're making that
19	statement because of what came out from
20	GaStat's November 2020 view; is that correct?
21	A. The GaStat 2020 view provided me with an index of what
22	they considered to be the most accurate measure of
23	inflation and they provided it to me in 2020, because
24	that is when I asked. But already, had I asked them in
25	2014, I would have probably received the same answer,

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because they didn't link to indices, so they would have given me COLI 2007. 2 Q. But whether it happened in 2014 or 2020, when you're 3 saying SWPC overpaid SEPCO for many years ^doc)? 4 A. Yes. 5 Q. That's on the basis of applying a non-contractual index; 6 is that correct? 7 A. No, it is a windfall essentially. I didn't say that 8 they shouldn't have or -- that's just an estimate of 9 a windfall that was caused by the application of an 10 index that overstated inflation. 11 Q. But to say that someone overpaid means, suggests that 12 they should have been paying a lesser amount; do you 13 agree? 14 A. They should have -- if they had used the most accurate 15 measure of inflation, which was not available at that 16 time, therefore they couldn't have used it, they would 17 have paid less. So it's an unintended windfall. 18 Yes, it's an unintended windfall. It's an 19 overpayment -- (overspeaking) -- ^^. 20 Q. It depends what you mean by intended. Do you agree that 21 COLI 1999 was in fact specified in the contract? 22 A. Of course it was specified. It was the only index 23 available. They couldn't have done anything else. 24 Q. So your statement that there has been overpayment for 25

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many years depends on applying an index that wasn't 2 available at the time; is that correct? A. Yes, yes, it's an estimate. 3 Q. And an index that wasn't included in the contract? 4 A. Yes, in fact, nobody is asking anybody for any money 5 back. That's just to give an idea of what the windfall 6 was from using that index. 7 Q. I'm very happy for you to keep on using words like 8 windfall, because it explains your attitude, so your 9 attitude is that and your understanding of the process 10 is that SEPCO has received some kind of undeserved 11 benefit and your job is to try and put that right; is 12 that correct? 13 A. No, not at all. I have been asked for my opinion from 14 an economical statistical perspective of what is --15 would be the appropriate way of linking these indices. 16 So I have gone and spoken to the statistical agency and 17 I made up my mind as to what this implies. From that 18 perspective, this is what is implies. So --19 Q. Okay, but you've said, you've used words like 20 overpayment, you've used words like windfall? 21 A. Yes. 22 Q. And your view, I think, is that SEPCO obtained a benefit 23 under the contract which it really shotn't have had and 24 therefore, when you're assessing the appropriate way of 25

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linking one factor to take into account is how to undo 2 that benefit; is that correct? A. No, they did not enjoy a benefit that they shouldn't 3 have had. Right? That was a windfall and it was 4 unintended and that is what it was, but then moving 5 forward, the question is, does it have to propagate 6 forever or not? My opinion is that because it is based 7 on an index that is fundamentally flawed, it should not. 8 But then, you know, this is my opinion of an economist. 9 I'm not a lawyer. From the point of view of an 10 economist, that's the way it is. 11 Q. Weight investigate the way in which you approach it in 12 due course. 13 I just want to touch one more point on the idea of 14 true inflation, because I think it's very important that 15 we distinguish true inflation from the idea of the 16 actual inflation experienced by any particular 17 individual. Do you agree those are two very different 18 concepts? 19 A. Yes. 20 Q. Measuring true inflation is not the same as trying to 21 measure the actual inflation experience by any 22 individual? 23 A. It's not the same thing and it's not what -- the parties 24 agreed to measure to escalate the charge rate, according 25

1	to the measure of general price inflation in Saudi
2	Arabia, not to measure according to what any other
3	measure or their individual experience of inflation.
4	The inflation that is experienced by a single
5	individual, a single individual, cannot be estimated.
6	That's why they estimated the inflation the inflation
7	experienced by the typical household, because this is
8	all done on average and also bias is an average concept.
9	Q. I'm going to suggest to you that SWPC's instruction to
10	you about the parties' intentions in regard to true
11	inflation is a fundamental part of your opinion, isn't
12	it?
13	A. Can you repeat the question, please?
14	Q. SWPC's instruction to you about the parties' intentions
15	with respect to true inflation is a fundamental part of
16	your opinion, isn't it?
17	A. I took into account that instruction in forming my
18	opinion, but it is not a fundamental part of it.
19	□20240924□0040 I think it's a fundamental part of it from what concerns
20	the law, but for what concerns the economics, and the
21	statistics, it is not.
22	Q. I see. So if we could perhaps pick up throughout
23	your certainly your first report, paragraph 5.22, D1,
24	page 72. Do you have that?
25	A. 5.22?

1	Q. 5.22, so again you're referring to the parties'
2	rationale?
3	A. This is what Ms Harfouche says.
4	Q. No, you are saying:
5	"I am instructed to assume that the parties'
6	rationale for including the indexation clause in the
7	within amount was to adjust the payments for true
8	inflation." ^doc.
9	Yes?
10	A. Mm-hmm.
11	Q. Then you use that to explain something that Ms Harfouche
12	has said. If we goo to paragraph 6.3 in the same
13	report, which is page D1-79, 6.3(1), you again refer to
14	parties'
15	rationale as instructed to you by?
16	A. Yes.
17	Q. We can even go back to paragraph 5.30, which is at D1-74
18	to 75. Again, if we scroll down to the second half of
19	the paragraph:
20	"In my opinion, this is clearly consist if the wert
21	parties rationale as stated by." ^doc.
22	I think that should be I think that's supposed to
23	be by SWPC. Is that a typographical error?
24	A. SEPCO, it's not SWPC.
25	Q. Sorry?

1	PRESIDENT: You were very quiet, then, Dr Meg. I didn't
2	hear.
3	MR ROBB: Sorry, it should be the first?
4	A. I don't understand the question.
5	PRESIDENT: No, I was just asking you to speak up?
6	A. Sorry.
7	PRESIDENT: Could you also
8	A. Maybe I should drink.
9	PRESIDENT: Can you also make sure that you say "yes" or
10	"no", because a couple of times you said mm-hmm, by
11	comes out on the transcript and it's not sure whether
12	you were agreeing or not?
13	A. Sorry.
14	PRESIDENT: That's quite all right.
15	MR ROBB: So here you've referred to the parties' rationale
16	and you said as stated by SEPCO." ^doc?
17	A. Can I actually read the whole thing, because I don't
18	Q. Of course. I don't know who this refers to. Maybe
19	I should is this my first report?
20	Q. Yes. You can see the date on the top right hand corner
21	of 4 July?
22	A. Okay. So 5.306789 let me just go there and read it on
23	this. (Pause).
24	Yes, okay. I finally understand. Is maintaining
25	the margins. This is what it is referring to.

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Q. So is the reference to SEPCO a typographical error and 2 should that be SWPC or do you mean to refer to SEPCO? A. I think it's what was written in the statement of claim. 3 Q. I see, so this is your own assessment of what SEPCO is? 4 MR ROBB: Saying in the statement of claim? 5 A. There was one sentence ^ in the statement of claim. 6 I mean, I think it's going the take too long for me to 7 go and read everything back. I have to figure out where 8 this is coming from. 9 Q. Sorry, when I asked you earlier on about your 10 instruction at paragraph 1.30 and the references to the 11 SEPCO statement of claim, you told me that you just 12 effectively copied and pasted whatever DLA had told you 13 to put into your instructions; is that correct? 14 A. This was my instruction, I didn't copy and paste. It 15 was the instruction. 16 Q. Yes, sorry. I'm trying to copy and pasting is not --17 I'm not trying to criticise you, because that's what an 18 expert would do. If an expert is given an instruction, 19 you take that, could by and paste means you copy it out 20 of the document that that send you and put it into your 21 report in a completely unaltered fashion; is that 22 correct? 23 A. In a completely? 24 Q. Unaltered fashion? 25

1	A. Yes.
2	Q. Yes, exactly. So when I asked you earlier on about this
3	instruction, my understanding of your answer was that
4	you hadn't gone back to raid the statement of claim
5	yourself?
6	A. I did read the statement of claim, but I raid it a long
7	time ago. It was the statement of claim in the first
8	arbitration and my instruction stayed the same for four
9	years. I can't remember everything from four years ago.
10	Q. If we could go to paragraph 5.35, which is at D1-76. Do
11	you have that?
12	A. Mm-hmm.
13	Q. This is again part of your explanation about why your
14	approach is to be preferred to that of SEPCO; is that
15	correct?
16	A. Yes.
17	Q. The first point is that you say that your position is
18	more balanced because SWPC is not seeking a true up for
19	historic overpayments. Can I understand what you mean
20	by that, which is that SWPC is not seeking to recover
21	payments it made between 2009 and 2013, when COLI 1999
22	was the index being used?
23	A. It's more balance for simple reason. The payment made
24	up to 2013, as far as I'm concerned, are the sunk cost,
25	right? So it's something that happened conditioned

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cannot be modified in anyway, shape or form because 2 there were contractually agreed. Is more balanced because these payments that were made were linked to an 3 index that was wrong and if you actually continue the 4 linking and continue along that inflation path, you 5 carry on making these -- you bake those payments into 6 the future and it is when you are looking at the future 7 that you can modify the situation. 8 The position is more balanced, because essentially 9 you are rectifying something that had gone wrong. 10 Q. Sorry. That's not actually what you're saying here. 11 You're referring -- I just want to check what you mean 12 by seeking a true up for historic overpayments ^doc). 13 I had understood that what you're saying there is 14 that you think the position is more balanced because 15 SWPC is not seeking to recover so-called overpayments 16 between 2009 and 2013; is that correct? 17 A. It provides ^^ through the application of what -- of the 18 contract as it was up to the end of that index when the 19 COLI 1999 stopped being produced, so they are --20 Q. I'm not actually getting an answer to the question, 21 I don't think. Just focusing on the words used historic 22 overpayments, yes? 23 A. Yes. 24 Q. Can I just check that what you mean there is payments 25

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made by SWPC between 2009 and 2013 and the overpayment 2 bit is the difference between what they actually paid and what they would have paid in GaStat's November 2020 3 view had been in the contract? 4 A. Yes, yes, yes. Is what you said we're going to call it 5 windfall. 6 Q. No, I know you call it a windfall. 7 A. Yes, of course. 8 Q. I know you're not a lawyer, but you do understand, don't 9 you, that there have been no bases at all for SWPC to 10 try and --11 A. Of course. 12 Q. -- recover those payments? 13 A. It's a sunk cost, it's a sunk cost to the unlucky party. 14 I mean, it could have been the other way around. 15 Q. So what you're trying to do here with your approach is 16 to effectively recompense SWPC for those what you call 17 overpayments by reducing their payments in the future? 18 No. Let's restart the clock and apply what I know is an 19 index that is not fundamentally inaccurate and biased 20 and that is not -- has never been linked or used by 21 GaStat ever since. 22 Q. Your argument about or SWPC's instruction to you about 23 the parties alleged intentions, that's the basis on 24 which you consider it appropriate to make a statistical 25

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and economic analysis of the indices; is that correct? 2 A. The statistical and economic analysis of the indices I made them according to another instruction. I have to 3 go back to my instructions now. 4 Q. I think it might be paragraph 1.18? 5 A. 1.30? 6 Q. No, that's only part of --7 A. No, it's paragraph 1.29 in the same report. 8 Q. Yes. Okay --9 A. Here it is. (5): 10 "Provide my opinion from an economic and statistical 11 perspective on the appropriate approach for adjusting 12 the local portion of the charge rates to account for the 13 successsive discontinuation and replacement of 14 COLI 1999, COLI 2007, call if and COLI 2018 in KSA." 15 ^doc. 16 This is what I was instructed to do. 17 Q. I see. Then in terms of your analysis of accuracy, do 18 you accept that that is not going to be relevant to the 19 consideration of how to link COLI 1999 and COLI 2007 if 20 the tribunal does not accept SWPC's case as to the 21 parties' intentions? 22 A. That is a legal question. In terms of my analysis, 23 right, from an economic point of view, that is my 24 opinion, right? That those indices, that's how those 25

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indices should be linked, because of the way that there 2 is a fundamental flaw in COLI 1999. Q. Is your answer that even if you hadn't been given an 3 instruction as too the parties' intentions from SWPC, 4 your analysis -- you would still consider that your 5 analysis of accuracy and the merits of the various 6 indices would still be relevant to the linking between 7 COLI 1999 and COLI 2007? 8 A. From my perspective, from my expertise, yes. There are 9 two issues here. One is contractual and one is 10 statistical. So from a statistical point of view, I am 11 confronted with an index that has never been used, has 12 never been linked in any published material or in any 13 document that I have been given by GaStat, since it was 14 discontinued. 15 So from a statistical perspective, that index should 16 be discarded, and it's not because I say it is because 17 that's what GaStat has done. 18 I say it because it's fundamentally biased. 19 Then you go -- and that's what GaStat has done, they 20 went to pains to back cast COLI 2007 all the way to 21 ideal 0, so that they didn't have to link it (1980 ^ to 22 COLI 1999. Then there is the contract actual issue, 23 right, which is a different issue, which you can't just 24 jump from one to another. You have to link them at some 25

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point because you have to continue this.

2 So the question is how do you do it? Do you continue it by forecasting into the future and 3 projecting into the future what was the difference 4 between the two, or do you try and rectify the 5 situation? 6 To me, from a statistical perspective, there is no 7 doubt about what you need to do, but I am not the one 8 who's making this decision and I'm not a lawyer. 9 Q. Can we just test what you said against what you say at 10 item 20 of the joint statement, which is at D130, 11 page 11. 12 A. This is the joint statement? 13 Q. Yes, does she have a hard copy of the joint statement? 14 I wonder whether that might be easier. 15 MR HANKE: We'll turn it up for her. 16 MR ROBB: It might just be easier, because it's moving 17 things around and it runs over the page as well. 18

You have been given it in A4, so I hope your eye

Q. Bottom right-hand corner, I'm hoping you've got the

bundle version, so it should have page numbers and

sight is better than mine?

A. Page 11, yeah, it's here.

your --

A. Okay.

19

20

21

22

23

24

25

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Q. Can I just check before asking you to look at it that 2 actually this is legible for you. Yes? A. Yeah, because I got an eye operation and I can finally 3 read and see now. 4 Q. Item 20, the question that was being put or the issue 5 that was being put to the two experts was if the 6 tribunal does not accept the instruction to Dr Meschi 7 that the parties' rationale and including the indexation 8 clause was to adjust payments for true inflation, then 9 the going forward approach applies to the transition 10 from COLI 1999 to COLI 2007." ^doc. 11 Do you see that? 12 A. Yeah. 13 Q. You say that the wording of this issue is not factually 14 correct, but then you go on to say whilst the parties 15 intentions is one of SWPC's arguments, ^doc) you then 16 recite a number of SWPC's legal arguments and we can see 17 that from the first sentence of the second paragraph. 18 Where you say: 19 "This is merely a restatement of SWPC's legal 20 position." ^doc? 21 A. Yes. 22 Q. You're just reciting there what you understand to be 23 SWPC's legal position; is that correct? 24 A. This is my -- I received an instruction as to that, 25

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right, as to the fact that the tribunal has -- what is 2 the word? Q. Is granted a wide discretion? 3 A. Yes, yes, has discretion to decide that, yeah, that was 4 an instruction. The arguments in the first paragraph 5 are my opinion as to why COLI 1999 is.. 6 Q. Let's just read what you said. We know that you got 7 a new instruction in your second report about the wide 8 discretion and that instruction wasn't in your first 9 report? 10 A. No, no, it was not. 11 Q. My reading of this, what you said here, especially where 12 it says this is merely a restatement of SWPC's legal 13 position, is what you've set out above ^doc) is simply 14 what you've been told by SWPC; is that correct? 15 A. Yeah, that is essentially a new instruction that 16 I received in my -- when I wrote my second report. But 17 I didn't change my opinion at all, because I provided my 18 opinion on the basis of my expertise, not on the basis 19 of this is things. It's not changed throughout any 20 reports that I write ^^ four reports. 21 Q. It's relevant here, isn't it, because here in 22 paragraph 20 you're being asked to present your opinion 23 on the assumption that the tribunal does not accept 24 SWPC's case as to the parties rational, aren't you ^? 25

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A. Yes, yes, but the issue is this, you know. Even without 2 that rationale ^dict), the tribunal could still decide that because the index is fundamentally wrong, and is 3 fundamentally inaccurate, ^ and because it overstates --4 it's an overstated measure of inflation, that could be 5 a different approach to follow. 6 Q. Okay, but --7 A. Which is not my decision to make, but if they have the 8 discretion to do so, they could do so. 9 Q. The first point is that in your first report, you didn't 10 have this discussion, this instruction about the 11 tribunal's discretion? 12 A. No. 13 Q. So this second instruction comes in on the basis that 14 what happens if the tribunal does not accept SWPC's case 15 as to the rationale; is that right? 16 A. This is an item on the joint statement. If they don't 17 accept that, they can still consider the fact that that 18 index was biased, was a biased measure of inflation and 19 therefore, there is there can be an alternative way of 20 linking the two indices. The end cease are lib asked, 21 the issue is when do you link them ^. 22 Q. Yes, but what I'm trying to get at is that the matters 23 which are set out in the first paragraph beginning 24 "whilst the parties' intentions", that was another 25

1	instruction to you from SWPC, was it?
2	A. Yes, the instruction about the parties' intention has
3	been the same throughout all four report, yes.
4	Q. Sorry. In this paragraph, there's not only a reference
5	to the parties' intentions, but there's also then if you
6	read on, it says:
7	"Whilst the parties' intentions is one of SWPC's
8	arguments, SWPC's case is also that the independent
9	expert, as well as the tribunal, were I can'ted a wide
10	discretion." ^doc.
11	Then you say:
12	"Those facts SWPC says, include." ^doc.
13	Then you list out some facts, yes?
14	A. Mm-hmm.
15	Q. I just want to be clear I don't think it's going to
16	be controversial that everything in this paragraph
17	has been presented to you by SWPC; is that correct?
18	A. Everything in the first paragraph?
19	Q. Yes.
20	A. Well, COLI 1999 was a fundamental inaccurate measure of
21	inaccurate index is my opinion and ^doc) it has what
22	does RDC mean?
23	Q. Reply and defence to counterclaim.
24	A. Okay. It is my opinion and it has been and it is
25	SWPC opinion, but this is my opinion.

1	Q. I'm focusing on the words SWPC says", which led me to
2	conclude that you were simply recording something that
3	you had been instructed by SWPC. I'm not asking at the
4	moment whether you agree or disagree with it. I'm just
5	saying
6	A. Yes, I was instructed by I said it in the
7	presentation. I was instructed to assume about the
8	rational of the parties ^ and I was instructed that the
9	tribunal has this discretion, I don't remember the exact
10	wording.
11	Q. Are you agreeing that everything in this first paragraph
12	is just something that you were instructed by SWPC?
13	A. The first paragraph is the wording of this issue is not
14	factually correct." ^doc.
15	Q. Sorry, I'll rephrase. Can we agree that everything in
16	the paragraph beginning whilst the parties' intentions
17	^doc)?
18	□20240924□0054A. Is one of the ^^ arguments ^^ SWPC case is than also
19	that (witness reads to herself) ^. Yes.
20	Q. This was just everything in this paragraph was an
21	instruction to you from SWPC?
22	A. Yes, yes.
23	PRESIDENT: Sorry, Dr Meschi, can I just understand, that
24	paragraph starting "whilst the parties intentions ^doc)
25	were you given those words and instructed to put them in

1	the joint table or is this you paraphrasing
2	A. No, no, no.
3	PRESIDENT: what you've been told previously?
4	A. This is not no, I wasn't instructed to put those
5	words in the table.
6	PRESIDENT: I just wanted to understand what you meant when
7	you said these were your instructions. So these are
8	your instructions you've received previously which
9	you're paraphrasing?
10	A. Yes, my instructions that I received are that the ones
11	that I read to you before. I actually have the
12	presentation. I can read them to you again.
13	PRESIDENT: No, you don't need to. I just wanted to
14	understand when you were saying in relation to
15	A. Yeah, I wasn't told by anybody what I had to put in this
16	paragraph. No, no.
17	PRESIDENT: Thank you.
18	MR ROBB: Dr Meschi, just to be clear, if you are making it
19	clear that something is what you're been told or what
20	one party thinks, then obviously you can take that from
21	that party and that's not a problem as long as it's
22	clear that that's what the party are saying, not what
23	you're saying?
24	A. Yes, as I said, what I'm saying is about COLI was
25	fundamentally inaccurate index and I actually do believe

1	that there is no other although the parties'
2	intention in agreeing an indexation clause was to track
3	real inflation and this is ^doc) the statement by SWPC
4	and it's also my instruction, I actually, from
5	a professional point of view, I cannot believe that they
6	may have intended to do anything else. Why would you
7	index something to why would you actually create an
8	indexation in order to follow a ^^ measure of inflation?
9	To me it makes no sense. (witness reads to hrs).
10	And if this is if this is established SWPC
11	position, it is a position that I actually agree with.
12	Q. Looking at the time
13	A. And that's the third that's the (c), I do you agree
14	with that. Because from an economic point of view, that
15	is the result of all this, yeah.
16	MR ROBB: I think we started at 10 o'clock, we're finishing
17	at 1, so we're about I think we've halfway through. Is
18	now a sensible time to take a break?
19	PRESIDENT: Yes, the transcriber is nodding, so yes, that's
20	a good time to have a break.
21	Dr Meschi, we will have a 20-minute break now.
22	During the break, please do not speak to anyone
23	including your sis tantsds, but you can obviously speak
24	for cups of tea and coffee and the like, but don't
25	discuss your evidences with anyone else.

2 PRESIDENT: Thank you. 3 (11.40 am) 4 (A short break) 5 (12-point 6 (12.00 pm) 7 PRESIDENT: Dr Meschi, just to are behind you that yourself 8 still under the affirmation you gave previously. 9 Mr Robb. 10 MR ROBB: Thank you. Dr Meschi, can we turn up joint 11 statement item 20, so that was D130, page 11. It was 12 the bit we were looking at just before the break? 13 A. Yes, yes, yes. 14 Q. In the first bit lij want to check that I understood 15 your evidence correctly, which is that you had drafted 16 the paragraph that begins: 17 "Whilst the parties' intentions is one of SWPC's 18 arguments." ^doc?
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9 Mr Robb. 10 MR ROBB: Thank you. Dr Meschi, can we turn up joint 11 statement item 20, so that was D130, page 11. It was 12 the bit we were looking at just before the break? 13 A. Yes, yes, yes. 14 Q. In the first bit ljy want to check that I understood 15 your evidence correctly, which is that you had drafted 16 the paragraph that begins: 17 "Whilst the parties' intentions is one of SWPC's
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statement item 20, so that was D130, page 11. It was the bit we were looking at just before the break? A. Yes, yes, yes. Q. In the first bit ljy want to check that I understood your evidence correctly, which is that you had drafted the paragraph that begins: "Whilst the parties' intentions is one of SWPC's
the bit we were looking at just before the break? A. Yes, yes, yes. Q. In the first bit ljy want to check that I understood your evidence correctly, which is that you had drafted the paragraph that begins: "Whilst the parties' intentions is one of SWPC's
A. Yes, yes, yes. Q. In the first bit Ijy want to check that I understood your evidence correctly, which is that you had drafted the paragraph that begins: "Whilst the parties' intentions is one of SWPC's
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"Whilst the parties' intentions is one of SWPC's
18 arguments." ^doc?
19 A. Yes.
Q. You drafted that. But I think you also said in the
course of your evidence that you didn't know who RDC
meant; is that correct?
23 A. I do not?
Q. You did not know who RDC meant?
A. Yes, I'm sorry, I just forgot.

1	So you forgot?
2	A. Yeah, I didn't think quickly enough, I guess. I don't
3	know, it didn't occur to me what it meant.
4	Q. And you're sure this wasn't drafted to you by DLA?
5	A. No, no, no.
6	Q. So you had gone through the pleadings, had you, to
7	identify these parts of SWPC's case, had you?
8	A. Yes.
9	Q. I see. You use the word "could" in the second
10	paragraph. You say:
11	"The tribunal could decline to apply the going
12	forward approach." ^doc.
13	Do you see that?
14	A. Is it the second?
15	Q. It's the second large paragraph
16	A. The one after the
17	Q. It says:
18	"I consider that if the tribunal accepts that it has
19	this wide discretion and takes into account any of the
20	above considerations, it could decline to apply
21	Ms Harfouche's going forward approach" ^doc.
22	Do you see that?
23	A. Okay, at the end of the page, yes.
24	Q. At the bottom of the page?
25	A. Yes, yes.

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Now, I'm going to suggest to you that the reason why you 2 use the word "could" is because, in your view, in fact, the proper way to go forward, if the tribunal does not 3 accept SWPC's case as to the parties' intentions, is 4 that the going forward approach should apply, isn't it? 5 A. It means that it could do that or it could do something 6 else. 7 Q. I'm asking you that if you had the discretion and you 8 weren't allowed to take account of SWPC's case as to the 9 parties' intention, then your view would be that the 10 going forward approach should apply, wouldn't it? 11 A. What this sentence means (Pause). 12 So it's in two parts, right? If the tribunal 13 accepts that it has this wide discretion, which is the 14 instruction and it takes into account any of the above 15 considerations, which is ^doc) the situation with 16 COLI 1999 and the resulting unfairness blah, blah, blah, 17 then it could decline to apply that approach and use 18 another one. 19 Q. I see that and I'm asking a slightly different question. 20 I'm asking you if you assume that SWPC's case as to the 21 parties' intentions is wrong, yes, and if you had the 22 discretion that --23 A. If I had the discretion? 24 Q. If you had the discretion you refer to, you would 25

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consider that the only sensible approach would be to 2 adopt the going forward approach, wouldn't you? A. If the tribunal is wrong and the parties didn't have the 3 intention of tracking true inflation, how could I not? 4 ^^ I mean, this is very hypothetical. I mean, for me, 5 it's not possible that somebody wants to track something 6 else. So even if they wanted -- didn't want to track 7 true inflation, that's what you're asking me, right? 8 Even if they didn't want to track true inflation, what 9 should they do? And my decision would be if you wanted 10 to track -- even if you didn't want to track true 11 inflation, you should be doing what is right, because if 12 that is not what you do, you're going to create winners 13 and losers and in one case, in this particular case that 14 before here, there is one winner and one loser, it could 15 be switched around if the situation was the of sit with 16 the index. 17 And you don't really want to -- I wouldn't want to 18 find myself in that situation, but that's me. 19 Q. When you say could, the tribunal can decline to apply 20 the going forward approach ^doc), that means presumably 21 that the tribunal could also properly apply the going 22 forward approach, couldn't it. It's their decision, not 23 mine. 24 Q. I just want to deal with some of the facts or some of 25

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the issues raised by SWPC in this part of the -- in JS20

- that you've referred to. So you have three items that
- are said to be relevant. Do you see that? (a), (b),
- 4 (c)?
- 5 A. Yes.
- Q. We know that we are dealing -- this is on the hypothesis
- 7 that the tribunal does not agree with SWPC's case as to
- 8 the parties' intentions?
- 9 A. Okay.
- 10 Q. Do you agree?
- 11 A. So we are discussing a hypothetical situation in which
- (b) doesn't apply. Is that what you're asking?
- Q. The first point is that (b) clearly doesn't apply, does
- 14 it?
- 15 A. In what case?
- Q. If the tribunal does not accept SWPC's case as the
- parties' rationale, then plainly the factor referred to
- at subparagraph (b) can't apply?
- A. The factor -- yes, of course -- well, yes.
- Q. And if (b) falls away, then item (a) also falls away,
- 21 doesn't it?
- A. No, it's still fundamental inaccurate index and the
- result is still up fair. (a) doesn't follow from (b).
- (a) is -- well, as far as I'm concerned is a fact. Of
- course it's my opinion, but it's -- yeah, it's still

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a fundamentally inaccurate index. It doesn't depend on 2 what the parties thought and the same with (c). It doesn't depends on the intentions of the parties. COLI 3 is a fundamentally inaccurate index, as far as I'm 4 concerned, and the results would be unfair, because it 5 would be projecting that inflation forever more, until 6 2029. 7 Q. So your approach on here is what you consider to be 8 a matter of fairness, is it? 9 A. From an economic point of view, yes. Is not --10 I appreciate it is not legal, but from an economic point 11 of view, yeah. 12 Q. When you talk about non-existent inflation, what you're 13 really talking about is the fact that the call # 14 estimate of inflation turn out to be lower than that of 15 COLI 1999? 16 A. It could have turned out to be higher. COLI 1999 would 17 still be wrong. But fit was higher, it would be -- the 18 situation would have been reversed. 19 Q. The point here is that when you talk about non-existent 20 inflation, you're simply talking about the fact that the 21 two indices have different estimates of inflation over 22 the same time period; is that correct? 23 A. There are two indices. One of which is fundamentally 24 flawed and overestimates inflation systematically due to 25

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its mathematical -- to the flaws that I have described 2 in my presentation this morning. The other index does not have those characteristics, so that other index is 3 not flawed, right? 4 So the flawed index is measuring to an extent, 5 inflation that is not there, that does not exist, just 6 to give you an example of what I'm trying to say. When 7 in 2003, Gordon brown changed the Bank of England 8 inflation target, because the CPI had been introduced 9 a few years earlier, the inflation target was the RPI. 10 The RPI is like COLI 1999, in terms of formulae, so in 11 terms of bias. 12 The CPI is not. What did gore bon brown do? He 13 changed from RPI minus 2.5 to CPI minus 2. That's what 14 Gordon brown did, because there was a difference between 15 these two indices, the RPI was flawed and therefore, you 16 couldn't force the economy to follow a target that was 17 obviously based on a component of inflation that was 18 non-existent ^^ because it was Ms Measured. That is 19 what I meant. 20 Q. If you ever have two indices which measure inflation of 21 the same period, and you have different results, 22 different estimates, that can happen, yes? 23 A. Yes. 24 Q. So on your analysis here, it wouldn't matter why the two 25

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indices had different measures of inflation. Your 2 argument at (c) would simply would be the same, wouldn't it? 3 A. My argument about? 4 Q. At item (c) would be the same? 5 A. No, because if two indices have different measures of 6 inflation and one is biassed in a fundamental way and 7 one it is not then it is unfair ^^. 8 Q. If we assume the later index is more accurate than the 9 later indecision, that's a fair assumption, isn't it? 10 A. Well, okay, successive indices are always more accurate 11 than the indices before. The reason why they're 12 accurate is because of the question that the precedent 13 asked me this morning, right, is because of the way 14 (president ^ they with weighted and the fact that the 15 weighs ^^ five years long in the case of COLI 2007, 10 16 years old. That is an inaccuracy that is known and is 17 part of all the indices. The fact that you are basing 18 an index on a formula that is known to be fundamentally 19 biased and it should not be used, right, is what makes 20 a difference between those two indices. 21 Q. If two successcy indices -- for example, COLI 2007 and 22 COLI 2013 -- they diverge, don't they? 23 A. They don't? 24 Q. They diverge, don't they? 25

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All the indices diverge to a certain extent. 2 Q. Exactly. So what I'm suggesting here is it doesn't matter why the indices diverge. You're going to have 3 the same unfairness that you talk about whenever the 4 indices diverge, aren't you? 5 A. No, no, because one is biased in a fundamental way and 6 another one is not biased in a fundamental way. In 7 statistics, what you're trying to do, right, you're 8 trying to measure the underlying parameter of 9 a population. In this case, ^^ that's all we're trying 10 to do, but it's a complex measurement, because it's not 11 just taking the average of five items. 12 What happens is that because you are measuring the 13 average, you are having a measure which has a margin of 14 error around it and because of that, every measure has 15 a certain degree of accuracy or inaccuracy. But when 16 a measure is fundamentally biased, it doesn't matter 17 what size the measure is. It should never be used. 18 It's like saying the example that I gave before, you're 19 trying to measure the height of people living in Dubai 20 and only take a sample of, you know, young men. That's 21 going to be biased, regardless, and you shouldn't do 22 that, because it's wrong. 23 Q. Can I just understand this. Your evidence is that it 24 doesn't matter why -- it doesn't matter why there's 25

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a difference between two indices and it doesn't matter what the extent of that difference is in numerical 2 terms? 3 A. It matters why there is a difference, because the 4 difference could be due to the uncertainty around the 5 confidence interval of that measure, it could be due to 6 a fundamental error in the way that the index is 7 constructed, like with everything else. 8 Q. Just to take some very crude examples, these are 9 entirely made up numbers, just to illustrate the point. 10 So don't --11 A. Okay, okay. 12 Q. I'm not trying to tie them to any particular set of 13 indices. 14 If you have two indices and one of them is, as you 15 say, biased for a fundamental reason and the next index 16 isn't, and the two indices when diverged by 10 per cent 17 ^, and then let's take another two indices, where the 18 first index doesn't have what you call a fundamental 19 inaccuracy, but still measures different inflation from 20 its successor index and that difference is 20 per cent, 21 right? 22 So you're say that is there would be no unfairness 23 under your item (c) with respect to that second example, 24 but there would be with the first example? 25

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So if the index is biased and it measures a difference as 10 per cent and the other two indices are not biased, 2 right, they cannot have a difference of 20 per cent. 3 It's not possible. 4 Q. Okay, let's say that in the two examples, both sets of 5 indices are diverged by 10 per cent, so they both 6 diverge by 10 per cent by the same actual amount. Is 7 your evidence that your treatment of these two sets of 8 indices would differ because of the reason of the 9 divergence on the first set? 10 A. Can you please qualify what the divergence of 11 10 per cent mean? How is it measured? 12 Q. When you take a starting point and then you get to an 13 end point, the same number of years later --14 A. The same? 15 Q. Number of years later, so you're measuring -- like with 16 like? 17 A. Okay, okay, I get you. So if you're measuring like for 18 like and we are going more into the practicality of what 19 is being discussed here, if you measure like for like, 20 the two indices in this dispute, which are COLI 1999 --21 Q. Sorry, I'm not asking you about the indices in dispute, 22 I'm just asking you -- that's why I was trying to put 23 I side all the ^^? 24 A. Yes, but that's not going to happen. 25

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1	Q. So your evidence then is that if you couldn't have two
2	sets of indices diverging by the same amount, say
3	10 per cent, over the same number of years, if one of
4	them if only one of those indices was funds mentally
5	biased?
6	A. I don't think it can happen, because you see both
7	indices have the same underlying problem, right, that
8	you have a margin of error, that you have a confidence
9	interval, blah, blah, that is every index has.
10	But one has another problem, which is on top, and
11	that problem, which is on top, is the fact that it is
12	known to be biased upwards, ie to systematically
13	overestimate inflation and so if I'm really do measure
14	them like for like, that's not going to happen.
15	Q. I see, so you're saying that your (c) could never happen
16	in the case of where there's no fundamental inaccuracies
17	as you describe it?
18	A. My (c) hold on.
19	Q. Do you have it?
20	A. Yeah, yeah, I do have it. Yes, because if it an index
21	was not biased, right, it would be an average so
22	essentially, let's go back one seconds and define bias,
23	right? Bias is the systemic tendency of an estimator,
24	any estimator, to systematically deviate from the true
25	value on average. So if it is known to be

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1 systematically upward biased, it means that every single -- on average, that index will overestimate 2 true value more than an index that is known not to be biased. That is the dif in addition. 3 So how can it happen that you have an index that is 4 known to be upward biased, that returns the same gap as 5 an index that is known not to be? 6 Q. You accept, don't you, that if you have a later index 7 which measures lower inflation over the same period as 8 an earlier index, but no fundamental inaccuracies as far 9 as you're concerned, that still would mean you're 10 embedding some non-existent inflation? 11 A. If I have an index ^^ inflation because what you're 12 saying is that because it is still an estimate -- yes, 13 I mean, you can see it. Actually, you can see that. We 14 can see that in my presentation. It's on -- I can show 15 you. It's on slide -- where is it? It's slide 13 --16 14. Could you please pull that up. 17 14, the next one. So you see, when you're linking 18 the indices, the way I have linked the blue line, right, 19 there is still a difference between ^^ the way they have 20 been linked by GaStat, so in the base year, and the way 21 that we need to link them because of the commercial 22 nature of this transaction, because you can't carry on 23 going back, carry on going back. 24 So what is happening here is that you link them, but 25

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each successive index is more accurate than the other. 2 It is unbiased and there is still the light pink colour that shows an overestimate over what the statistical 3 agency of Saudi Arabia considers to be the most accurate 4 measure of inflation. So that happens every time. But 5 those indices are not biased, fundamentally, but the 6 index before that is. 7 Q. If we could go to slide 10 within this. We're looking 8 at figure 4-3 on the right-hand side. 9 A. Yes. 10 Q. We can see there, can't we, that the green line is 2007 11 and then the red line or orange --12 A. Is 13, the red line. Actually, the red line is two #, 13 2013, and ^^ they're all linked. 14 Q. Exactly, but we can see that the green line 15 overestimates inflation compared to 2013 and 2018? 16 A. Yes, it does. I mean, the thing with the green line is 17 that by the time you get to 2017, right, the weights in 18 that line -- I mean, in that index are 10 years old. 19 So, yeah. 20 Q. And so on your analysis, that is non-existent inflation, 21 isn't it? 22 A. Yes, yes, it is, it is. But it's not fundamentally 23 biased, the index, it's just old, it's just that it was 24 published with much delay. 25

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Q. But it still creates -- why doesn't that create the 2 unfairness that you talk about in your item (c)? A. It doesn't create the unfairness because it is often 3 index that is not biased in a fundamental way. It does 4 not systematically overestimate inflation and that is 5 why it's been linked by the agency in previous periods, 6 to all the other indices. So they thought there was 7 something really seriously wrong with that index, 8 I would have done exactly the same as they did with 9 COLI 19999, they wouldn't have linked it ^^, which is 10 something that they actually did. So the reason why we 11 are having this issue is because we are actually linking 12 in 2013 and not because the fact of the fact that the 13 index has ^ a real -- it's fundamentally flawed, yes. 14 Q. Sorry, I didn't really follow that last -- the reason 15 why we are 'reading...) linking in 20 if and not because 16 of the fact that the index has a real fundamentally 17 flawed ^doc) which linking are you talking about? 18 A. So essentially, what I am trying to say here, is that 19 the statistical agency published COLI 2013 -- COLI 2007 20 until 2017. 21 Q. Yes. 22 A. Right? And I made a mistake. In 2013, when the new 23 index was pub libbed, okay -- no, I didn't make 24 a mistake, actually. In 2013, when the new index was 25

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published, the statistical agency linked those two 2 indices, right, and that is why there is the dot in 2013. But they didn't publish 2013 until January 2018. 3 So they published it five years after they had done the 4 survey. By the time they published that index and 5 therefore it was available for linking forward for the 6 purpose of this contract, COLI 2007 had essentially 7 continued and was still existing and was overmeasuring 8 inflation by virtue of having weights that were very, 9 very old. 10 But not by virtue of the fact that it was fund 11 mentally flawed ^. So the amount of -- if you want, the 12 amount -- not the amount, but the inaccuracy of each 13 successive index changes on the basis of how old the 14 weighting that index are. So you can see that also the 15 red and the grey line, right, have -- there is a slight 16 difference between the two and the reason why is -- and 17 it's much less than with the green line, because if you 18 think about it, COLI 2013 is based on weights from 2013. 19 It was published at the end of -- what was it? When was 20 it published? Tend of 2019, right, in January 2020. So 21 it was six years old, seven years old. The other one 22 was olds ever. 23 So as GaStat becomes more, you know, goes forward in 24 their programme of pub libbing these indices, according 25

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to international standards, they are getting closer and 2 closer to carrying out the surveys every five years and to publish the results as soon as they possibly can, 3 because the majority of statistical offices do the 4 survey, link the index and move n in a periods of 5 months. While it took much longer to these agency to do 6 these things ^. 7 Q. Going back to where we were. Your evidence then that it 8 doesn't matter why -- it does matter why the indexes 9 diverge and it doesn't matter by how much they diverge; 10 is that right? 11 A. It matters why they diverge, yes, it matters why they 12 diverge. And it matters what the statistical agency 13 considers them to be. 14 Q. But then the second part of that is your evidence is and 15 it doesn't matter by how much the two indices diverge? 16 A. Not in terms of assessing the fundamental bias, no. You 17 can measure the bias, but you know from the premises 18 of -- you know, from your fundamental knowledge of 19 statistics that one is biassed and the other one is not. 20 Because you know, just to go back to that example that 21 I had about, you know, measuring the height of people in 22 a city, right? Okay. So you can say, okay, let's 23 measure the height of people in a city. Let's take 24 a sample of men and do that. And then you get, oh, the 25

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average height of men in the city is 1 metre 75. So the 2 average of people in the city is 1.75. And then you take -- then somebody tells you, no, 3 this is wrong, it's biased. You should do something 4 else, you should take men and women. And then you take 5 men and women and you say, oh, the average of men and 6 women in is 1.73, so it's not a big deal. I can use it. 7 This is good. Why not? Then you go in another city and 8 you take men and you finds that the average height of 9 men in that city is 187. Are you doing the right thing? 10 What happens if you take the measure of women and they 11 all look like me, then the average height of people in 12 that city, for sure, is not you know, 2 centimetres less 13 than the one of men. So the fact that you're using the 14 bias estimator, because that's its called it's an 15 estimator statistic, is wrong on principle because if 16 you do it again and again, and this is the 17 statistics for you, you get the results that are wrong 18 and eventually, you get to a result that is so wrong 19 that you have COLI 1999. 20 MR GHAFFARI: May I ask a question. 21 MR ROBB: Please, of course. 22 MR GHAFFARI: When you look at figure 4.3 and you look at 23 COLI 2007, that green section that shoots up, the gap 24 between 2007 and the black line underneath it, that 25

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delta, that white space in between, would you describe 2 that as an inaccuracy? A. The gap between? 3 MR GHAFFARI: The green line shown and the plaque line 4 underneath it. Is that an inaccuracy, a difference, 5 that divergence? 6 A. It is an inaccuracy that is caused by the fact that the 7 index is old and the weights are higher, but is not 8 a fundamental inaccuracy caused by the use of 9 a measurement that is biased. It's something that you 10 can't avoid, if you want, unless you publish it on time, 11 you can't avoid that. But if you use a fundamental are 12 you biased measure, you will re Peats and repeat and 13 repeat and repeat the error. That's why they changed 14 the methodology. 15 MR GHAFFARI: I understand that. Follow-up question. Can 16 that divergence, let's call it inaccuracy, ever get to 17 the magnitude that is equivalent to the magnitude that 18 you would get if you have a biased index, for difference 19 reasons --20 A. For practical reason, no, because they will never wait 21 as long as they waited in the other -- how long will 22 they have to wait in order for the weight to have that 23 effect? Because if you look --24 MR GHAFFARI: Don't extend the five-year period of weight. 25

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Assume that period of wait ^ stays the same, but can 2 there be other factors that cause the same divergence? What I'm going back to is the initial question that 3 Mr Robb asked, can you ever get the 10 per cent as 4 against the 10 per cent, whereas this 10 per cent is 5 caused by fundamental bias and this 10 per cent is 6 caused by other reasons 7 A. What other reason can there be? I mean. 8 MR GHAFFARI: Other than weight, just weight. 9 PRESIDENT: For example, if there was a significant change 10 in what is in the basket or the weight that's applied to 11 what is in the basket. 12 A. The thing is that the way that -- so you mean 13 consumption ^^ of people, that is why that you do it 14 every five years, because (habits ^ or less, because 15 that is not a long enough period for habits to change 16 consistently. There could be a situation where you have 17 very rapid technological change and therefore, the items 18 in the basket change in quality and they change in price 19 and the reason -- think about, for example, you 20 introduce smartphone, right, and smartphones at every 21 year, they become more and more powerful, and so their 22 prices change, right? So what statistical agencies do 23 in that respect is they adjustment for the differences 24 in quality by using different methodology, one is called 25

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iDon I can price analysis, there are those 2 methodologies. That way they obtain a comparable prices and use 3 those comparable prices in calculating the index. So 4 that they make sure that they are comparing 5 like-for-like. It's very -- yeah. You can make 6 adjustments and they do make adjustments and that's 7 a very -- yeah, it's a very good question, actually, 8 because it will happen unless you make an adjustment, 9 which is what is done. It will happen, yes. 10 MR GHAFFARI: Thank you. 11 MR ROBB: The first point I wanted to get to, which I don't 12 think I've had a complete answer to, is that in your 13 mind, if there is a fundamental inaccuracy in one of the 14 indices, it doesn't matter how big the gap is with what 15 you would call the more accurate index; is that right? 16 A. Yes, you shouldn't use it. 17 Q. No, if your mind, if there is a fundamental inaccuracy, 18 it doesn't matter what the effect of that fundamental 19 inaccuracy is, in numerical terms, is that your 20 evidence? 21 A. Yes, yes. 22 You can actually see it from here, because you see, 23 if you actually bring them both to the comparable, you 24 shouldn't bring them both back. So 1999, you compare 25

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the blue and the red line and then you compare the green 2 and the black, right? So one way of doing it is you can say, okay, you know, I compare them over a period of 3 time that is consistent. So the period of timing which 4 those two indices, the green and the black line, 5 actually different, it's four years, right? But the 6 blue line and the reds line have been published together 7 since 1980, even though the blue line is no longer 8 anywhere to be seen on the website of fa statistic. So 9 those two lines go back a very long way together. 10 The reason why here they start in 2005 is because 11 I link them, not because they are linked at that time. 12 They are never linked. They were never linked by 13 GaStat. 14 Now, if you really want to link them, and measure 15 the distance between them, you have to start in 2007. 16 2007 is the year in which the green line starts, exactly 17 the same way as 2013 is the year in which the grey line 18 start. In 2007 is also the year in which the weights of 19 the blue line were changed. So if you had to do 20 a comparison between in the distance between those two 21 lines, you can't start in 2005, because that's a very 22 arbitrary point. You start in 2007 and you go four 23 years to 2011 and that is the correct -- and then you 24 measure the area underneath and see if they are the 25

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same. That's how you do it. 2 Q. Ask we move on now, please, to another topic. Can we go to paragraphs 5.4 to a .6 of your first report. That's 3 D1, page 66? 4 A. Is 5.4 of my first report. (Pause). Okay, yes. 5 Q. So here you're considering the going forward approach; 6 is that correct? 7 A. Yes. 8 Q. You illustrate this, which shows that the in your graph 9 at figure 5-1, where you show that what the going 10 forward approach means is to how you link COLI 1999 to 11 COLI 2007? 12 A. Yes. 13 Q. What you're showing is that COLI 2007 should be lifted, 14 raised so at the beginning of 2007 matches the end of 15 COLI 1999? 16 A. Mm-hmm. 17 Q. For the moment, should we just assume that under the 18 agreement, the parties agree to use COLI 1999 for as 19 long as it was available? 20 A. Yes. 21 Q. Then you say at 5.5 on the same page: 22 "Under this approach, the adjusted charge rates will 23 reflect cumulative inflation under each index for as 24 long as that index is available." ^doc.

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A. Yes. Q. That's right, because this treatment I think we can agree uses cumulative inflation, not year on year as the method of adjustment; is that correct? A. But also the two methods are equivalent, right? So they always reflect cumulative inflation, also the year on year, that reflects cumulative inflation, it's the same. They are the same. Q. I understand that math matically, they were produce the same result? A. Yes. Q. What I'm saying is you agree ^^ controversial? A. No, no. Q. That the agreement ^^ for the pay sits of adjustment? A. Yes, yes, it doesn't use year n year, yes, its goes back to 2005. Q. So what you're saying here is that the going forward as approach is used as the COLI 1999 cumulative inflation for as long as COLI 1999 is available; is that correct? A. COLI 1999 cumulative inflation and then it accumulated the 2007 to to COLI 1999, yes. But COLI 1999 is no longer available. COLI 1999 is available until 2014 and then the linking approach accumulates it forever, I mean, until the end of the contract, not forever.	1	Do you see that?
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	23	longer available. COLI 1999 is available until 2014 and
I mean, until the end of the contract, not forever.	24	then the linking approach accumulates it forever,
	25	I mean, until the end of the contract, not forever.

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Q. Can I ask you to go to paragraph 6.6, which is D1-80.

- 2 Here you're describing your approach?
- 3 A. Yes.
- 4 Q. We can see at 6.5, you refer to the expression
- 5 reasonable receipt active correction"?
- 6 A. 6.5. Yes,.
- 7 Q. That's your approach, isn't it? You're carrying out
- 8 what you consider to be a reasonable retroactive
- 9 correction?
- 10 A. Yes.
- Q. We can see that illustrated graphically at your figure
- 12 6.1, which is at D1-83. (6-1.
- 13 A. Yes.
- Q. At paragraph 6.6(2), you explain, D1-81, you say that
- the -- you explain your approach and you say prior
- to January 2014, COLI 1999 is used as per the WPA so
- this express term of the WPA is not disregarded.
- However from January 2014 onwards the rate of inflation
- implied by call # instead of the relatively inaccurate
- rate of inflation implied by COLI 1999 is used." ^doc?
- 21 A. Yes.
- Q. So the first point is here you're judging COLI 1999 and
- 23 call 2007 in relative accuracy terms?
- 24 A. Yes.
- 25 So that's part of your analysis, isn't it, about the

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1	relative inaccuracy, not just fundamental inaccuracy?
2	A. Yes, that is a misspoken. I apologise. Yes. It is
3	absolutely misspoken there. You're right.
4	Q. I'm not suggesting you've mistaken at all. Are you
5	saying you want to correct your report?
6	A. Well, this this case, it is yeah, it is inaccurate
7	and is also relatively inaccurate, but it is
8	fundamentally inaccurate. If we want to go there, the
9	term relatively" should be deleted.
10	Q. Then perhaps we could go down, just whilst we're here,
11	just to confirm anything else you want to change about
12	your report at this stage, into subparagraph (3), where
13	you're dealing with COLI 2007 to COLI 2013, where you do
14	use what you call the going forward approach; is that
15	correct?
16	A. Yes.
17	Q. You say while I consider that COLI 2013 is more accurate
18	than COLI 2007 for the reasons set out in section 3 and
19	section 4 I consider that COLI 2007 is not as inaccurate
20	as COLI 1999." ^doc.
21	Do you see that?
22	A. Yes.
23	Q. Again, that's a relative inaccuracy concern, isn't it?
24	A. Yes, as I explained before, COLI 1999 is inaccurate in
25	a fundamental way. COLI 2007 has this issue with the

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weights, because it's older by 2017, yes. 2 Q. But the only fair reading of this bit of the report is that you are comparing how close to presumably you're 3 comparing how close to what you consider to be true 4 inflation COLI 1999 is and call 2007 is, that's what 5 you're doing, isn't it? 6 A. No, no, it's not what I'm doing. What I'm doing is 7 saying one index is funds meant I will inaccurate, the 8 other one is inaccurate by way of construction, because 9 it's an old index, right, and therefore, first of all --10 okay. Let's actually look at the two aspects of the 11 let's look at the stay test call aspect and let's then 12 look at the contractual aspect. 13 So from a statistical point of view, one is 14 fundamentally inaccurate and the other one is not. So 15 from a statistical point of view, what the agency did is 16 one was never linked and the other one was linked on the 17 base here, at the base year ^. But the base year, 2007, 18 by 2017, was 10 years old. So when the new index comes 19 in, which is 2013, what are you going to do? The 20 statistician links it in 2013 and discard the green spin 21 off, overshoot. But here we are talking about two 22 parties in a contract. So what do you do? You say, 23 okay, I have to strike a balance here. I can't 24 constantly go back. I go back once because there is 25

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autherwise it becomes every time you have to go back. So you strike a balance and you say I link them in 2013 — sorry, in December 2017 and then you wait for the next index to come. So it's two different things. One is the statistical as spectsdz of it and the other one is what should be done for this contract. I have some guiding principles among which there is what I call the tradeoff between certainty and crass, which are important in this respect. They are not important to a statistician, but they are important in this respect. So that is why I do that. Q. In this bet you're not using your sort of I con what tryings statistician expertise; is that correct? A. Fortunately I also have another PhD, I have a PhD in economics and economic policy, so that's also part of my expertise. Q. But in this subparagraph 3 that we've just been looking at, you are using the language of relative accuracy and inaccuracy, aren't you? A. Yes, as I explained to you, what that means. Q. No, but when you said is not as inaccurate as COLI 1999, that can only be a statement about —	1	a real problem.
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Q. No, but when you said is not as inaccurate as COLI 1999, that can only be a statement about	21	inaccuracy, aren't you?
24 that can only be a statement about	22	A. Yes, as I explained to you, what that means.
	23	Q. No, but when you said is not as inaccurate as COLI 1999,
ος Δ It's not	24	that can only be a statement about
25 A. It's not	25	A. It's not

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Q. -- the amount ofder ^^ because one is fundamentally 2 inaccurate and the other one is not. It's not just -it's not a mer of size. It's not a matter of size. 3 Q. Okay. For the present purposes, you just like the 4 tribunal to delete through the word relatively in your 5 supplement 2 ^? 6 A. Yes. 7 Q. Just going back to subparagraph (2), made a bit of 8 divergence because I was trying to understand where your 9 evidence currently was. I'm going to suggest to you 10 that you said and we looked at this when you were 11 looking at the going forward approach that the going 12 forward approach retains the cumulative inflation under 13 COLI 1999; is that correct? 14 A. Yes. 15 Q. And that was a consequence of using COLI 1999 for as 16 long as it was available? 17 A. Yes. 18 Q. But when you're engaged in your retd active correction, 19 you are disregarding that express term about using 20 COLI 1999 for as long as possible, aren't you, because 21 you're replacing that cumulative inflation with the 22 cumulative inflation implied by COLI 2007? 23 A. But COLI 1999 didn't exist anymore. 24 No, but the cumulative inflation which was implied up to 25

2013 that has to be retained in you're going to use

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2 COLI 1999 for as long as possible? A. No. I mean, I can use COLI 1999 for as long as possible 3 until 2014 and then from then on, where it's no longer 4 possible to use it, I can make a correction. 5 Q. I see. So when we go --6 A. I don't know -- this is a legal point, actually, because 7 I don't -- what is it that this was --8 Q. Can I take you now to paragraph 5.31 at D1-75. Do you 9 have that? 10 A. Yes, yes. 11 Q. You say: 12 "I explain at paragraph 5.24 above that SWPC 13 overpaid SEPCO for many years due to COLI 1999 14 overstating the true rate of even nation relative to 15 more accurate indices." ^doc? 16 A. Yes. 17 Q. I just pause there. Again, what you're talking about is 18 a relative accuracy and the divergence between COLI 1999 19 and later indices? 20 A. No, no, no. What I mean here is that if you compare it 21

I mean.

22

23

24

25

to more accurate indices, COLI 1999 was overstating,

overestimating the rate of up nation. That's what

Q. In this paragraph, what you're saying is that the

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because of your concerns about call the, you have to 2 lower the starting point for COLI 2007 by removing the cumulative inflation implied by COLI 1999 between 2007 3 and 2013 and replacing it with the inflation implied 4 under COLI 2007; is that correct? 5 A. I am not removing the cumulative inflation, because if 6 I had removed the cumulative inflation, then there would 7 be no overpayment. I just making a correction. 8 Avoiding that cumulative inflation to be projected 9 forward for the whole life of the contract. 10 Q. In fact, what you're --11 A. So, yes. 12 Q. What you've correcting is the use of COLI 1999 up to 13 2014 by replacing it with COLI 2007, that's what you're 14 doing, isn't it? 15 A. No, I'm not removing the use of COLI 1999 up to 2014 16 because if I had done that, then I would have said what 17 the windfall, the overpayment, whatever we want to call 18 it, should be given back. So, you know, yes. So I'm 19 not removing it, no. I'm just making a correction. 20 What was, as I said before, it is whatever overpayment, 21 whatever cumulative inflation that was not supposed to 22 be there, is like a sunk cost. Until then, we take it 23 as it is and from 2014 onwards, we try to rectify the 24 situation. 25

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Q. I'll just start by touching on the new instructions you 2 received in your second report. There were two new instructions in your second report, witness there? The 3 first is at paragraph 1.5 of your second report at D103, 4 page 5. 5 You have to read paragraph 1.5 and 1.5. 6 Paragraph 1.4 starts am crave over to D103-5. 7 Do you see that? 8 A. Yes, yes. 9 Q. This is the instruction as to the discretion or the 10 approach of the independent expert as set out in the 11 contract; is that right? 12 A. So this one is independent expert and the second one is 13 the tribunal has similar discretion. 14 Q. That was the point we looked at in relation to item 20 15 of the joint statement, is it? 16 A. About the instruction of the tribunal, yes. 17 Q. Yes. Sorry. I think you're nodding your head and 18 I think ^^ if you could just I ^^? 19 A. Yes, I did say, three times. 20 Q. The second of these new instructions is at 21 paragraphs 3.15 and 3.16, which is D103, page 18. 22 Here you're dealing really you can start at 3.14, 23 because that's where you're dealing with it. You say 24 that Ms Harfouche repeats the wording from appendix 13 25

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of the agreement and emphasises the words if the index 2 is not available and as I that she understands that the parties have agreed that COLI 1999 should be used as 3 long as it is available and opines that this suggests to 4 me that the parties have agreed to continue following 5 this approach to the subsequent end seed." ^doc. 6 Then 3.15 you say it is not for you to opine on what 7 the parties have and in fact have or not have agreed 8 to." ^doc. 9 Then you refer -- you take that the relevant part of 10 appendix 13 and you cite it there. Then your new 11 instruction is question I am instructed to assume that 12 the correct interpretation of this clause is that a new 13 index could be adopted by a mutual agreement or an 14 independent expert decision or an arbitral tribunal even 15 if the old index is still available." ^doc. 16 Because you've emphasised the words or if the 17 parties agree otherwise, do you see that? 18 A. Yes. 19 Q. So just to understand how you've approached this 20 question, is your understanding of your instruction that 21 an independent expert or tribunal could replace an 22 existing index when it was available without the 23 agreement of the parties? 24 What I understand from this is that this instruction 25

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means that the tribunal has the same discretion as the 2 independent expert. That's how I understand it. In 3.15, so the -- yes, that's how I understood it. 3 Q. No, no. The instruction that about the tribunal's 4 discretion, that was the instruction we looked at first 5 of all and it's the one that's referred to in joint 6 statement 20. This is a different instruction you're 7 being given here, isn't it, 3.16? 8 A. How is it different? In terms of even if the old index 9 is still available? 10 Q. Yes, that's a new instruction, isn't it? 11 A. No, because it's written here, right? It says ^^ or in 12 the index is not available or if the parties agree 13 otherwise." ^doc. 14 So there are two ^^ it could be that the index is 15 not available or it could be that the parties agree 16 otherwise. 17 Q. Yes, I understand that, I'm trying to understand what 18 you understood here and how that might have impacted 19 your opinions. So --20 A. No, my opinion was not impacted by any of this. You 21 know, my opinion is not a legal opinion. My opinion is 22 what I think as -- in my area of expertise, what I think 23 is the right thing to do. 24 Q. But hold on. This is an instruction? 25

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1	A. Yes.
2	Q. And so presumably, this instruction has become relevant
3	to the way you express your opinion in your report,
4	hasn't it?
5	A. But if it was relevant to the opinion in my report, the
6	instruction at 3.16, you mean?
7	Q. The instruction which you have to read paragraph 3.15
8	and 3.16 to understand the instruction?
9	A. Okay, right.
10	Q. I'm asking you, is that instruction relevant to your
11	report?
12	A. It's not relevant to the conclusions. I mean, it's
13	always been I have always had the same opinion. The
14	issues or if the parties agreed otherwise, means that
15	^doc) it could very well be that you can use a different
16	mutually agreed index, but this is not what happened
17	here. So there was no index available when COLI 1999
18	was being produced. There was nothing else. There was
19	just COLI 1999. It's the same for the following
20	indices. And, yeah.
21	Q. I'm just looking at the time. I think maybe
22	A. And the mutually maybe I can finish the answering
23	this question.
24	The way I interpret this is that there is this
25	clause gives the possibility of actually even if when

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COLI 1999 is no longer available, right, gives you the possibility of linking COLI 2007 to COLI 1999 at a prior 2 date than at the end of COLI 1999. So that linking in 3 2007. 4 Q. Sorry, which bit do you say gives you the possibility of 5 linking at an earlier date? 6 A. So in 2013, right, when the index -- when COLI 1999 7 became no longer available, there are two ways of doing 8 this, right? One way is to say, okay, we move forward 9 from this point. Another way is to say, okay, we 10 actually link them in 2007. So we link them at the 11 moment where COLI 2007 is no longer available, but it is 12 COLI 2007 is not COLI 1999, so. 13 Q. But that's not what you're saying at paragraph 3.16. 14 You're saying I am instructed to assume that the correct 15 interpretation of this clause is that a new index could 16 be adopted by mutual agreement or an independent expert 17 decision, or an arbitral tribunal even if the old index 18 is still available." ^doc? 19 A. Yes, this refers to the overlap. This refers to the 20 overlap. So if two indices are available at the same 21 time, where do you link them? So for -- if we exclude 22 the 2007 issue, it's for a possible future index that is 23 going to be published probably next year, I would guess, 24 and the last index in this contract. 25

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1	Q. Okay, so
2	A. If it was sorry, it was published corn currently,
3	which is something that I have not
4	Q. What I'm interested in is where you say obviously if the
5	parties agree something, they can agree anything they
6	like. But let's leave that aside. Are you saying that
7	even if there's no agreement between the parties, your
8	understanding is that an independent expert or an
9	arbitral tribunal can adopt a new index even if the old
10	index is still available?
11	A. Yes, they could just say, oh, look, there is an index
12	you know, there is a ^^ why don't we use the PPI. If
13	they agree, why not? But I don't know. I'm
14	Q. Well, sorry, the question was on the basis there wasn't
15	any relevant agreement between the parties. Answering
16	by reference to an agreement is not going to help. So
17	I'm asking again
18	A. The question is asked, you know, what could be done if
19	the index is not available? The parties could have
20	agreed, right? The answer is the question was asked
21	in hypotheticals. I mean, you're asking me to interpret
22	a legal provision, you know. This is not for me to do.
23	Q. No, I'm asking you to explain your understanding of your
24	instruction, but I think we'll have to return to that
25	after lunch.

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PRESIDENT: Thank you, Mr Robb. We'll now break for an hour. So we're back at 5 past 2. 2 (1.07 pm) 3 (The luncheon adjournment) 4 (2.0)5 Testing the realtime. The time is 1.54 pm test test 6 test 7 (2.03 pm) 8 PRESIDENT: We'll get started again. Dr Meschi, I remind 9 you you're still under your affirmation and Mr Robb, if 10 you would like to continue. 11 MR ROBB: Thank you. 12 Dr Meschi, before we continue with the line of 13 questioning before lunch, I would just like to give you 14 a chance to consider whether the answers you gave 15 earlier on about the differences between COLI 2007 and 16 COLI 2013 and I think then you were saying that the only 17 reason for the difference was the outdated basket being 18 used for COLI 2007; is that correct? 19 A. Yes, there is another reason, but that's not what has 20 caused that kind of problem. 21 Q. Perhaps we could just look at -- I think just so 22 everyone understands what you're talking about, go to 23 table 4-1 of your first report, page D1-52? 24 Yes. 25

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Q. Here what you've tonne is you've compared various 2 aspects of the ^^ indices and explained how things have changed. One of the things that we can see that's 3 changed between COLI 2007 and COLI 2013 is the final 4 line, which is where the method of aggregating items for 5 the general index has changed from ath met I can in 6 COLI 2007 to geometric in COLI 2013? 7 A. Yes. 8 Q. So that's another difference that would have had an 9 impact on the inflation estimated by the two indices? 10 A. Yes, it does. It's just not a fundamental issue, 11 because the geometric means there are used on the higher 12 level indices, which have weight, so they do not have 13 the same affect on the index as the use of the 14 arithmetic means on the elementary aggregates. 15 So there is a quote in my report. I think it's in 16 the first one. Is it possible to look for a word? 17 TECHNICIAN: Yes, ma'am? 18 A. Can you check for for, TOR, can you find anything? 19 There is a quote from the CPI manual, fisher. 20 I'm so sorry. 21 MR ROBB: We might come to this later, but let me put it in 22 this way. The question is that or the position then is 23 that in addition to the issue about the basket, there 24 was a method logical change between COLI 2007 and 25

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COLI 2013? 2 A. Yeah. Q. But your view is that that difference is not as 3 significant as the change between arithmetic and 4 geometric ^^ between COLI 1999 and COLI 2007 in respect 5 of the elementary aggregates? 6 A. Yes, it doesn't impart bias from the mental bias to the 7 indices ^^. It is because of different way that the 8 indices are treated. So the higher aggregate are all 9 weighted, right? So they use the basket of weight and 10 so the distortions that happen in the lower level, 11 because of the absence of weights, are not -- they do 12 not happen in the higher level weight, is because when 13 you don't put a weight, what you're doing essentially 14 there are implicit weight in those indices that create 15 a distortions. Then depending on what type of 16 arithmetic index you use, there is a different type of 17 distortion. But they are quite serious and they are --18 those indices are strongly discouraged by --19 Q. We'll be coming back to that, but I just wanted to 20 clarify there was another difference between the two 21 indices? 22 A. Yes, but it's not substantive in any way. 23 Q. Returning to where we were before the lunch break, where 24 we were dealing with your understanding of the 25

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1	instruction that had been given to you at
2	paragraphs 3.15 and 3.16 of your second report, which
3	was just so we get it back, it's D103, page 18.
4	Just want to make sure you have that.
5	
6	Do you have it?
7	A. Yes, I have it.
8	Q. Just say yes so we can be clear that you have it ^^.
9	This was the instruction given to you. It wasn't in
10	your first relationship but you refer to it in your
11	second report.
12	I just want to understand how you have understood
13	this question. Okay? And how you have understood this
14	instruction.
15	A. This is my first report, 3.15.
16	Q. No, your second report, which is why I want to check you
17	have the document, it's the one that's on the screen?
18	A. Yes, yes. Okay. Yes, right.
19	Q. Right. What I want to understand, this is the
20	instruction that was given to you for your second
21	
22	A. Yes.
23	Q. I want to understand how you have understood that
24	instruction. As I read paragraph 3.16 you tell me
25	whether this is how you understood it that you were

being instructed that an independent expert or tribunal

A. Not if anybody asked them. So it would have been

necessary that -- and that's my understanding. So the

parties did not agree on substituting an index and then

Q. I'm just trying to understand what you understood about

somebody comes from outside and substitutes it?

this and what the significance of the words were or if

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could have replaced COLI 1999 with COLI 2007 when 2 COLI 1999 was available even if the parties had not 3 agreed to do so? 4 A. Even if the -- when COLI 1999 was available? 5 Q. Assume there's no relevant agreement by the parties 6 about replacing an index? 7 A. Right. 8 Q. There's no treatment about from the parties? 9 A. Okay. 10 Q. Is your understanding of this instruction that an 11 independent expert or tribunal could have replaced 12 COLI 1999 with COLI 2007 even when COLI 1999 was 13 available? 14 A. So in that one-year in which they were --15 Q. As an example. 16 A. Whether there was is the only time -- (overspeaking) --17 18 Q. Let's take that as the point.

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the parties agree otherwise" which you're underlined in 2 your paragraph 3.15? A. It could have been that, for example -- I don't know. 3 You're asking me to interpret a legal clause --4 Q. That's the point. I'm really not asking you to do some 5 legal interpretation. You've been given an instruction 6 as an expert by your client and it is important to 7 understand if you understood that instruction and how 8 you understood that instruction? 9 A. So I understand this instruction in a very simple way, 10 is that if there is a dispute about this index, an 11 expert can determine what to do with it and it could be 12 either about the index any time because it looks like --13 if the parties agree otherwise ^doc) ^^ so it could be 14 15 yeah. Q. To avoid intending the clause and focus on your 16 instruction, which is really what you ought to be 17 concerned with. Why do you focus on paragraph 3.16? 18 What I'm trying to ^^ understand is here you appear to 19 be saying -- you appear to be being told that an 20 independent expert or arbitral tribunal could adopt 21 a new index even if the old index is still available. 22 Do you see that? 23 A. Yes, because it's says or if the index is not available 24 or if the parties agree otherwise ^doc) so the parties 25

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1 may agree that the index is there, but is not really 2 appropriate, right? And then they can say, okay, this index is not working for us. Then let's change it. 3 I want to change it this way. No, I want to change it 4 the other way. We don't agree. Let's go to an 5 independent expert. That's how I interpret it. 6 Q. I see. We'll follow this through --7 A. I'm just trying to figure out what this meaning and 8 those I interpret it. 9 Q. That's how you interpret it when you were preparing your 10 report ^^? 11 A. This instruction really didn't make much sense -- now it 12 doesn't make much sense -- didn't change my opinion when 13 I ^^ wrote my report. Because what really mattered to 14 me is how do you do the transition? Because I'm 15 asked -- the instruction that made -- that mattered most 16 to me was the one I read to you before about how do you 17 do the transition? What the the appropriate approach to 18 do this transition? That was actually the question that 19 was substantive to me. 20 In order for that instruction not to be moot, there 21 had to be some kind of dispute about it and this is the 22 clause, I think, which is disputed. Because otherwise 23 why would they ask me? ^^. 24 Q. Well, we move on to paragraph 3.17 if you scroll further 25

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clause is here ^^. 2 Q. Yes, I know, but I'm trying to understand how you've proceeded in your second report? 3 A. So --4 Q. Do you proceed in your second report on the basis that 5 the parties had agreed in the WPA to use COLI 1999 for 6 as long as it was available? 7 A. But it doesn't matter to me. They used it until 2013 8 and they had to change it in 2014. So the question is 9 what do you do from 2014 onwards? You have to use 10 another index because the first index is no longer 11 available. What do you do? Do you go and use 2007 from 12 a different starting point or do you use 2007 starting 13 from the last date at which was available? 14 Q. Right, so --15 A. Is there any overriding reasons why you should depart 16 from using the approach that was proposed by 17 Ms Harfouche. In my opinion, there is. 18 Q. So the -- am I right in thinking, then, that your 19 evidence now is that the instruction that we were 20 looking at at paragraphs 3.15 to 3.16, was irrelevant to 21 your report? 22 A. I mean, the parties didn't agree, right? It's not up to 23 me to decide what the parties have or have not done. 24 This is what I'm saying here. So the clause says if the 25

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index is not available or if the parties agree 2 otherwise, what I am doing in 3.15 is responding to Ms Harfouche, who's saying if the index is not 3 available. Actually, there is another part of that 4 clause, which is or if the parties agree otherwise ^doc) 5 blah, blah, blah, blah, this is what I'm saying 6 here. 7 Q. I want to be clear here. You previously were 8 approaching this paragraph-paragraph basis of what you 9 were instructed -- these were part of your instructions; 10 is that right? 11 A. Well, the crux of the matter is not what is written 12 here, is what I'm responding to, and what I'm responding 13 to is actually in paragraph 3.14, right? What I am 14 responding to is Ms Harfouche repeats wording from 15 appendix 13 of the agreement and emphasises the words if 16 the desk is not available states that she understands 17 that the parties have agreed that COLI 1999 should be 18 used as long as it is available and opines that this 19 suggests to me that the parties have agreed to continue 20 following this approach for the subsequent indices." 21 ^doc. 22 I consider that this is not for Ms Harfouche or 23 indeed me to opine on what the parties in fact have or 24 have not agreed. I understand that SWPC has not agreed 25

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to this, and that there is in fact a legal dispute about 2 how to interpret the terms of the WPA in respect of the future indexation changes. Ms Harfouche neglects to 3 emphasise the six words that follow if the intention is 4 not available or if the parties agree otherwise." ^doc. 5 Q. You're reading out bits of your report? 6 A. Yes. 7 Q. But can I -- what I was trying to understand was whether 8 the instruction that's in paragraph 3.16 is of any 9 relevance to your -- the conclusions in your second 10 report. 11 A. It is a legal issue to decide whether you have to --12 whether there is something in this agreement, right, 13 that says that you have to use the cumulative inflation 14 that happened and put it forward forever. 15 What this is, what my position is, is this 16 instruction says that doesn't have to be like that. So 17 if it doesn't have to be like that, what is the way 18 around to doing this? So in that respect, --19 Q. The instruction you were given in 3.16 was to assume 20 that the correct interpretation for this clause is that 21 a new index could be adopted by mutual agreement or an 22 independent expert decision or an arbitral tribunal even 23 if the old index is still available." ^doc. 24 Yes? That's what you --25

1	A. Agreed a new methodology, yes, a different methodology
2	^^, yes.
3	Q. Well, you don't mention that there. It's a very simple
4	question. Did this instruction have any influence on
5	your second report?
6	A. I don't I mean, I haven't changed my in my second
7	report, I haven't changed him at all from what I was
8	saying before, so how could this instruction have had an
9	influence on my second report?
10	Q. Well
11	A. Which was the fifth one I wrote.
12	Q. All I'm doing is ask you a question about whether you
13	consider that this was relevant to any issue in your
14	report? If your answer is no, then that's fine.
15	A. Yeah, I don't think so. I mean, given I haven't changed
16	my opinion tab I don't mean to jump in, but is the
17	answer not in 3.17 (Mr Gaff ^ are you not saying there
18	that the issue is moot?
19	A. Well, that's what I said before.
20	MR GHAFFARI: Is your answer that the instruction at 3.16
21	was relevant to your report ^^ or not relevant to your
22	report, not relevant because it's academic or moot?
23	I think that's what we're trying to get at,
24	^^ (overspeaking) ^^?
25	A. Yes, because essentially the issue here is the way at

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the point that we have to make a decision, COLI 1999 had 2 already been used, it has been used for as long as it was available and then it was dismissed and it was not 3 published again. 4 The subsequent indices were not published 5 concurrently. So this is all in the past. What is 6 important is what happens in the future. And what 7 happens in the future is going to happen when the next 8 index is coming. So what do you do with that next 9 index? And what do you do with the next index depends 10 on how the index is published. So when I wrote my first 11 report, I didn't consider that it was -- that the next 12 index would be published in any way but back-to-back. 13 The same way the other indices have been published. So 14 there is only one point in time in which you can 15 actually physically link these indices. You have no 16 choice. ^^. 17 But in case the next index would be -- would 18 actually be published in a concurrent way for longer 19 than 12 months, then that instruction in 3.15 can become -- becomes applicable, because if you 20 reflect to inflation and use the most accurate index, 21 then, in my opinion, you have to link the indices as 22 soon as the new better one comes. This doesn't imply 23 any correction, is just linked as soon as the new index 24 comes. 25

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So that is the disagreement, because in my opinion, that's when it should be done and in Ms Harfouche's 2 opinion, it should be done following -- at the very last 3 moment when the old index is published and that is where 4 my instruction matters. 5 MR ROBB: So your evidence is that this instruction has 6 nothing to do with your opinion on COLI 1999, COLI 2007? 7 A. COLI 1999 and COLI 2007 I have expressed my opinion 8 regardless. 9 Q. So --10 A. As I said, call --11 Q. Did you agree with my question, that your evidence is 12 that this instruction has nothing to do with your 13 opinion on COLI 1999 to COLI 2007? 14 A. The one in 3.15? 15 Q. Yes. 16 A. Yes, I did say before --17 Q. I just want to be absolutely clear about your evidence 18 and you're agreeing with me, I'm very happy to move on? 19 A. Yes. 20 Q. Thank you. Could we please go to the joint statement, 21 which is D130, page 23. Do you have that? This is item 22 33 of the joint statement. Looking the your column 23

here, it starts off you say Ms Harfouche considers that

my preferred approach does not come pie WPA because its

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starting point this 2014 and thus all invoices 1 2 thereafter do not use COLI 1999 for as long as it was available, but rather use COLI 1999 from 2005 to 2007 3 and COLI 2007 from 2007 to 2013." ^doc. 4 Do you see that? 5 A. Yes. 6 Q. Then you say: 7 "I disagree. The WPA does not state that COLI 1999 8 should be used for as long as it was available. Rather, 9 it states that COLI 1999 should be used or, if the index 10 is not available or if the parties agree otherwise, then 11 another mutually agreed index, or in the event of 12 a failure to agree then such index or method of 13 calculation as shall be determined by the independent 14 expert. The use of COLI 1999 prior to January 2014 is 15 therefore consistent with WPA." ^doc. 16 Then you say: 17 "The six words emphasised above, mean that the 18 parties can agree, or the independent expert and I am 19 instructed this tribunal, can determine a different 20 approach." ^doc. 21 So I take it from here that here you are saying that 22 the instruction that you were given at paragraph 3.15 23 and 3.16 of your second report, is relevant to your 24 assessment of how to transition from COLI 1999 to 25

4	COLI 2007?
1	
2	A. This is an answer to another question, though. The
3	question is whether my approach complies with the WPA,
4	not whether the WPA determines my approach.
5	Q. Sorry. But you're saying here, you've justifying your
6	approach by reference to the WPA by reference to the
7	clause that we were just discussing in the context of
8	the instruction at paragraph 3.15 and 3.16 of your
9	second report?
10	A. Yes, yes. Yes, but the issue here is the of sit of what
11	you presented to me before. What you asked me before
12	was does this instruction matter for what you decided to
13	do about len king COLI 1999 and COLI 2007 and that is,
14	no, that instruction doesn't affect my opinion how to
15	link those indices. But here the question is: does my
16	opinion in my approach comply with the WPA or not? And
17	I say, well, yes, it does, for these reasons, because
18	this is what that says.
19	I'm not saying that I have decided this in order to
20	comply with the WPA. I'm just saying that my approach
21	does comply with the WPA, because this is what the
22	WPA this is how I read the WPA, is the other way
23	around.
24	Q. I see. So is your evidence, then, that if the words or
25	if the parties agree otherwise" didn't exist, then you

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would accept that your approach does not comply with the WPA? 2 A. No, because -- no. Because there could still be 3 recourse to -- if the index is not available, then 4 another mutually agreed index may not have been agreed 5 by the parties, but can still be decided by an expert or 6 by a tribunal. 7 Q. Hold on. So you start this by saying that the WPA does 8 not state that COLI 1999 should be used for as long as 9 it was available. Do you see that ^doc)? 10 A. Yes. 11 Q. Then you emphasise in the clause the words or if the 12 parties agree otherwise ^doc) do you see that? 13 A. Yes. 14 Q. And then you say in the next paragraph down: 15 "The six words emphasised above just to be clear the 16 words are or if the parties agree otherwise ^doc) 17 meaning that the parties can agree or the independent 18 expert and I am instructed this tribunal can determine 19 a different approach." ^doc. 20 Do you see that? 21 A. Yes. 22 What you're saying here is that the reason that your 23 approach complies with the WPA is because of the 24 presence of the words "or if the parties otherwise 25

1	agree"?
2	A. Yes.
3	Q. Right.
4	A. Among other things. Or if the parties agree otherwise,
5	this is a whole clause, yes.
6	Q. Yes, so if those words were not in that clause, so
7	imagine they were struck through, they just never
8	existed, that you're agreeing, aren't you, that
9	A. Why should I argue that? The words are in that clause.
10	PRESIDENT: Sorry, Dr Meschi, can you wait until the
11	question has been finished otherwise the transcript
12	doesn't pick up?
13	A. Sorry, sorry.
14	MR ROBB: I'm just asking you to consider the position that
15	would exist or if the parties agree otherwise", if those
16	words were not in that clause. Okay?
17	A. Yes.
18	Q. So if those words were not this that clause, then your
19	position would be, as I understand it, that your
20	approach does not kilometre ply with the WPA?
21	A. It does, because there is another "or" there. It says
22	"or if the index is not available or if the parties
23	agree otherwise or in the event of a failure to agree
24	such index or method of calculation as shall be
25	determined by the independent expert." ^doc.

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So if the parties agree otherwise were in there, you 2 should change or in the event of a failure to agree ^^, right? So you can't just take out these six words. 3 They are part, an integral part of this clause or at 4 least it seems to me. As I said, I am not a lawyer, but 5 to me when there is one or, two or and then three or, 6 they have to be read in sequence. ^. 7 Q. I'll debate contractual interpretation I'm sure at 8 a later stage. But I want to go back to the point that 9 you have emphasised in the following paragraph these 10 sick words. You've emphasised them in the text or if 11 the parties agree otherwise", just as you had done in 12 your second report, and you follow up on that emphasis 13 in the next paragraph by saying that you understand 14 those words to mean, in effect, that your approach 15 complies with the WPA; is that right? 16 A. Yes. 17 Q. So the logical consequence of that is if those words did 18 not exist, your approach would not comply with the WPA, 19 would it? 20 A. Those six words have to be read with everything that 21 comes afterwards. 22 Q. But I'm asking you to imagine the situation where those 23 words are struck through, don't exist. 24 A. Sorry, but if you struck through these words, you have 25

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to add something to the next part of this sentence. 2 Q. No, Dr Meschi. I don't want to get involved in contractual interpretation. I'm just trying to 3 understand what your approach is. Take it from me that 4 if you strike through those six words, the clause still 5 makes sense. 6 A. It doesn't make sense to me. 7 Q. You emphasise those six words as giving the basis upon 8 which your approach to linking complied with the WPA, 9 didn't you? 10 A. The six words are the words that have been ignored 11 before. That's why I emphasise the six words. The 12 parties can agree otherwise or if they cannot agree, or 13 if they cannot agree, then ask an independent expert, 14 and then I have an instruction, this tribunal can still 15 decide ston a different approach. 16 Q. But --17 A. There is nothing in the WPA that says, as far as I can 18 tell, how do you link the indices. 19 Q. No, but you start this paragraph I disagree"? 20 A. Yes. 21 Q. Right? What you're disagreeing with is that COLI 1999 22

A. Yes.

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was to be used for as long as it was available; yes?

Q. So your process upon which the understanding of the WPA

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on which you have proceeded is that it does not require COLI 1999 to be used for as long as it is available; is 2 that correct? 3 A. It can be used if it is not available or if the party 4 agree otherwise or if they can't agree, an independent 5 expert. 6 Q. Well, you say the WPA does not state that COLI 1999 7 should be used for as long as it was available." ^doc. 8 Then you emphasise or if the parties agree 9 otherwise." ^doc. 10 Now, are you aware, has anyone ever suggested to you 11 that there is any agreement between the parties that 12 would satisfy the words "or if the parties agree 13 otherwise"? 14 A. I don't know. I don't know. I guess if they have an 15 agreement, we wouldn't be here. 16 Q. Let's assume that there is no basis upon which anyone 17 could suggest that the parties have agreed otherwise. 18 A. Yes. 19 Q. So then we're just left with or if the index is not 20 available", yes? 21 A. Yes. 22 Q. And your up approach, as we can see from the third 23 paragraph there, beginning the six words, means that if 24 the only bit that this tribunal can be concerned with is 25

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for slns it was available", then your approach is not 2 consistent with the WPA, is it? A. No, I don't agree with you. Because what I understand 3 from this, I am emphasising those six words as pop esed 4 to the fact that they were ignored, the index is not 5 available. There are two ways in which when you have an 6 index that is still available, you can move forward. 7 The party -- one of the parties could say this index is 8 doing something wrong, right? And the other party may 9 say yes, and so they agreement or if they don't agree, 10 they can go into a different kind of process. 11 But my whole approach doesn't mention the six words, 12 no. 13 Q. We take it from me there is no -- in COLI 1999 to 14 COLI 2007, there's no question of the parties having 15 ever agreed at any stage that they needed to have a new 16 up desk, is there? 17 A. No, but they obviously disagreed on how to move forward 18 once that index was, I don't know when, when was it, in 19 2014, they disagreed on how to move forward. 20 Q. This whole debate that you're explaining this this item 21 33 arises because you're concerned that Ms Harfouche has 22 said that your approach does not comply with the WPA, 23 yes? That's what this issue 33, if we can see that from 24 the first paragraph of your column for item 33? 25

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A. Yes. 2 Q. So what you're trying to explain is why your approach does comply with the WPA? 3 A. Yes. 4 Q. Is that correct? 5 A. Yes. 6 Q. And when you are trying to explain why your approach 7 complies with the WPA, the words that you alight are ^^ 8 otherwise; is that right? 9 A. Well, I think this is -- the way I understand it is 10 explained in the paragraph below, right? The six words 11 emphasised above mean that the parties can agree, or the 12 independent expert if the parties don't agree the 13 independent expert, because it's if they agree otherwise 14 or they don't ^doc) somebody else can. That is why 15 those six words are important. They are important 16 because they can either agree or not agree. But there 17 has to be the start of a discussion in order to agree or 18 not agree. Is that is why. 19 Q. I'm going to put it to you again that the basis upon 20 which you consider that your approach complies with the 21 WPA is the presence of the words "or if the parties 22 otherwise agree"? 23 A. No, is or as the parties otherwise agree or in the event 24 of a failure to agree" it's both ^doc). 25

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Q. Well, you haven't referred to the latter words, have 2 you? You've focused very much on or if the parties agree otherwise", haven't you? 3 A. Yes, I am emphasising this, because it was not 4 emphasised before. It's just by contrast. 5 Q. No, because then you would have also emphasise the words 6 you have just mentioned for is very ^^ or or ^^ you 7 don't agree those, do you? 8 A. Six words emphasised above mean that the parties can 9 agree or independent expert can determine a different 10 approach." ^doc. 11 Q. And the different approach is not to use COLI 1999 for 12 as long as it is available, isn't it? 13 A. It could be let's forget about COLI 1999 and let's go to 14 the PPI if there is a PPI. It could be let's use the 15 same PPI that is used for the foreign portions. It 16 could be a lot of things. I don't know what it could 17 18 Q. This is a debate about whether COLI 1999 has to be used 19 for as long as it's available and you're saying no, you 20 don't have to use COLI 1999 for as long as it's 21 available, aren't you? 22 A. According to what is written here, as I said, this is 23 a moot point, but according to what is written here, you 24 have two possibilities. You can use it until it's 25

1	available or if it is not available, or the parties
2	agree otherwise, you can use something else. Or if you
3	don't agree, then you have to put it to an authority to
4	decide or somebody with authority to decide.
5	Q. But reading this together, when you refer to a different
6	approach in that third paragraph, you are talking about
7	an approach which is different from the going forward
8	approach; is that right?
9	A. My approach?
10	Q. When you refer to you say a different approach, yes?
11	A. Yes.
12	Q. Right. By a different approach you mean an approach
13	which is different from the going forward approach?
14	A. Yes, it could be any other approach.
15	Q. So the only basis on which you can do something other
16	than the going forward approach is the presence of these
17	six words.
18	A. No. Why?
19	Q. I'm just reading your words, Dr Meschi. What you have
20	said, and we can rephrase this now you have explained
21	what a different approach means. The six words
22	emphasised above mean that the parties can agree, or the
23	independent expert and I am instructed this tribunal)
24	can determine an approach that is different from the
25	going forward approach ^doc) would that be a fair

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summary of what you're trying to say? 2 A. The question is does this approach comply with the WPA or not? So this is the question. Right? Does my 3 approach comply with the WPA or not? It complies with 4 the WPA because this is what the WPA says. 5 Q. Sorry, that --6 A. So you're saying that if the WPA didn't say that, would 7 your approach comply with the within amount? 8 Q. No, that isn't even close to an answer to my question. 9 I'm going to look at the words that you use in item 33 10 in that paragraph that begins "the six words". Okay? 11 Right. 12 We had a debate a few moments ago about what you 13 meant by determine a different approach and you agreed 14 that what you meant there was that it can determine an 15 approach that is different from the going forward 16 approach proposed by Ms Harfouche? 17 A. By Ms Harfouche, not by the WPA. The WPA doesn't say 18 that that is the approach you have to use. 19 Q. No, can we just focus on what the questions are. So 20 I asked you a question to find out exactly what you 21 meant by a different approach in that paragraph. Yes? 22 I asked you a question before to work out what you meant 23 by a different approach" in that paragraph. Do you 24 remember that I asked you those questions? You have to 25

1	say "yes" or "no"?
2	A. Can you read it to me? I mean.
3	Q. I asked you a question before?
4	A. Yes.
5	Q about what you meant by a different approach in that
6	paragraph. Do you remember that question?
7	A. No.
8	Q. Okay. Let's try again.
9	I'm going to suggest to you again that where you
10	refer to "a different approach" in that paragraph, what
11	you
12	A. In this one?
13	Q. The paragraph that begins "the six words"?
14	A. Yes.
15	Q. At the end of that you refer to a different approach".
16	Do you see that?
17	A. Yes.
18	Q. Right. What I want to do is confirm what your view is
19	about what you intended to mean by the words a different
20	approach". I'm suggesting to you that what you meant
21	was can determine an approach that is different from the
22	going forward approach proposed by Ms Harfouche.
23	Yes.
24	Q. Yes?
25	A. To be clear, Ms Harfouche considers that my approach is

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not compliant, okay, and with the WPA. Because in her 2 opinion, in her opinion, not to the letter of the WPA, her approach is the only one that complies. Whether 3 I agree or not with that and I don't, then the next 4 question is does my approach comply with it? There are 5 several and we are -- yes, there are several 6 possibilities in which a compliant approach can be 7 produced. 8 Q. Can I just confirm that -- you agree that what you meant 9 by a different approach was an approach that is 10 different from that proposed by Ms Harfouche as the 11 going forward approach. You've agreed with that. Say 12 "yes" or "no"? 13 A. Yes. 14 Q. ^^ so the only basis that you put forward for saying 15 that the tribunal can determine a different approach is 16 the words "or if the parties agree otherwise"? 17 A. Or "parties agree otherwise or in the failure in the 18 event of a failure to agree then such index or method of 19 calculation shall be determined by independent expert." 20 ^doc. 21 So the whole sentence after the or if the index is 22 not available. It's not just those six words, no. 23 Q. Can I just check that those are the only six words that 24 you've emphasised ^^? 25

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A. Yes why those ^^ aren't they? 2 A. Mean that the parties can agree or the independent expert, that's what I have written in that paragraph. 3 Q. Yes, but the words that you are referring to in that 4 paragraph are the words or if the parties agree 5 otherwise? 6 A. Yes, because if the parties do not agree, they call an 7 independent expert. If the parties agree, there is no 8 need. So that is the premise or if the parties agree 9 otherwise is the premise for what comes afterwards. 10 That's why they are so important. 11 Q. But why are the words if the eater ^^ important? 12 A. Because if they don't, if they agree, you don't have the 13 needs to call an independent expert and if they don't, 14 you call an independent expert or an arbitration 15 tribunal. That's how I read it. That's my 16 interpretation of this. 17 Q. The interpretation you gave and the explanation you gave 18 for your approach in the third paragraph only focused on 19 the six words or if the parties agree otherwise, do you 20 agree? 21 A. Yes. 22 And that's what you say means that your approach is 23 consistent with the WPA? 24 A. The words emphasise above mean that the parties can 25

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agree, or the independent expert." ^doc. 2 So what this means again, I shall say this again, is that the parties can agree, so let's say that the index 3 is not available or that the index is available and the 4 parties agree otherwise or if they don't, they can go to 5 an independent expert. 6 Q. I'm probably going to have to --7 A. Because -- yes, this is my way of reading this. I mean, 8 it's not the legal way. I don't know. But this is the 9 way I read it is if the parties agree otherwise or if 10 they can't agree, they can go to an independent expert. 11 But they first have to try to agree before they cannot 12 agree. That's the way I interpret it. 13 Q. Can I just ask you about the words at the end of the 14 second paragraph, the words that aren't italicised: 15 "The use of COLI 1999 prior to January 2014 is 16 therefore consistent with the WPA." ^doc. 17 am I right in thinking there's a typo and that 18 should be COLI 2007? 19 A. But COLI 2007 was not used prior to January 2014. 20 Q. I'm just trying to understand why you say the use of 21 having been through the words we've been through on 22 a number of occasions from the agreement, you then say: 23 "The use of call KWR-9 prior to January 2014 is 24 therefore consistent with the WPA." ^doc. 25

1	Why have the words, why in your opinion have the
2	words you've set out got anything to adopt ^ accurately
3	why the 9 prior to January 2014 is consistent with the
4	WPA?
5	A. It's because of what is written (Pause).
6	I think it's COLI 1999. It's consistent with the
7	WPA.
8	Q. Well, I mean, put it this way. COLI 1999 is actually
9	specified in the supplemental agreement, so I don't
10	think anyone has ever, so far there hasn't been an issue
11	about whether COLI 1999 could be used prior
12	to January 2014. So I just don't understand why you
13	considered that the use of COLI 1999 prior
14	to January 2014 being consistent with the WPA, had
15	anything to do with the words you've just quoted?
16	A. Let me just give me a second. I want to read this
17	whole thing. (Pause).
18	Because this is an answer to what is written in the
19	first paragraph to the right, that refers to another
20	issue.
21	Q. Sorry, Ms Harfouche's first paragraph?
22	A. Yes, because I'm responding to that in this.
23	Q. Sorry. As I read it, your second paragraph, which
24	begins I disagree was a response to the point that
25	Ms Harfouche had made and you had set out in your first

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paragraph; is that correct? 1 2 A. I think so, yes. Q. Yes, okay. Tell me which bit of Ms Harfouche's column 3 you say you're responding to with the words: 4 "The use of COLI 1999 prior to January 2014 is 5 therefore consistent with the WPA." ^doc? 6 A. Yes, COLI 1999 prior to January 2014 is therefore 7 consistent with the WPA." ^doc. 8 I have not used COLI 2007 prior to January 2014. 9 I have linked COLI 2007 to COLI 2013 prior to 2014, but 10 I've not used it, it's used from 2014 onwards. 11 Q. Sorry, none of this is an explanation of what you meant 12 and what you were trying to say with the words the use 13 of COLI 1999 prior to January 2014 is therefore 14 consistent with the WPA." ^doc. 15 I'm just trying to understand why you thought the 16 words you dealt with previously about or if the parties 17 agree otherwise have got anything to do with the use of 18 COLI 1999 prior to January 2014 is consistent with the 19 WPA." ^doc? 20 A. Because what it says before is that I've been using 21 COLI 1999 from 2005 to 2007 and COLI 2007 from 2007 to 22 2014. I've used COLI 1999 and that use is consistent 23 with the WPA. If you want to use COLI 1999, yes. 24 Q. Are you now saying that we should just ignore the word 25

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"therefore"? 2 A. What is therefore? Q. It is in the final sentence of your second paragraph. 3 The use of call why the priority January 2014 is 4 therefore dc? 5 A. Is therefore consistent. ^doc) yes. 6 Q. Would you like us to read it as if the word "therefore" 7 has been deleted? 8 A. No. 9 Q. So what is the relationship between the clause you've 10 just cited and your conclusion that use of COLI 1999 11 prior to January 2014 is therefore consistent with the 12 WPA." ^doc? 13 A. My use of COLI 1999 prior to January 2014, the way 14 I have used it, is therefore consistent with the WPA. 15 Because I have used COLI 1999 prior to January 2014 and 16 I have run asked it to COLI 2007 prior to January 2014 17 and that use that I have made of COLI 1999 is consistent 18 with the WPA. Because it was used until the very last 19 moment that it was available and from there on, it was 20 used as it was linked to COLI 2007. That is the use of 21 COLI 1999 prior to 2014. It was used in two ways. It 22 was used in the invoices because that was the index it 23 was agreed upon, and then it was used to do the linking 24 in 2007 in a way that I consider to be consistent to the 25

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WPA and Ms Harfouche does not. That is how -- this is 2 what this sentence means, the last one. Q. I'm afraid I'm going to have to move on. 3 Now do you recall that we were discussing the same 4 instruction about or if the parties agree otherwise" in 5 your second report, you said that in fact, it was 6 irrelevant to your opinion? 7 A. Yes. 8 Q. But clearly, here, you are suggesting that those words 9 are very relevant to your opinion, aren't you? 10 A. No. As I said before, what this is an answer whether 11 my approach complies with the WPA, not whether the WPA 12 complies with my approach. My approach is end per 13 innocent. I have been asked what would you do if you 14 were in 2014 and you were put the question how do you 15 link -- what do you do? This is what have simply said 16 in my reports what I would have done and consistently 17 from the first report, where there was no issue of COLI 18 2018 all the way to my last, I've never changed my 19 opinion. 20 Q. Do I take it from your answer then that when you've 21 approach it you've basically ignored the terms of the 22 WPA? 23 A. When I approached it I approached it to ask the question 24 is there something wrong with this index? If there is 25

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something wrong, "yes" or "no". If there is something 2 wrong, how would you do -- if there was nothing wrong, how would you approach the transition? If there was 3 something wrong, how would you approach the transition? 4 For my opinion, if there is something wrong, I will try 5 to rectify what is wrong and that is what my approach 6 has tried to do. 7 Q. Again, sorry, that isn't an answer to the question. My 8 question is when you've embarked on your approach, have 9 you put to one side and ignored the terms of the WPA? 10 A. I mean, if the WPA said you have to use the going 11 forward approach come rain or high water, of course 12 I would have, I couldn't have done anything, right? But 13 because it gives leverage to do something else, I have 14 actually tried to do it. So the way I see this is like 15 there is a possibility of choosing an approach. What 16 should this approach be? But the fact that there is 17 a possibility does not have any impact on my approach. 18 Q. Sorry, that's not -- again, not an answer to the 19 question. My question is when you've set out writing 20 your opinion which now covers four report, I think, have 21 you put to one side and ignored the terms of the WPA? 22 I didn't even consider them, because I think if I am 23 instructed, right, there must be a reason why I am 24 instructed. Pause there is room for expressing an 25

1	opinion on these matters, otherwise why would I you
2	know I wouldn't have been instructed otherwise.
3	Q. Do you agree let say this tribunal finds that the words
4	or if the parties agree otherwise are simply not
5	relevant to this dispute?
6	A. That what is not relevant?
7	Q. About that the words or if the parties agree otherwise",
8	yes, you emphasise words, if the tribunal finds that
9	those words are simply not relevant to this dispute?
10	A. They're not relevant to my approach. I don't know if
11	they're relevant to the dispute or not. I am not
12	qualified to give you that answer.
13	Q. Sorry
14	A. ^^.
15	PRESIDENT: You need to wait until Mr Robb has finished
16	putting his question before you answer. ^^.
17	MR ROBB: Thank you.
18	So if the tribunal finds that the words or if the
19	parties agree otherwise" are not relevant to this
20	dispute, do you agree that your approach is not
21	consistent with the WPA?
22	A. No.
23	Could you just explain why you consider it still to be
24	relevant to the dispute? Why your approach would be
25	compliant with the WPA?

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A. Sorry, can you say this again? 2 Q. Can you explain on that basis why you say your approach would be compliant with the WPA? 3 A. My approach complies with the WPA because there is 4 a possibility of having an expert or a tribunal to 5 decide an approach. 6 Q. But if the tribunal finds that the clause requires that 7 the parties use COLI 1999 for as long as it's available, 8 and the words or if the parties agree otherwise aren't 9 relevant, then do you agree that your approach is not 10 consistent with the WPA? 11 A. For as long as they are? 12 Q. For as long as COLI 1999 was available -- I'll start 13 again, because I can see you're getting a bit lost. 14 Also assume the tribunal finds two things. One, the 15 parties agreed that COLI 1999 would be used for as long 16 as it was available. Two, the words or if the parties 17 agree otherwise are not relevant. Yes? 18 In that situation, do you agree that your approach 19 is not consistent with the WPA? 20 A. What about -- no, because if the index is not available, 21 so the tribunal has to find that, there is only one 22 approach and that is the going forward approach. If the 23 tribunal finds that there is only one approach, that is 24 the going forward approach. 25

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A. What was the question? I am a bit confused. 2 Q. Assume the tribunal finds two things. First, the 3 parties agreed that COLI 1999 would be used for as long 4 as it was available. 5 A. Okay. 6 Q. Second, the words or if the parties agree otherwise" are 7 not relevant. 8 A. Okay. 9 Q. In that situation, do you agree that your approach is 10 not consistent with the WPA? 11 A. No. And the reason why I don't agree with that is 12

Q. Right, that's again not an answer to the question.

Q. So I come back to the question. What an earth are the

because COLI 1999 was used until it was available. It

was. It came out of a publication at the end of 2013

and until then, it was used to issue invoices. It was

- words or if the parties agree otherwise got to do with
- your am -- the tribunal being able to determine
- 20 a different approach?
- A. Because if the parties agree otherwise, if they don't,
- they have to go to the tribunal.

used until it was available.

- 23 I'm going to move on. I may have to come back to this.
- I want to look at what you call your guiding
- principles which are in your first report at

- paragraph 6.3, which is D179.
- 2 A. The second or the first.
- 3 Q. Your first report. D1-79 ^.
- 4 A. Okay.
- Q. These are your principles, do you recognise these?
- 6 A. Yes, yes, yes, yes.
- 7 Q. Paragraph 6.3. Then just to be clear, you've got
- 8 footnote 200 towards the bottom of the page:
- 9 "I do not express any opinion on whether these
- principles are consistent with the relevant legal
- 11 framework." ^doc.
- Do I understand when you say relevant legal
- framework, you mean the WPA?
- 14 A. Yes.
- Q. So the first -- your first approximately, if we look at
- this ^, the indexation approach to add ^reading...)
- 17 charge rates in line with 'reading...) true rate of
- 18 inflation." ^doc.
- So we can accept, I think you'll accept that true
- 20 inflation is never actually measured; is that right?
- A. True inflation is never known. It's estimated, yes.
- Q. And you say that the estimate is by I think you said
- 23 this before --
- 24 A. Indices.
- Q. Yes, -- (overspeaking) -- ^^?

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A. It's the next best estimate which is the next estimate; 2 is that correct yes. Yes. Q. So you never know it's only when the next index comes 3 out you understand what the best measure of inflation 4 was at any in any period? 5 A. Either that or if you know the formulas, but in this 6 case, the formulas were not known. 7 Q. I see, the formulas weren't known, so you would never 8 know whether 2013 -- COLI 2007 was an accurate estimate 9 of true inflation until you got COLI 2013 and you would 10 never know about COLI 2013 until you got to COLI 2018; 11 is that right? 12 A. No, you know about COLI 2007 because the formulas were 13 published, so it was known. They were published in 14 I think 2016 by GaStat. They were published. Let me 15 tell you where it is. It's the GaStat annual in 2017. 16 They do publish -- I need to go to the extracts. 17 Q. While you're doing that, can I just check, you're saying 18 the COLI 2007 formulas were known in about 2016? 19 A. Yes. Just one second. I have to find them. 20 So I think it is D14-1-7. 21 Yeah, this is the one. 22 I see, so this is the methodology and I think I saw from 23 the index page that it was published in 2017? 24 A. Yes. 25

1	Q. So you wouldn't know whether you could accept
2	COLI 2007 which was published in January 2013?
3	A. Yes.
4	Q. And you wouldn't know about whether that was, in your
5	mind, sufficiently accurate estimate of inflation until
6	2017?
7	A. Well, you would know that it would be you asked me
8	vis-`-vis 2013. 2013 have not been published when this
9	was published. 2013 was published a year later ^dict).
10	Q. Okay, but just then rephrasing the question, given your
11	answer. Subcontractor that you wouldn't know about the
12	accuracy or otherwise of COLI 2007 until 2017?
13	A. You would know that there was a problem between the two
14	indices because there was quite a difference in the
15	estimated inflation and I guess that is why in 2014,
16	there was no agreement as to how to move forward
17	Q. That is absolutely not even close to being an answer to
18	the question.
19	A. Okay.
20	Q. We're asking about COLI 2007. You said that you
21	wouldn't know about whether an index was accurate or
22	otherwise until you have seen the formulae, yes?
23	Yes.
24	Q. And then you decided to go to this document which is
25	dated 2017, yes?

1	A. Yes.
2	Q. Which has the formulae for, you say, COLI 2007?
3	A. Yes.
4	Q. So as I understand your evidence, you would not
5	nobody could know whether COLI 2007 was an accurate
6	index until 2017?
7	A. From the mentally biased, yes ^^.
8	Q. Yes, okay. So until 2017, you couldn't know whether
9	COLI 2007 was, in your words, a fundamentally biased
10	index or not?
11	A. Yes, you could only know that it had a completely
12	different measure of inflation from COLI 1999 and you
13	could know that COLI 1999 and COLI 2007 had not been
14	linked by the statistical agency, which should have
15	given quite a red flag.
16	Q. Sorry, again, you're answering trying to answer
17	different question. I understand that your huge theme
18	you want to push at every ^^ you don't like COLI 1999.
19	We all understand ^^?
20	A. No, that's not it.
21	Q. Please let me finish. What I'm asking you now is about
22	COLI 2007, so going back to COLI 1999 is not an answer
23	to my questions. So what I'm trying to say is that you
24	get COLI 2007 in January 2013, yes?
25	A. Yes.

a funds meant I will inaccurate index until 2017; is that correct? A. You don't know if this is a fundamentally inaccurate index until you see the formula. Q. Is that correct? A. Yes. Q. And that's 2017 on your evidence? A. That is 2017, you only as I said, you only know that that index is not linked with the index before and you know that this index is very different in terms of the inflation that it represents. So in my view, if you think that there is a problem, you ask the statistical agency. Q. But in A. Because the statistical agency will know. Q. But just taking COLI 2007, you're not going to know whether it's good, bad or otherwise until 2017; is that correct? A. You know that it's better than 1999, you don't know what It is vis-`-vis the next one. Q. Exactly. So you would have four years of COLI 2013 before you got to know whether, in your view, it had a fundamental statistical bias? A. COLI 2007?	1	Q. And your evidences is you don't know whether this is
A. You don't know if this is a fundamentally inaccurate index until you see the formula. Q. Is that correct? A. Yes. Q. And that's 2017 on your evidence? A. That is 2017, you only as I said, you only know that that index is not linked with the index before and you know that this index is very different in terms of the inflation that it represents. So in my view, if you think that there is a problem, you ask the statistical agency. Q. But in A. Because the statistical agency will know. Q. But just taking COLI 2007, you're not going to know whether it's good, bad or otherwise until 2017; is that correct? A. You know that it's better than 1999, you don't know what it is vis-`-vis the next one. Q. Exactly. So you would have four years of COLI 2013 before you got to know whether, in your view, it had a fundamental statistical bias?	2	a funds meant I will inaccurate index until 2017; is
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agency. Q. But in A. Because the statistical agency will know. Q. But just taking COLI 2007, you're not going to know whether it's good, bad or otherwise until 2017; is that correct? A. You know that it's better than 1999, you don't know what it is vis-'-vis the next one. Q. Exactly. So you would have four years of COLI 2013 before you got to know whether, in your view, it had a fundamental statistical bias?	12	inflation that it represents. So in my view, if you
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A. You know that it's better than 1999, you don't know what it is vis-'-vis the next one. Q. Exactly. So you would have four years of COLI 2013 before you got to know whether, in your view, it had a fundamental statistical bias?	17	Q. But just taking COLI 2007, you're not going to know
A. You know that it's better than 1999, you don't know what it is vis-'-vis the next one. Q. Exactly. So you would have four years of COLI 2013 before you got to know whether, in your view, it had a fundamental statistical bias?	18	whether it's good, bad or otherwise until 2017; is that
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Q. Exactly. So you would have four years of COLI 2013 before you got to know whether, in your view, it had a fundamental statistical bias?	20	A. You know that it's better than 1999, you don't know what
before you got to know whether, in your view, it had a fundamental statistical bias?	21	it is vis-`-vis the next one.
24 a fundamental statistical bias?	22	Q. Exactly. So you would have four years of COLI 2013
	23	before you got to know whether, in your view, it had
25 A. COLI 2007?	24	a fundamental statistical bias?
	25	A. COLI 2007?

1	Q. No, 2007.
2	A. Sorry, 2007. I personally would think, personally, from
3	an expert point of view, if I see that a statistical
4	agency is not linking to indice, I know that one of the
5	two is wrong, right? So the one that is wrong has to be
6	the old one, because otherwise they wouldn't have
7	published a new one. That's how I would see it. If
8	I was somebody who's using these indices, I will say,
9	okay, let me pause for a second, let me look at what's
10	going on herement let me ask GaStat why is it that this
11	indices are so different? And then they will tell you.
12	Q. But GaStat doesn't say anything about COLI 2007 apart
13	there publishing it until 2017; is that correct?
14	A. In the public, no, but if you ask them privately.
15	Q. In terms of your first principle, to know whether you
16	got an accurate estimate of true rate of inflation,
17	you're going to need the formulae; is that correct?
18	A. So my first principle.
19	Q. The first principle is that you should adjustment the ^^
20	charge rates in line with an accurate estimate of the
21	true rate of inflation; yes?
22	A. Yes.
23	Right. So just taking COLI 2007, you wouldn't know
24	whether you had an accurate estimate of the true rate of
25	inflation for about four years; is that correct?

1	A. Until about four years later?
2	Q. Yes.
3	A. Officially, you wouldn't know, but you could know it
4	unofficially by simply asking the statistical agency.
5	Q. I see. The other point about your first principle is
6	that we know what you think about COLI 1999, but you
7	would agree, wouldn't you, that as the parties
8	specified, COLI 1999 in the supplemental agreement, your
9	first principle is not compatible with the WPA, is it?
10	A. But when they were actually using COLI 1999, nobody knew
11	that there was any problem with that index, nobody. And
12	they didn't have anything to compare it to, to say, hold
13	on a second, what's going on here? So, yes, it was
14	compatible compliant. It was the only index that was
15	available. They couldn't have done anything else.
16	Q. I agree they couldn't have done anything else, but your
17	first principle just isn't consistent with the WPA, is
18	it?
19	A. Why not? Because the parties agreed to adjust the local
20	portion profit charge rate in accordance with n estimate
21	of inflation which you consider is not an accurate
22	estimate?
23	A. But I department know ^^.
24	Q. Let's move on to the second principle. No up decision
25	tells you what true inflation is; is that correct?

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A. What true inflation -- the population inflation, no. 2 It's an estimate, an index. Q. And each index is just an estimate of true inflation; is 3 that correct? 4 A. Each index, yes. 5 Q. Generally, indices become more accurate over time; is 6 that correct? 7 A. Successive you mean or individually. 8 Q. Yes, discusscy indices will become more accurate over 9 time. They will become more accurate because of the 10 weights, because of the weights, because as time passes, 11 the weights become old. So that is by default. 12 Q. But also we know that NSAs often make methodological 13 changes to indices as they move forward in time; is that 14 correct. There are methodological changes which are --15 which can correct for fundamental inaccuracies like the 16 methodological change that happened between COLI 1999 17 and COLI 2007 and there was the fundamental inaccuracy 18 that came from the formula for the elementary aggregates 19 and then there was another inaccuracy that came from the 20 use of a very outdated classification methodology, 21 because prior to COICOP, which was issued in 1999, the 22 classifications followed what was called S and A ^ which 23 is a system and national accounts and the last S and A 24 published I believe was in 1968. So this was the two 25

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reasons why that index was fundamentally inaccurate and 2 the following ones were not. Q. In your first report, you said that the going forward 3 approach was only valid with the only change between 4 indices was re basing and there were no methodological 5 changes? 6 A. Fund meant call methodological changes. 7 Q. Look at paragraph 2.14 of your first report, D1-22. 8 A. Yes. 9 Q. You say that you refer to the going forward approach and 10 you say that's only to be used where the new index has 11 been re based and we know from your definition of re 12 based that it doesn't include any methodological 13 changes, does it? 14 A. Any fundamental method logical changes, I mean, it has 15 to be a substantive methodological change in order for 16 something, for an agency not to link to indices. It has 17 to be fundamental. So every five years. 18 Q. Re basing, you've defined re basing as simply being only 19 a change to the baskets of goods and services. Is that 20 agreed? 21 A. Yes, yes, of course. 22 So you accept that COLI 2007 to COLI 2013 went beyond re 23 basing, didn't it? 24 A. Well beyond the change of weight, yes. It involved also 25

- 1	a change in the calculation methodology of the higher

- 2 aggregates.
- Q. So it went beyond a re basing as you're defined it?
- 4 A. Yes, it was also had a method lodge dal change, yes, but
- that methodological change, as I said, was not
- 6 substantive, it was compliant with international
- 7 guidelines standards, which GaStat is committed to.
- 8 That's why they linked it. They themselves linked it.
- 9 Q. I want to move on to your third principle.
- 10 A. Yes.
- 11 Q. Let's go back to your second principle.
- 12 I would suggest to you that if you were going to
- apply your second principle properly, you would have
- also said that the going forward approach shouldn't
- apply between COLI 2007 and COLI 2013?
- 16 A. My second approach.
- 17 Q. Second principle, paragraph --
- A. Sorry, my second principle.
- 19 Q. D1-79.
- 20 A. No, because it didn't have -- COLI 2007 did not -- the
- 21 methodological changes did not justify any need for
- 22 applying anything but --
- Q. So your evidence is that in looking at how you do these
- transitions, you've got to get into the formulae, yes?
- A. I have to get into the formulae.

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Q. Somebody is going to have to get into the formulae to 2 understand what's been going on; is that right? A. Somebody has to know what changes have been made and one 3 good way of knowing what changes have been made, if 4 these changes are consistent, is by looking at what the 5 agency actually does, in a way it's like the proof of 6 the pudding is in the eating. If the agency links the 7 indices without any problems, it means that the indices 8 can be linked. 9 So every time that they published a next index, they 10 published it also back wards and when you look at how 11 it's published backwards, you can see that its nothing 12 but the old index re based. So you know that they are 13 linking them. So you know that there is no problem, 14 that the indices are all linked. 15 Q. So that ^^ you're talking here about the 16 GaStat November 2020 approach; is that right? 17 A. No, no, no. I am looking about GaStat in every time 18 that they -- every time they publish a new index, so for 19 example, when they published COLI 2007 in 2013, they 20 also published it looking back. So they publish it 21 for -- it's in SAMA 49, they publish for 2013, 12, 11. 22 They always do that and so from that, you can see 23 whether it's been linked or not. So they do this for 24 2013, they do this with 2007, they do with this 2018. 25

1	And
2	Q. Sorry, the point was if you're going to understand why
3	the indexes are different, as I understand it you are
4	going to have to look at the formulae which are
5	published for each index eventually; is that correct?
6	A. No, you first look at whether the indices are linked or
7	not. If the if the indices are linked, then they are
8	compatible, right, because the agency has linked them.
9	If the indices are not linked, then you ask the agency
10	why haven't you linked them? Can yougy me an
11	explanation why these indices are not linked F they
12	don't want to give you an explanation, you can ask them,
13	okay, why don't you give me your best your view of
14	the most accurate measure of inflation? So if they give
15	you the index that's linked, then you realise, okay,
16	they have linked it. But if they don't, as they didn't,
17	they didn't give me a measure where there was a linking
18	between certain indices, then you know that there is
19	a fundamental problem, because there are cases in which
20	the agency may not want to state that there is something
21	wrong with an index.
22	Q. We'll come to GaStat's 2020 view in due course.
23	A. That's not in 2020. You can ask them any time. I asked
24	them in 2020 because that is when I was instructed.
25	Q. I think that's an appropriate time. It's 3.30. Unless

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the tribunal thinks we ought to press on. I understand 2 we're finishing at 5.30, so if we can a 20-minute break 3 now. PRESIDENT: That's quite all right, yes. 4 We'll break for 20 minutes and as before, if you 5 could not talk to anyone about your evidence. Thank 6 you. 7 (3.31 pm) 8 (A short break) 9 (3.57 pm) 10 PRESIDENT: We'll restart, then. Interest mess, as before, 11 you're still under your affirmation. Thank you. 12 MR ROBB: Can we pick up where we left off in terms of 13 looking at your principles and we've been through the 14 first two principles, now looking at the third 15 principle? 16 A. Yes. 17 Q. So just want to clarify obviously that if -- I think you 18 say here that this doesn't make any sense, does it, 19 because you've not -- if there's an overlap between the 20 two indices, if you look at your first principle, the 21 indexation approach should always use the most accurate 22 ^reading...) as soon as it is made available. That 23 index should be linked to the previous index in the last 24 month for which that previous index was available." 25

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1 ^doc. 2 Is if there's an overlap between the publication of the two indices, then that approach won't work, because 3 you've got a make a choice between the last point in 4 time at which the old index is available or the first 5 point in time at which the new index available? 6 A. Yes, actually, can I explain? The second part of this 7 point (3), that index should be linked, it's new in this 8 report, it was not in my 2022 report and in my 2020. 9 Is it possible to pull up my 2022 report? Because 10 I appreciate what you are asking --11 Q. As I understand it, you've clarified it later, by saying 12 at he stage, you didn't think there would ever be an 13 overlap? 14 A. Yes, yes. 15 Q. But if there is an overlap, that approach obviously 16 can't work. You have to make a choice --17 A. Yes, yes, because I assumed, so maybe there is no need. 18 I assume that the next index that's going to come out is 19 going to come out in the same way as 2013 and 2018 have 20 come out. So there is going to be -- when the new index 21 comes out, the other one immediately stops. Sorry, 22 Ms Harfouche actually pointed out to me, but what 23 happens if they come out concurrently? And that is what 24 I clarified in the second report. 25

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1	Q. Thank you. Then I just want to look at your decision to
2	link COLI 2007 and COLI 1999 in 2007 and not in any
3	other year. Do you accept that choosing to link those
4	two indices in 2007 provides the best financial outcome
5	for SWPC?
6	A. The best in what sense?
7	Q. The lowest amount they will end they would have to
8	pay SEPCO. Do you agree that linking in 2007 provides
9	the best outcome for SWPC?
10	A. The fairest. As far as I'm concerned, yeah, it's the
11	fairest.
12	No, I
13	A. You can link them in 2005.
14	Q. Yes, and if you link them in 2005, then SEPCO's losses
15	would be greater than linking in 2007, wouldn't they?
16	A. If I link them in 2005 SEPCO's losses would be greater?
17	Q. Yes?
18	A. I don't knowing because I've not done the calculation.
19	I've linked them in 2007 for a number of reasons.
20	Q. Yes, but for example, if we look at your figure 4-4 at
21	D1, page 58. We can see that in 2007, COLI 1999 gives
22	you a lower estimate than COLI 2007 and in 2006, they're
23	about the same. Do you see?

 $\ensuremath{\mathsf{Q}}.$ Do you agree that if you linked them in 2005, then you

A. Yes. But --

24

25

1	would have ended up with a greater loss for SEPCO than
2	by linking in 2007?
3	A. If you link them in 2005, you do the same that is not
4	possible, because actually, if you link them in 2005, it
5	is the same approach as it's used in the invoices. It's
6	mathematically equivalent.
7	Essentially, what it does yes, it's the identical
8	approach as in the invoices, identical. And then if
9	that is the case, there would be there wouldn't be
10	any losses in my calculation while there is ^^. The
11	reason why I think it can be seen from there is
12	a photograph that explains it quite easily ^ which is in
13	my presentation, it's slide 14. So if you link them in
14	2007 2005, you adjustment on the green line.
15	Q. Yes. What we see from there is that COLI 1999 is lower
16	than COLI 2007?
17	A. You have
18	Q. The blue line is lower than the green line for a period
19	prior to 2007, isn't it?
20	A. Yes, but then the green line is the line that is going
21	to be forever. So what that means is the light pink
22	area, that's wiped at completely.
23	Q. No, if you had linked them in 2005, you would not have
24	wiped out all the losses, you would have increased
25	SEPCO's losses, wouldn't you? (Pause).

1	Can I move on? I'll come back to that.
2	Can I move on to your fourth principle, which is
3	over the page at D1-80.
4	A. Okay.
5	Q. It's your fourth principle ^^ which just happens to be
6	over the page. Here you're talking about a tradeoff
7	between certainty and accuracy. Do you agree?
8	A. Is D?
9	Q. D1-80, subparagraph (4) at the very top of the page.
10	A. Yes.
11	This is your fourth principle?
12	A. Yes.
13	Q. Presumably by accuracy you mean how close you are to
14	how close an index is to estimating true inflation?
15	A. Yes, is the accuracy of the index, yes, yes.
16	Q. You can only quantity few the accuracy of the index by
17	reference to the next index; is that right?
18	A. Yes.
19	Q. So when you're talking about a trade off between
20	accuracy and certainty, that means you're talking about
21	accuracy in a relative sense, not an absolute sense,
22	aren't you?
23	A. Yes, because as I said, apart from the fundamentally
24	wrong issue, successive indices are always more accurate
25	by default. So essentially the question that then you

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have is that given that these indices are being 2 published with a few years delay, what do you do? Do you go back every time and then you are in a situation 3 where you are always on the green line, as it were, so 4 you get the most accurate estimate or do you actually 5 give also weight to certainty? Unless there is a reason 6 to believe that there is a fund meant bias and therefore 7 there is a fundamental reason to rectify the situation, 8 you make a judgment call as what is the best thing to do 9 in that respect. So that is what I meant. That's why 10 to me that principle is important. 11 Q. Thank you. Can I just now move on to -- step back 12 a bit, looking at the two ways in which contracts can 13 deal with inflation in a long-term project. 14 A. Okay. 15 Q. There are two basically ways that you can deal with it. 16 First, you can use published inflation indices; is that 17 correct? 18 A. Yes. 19 Q. Here even takes the risk that the actual inflation 20 experienced by the contracting party will be greater or 21 less than the inflation estimated in the published 22 index? 23 A. Can you point me to where this is written? 24 Q. No, it's not in in your report. I'm asking you some 25

1	questions. I'm asking you some questions about your
2	experience about how you can use
3	A. Okay, okay, yes.
4	Q. First of all, the first opportunity published inflation
5	indices ^^?
6	A. Yes.
7	Q. There even takes the risk that the actual inflation ^^
8	contractual party will be greater or less than the
9	inflation estimated in the published index; is that
10	right?
11	Everybody?
12	Q. People take the risk, contracting parties take the risk
13	that the actual inflation experienced by the contracting
14	party will be greater or less than the inflation
15	estimated in the published index?
16	A. Yes.
17	Q. This approach of using published inflation indices
18	favours certainty simplicity and clarity?
19	A. Okay.
20	Q. Do you agree?
21	A. With respect to what?
22	Q. Do you agree that using published inflation indices
23	favours certainty, simplicity and clarity?
24	A. Yes, but with respect to what?
25	Q. Well I mean, you say that there are two approaches,

1	right?
2	Q. We'll move on to the second approach. Second approach
3	is you can look at the actual costs to the parties that
4	being compensated and how those costs change over time
5	due to inflation. Some sort of cost-plus mechanism?
6	A. Okay.
7	Q. About yes? That's another type of method dealing with
8	inflation?
9	A. Yes, yes.
10	Q. You agree that that is a complicated time consuming and
11	expensive process?
12	A. Well, I guess that it's prone to a lot of quarrels. So
13	there will be spend receive. Because it requires a lot
14	of scrutiny, right? (expensive ^.
15	Q. A lot of quarrels sorry. Pause I couldn't see my
16	transcript. I couldn't check ^^?
17	A. It's my accent.
18	Q. No, no, a lot of disputes?
19	A. Yes.
20	Q. By we know that some contracts do adopt this method of
21	the sort of cost plus method, presumably because the
22	parties value perceived precision over certainty, is
23	that fair enough?
24	A. I think if they wanted real certificate, because there
25	is uncertainty when it comes to inflation, if they

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wanted complete ' certainty, they would say, okay, let's 1 2 have -- let's calculate a charge which is an underlying cost plus a margin, at times zero and then just add 3 X per cent every year ^^. And that would be the 4 certificate, 100 per cent certificate, right? And then 5 there would be on the other side, you would say, okay, 6 let's not to that. Let's check the cost every single 7 year or whatever interval you have to do, and then add 8 a margin on top and that will be the complete accuracy 9 provided that they can agree that that is -- right? 10 Then there would be something in the middle, which 11 balances the two, which would be let's index to the 12 inflation. Yes, yes, yes. 13 Q. I suggest to you the parties here have chosen a process 14 that favours certificate, simplicity and clarity; is 15 that right? 16 A. ^? 17 A. Certainty, simplicity and clarity over the one that is 18 100 per cent accuracy you mean? 19 Q. You agreed with me before that using publish inflation 20 indices favours certainty, simplicity and clarity, do 21 you agree? 22 A. Yes, I do, I do agree. 23 Q. That's what the parties have chosen -- and that's what 24 the parties have chosen here ^^? 25

1	A. In this particular dispute?
2	Q. Yes.
3	A. That's what the parties have chosen.
4	Q. Yes. And your approach requires a case by case analysis
5	of each index, doesn't it?
6	A. No.
7	Q. You have to look at why each index has been brought in,
8	it's methodologies, you've got to make an assessment of
9	whether there's any fundamental flaws in your view
10	before you can decide the correct way to link these
11	indices; is that right?
12	A. No, you just look at whether the index has been linked
13	or not. Thattives you the answer. Then you use it and
14	move forward.
15	Q. Before you were saying you would needs to look at things
16	like the formulae, et cetera?
17	A. Yeah, in order to assess the type of bias that there is.
18	Q. Yes.
19	A. You know, if I want to assess the type of bias that
20	there is, I need to know how the intention has been
21	calculated, but the very fact that the index is linked
22	means that the index here is acceptable.
23	Q. But the fact that you've said that things like
24	fundamental bias, et cetera, are relevant
25	considerations, means that your view is that you have

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got to examine such things from a statistical 2 perspective before you can make a decision about an index; is that right? 3 A. But that is done by the statistical agency, right? 4 I mean, that's what they die. They publish the indices, 5 every time they publish one index or at least GaStat, 6 every time it publishes the new index, it links or it 7 doesn't link it to the previous one and the only time 8 where they haven't tunnel that is in ^ 2012, 13. 9 Q. Can I ask you to look at item 15 of the joint statement, 10 which is D130, page 9. 11 A. You said item 15. 12 Q. Item 15, D150, page 9. 13 A. Okay, right. (D130 ^. 14 Q. So you say in situations where the new indecision has 15 changed in a way this wonder yowed a simple rebasing you 16 appropriate linking method must be evaluated on 17 a case-by-case basis." ^doc. 18 Do you see that towards the bottom of your first 19 paragraph? 20 A. Yes. 21 Q. So unless you're going to change your evidence, as 22 I understand it, your view is that you've got to 23 consider whether each index goes beyond a simple 24 rebasing and then where it does go beyond a simple 25

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1 rebasing, you have got to evaluate on a case-by-case 2 basis? A. Yes, that's correct, that's correct. 3 Q. Your evaluation on a case-by-case basis means you've got 4 to have a statistical even put to examine the formulae, 5 whether there's any statistical bias or flaws all that 6 kind of thing before you can approach your case-by-case 7 basis? 8 A. No. I mean, if the statistical agency goes and links 9 the index, it means that the index is Lynncable and it 10 has been linked. It's only if he doesn't link it, then 11 you open the proverbialial can of worms and you have to 12 go and yourself check why there is -- whether there is 13 something fundamentally wrong. But if they link them, 14 it is on a case-by-case basis. You just look at whether 15 they're linked or not. If they're linked, it means that 16 the statistical agencies considered them Lynncable and 17 therefore, that they there are no problems with them, in 18 terms of bias. 19 Q. But then this is the explanation you have just given is 20 not the same explanation you gave at item 15, is it? 21 Tap than of the joint statement ^^? 22 A. Why? 23 Q. Because once it goes beyond a simple rebasing here, you 24 say you've got to evaluate on a case-by-case basis, you 25

1	don't refer anything to what the national statistics
2	office does.
3	A. Is I mean, you assume that they are correct, if they are
4	linked, no?
5	Q. I'm going to move on.
6	Can we please now go to page D1-6806 your first
7	report, paragraph 5.11.
8	Do you have it there?
9	A. Yes, I do.
10	Q. Here you give your six reasons for your view about where
11	the going forward approach is not appropriate for
12	COLI 1999 to COLI 2007; is that right?
13	A. Yes.
14	Q. Is it correct that all these reasons only apply if the
15	tribunal accepts SWPC's case about the parties'
16	rationale? Do you agree that?
17	A. The tribunal can accept or not whether this approach is
18	correct or not. But as far as I am concerned, the going
19	forward approach regardless of the rationale, is
20	incorrect, for all these reasons.
21	Q. If we just pause there. If we look at item (3), one of
22	the reasons you've given is because it's not you say
23	the going forward approach isn't consistent with the
24	parties' rationale?
25	A. Yes, yes.

1	Q. If the tribunal doesn't accept SWPC's rationale, that
2	reason must fall away?
3	A. ^ck num) (3), yes, of course, of course.
4	Q. Moving on to the various reasons, so reason 2, you've
5	got two parts to reason 2, first it's an an accurate
6	measure of inflation and secondly it's been effectively
7	disregarded by SAMA and GaStat?
8	A. Yes.
9	Q. Can we look at the argument that's it's been effectively
10	disregarded by SAMA and GaStat.
11	□20240924□0160A. Yes.
12	Q. We can pick that up in your first report at D1-58,
13	paragraph 4.12. It's on the screen for you?
14	A. Yes, I'm there.
15	Q. The reasons you give on 4.12 through to 4.25, I think
16	are as follows. GaStat has removed some data pertaining
17	to COLI 1999 from its website, that's the first one.
18	Then you say GaStat provided you with its November 20 to
19	view of the most accurate estimate of inflation this
20	does not include any data from COLI 1999 and then once
21	COLI 2007 was available, SAMA no longer referred to
22	COLI 1999 inflation or the linked the indices." ^doc.
23	Those are the reasons you give in your report; is
24	that right?
25	A. Yes.

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Q. The first point I want to see if we can agree is that at 2 no time either publicly or privately, has either GaStat or SAMA said that they have decided to disregard 3 COLI 1999? 4 A. Are you asking me? 5 Q. Yes. 6 A. They have told me when we had a meeting, they said that 7 the indices could not be linked and that they gave me 8 their measure of their view of the most accurate 9 inflation index that did not contain COLI 1999 and they 10 have actually taken out COLI 1999 from the website for 11 all the values prior to January 2001 and 12 subsequent December 2011. That is in figure 4-5. 13 Q. Yes, sorry, I'm trying to distinguish between inferences 14 that you've made from things that GaStat has done and 15 whether GaStat has ever actually said to you, yes, we 16 have decided to disregard cooling 9. I'm going to put 17 it to you that at no time has GaStat said to you better 18 disregarding COLI 1999? 19 A. I didn't ask them that question. I asked them in they 20 had linked it or not and they said that they couldn't be 21 linked publicly they have never made that statement ^, 22 but I would not -- I would never expect them to do so. 23 Q. You didn't ask them the question and they've never -- so 24 you're right, you're agreeing with me that they're never 25

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1	said we disregard COLI 1999?
2	A. Not in public, never, no.
3	Q. Not only in public, but not in private either, have
4	they?
5	A. No, I haven't asked them, I asked them in they linked
6	them, which is to me the same.
7	Q. It's true, isn't it, that at the meeting to discuss
8	its November 2020 view, GaStat expressly said that they
9	had linked COLI 1999 and COLI 2007?
10	A. That is in the minutes, but I have not found it
11	anywhere. It's nowhere to be seen.
12	Q. So you agree that why don't we just bring it up, it's
13	D11, page 4.
14	A. D?
15	Q. It will have to be on the screen.
16	A. Sorry.
17	Q. If you scroll down. It should be 3. As for the data
18	linking between KWR-9D the CPI and 2007 CPI the linking
19	occurred at the general price index only due requested
20	then there's an explanation?
21	A. Yes.
22	Q. So the point is that ^doc) insofar as GaStat has said

linked it, haven't they?

23

24

25

anything expressly about whether they've linked

COLI 1999 and COLI 2007, they have said that they have

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A. These are from the minutes of the meeting, right? When 2 I received these minutes, I prepared list of questions in which I asked the follow-up question. But the 3 meetings were not forwarded to GaStat, so GaStat were 4 never asked that follow-up question. So what I have is 5 the fact that they have not -- they have never provided 6 publicly or privately, any evidence. That is for me, 7 any evidence that this index had ever been linked and 8 that is for me enough. Yes, it is enough. They may 9 have their own -- the very good reasons for not wanting 10 to say, to make certain statements, because they may 11 have an impact on --12 Q. Pausing there, so unless you're going to say that in 13 this minute, GaStat has either mistaken or not telling 14 the truth, then it is clear that GaStat did not 15 effectively disregard 1999, isn't it? 16 A. Well, they did, because effectively they did disregard 17 it, actually, because they never hin asked it anywhere, 18 anywhere. 19 Q. In this minute, GaStat say they have done the linking, 20 don't they? 21 A. They may have done the linking and realise that it was 22 wrong and therefore put it aside and never published it. 23 Was nerve publish n ^^ not given to me ithere. 24 Q. Basically, you're picking and choosing between various 25

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things that GaStat has done and GaStat has said. GaStat 2 is saying here ---- (overspeaking) -- ^^ 3 A. No --4 Q. ^^ I'm not picking and chootding. I am, from the 5 evidence that's before my eyes, and from the fact that 6 there obviously is a problem with the index, it is 7 obvious, obvious to me, that that index was never linked 8 and that there were some very, very important reasons 9 why that index was not linked. 10 When you say that GaStat effectively disregarded 11 COLI 1999, when are you saying this happened? 12 A. Sorry if. 13 Q. When do you say that GaStat effectively disregarded 14 COLI 1999? 15 A. When they publish COLI 2007 without linking it to the 16 prior index. It's already, that is already a sign that 17 the index was not longer in use. While for all 18 successive indices when they published them, they had 19 linked them to a number of years prior. 20 Q. But you wouldn't know about what GaStat was going to do 21 with later indices until those later indices were 22 published. You would ^^ COLI 2007 and COLI 2013 until 23 2018, would you? 24 A. I wouldn't, no. I was doing this in 2020 and 2022 and 25

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2024. In 20 if, you mean that they had ^ not linked and 2 if you use these indices, like, for example, you're linking the preponderance I, you are American the PPI 3 for the other, for the foreign portion of these charge, 4 right? And you will have seen that the American PPI are 5 all linked to each other without any problems. 6 Q. Can we look at the list of questions that SWPC provided 7 to GaStat and we can pick that up at D101-3. 8 Then if you scroll down to 6. It says this was 9 a question that you prepared, was it ^? 10 Yes. 11 Q. Please could you provide documents describing the 12 specific reasons why the relevant stay sties call agency 13 decided to retire COLI 1999 and replace it with 14 COLI 2007?" 15 ^doc) then we can see you asked whether any 16 particular deficiencies, whether any particular 17 guidelines, if we scroll down, please. Was the 18 calculation of COLI 1999 guidelines and if so how ^^ 19 ^doc) then we get the answer from GaStat in the letter 20 of 5 November 2020, which is at I think it is D92. No. 21 It might be B92. 22 If we go down to page 5. Yes, these are the answers 23 that you got back from GaStat; is that right? 24 A. Yes, yes. 25

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Q. We can see at item 3 they explain the changes to the phases of the CPI? 2 A. Yes. 3 Q. If we go through, they start very early in the process. 4 We can see in 1980. If we can go through to page 6, 5 please. In fact, sorry, if you could go back up to 6 where we were, just explain, pick out a part that 7 they -- bit further up. 8 So they say there constantly updating all as experts 9 of the CPI programme in order to improve and develop the 10 CPI programme and chai the highest (^ck reading...) 11 comprehensiveness in relation to the CPI programme data. 12 The important factor for change is to reflect the 13 changes in household consumption patterns in the KSA 14 GaStat formally central 'reading...) information is 15 committed to introduce updates to CPI in accordance with 16 the latest international recommendations requested 17 that's the general approach they have ^doc) if you go 18 through to page 6. If we can scroll down so we can see 19 the reference to phase four. This is COLI 1999, isn't 20 it, in phase four, if you just keep scrolling down, 21 we'll get phase four towards the following page, no, the 22 other way, so phase four at the top. That's it. 23 Do you recognise this, you must remember this, 24 presumably? Do you remember this? 25

1	A. Yes.
2	Q. So then this phase four is COLI 1999, isn't it? If we
3	scroll a bit further down, there we go, the reference to
4	1999. Then if we go to phase five, that's then
5	describing the COLI 2007. If we just pause there. Is
6	that correct?
7	A. Yes, it is.
8	Q. So there's nothing there saying that in respect of
9	COLI 2007, no statement there that COLI 1999 should be
10	disregarded, is there?
11	No, not at all.
12	Q. When you met privately with GaStat, they didn't say that
13	COLI 1999 should be treated differently from other
14	indices, did it?
15	A. They did say to me that it couldn't be they did say
16	it in the meeting that the index couldn't be linked and
17	that's why I asked the follow-up question.
18	Q. We looked at the meeting minutes before and they said
19	that the index could be linked?
20	A. Yes, I know. They say that they had linked the
21	intention in the minutes, but when we were in the
22	meeting, they said that the indices couldn't be linked
23	and that's why I asked a series of follow-up questions,
24	because they discussed the linking of the meetings, the
25	formulae. I

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Q. So you --2 A. I prepared a series of questions to be asked. They're not --3 Q. You're saying the minutes are inaccurate, are you? 4 A. Sorry. 5 Q. Are you saying that the minutes are inaccurate? 6 A. Yes, absolutely. They weren't inaccurate. They didn't 7 cover everything that was discussed and therefore, we 8 asked follow-up questions, but the follow-up questions 9 were not delivered to GaStat. Because we were very, 10 very close, because essentially what happened was that 11 I was appointed in June, in July we asked for an 12 appointment to discuss these indices with GaStat. We 13 finally managed to get this appointment for November, 14 but by 17 December, the relationship was due ^ and 15 therefore, there wasn't anymore time. But I did prepare 16 a lest of questions for them about the things that were 17 not in the minutes, but have been discussed in the 18 meeting. 19 Q. So your evidence is that in that meeting, you were 20 told --21 A. Yes. 22 Q. -- that GaStat what? Can you remember the precise 23 words? I think it's really important that you give us 24 the precise words. 25

1	A. Sorry?
2	Q. What were the precise words that GaStat used?
3	A. They said that indices could not be linked. It's in the I think the precise words are in those minutes.
4	I can't remember them.
5	Q. We just looked at the minutes?
6	A. Sorry, are in the follow-up questions that I prepared,
7	but this was four years ago. So the precise words
8	I cannot remember. But I do remember very distinctly.
9	Because otherwise, quite apart from the fact that they
10	actually hadn't linked the indices, so I have no reason
11	not to believe them.
12	Q. You didn't say anywhere in your reports that the minutes
13	weren't accurate, does you?
14	A. Oh, no, no, I wouldn't.
15	Q. In the reports that you've served for this arbitration,
16	you haven't said that the minutes of those meetings were
17	inaccurate, have you?
18	A. No. I didn't base my opinion on just on these meetings,
19	but I also on what I heard and what I saw.
20	Q. But hold on. If you know when you're putting your
21	reports you're supposed to put in everything that's
22	relevant, yes?
23	A. Of course, yes.
24	Q. And you don't think that mentioning that you were told
25	something different in a meeting than what's in the

1	minutes that you rely on is spg that's worst mentioning
2	in your report?
3	A. It is in those questions, in those follow-up questions.
4	If you want, we can
5	Q. As far as I know, we don't have those follow-up
6	questions. I think we'll have to move on, but it's not
7	in your report, is it?
8	A. No, it's not in my report.
9	Q. We'll come back to that?
10	Because essentially, what happened was that they
11	provided me with the I decision and so from that index,
12	it was very obvious to me that they had not linked KWR-9
13	to anything they linked all the other indices and I had
14	all the information that I needed to have.
15	Q. In the meeting
16	A. Without
17	Q. But in the meeting they actually said they had linked
18	COLI 1999 to COLI 2007, department they?
19	A. They said what you read.
20	Q. Yes.
21	A. Yes, but they didn't do it.
22	Q. You don't know who they've done, do you?
23	A. Well, they may have done it or tried to do it, but they
24	never published it. It's not in the public domain
25	anywhere.

1	Q. Can we just move on now to your reasoning based on SAMA.
2	I think in the joint statement at item 28, which is
3	D130, page 18. At the bottom of page 18, do you have
4	that? You say:
5	"Regarding SAMA I agree with Ms Harfouche's point
6	that SAMA appears to treat the switch to COLI 2007 in
7	a similar manner ^^ 2013 in COLI 2018." ^doc.
8	So you're agreeing with Ms Harfouche that SAMA
9	treats COLI 1999 in the same way as the later indices,
10	do you agree?
11	A. Yes, they don't prepare the indices, they just publish
12	them and I agree with Ms Harfouche, yes.
13	Q. That was just based on a straightforward examination of
14	the SAMA reports, wasn't it?
15	A. Yes, yes.
16	Q. Ms Harfouche referred to SAMA's 54th annual report as
17	show that is in 2018, SAMA referred only to control 13
18	and not COLI 2007. Do you agree with that?
19	A. Yes, yes, I agree with that.
20	Q. And you had the 54th annual report from SAMA as your
21	exhibit mm19, which is at D23. Then we go to page 9 and
22	page 10. Scroll down a bit, I think. There we can see
23	the reference to in table 7.1, we see the reference to
24	general consumer price index for all cities 2013 equals
25	is hundred. That's COLI 2013, isn't it?

1	A. Yes.
2	Q. You had all the information to hand, but you still
3	concluded that SAMA's treatment of COLI 1999 was
4	materially different from it treatment of later indices?
5	A. Yes, I made a mistake. There is actually a document
6	that is the minutes of a meeting in 2015 with a meeting
7	that SAMA had with WEC and other companies where the
8	representative for SAMA said that COLI 1999 had been
9	I don't remember the exact words, but essentially had
10	been dismissed and should not be considered. But my
11	understanding is that the minutes of these minutes are
12	not in evidence.
13	Q. Yes, exactly. Slightly surprised that Dr Meschi felt it
14	appropriate to refer to a document that she clearly
15	knows isn't in evidence and presumably shes no that we
16	don't accept the provenance or authenticity of that
17	document. So that's the brief document which SWPC
18	declined to apply to have put in. So I would say I was
19	surprised by Dr Meschi' ^ck) I'm not actually, but it's
20	not appropriate for her to be making reference to
21	documents that she knows aren't in the bundle.
22	I request the tribunal ignore that statement.
23	So you accepted in the joint statement that
24	Ms Harfouche was right and I'm going to put it to you
25	that any reasonable, can of those SAMA reports which you

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had would have revealed that Ms Harfouche was correct, wouldn't it? 2 A. Yes, I agree with her. She she's right. 3 Q. One could suggest to you what's ^^ preconceived idea 4 about COLI 1999 and you simply try to find evidence to 5 support your ideas about COLI 1999 and you've just gone 6 on and ignored any evidence that's inconsistent with 7 that idea; is that correct? 8 A. No. I accepted that this is wrong, that I was wrong 9 with this, but to me, the fact that -- again, the fact 10 that the statistical agency did not ever link an index 11 to another is proof that that statistical agency does 12 not consider that index linkable. They have never 13 linked it, never. 14 Q. Can I move on, please, to your arguments around the 15 removal of data relating to COLI 1999. This is at page 16 D1-59 of your first report, which is at paragraphs 4.14 17 to 4.15. Then we'll deal with the other parts of your 18 report, but you accept, don't you, that COLI 1999 data 19 is available for 2001 to 2010 on the GaStat website? 20 A. It is, yes, it is. 2 December 2011, not 2010. 21 Q. If you look on the GaStat website for those years, 22 you're only going to get cot 9 data, aren't you? 23 A. For what? For those dates? 24 Q. For those years? 25

goes in 2014, that goes back for many years and then there is the metadata which is accessible and it goes back to 2015 for the public use and it has a link for people who have — how do you call it — the password for historical data and it has an email address that people can write to if they want the see are you that is goes back. Q. Can we please take up Ms Harfouche's second report, I'm sure you've considered this, haven't you? A. Yes, that's 2014 and that's the series that — that's the link to where the longer series is, in Excel. Q. Yes, so if you go into the 2014 year, then you can find historical data; is that right? A. Yes, because these are the releases, right. Q. Sorry, if we go to D112, page 14, this shows you what happens if you go into particular years for 2002 to 2010. You only get COLI 1999 data, don't you? A. This is 2024. Q. But do you agree that if you go on to the GaStat website and click on their years for 2002 to 2010, you only get COLI 1999 data? A. Yes, you get the PDF, there are no Excel feels, because those are the releases, those are the releases. In 2002	1	A. No, you don't, because there is historical series that
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10 D112, page 16. 11 I'm sure you've considered this, haven't you? 12 A. Yes, that's 2014 and that's the series that that's 13 the link to where the longer series is, in Excel. 14 Q. Yes, so if you go into the 2014 year, then you can find 15 historical data; is that right? 16 A. Yes, because these are the releases, right. 17 Q. Sorry, if we go to D112, page 14, this shows you what 18 happens if you go into particular years for 2002 to 2010. You only get COLI 1999 data, don't you? 20 A. This is 2024. 21 Q. But do you agree that if you go on to the GaStat website 22 and click on their years for 2002 to 2010, you only get 23 COLI 1999 data? 24 A. Yes, you get the PDF, there are no Excel feels, because	8	goes back.
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A. Yes, you get the PDF, there are no Excel feels, because	22	and click on their years for 2002 to 2010, you only get
	23	COLI 1999 data?
those are the releases, those are the releases. In 2002	24	A. Yes, you get the PDF, there are no Excel feels, because
	25	those are the releases, those are the releases. In 2002

1	to 2010, what they released was COLI 1999, but funnily
2	enough, for those years you don't have the Excel file,
3	you only have the PDF. I don't know if I think there
4	must be a picture in Ms Harfouche's report of those
5	years.
6	Q. The point is if people want to find out what inflation
7	was for those years today, what they will will finding
8	is COLI 1999 data, isn't that correct?
9	A. No, they will go to the they should go to the met
10	data, because nobody will want to find the data into
11	a PDF file or into the metadata, that is the API and
12	they can get the whole series.
13	Q. The only way you can find COLI 2007 data for those years
14	if you go into the 2014-file; is that correct?
15	A. On the releases, yes, because that's when it was
16	released.
17	Q. What we can see is that GaStat is still publishing
18	COLI 1999 data, isn't it?
19	A. When?
20	Q. Well, this is as far as we know, this is the
21	A. Yes, these are the releases, these are the official
22	releases of the data.
23	Q. There's nothing on the GaStat website to say that this
24	data shouldn't be used, is there?
25	A. No.

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Q. GaStat's actions show that they continue to publish and make available to the public COLI 1999 data for the 2 years 2002 to 2010? 3 A. They don't publish it. The document that is on the 4 website was published in 2002. Now it starts from 2002. 5 Every year they take a year out. So those are the 6 releases. Those are the official publications. In 7 those years, those were the publications. 8 Q. In addition, you can still get the COLI 1999 data for 9 years prior to 2001 on the SAMA website in its 48th nual 10 report, can't you? 11 A. SAMA doesn't -- yeah, but those are -- that is the ^^ 12 annual report, what are they going to do? Take the 13 annual reports out of the website? 14 Q. If we can go to paragraphs -- 3.24 and 3.25 of D112, 15 page 15. I'm sure you considered these. This is where 16 Ms Harfouche has explained by reference to the metadata 17 as to how we got to the current position in terms of the 18 publication of the continued publication of the 19 COLI 1999 data ^. Do you see that? 20 Do you agree that the met data shows that in 21 COLI 1999 was deleted in its entirety from the C ^^ 22 website between system time between 10 October 20 ^^ 23 10 February 2014. Do you agree with that? 24 A. Where do you read it? Sorry, which paragraph is it? 25

1	Q. Look at 3.24 and 3.25?
2	A. Okay, let me read it.
3	Q. I'm sure you must have read this before. (Pause).
4	A. Yes, on 10 February 2014, CDSI the page had been
5	taken off their site. That's what is written here.
6	Well, actually, no, between 10 October 2013 to
7	10 February 2014, the whole historical series of
8	COLI 1999 was taken off that website, because it's no
9	longer in the web archives.
10	Q. And then at some time afterwards, COLI 1999 data for
11	2001 to 2011 was restored on GaStat's website; is that
12	correct?
13	A. The release was yeah, the bulletin are there, the
14	bulletins, yes. Those are official publications.
15	Q. Then I'm going to suggest to you that the decision by
16	GaStat to restore 11 years of COLI 1999 data and show it
17	as inflation for these years on its current website is
18	not consistent with it having effectively disregarded
19	COLI 1999 do you agree?
20	A. No, I don't agree. Because they have disregarded it
21	because they haven't linked it. So the inflations that
22	measured in Saudi Arabia, if you want a historical
23	series of inflation in Saudi Arabia, you're not going to
24	get into that historical series any data point that
25	belongs to COLI 1999.

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Q. I understand your point about what they've published in 2 terms of linking, but you had chosen in your report to make one of the reasons that you said that GaStat had 3 effectively disregarded was about what data was 4 available on the website. Do you agree? 5 A. They have taken out data and also they have not linked 6 in the up desk, it's both. It's not just one thing. 7 Q. I agree, but in relation -- just looking at the data, in 8 relation to what in fact happened about the data in 9 relation to COLI 1999 on the GaStat website, that is not 10 consistent, is it, with GaStat having effectively 11 disregarded COLI 1999? 12 A. Okay, let's put it like this. You are a statistical 13 agency, you have an obligation to publish every month 14 a bulletin. That bulletin is published if PDF. You put 15 that bulletin up on your website. You are changing the 16 index. You do a switch from an index 1999, because 17 that's tin desk, to 2007. What happens in the normal 18 circumstances is that you do 2007, you link it to tin 19 desk before, right, and you move on. This is what 20 they're done for 2013, this is what they've done for 21 2018. In 2007, they went and re back cast, COLI 2007 22 all the way to 1980 and put that on the website instead 23 of COLI 1999. To me, that tells me that I have 24 disregarded KWR-9, because otherwise they would have 25

1	linked them and moved on. That is my opinion. It's
2	enough. Essentially proof as far as I'm concerned ^^.
3	Q. Can we move now to GaStat's November 2020 view. This
4	was provided to you on a retrospective basis in 2020?
5	A. In 2020, yes.
6	Q. That wasn't available to the parties in 2014, was it?
7	A. No, what was available to the periods in ^ 2014 were the
8	two reports by SAMA, the annual reports, the 2012 that
9	had COLI 1999 and the 2013 which is 49 that had
10	COLI 2007. And they had a few years overlap from which
11	the inflation rates could be inferred. That is what was
12	available to the parties at that date.
13	Q. But we've agreed, haven't we, that there's nothing in
14	the SAMA reports that tells you that you should be
15	treating COLI 1999 differently from any other later
16	index, haven't we?
17	A. I do agree, yes, I do agree. Ms Harfouche is absolutely
18	correct with that.
19	Q. I'm not sure why you're referring to SAMA reports
20	because near ^^ about COLI 1999, are they?
21	A. I am referring to them for a different reason, actually.
22	I am referring to them because that is how the parties
23	could have or could have seen or maybe they did see,
24	I don't know, that there was a big difference between
25	these two indices.

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Q. But at that stage, they wouldn't have known whether that 2 difference between those two indices was significant, because you would have to see in order to understand 3 that, you would have to know what the difference between 4 COLI 2007 and COLI 2013 was and even what the difference 5 between COLI 2013 and COLI 2018 was to know whether it 6 was a significant difference? 7 A. They could have seen whether it was difference to them 8 and they could have said taken pause an try to figure 9 out what to do about it. 10 Q. Accepting that they could see in 201-4245 there was 11 a difference between COLI 1999 and COLI 2007, and that's 12 how you rely on the -- that's why you rely on the SAMA 13 reports. As I say, whether that difference was 14 a significant one wouldn't be known because you didn't 15 have anything to compare it to, because you can't 16 compare it to call # to COLI 2013 or COLI 2013 to COLI 17 2018? 18 A. No, but what you could have done and can I have table 19 4-2 of D1-64? 20 These are the inflation rates in the two SAMA annual 21 reports. This is the 48 which was published in 2012 and 22 this is 49, which was published in 2013. 23 So in 2012, and the next two columns are COLI 1999 24 and COLI 2007 and so from this, you can see that the 48 25

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report has a COLI 1999 and the 49 has COLI 2007 and as 2 Ms What are rightly says, this is the way they treat the indices always. 3 Now, somebody could have said, okay, hold on 4 a second here. So in 2011, inflation was 50 per cent 5 that we put into this contract, but actually now they 6 are saying that it's 3.7. In 2010, it was 5.3 and now 7 they are saying it's 3-pointle. In 2009 it was 5-point 8 # and now they're saying that 4.1. What is going on? 9 They could have done that. 10 And then they knew that in 2008 it was 9.9 and they 11 could have thought what is happening here? $^{\mbox{\scriptsize Λ}}$ that is 12 what I would have done for sure if I had -- can you 13 imagine if these are rates on your mortgage? 14 Q. But we know, don't we, that whenever a new index is 15 published, it's likely to be more accurate than the 16 previous index; is that correct? 17 A. It's going to be more accurate, but for sure when you 18 see these, you are starting asking questions. Maybe 19 they did ask questions. And that is why we are here. 20 I don't know. For sure, I personally would question it. 21 Q. Nothing that GaStat didn't say when it published 22 COLI 2007 that COLI 1999 was inaccurate, did it? 23 A. Statistical agency has a responsibility to make sure 24 that they're not going to wreck the economy. So what 25

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I'm trying to say is that on the basis of this inflation 1 2 rates, interest rates are set, exchange rates then are determined. To just say, oh, sorry, you know, we made 3 a mistake for 10 years and we've publishing something 4 that is wrong, would have been catastrophic. I mean, 5 there was an article yesterday, yesterday, on the 6 Financial Times, which is about Germany of all 7 countries, my husband's country, and Germany, the 8 statistical office of Germany, for the first time, has 9 failed to publish on time some data on the revenues of 10 companies and attributing this to an I. The glitch and 11 whole hell broke loose because, you know, people don't 12 know whether to believe it or not. So of course it is 13 a serious thing and inflation is fundamental to the 14 point where if you are a statistical agency and you are 15 excused of having been either tampered or having been 16 cavalier with the publication of inflation figures, your 17 country can be censored ^ by the IMF. This happened for June 2013 ^^. 18 So a statistical agency, in my opinion, will be 19 very, very careful before saying, you know what, we 20 publish something that was completely wrong. In fact, 21 when you think about what happened in the UK, for 22 example, they published the CPI in the 1990s, the 23 consumer price index, and it was substituted, as I said, 24 for the RPI and the inflation target in 2003, and it 25

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took until 2013 and the whole series of studies and 2 consultations for that RPI to be removed from being a national stay test ticks, after it had already lost 3 its job to set the inflation and therefore, as a target 4 for interest rates and everything else, for what was 5 going on in the economy. It took decades in the UK. 6 Q. We know that from the experience in the UK, this it's 7 perfectly possible for a national statistics 8 organisation to say that the previous index people have 9 been using which in that case is RPI, is an inaccurate 10 measure and should be replaced by CPI and that was all 11 very open and the transition was made as you say. So 12 actually there's no -- there's good evidences from the 13 UK that it's perfectly possible to move in a considered 14 way from one index to another index and there is no 15 reason why that couldn't have been done in the KSA, but 16 in fact the KSA never did that, did it? 17 A. The UK published -- if I'm not wrong, the CPI was 18 published from the first time in 1996. Okay? In 2013, 19 which is 17 years later, the UK said this index is not 20 good enough, after 17 years of using the CPI, the reason 21 I is not good enough, so it's no longer a national 22 statistic. 23 We will continue to publish it because there are 24 guilds that spire in 2030, but this index cannot be used 25

1	for policy purposes and it has not been used for policy
2	purposes since 1996. So it took them 17 years before
3	they actually came out and said this index is not
4	a national statistic.
5	Q. What I want to move now to is as I said, GaStat was
6	providing its view in November 2020 as the most accurate
7	estimate of inflation on a retrospective basis; is that
8	correct?
9	Yes.
10	Q. Just in the way they did it, given they're working
11	retrospectively, it made sense, because they were
12	provided ^^ their most accurate view, is that they would
13	use COLI 2018 for as long as they could; is that
14	correct? Going backwards?
15	A. No, they didn't use COLI 2018, they used 2018 as the
16	equal to 100, so it was rebased, but 2018 was 2018 from
17	2018 to 2020, before that was 2013. You can see it from it's slide 10, for example. My slide 10. You
18	can see very clearly there, actually. You can see it.
19	They are all linked. You can see it actually between
20	both, in both the figures, because in the left, you can
21	see they are all parallel. The dotted line are all
22	parallel to each other, which means that they are
23	essentially estimated the same relative inflation, they
24	are all the same index. So COLI 2007, then in 2013,
25	COLI 2013, then in 2018 COLI 2018. They are all linked.

1	Q. Yes, but it's correct, isn't it, that in the
2	retrospective view, it used COLI 2018 as far back as it
3	could; is that right?
4	A. It's not COLI 2018, it's the base year of COLI 2018.
5	COLI 2018 is the combination of three indices. It's
6	COLI 2007 from 1980, all the way to 2007. Then it is
7	call sorry, all the way to 2013. So from 1980 till
8	2013 it's COLI 2007. From 2013 to 2018 it's COLI 2013.
9	Then it's COLI 2018. They didn't estimate COLI 2018
10	going back.
11	Q. No, no. I think you're actually agreeing with me. That
12	the way they've done it they've linked in the index year
13	for each different COLI, is that right?
14	A. In the base year.
15	Q. Sorry?
16	A. In the base year, yes. In the base year. That's what
17	statistical agency they all do that.
18	Q. But the point is they were doing it let spickatively,
19	weren't they?
20	A. No, they weren't. They did it as they published the
21	indices.
22	Q. No, but the one you were given in November 2020, because
23	at that point, in November 2020, GaStat had all the
24	information available to it, didn't it, about COLI 2007,
25	COLI 1999, COLI 2013 and COLI 2018, didn't it?

1	A. When they published when they published COLI 2013,
2	which unfortunately it was published a few years after
3	2013, so it was published with a delay. They actually
4	estimated starting for a few years before and the four
5	years before was COLI 2007. That's why I'm saying that
6	they have linked them. They link them all. They are
7	all linked.
8	Yes, and they
9	A. And they link them contemporaneously as they were pub
10	rushing them but they published them with delay.
11	Q. But in 2020, GaStat was able to take a retrospective
12	view, wasn't it, looking back?
13	A. I asked for a historical series.
14	Q. Yes?
15	A. Yes, yes.
16	Q. Okay. Basically, what they've done is they've taken
17	COLI 2018 until there's no English going backwards until
18	there's no COLI 2018 data and then they link to
19	COLI 2013; is that correct?
20	A. They have taken 2007 and linked it to 2013 and 2013 and
21	linked it to 2018, because you link on the bay year and
22	the reason why they do that is because that is the year
23	of the expenditure survey on which each successive
24	subsequent index weights are based. So that is how they
25	link. It's not GaStat is every statistical agency does

1	that. Each and even of them.
2	Q. But the res specifictive view is using at each stage,
3	the most what it regards as the most accurate index
4	as far back as it can; is that correct?
5	A. Yes, but the most accurate index is from 2018 onwards,
6	is COLI 2018. From 2018 to 2013 it's COLI 2013, because
7	from 2013 to 2018, COLI 2018 is not COLI 2018, it's
8	COLI 2013 linked to that's why they are parallel.
9	They are parallel. They just shift them downwards.
10	They do statistical agencies tends to do backward
11	linking, not forward linking, because they link all the
12	index to the new one which is more accurate. That's why
13	you see them going down.
14	Q. Yes, absolutely. I actually adopt think we disagreeing.
15	The point is that they take advantage of the fact
16	that they are doing this on a retrospective basis, don't
17	they, they have to, because this is an historical series
18	and when they have published them, they already they
19	publish them when they publish COLI 2007, they didn't
20	link it to anything. So the year before 2007 where
21	a different index from 1999. When they publish
22	COLI 2013 when they published it, right, 2013 was 2013
23	only from 2013 onwards, before that was linked to 2007.
24	And the same for 2018 and I would guess the next one
25	will be the same.

1	Q. am I right in thinking that you use the fact that GaStat
2	has linked COLI 2007, COLI 2013 and COLI 2013 and COLI
3	2018 in the index reference years to the later indices
4	as a support for your approach to COLI 1999 to
5	COLI 2007?
6	A. As part of it, as part of it, yes, yes.
7	Q. But GaStat's actions don't justify your approach, do
8	they? Because the fact that GaStat can do it on
9	a historical b <mark>asis doesn't provide adjudication for</mark>
10	users acting in the same way because we know that the
11	reference year will be several years prior to
12	publication of the later index; is that right?
13	A. Are you saying in general or in this particular case.
14	Q. In this case. Negligence this particular case. In 2007
15	also the weights 2007 is the year in which COLI 1999
16	goes kind of berserk and it's also the year in which its
17	weights were changed and so that is why that's
18	another reason why I link them in 2007.
19	Q. That's not
20	A. I think I have written it
21	Q. I'll try the question again. So historically, looking
22	back historically, GaStat linked, for example, COLI 2013
23	with COLI 2007 in 2013; is that right?
24	A. Yes, yes. But also contemporaneously. That's when they
25	linked them.

1	Q. But a user in 2013 couldn't possibly have done that,
2	could they? Because they didn't have the COLI 2013 data
3	until 2018?
4	A. Yes, correct.
5	Q. It wouldn't make any sense at all, with it, for a person
6	in user 2018 to say I have now got the COLI 2013 data,
7	so I'm going to link it all the way back to COLI 2007 in
8	COLI 2013. Nobody would do that, would they?
9	A. I mean, why should they do that? COLI 2018 was already
10	linked back. You mean for the purpose of contracts or
11	for
12	Q. For example?
13	A. For the purpose of contracts. So as I explained, for
14	the purpose of a contract, in this particular in this
15	case, because there was no reason because the agency
16	had linked the indices and there was no reason to
17	believe that this index had any problems, that's what
18	I propose to do. I don't propose to go back every time.
19	I propose to use the going forward approach. It's the
20	only exception is that blue line ^.
21	Q. For the links between COLI 2007 and 2013 and 2013 and
22	2018, you only consider what was available at the time,
23	the information that was available at the time, ie so
24	you only do it at the end when the new index is
25	published, and so the exception for that is COLI 1999 to

1	2007, where you give yourself the benefit of hindsight;
2	is that right?
3	A. Yes.
4	Q. I would like to move now to your second reason, which is
5	the suggestion that call # is an inaccurate measure of
6	inflation. So I think we can agree that all indices are no indices truly measure true inflation?
7	Where are we?
8	Q. I'm just moving on to your reason 2. We can go back to
9	it if yo <mark>u would like?</mark>
10	A. Yes.
11	Q. It's your first report,?
12	A. Is it 6.6?
13	Q. 6.6.
14	A. Yeah, okay. I'm there.
15	Q. Here you deal with this, this is about COLI 1999 being
16	an inaccurate measure of inflation. You rely on the
17	fact that there is a statistical inaccuracy in
18	COLI 1999; is that correct?
19	A. Fundamental, yeah.
20	Q. Can we go to paragraphs 3.41 and 3.42 of your first
21	report at D1-41.
22	Then we can turn over to D1-42 where you deal with
23	the inaccuracy in COLI 2007, where you say the
24	arithmetic average also resulted in overstating
25	inflation at this stage." ^doc.

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So this is at the high level, yes? 2 A. Yes. Q. 3.42: 3 "Albeit this overstatement is generally small than 4 at the first stage." ^doc. 5 Do you see that? 6 Yes. 7 Q. So here what you're doing is you're making an evaluation 8 of accuracy in relative term, aren't you? 9 A. No, because in the CPI manual, actually advises that it 10 doesn't matter what you use in the second stage. They 11 are all unbiased. What matters is what you use in the 12 first stage and in the first stage, you should never use 13 arithmetic averages and so the quote that I have in the 14 next paragraph is for an inspection that the OECD did, 15 an assessment of the lat via statistical -- how do you 16 skal it, the statistical system in case statistics of 17 lat via and what the OECD actually said at the ^^ as 18 a conclusion of that assessment. 19 So it says lat via index ^^ elementstry level are 20 not based on a ^^ geometric averages index formula price 21 indices ^^ lower aggregation levels are cats collated 22 ratios ^^ mean prices in the reference and base fields 23 these reads read which does not enable capturing the 24 replacement de effect within the elementary aggregate 25

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the EOCD secretariat strongly encourages the CSB, the 2 central extra ^reading...) slat via to review the index number formula according to the CPI manual." ^doc. 3 Q. Thank you. Can we move to paragraph 5.20, by is at 4 D1-71. 5 You have that. You give some reasons as to why you 6 think that its out of date -- you think it's inaccurate 7 and 5.21 you refer to the out of date basket. Do you 8 see that? 9 A. Yes. 10 Q. The basket, I think you said the basket was updated in 11 2007; is that correct? 12 A. Yes, but you see the thing is that the basket for 13 COLI 1999 was selected from system of national accounts 14 that was not compatible with the survey that was done in 15 2007, because that survey was done based according to 16 the ^^ which is the international standard. 17 So what happens is that the weights that were -- the 18 goods that were in that basket corresponded to 19 elementary items in the COICOP that were not completely 20 comparable. So the weights were, if you want, shown in 21 do you say ^ into a classification that is not the same 22 as the original one. I don't have the basic weights of 23 the two, but judging from what is happening to that 24 line, the combination of these weights with the formulae 25

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for these elementary aggregates is what created then --2 not created, it was exacerbated the issue. Q. I see. Can we move now to the next point, which is in 3 relation to what you call the out of date approach to 4 averaging. You say that both the CPI manual and the US 5 bureau of labour studies, services --6 The labour bureau statistics, LBS, yeah, it's also the 7 ILO strongly enough, which is unfortunately labour 8 organisation ^. 9 Q. Can I just check that you confirm that you accept that 10 the CPI manual is only advisory, it's not prescriptive? 11 Do you agree with that? 12 A. Is yes, but I also have to say that what GaStat have 13 said to me any think in the letter that I wrote, is that 14 they are committed to it. So they committed themselves 15 to the GaStat, to this manual. Then in 2024, in the 16 metadata, it's one of the exhibits if Ms Harfouche's 17 report, her second report I think, in the metadata that 18 they publish for foo the consumer price index, they 19 actually stated that they follow the CPI manual. 20 Q. In 2024? 21 A. Yeah, but they told me in 2020 and they have done this 22 throughout. The thing is that you have to be compliant 23 otherwise as I said, there are consequences. 24 Q. Can we look at the preface to the CPI pannual 2020, 25

1	which is at D100?
2	A. They follow the 200 he ^ ^.
3	Q. We'll go to this is one of your exhibits, I think. ^
4	itch (overspeaking) ^^?
5	A. No, I'm say that is GaStat say that they
6	Q. I'm going to move on to D100, please, at page 13.
7	There's a paragraph which begins the paragraph in
8	the middle there beginning the IWGPS ^doc).
9	A. Where is it?
10	Q. The paragraph that begins it's in the middle of the page
11	on the screen, the IWGPS?
12	A. Yes.
13	Q. Can you see? Yes?
14	You can see that it says as you go down, you say,
15	because of practical resource constraints some of the
16	current representations may not be immediately obtain
17	^reading) NSOs and they should therefore serve as
18	guidelines or targets for agencies." ^doc.
19	Do you see that?
20	A. Yes, I do.
21	Q. Again, this is very much guidance to be followed in
22	accordance with the individual state's resources and
23	constraints?
24	A. Yes, but if you commit yourself to it, I mean, they had
25	six stage, how many stages were there in the letter that

1	GaStat wrote to me? And the reason why they did that
2	was to comply to this.
3	Q. Over time?
4	A. That's why they slowly changed ^^.
5	Q. Then we get to D9 could we go to D9-25, please. Then
6	we can see look at paragraph 9.37. You have seen this
7	as being part of the approach to aggregating for
8	elementary aggregates?
9	A. Yes.
10	Q. If we see at 9.37, ^^ is geometric; is that right?
11	A. Yes, it is.
12	Q. And car live is arithmetic?
13	A. Is one of the arithmetic, there are two of them. ^doc
14	name)s.
15	Q. So it says this gentlemen convenience ^^ in general
16	although there may be cases in which little or no
17	substitution takes place within the elementary aggregate
18	and the car live might be preferred. The index compiler
19	must make a judgment on the basis of the nature of the
20	products actually inincluded in the elementtry
21	aggregate." ^doc?
22	A. Yes.
23	Q. Is that correct?
24	A. Yes, I mean, think about it. For example, examples of
25	these are things like the television licence, in

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1 countries where there is a single supplier, the power 2 rates, what people pay for electricity. This kind of things. But for what people normally buy, there is 3 a lot of substitutions and what substitution means is 4 that when the price of something, let me tell you ^^ ^ 5 let's ^ or even rice, right, and there is one brand of 6 rice that all of a sudden costs more, only one 7 supermarket costs much more than in another, what you 8 are assuming is that actually, people are not 9 substituting them, which is, you know, a bit of 10 a stretch anyway, it's not compatible with economic 11 theory and the way consumers behave. 12 Q. It's a matter for the individual NSO, isn't it, to 13 deciden't basis of local circumstances how it's going to 14 approach these matters? 15 A. Of course, because, you know, there are countries where 16 they don't have a television licence, there are 17 countries where you have a competitive power supply, for 18 example, and people can switch from one to another, the 19 lucky ones who can do that. 20 Q. Is it correct also that even if arithmetic averaging as 21 level tends to overstate inflation, that does not mean 22 that an index will in fact overstate inflation in any 23 particular year because it's only one factor of many 24 that will determine whether inflation is overstated or 25

1	understated?
2	A. The bias is an average. These are all average concepts.
3	So on average, you will. But it can be lower in a year
4	also in ^^ but in average you will overstate it, yes.
5	Q. Then we can look at your second report at D103, page 31.
6	Do we see that? What you've presented here is
7	a diagram to show whether there's an overstatement. So
8	the zero line is accurate in accordance with GaStat's
9	2020 view; is that correct? So we can see that
10	A. Yes.
11	Q. Above an below the line ^^, so we can see that there are
12	even on COLI 1999, there are three years out of eight
13	where it understates inflation?
14	A. Yeah, in fact, actually, I can you see, what happens
15	here is that in 2007, it's the base year for essentially
16	what happened in 2007, they changed the weights and the
17	two years before, because the GaStat view, right, is
18	COLI 2007 in those years, right? What they have to do
19	in 2007, they change the weights, but sorry, they
20	didn't change the weights, they published 2007
21	expenditure survey, that was the base year for COLI 2007
22	and they publish that index going forward all the way to
23	whatever years. But then they also back casted it, but
24	they back casted it on the basis of the weights of 2007
25	and the reason why they were doing that is because they

1	substitutessed 2007 with 1999 without linking and so
2	there was a bit of there was some issue, I think,
3	with the way that they back casted based on the 2007
4	weights, that may have created a problem, but this is
5	speculation on my part. In those two years, it was
6	lower, 1999.
7	Only a statistician or economist would be in a position
8	to understand the effect of using ath met I can
9	averaging and not geometric averaging and get the
10	elementary aggregate level ^^; is that correct?
11	A. Yes, I would think so. But, you know, as I said, I user
12	would look another ^^ what is going the values, will
13	say what is going on and call a statistician, hopefully.
14	PRESIDENT: Can I just ask a quick question. Ath met I can
15	and geometric averages, the average that you've got on
16	your chart here is that an arithmetic or a geometric?
17	A. Just an average. Sorry, a arithmetic.
18	MR ROBB: It would be arithmetic.
19	PRESIDENT: Arithmetic, yeah.
20	A. It's the average difference.
21	PRESIDENT: On.
22	MR ROBB: It's adding up the blue for 1999 it's taking the
23	extent to which for each year adding up for each year
24	the COLI 1999 is above 0, then netting off the three
25	years where it's below 0 to get a net number and then

1	quiting by eight, presumably ^?
2	A. It's the sum over the
3	Q. Then divided by eight?
4	A. I think it's seven or eight? Yeah, it's eight, because
5	there is a blue line there, yes.
6	Q. Yes. We're at 5.30. Which I think is our scheduled?
7	Yes, how much longer will you be if it wasn't
8	much longer.
9	MR ROBB: No, it's not another 10 minutes so it will be more
10	than 10 minutes so definitely coming back tomorrow.
11	PRESIDENT: All right. In which case we will finish for
12	this evening. Thank you very much, Dr Meschi. As
13	before, please don't talk to your assistants or any
14	members of the legal team about your evidence overnight.
15	WITNESS: Can I have dinner with them if I don't talk about?
16	I think it's safer not to.
17	WITNESS: Okay, okay.
18	PRESIDENT: Thank you. Then we'll see you back here, if you
19	could be back here about 9.30 ready to start at 9.30.
20	A
21	WITNESS: Okay.
22	(5.32 pm)
23	(The hearing adjourned until 9.30 am on the following day)
24	INDEX