
IASB[®] Meeting

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Project	Power Purchase Agreements (PPAs)	
Topic	Hedge accounting amendments	
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Purpose of this paper

1. This paper provides our analysis of the feedback on question three of the Exposure Draft *Contracts for Renewable Electricity*, recommendations on potential refinements to the hedge accounting proposals and a question asking whether you agree with our recommendations.

Summary of staff recommendations and questions for the IASB

2. Based on the feedback received and our staff analysis in paragraphs 10–83 of this paper, we recommend the proposed hedge accounting requirements in the Exposure Draft are finalised, subject to:
 - (a) clarifying to which requirements in Section 6.3 of IFRS 9 the proposed amendments are adding new requirements that apply to specified hedging relationships only and that all other hedge accounting requirements remain applicable;
 - (b) clarifying that the amount of forecasted transactions to be designated is the amount of highly probable electricity transactions that are aligned to the

- variable amount of nature-dependent electricity expected to be delivered by the particular facility *referenced* in the NDE contract;
- (c) clarifying that for the purpose of the highly probable assessment:
- (i) there is an assumption that an entity's forecasted electricity transactions will be determinable based on its past and current levels of transactions;
 - (ii) an entity is not required to make detailed estimates of forecast transactions for every minute of every day, but that the time intervals over which estimates are made are consistent with the frequency with which the hedged cash flows occur.
- (d) clarifying that forecast transactions are not required to be highly probable if the cash flows of the hedging instrument are contractually linked to the hedged item such that the cash flows only arise when the forecast transaction occurs.
- (e) providing in the final amendments qualitative examples to illustrate the application of proposed amendments.

Question for the IASB

1. Does the IASB agree with our recommendation in paragraph 2 of the paper?

Structure of the paper

3. This paper is structured as follows:
 - (a) terminology (paragraph 4);
 - (b) background and the proposals in the ED (paragraphs 5–9);
 - (c) feedback and staff analysis (paragraphs 10–83),
 - (d) appendix A—Example of hedge accounting considerations; and
 - (e) appendix B—Example of volume weighted average pricing.

Terminology

4. In this paper we use the following terms for ease of reading:

Term	Explanation
NDE contract for electricity	an <i>NDE contract</i> for the receipt (purchase) of electricity that can be settled net—commonly referred to as a physical power purchase agreement.
NDE contract for differences	an <i>NDE contract</i> that require net settlement of the difference between the prevailing market price and the contractually agreed price for the contracted volume of electricity—commonly referred to as a virtual power purchase agreement.
NDE contract	a contract that has the specified characteristics used to scope the proposed amendments and that we discussed in Agenda Paper 3A for the IASB’s September meeting. NDE stands for ‘Nature-Dependent Electricity’.
Proposed amendments	The proposed amendments to particular hedge accounting requirements in IFRS 9 as specified in paragraphs 6.10.4–6.10.6 of the Exposure Draft.

Background and the proposals in the ED

5. Entities are increasingly using NDE contracts (previously referred to as contracts for renewable electricity) to fix the price at which renewable electricity will be sold or purchased. For those contracts that are not accounted for as executory contracts (as required by paragraph 2.4 and subject to the proposed amendments that we discussed in [Agenda Paper 3B](#) for the IASB’s September meeting), entities could apply hedge accounting to reflect the effect of these contracts in their financial statements.
6. When applying the hedge accounting requirements in IFRS 9, application challenges arise in designating and measuring the hedged item for hedging relationships in which an NDE contract is designated as the hedging instrument.

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7. The application challenges for entities that are sellers, and those that are purchasers, of nature-dependent electricity, are different. For sellers, the application challenges relate to the designation of a volume of future sales that is highly probably to occur given the variability associated with nature-dependent electricity. These challenges then also affect the assessment of the economic relationship between the hedged item and hedging instrument and the measurement of hedge effectiveness.
 8. For purchasers, determining the volume of future electricity purchases that is highly probable is not as problematic as for sellers—an entity’s electricity consumption is a given, and entities can typically reliably estimate their expected consumption (especially when it is not likely to change or end suddenly). However, when the underlying of the hedging instrument is nature-dependent electricity which gives rise to volume variability, applying the current requirements give rise to challenges when firstly designating the hedged item in accordance with the entity’s risk management objective and secondly assessing the economic relationship. This is because the variability of the cash flow profile of the hedging instrument is not aligned to the cash flow profile of the future purchases. For the hedging instrument, cash flows vary based not only on price uncertainty, but also volume uncertainty, whereas for future purchases, the cash flow profile is primarily affected by price uncertainty (see also paragraphs 50–60).
 9. To resolve the application challenges described in paragraphs 7 and 8 of this paper, the IASB proposed amendments to the hedge accounting requirements in IFRS 9 with regards to the designation of the hedged item. The proposed amendments permit:
 - (a) the hedged item to be designated as a variable nominal volume of forecast electricity transactions; and
 - (b) the hedged item to be measured using the same volume assumptions as those used for the hedging instrument.

Feedback and staff analysis

10. Almost all respondents agreed with the proposed amendment to the general hedge accounting requirements for cash flow hedges when an NDE contract is used as a hedging instrument. In their view, the current hedge accounting requirements do not faithfully reflect the purpose and the economic effects in the financial statements when such contracts are used as hedging instruments.
11. Notwithstanding their agreement with the proposed amendments, most respondents asked for clarifications or further application guidance on how the proposed amendments could be applied, in particular how:
 - (a) the [proposed amendments relate to the current hedge accounting requirements in IFRS 9](#) (see paragraphs 16–18);
 - (b) to [designate and identify the hedged transactions](#) (see paragraphs 19–40);
 - (c) to [assess whether forecast electricity transactions are highly probable](#) (see paragraphs 41–68); and
 - (d) to [measure the hedged item](#) (see paragraphs 69–83).
12. Only a few respondents disagreed with the proposals because they are concerned that the proposed amendments could provide too much flexibility with regards to the designation of the hedged item that could result in true ineffectiveness not being recognised in the financial statements.
13. A few respondents also suggested that similar amendments be made to the hedge accounting requirements in IAS 39 for entities that are still applying those requirements. However, as noted in [Agenda paper 3B](#) for the March 2024 meeting, the differences between the hedge accounting requirements in IFRS 9 and IAS 39, albeit subtle, mean that similar changes to the requirements would either not be possible or not achieve a similar outcome. In addition, our research and outreach with stakeholders, both during the development of the proposed amendments and during the consultation period, did not indicate that there is a need for similar amendments to be made to the IAS 39 requirements. We therefore continue to be of the view that

equivalent changes should not be made to the hedge accounting requirements in IAS 39.

14. The IASB has decided at the [September 2024](#) meeting to not make fundamental changes to the scope of the NDE contracts to which the proposed amendments could be applied. Based on the feedback received, the staff continue to be of the view that, for these contracts, the proposed amendments to the hedge accounting requirements in IFRS 9 are needed for the reasons explained in paragraphs BC32–BC35 of the Basis for Conclusions on the Exposure Draft.
15. Therefore, our analysis of the feedback and recommendations for finalising the amendments are based on the four key areas described in paragraph 11 of this paper.

Relationship between proposed amendments and current requirements

16. Some respondents asked for clarification on the relationship between the proposed amendments and the current hedge accounting requirements in IFRS 9. In particular, they seek clarification on whether, and if so the extent to which, the proposed amendments supersede or simply supplement the current requirements.
17. As noted in proposed paragraph 6.10.2 of the Exposure Draft, the proposed amendments provide an alternative accounting treatment only to the current requirements as specified in the proposals. With regards to the hedge accounting requirements, reference is made specifically to Section 6.3 of IFRS 9, being the designation of the hedged item. Therefore, all other hedge accounting requirements in IFRS 9 continue to apply to hedging relationships to which the proposed amendments are applied.
18. However, we acknowledge that it could be made clearer about which particular requirements in Section 6.3 of IFRS 9 are subject to the proposed amendments. In addition, although the Exposure Draft referred to ‘exceptions’ from the current requirements, we are of the view that the proposed amendments are more akin to additional or supplementary requirements that apply to specified situations and not

necessarily exceptions. We therefore recommend also clarifying this in the final amendments.

Designating and identifying the hedged item (paragraph 6.10.4(a))

Feedback

19. Some respondents noted that in the [March 2019 Agenda Decision](#), the IFRS Interpretations Committee (Committee) concluded that a forecast transaction should be documented with sufficient specificity in terms of timing and magnitude, so that when such transactions occur, the entity can identify whether the transaction is the hedged transaction. These respondents asked for clarification on how to:
- (a) document with sufficient specificity the variable notional volume of electricity designated as the hedged item. More specifically, they asked whether the variable notional volume should be designated and documented as an absolute (but different) volume, for every delivery interval during which the entity is expected to buy or sell electricity.
 - (b) identify whether the hedged transactions occurred. They noted that this would be needed to reliably measure the hedged item and determine the amount to be reclassified from the cash flow hedge reserve. Respondents asked whether the hedged transactions are identified for example based on an even distribution during the period, the first transactions to occur or with hindsight based on the volume of electricity for which settlement is made on the hedging instrument.
20. With regards to the feedback described in paragraph 19(b), some respondents asked whether an entity could apply an approach that is similar to the ‘net purchaser’ requirement used for the own-use amendments, to support an evenly distributed volume of the hedged item if the exact amount cannot be determined at a reporting period end.
21. Although a few stakeholders did not disagree with the proposed amendments in the context of the seller of the nature-dependent electricity produced by their own

referenced facilities, they did not agree with permitting a purchaser to apply the amendments. They were of the view that such a ‘contingent hedge’ could result in the entity continuing to be exposed to cash flow variability during a hedge period. For example, if purchases of electricity are stable but no nature-dependent electricity is delivered during the period, the entity remains unhedged for the period. They believe that such an outcome cannot be considered a good economic hedge and therefore does not provide a faithful presentation of the underlying economic phenomenon.

Staff analysis

22. Paragraph 6.3.7 of IFRS 9 states that an entity may designate an item in its entirety or a component of an item as the hedged item in a hedging relationship and refers to types of components (including combinations) that are eligible to be designated, being risk components, one or more selected contractual cash flows and components of a nominal amount. Paragraph B6.3.16 states that there are two types of components of nominal amounts that can be designated as the hedged item; a proportion of an entire item or a layer component. The component designated has to be consistent with the entity’s risk management objective.
23. With regards to a layer component, paragraph B6.3.18 states that it may be specified from a defined, but open, population or from a defined nominal amount. Examples include part of a monetary transaction, part of a physical volume, part of a physical or other transaction volume, or a layer from the nominal amount of the hedged item.
24. In our view, IFRS 9 already provides flexibility with regards to the designation of the hedged item, which provides entities the opportunity to designate a hedging relationship in a way that best reflects the economic offset the relationship will provide. However, although IFRS 9 permits the layer component to be designated from an open portfolio, the layer component has to be specified in terms of the absolute cash flows or physical volume, ie the first 100 MWh of electricity purchases/sales in a particular month.

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25. The agenda decision referenced in paragraph 19 of this paper, is based on these requirements in IFRS 9 and continues to be relevant when designating a hedging relationship in accordance with those requirements. The proposed amendments therefore do not affect the relevance or applicability of the agenda decision based on the current requirements.
26. The IASB acknowledged the challenges that arise from designating cash flow hedging relationships when the hedged item references nature-dependent electricity in paragraphs BC23–BC29 of the Basis for Conclusions to the Exposure Draft. Therefore, it decided to propose amendments that would address these challenges.
27. The proposed amendments permit the designation of a variable nominal amount and therefore represents a new type of component that can be designated as a hedged item when applying paragraph B6.3.18 of IFRS 9. However, this ability to designate a variable nominal amount is permissible only for hedging relationships where the hedged item references nature-dependent electricity. As the proposed amendments add new requirements to IFRS 9, the agenda decision might not directly relate to the proposed amendments.
28. We think it is important to note that designating a variable nominal amount is not the same as designating an absolute amount that varies from one period to the next (ie 100 MWh for period 1 and 130 MWh for period 2). In the case of hedging relationships involving contracts referencing nature-dependent electricity, the hedged item representing the forecast purchases or sales of electricity is specified in terms of the (uncertain) variable volume of nature-dependent electricity delivered by the particular facility to the spot market and referenced in the NDE contract.
29. In our view, such a designation is still consistent with the Committee’s conclusion that the hedged item should be documented with sufficient specificity in terms of timing. However, instead of being specified in terms of magnitude, the magnitude of the hedged item is specified in terms of origin (ie nature-dependent electricity expected to be delivered by the particular facility to the spot market). Therefore, the hedged item can still be identified with sufficient specificity as it occurs in each

- period—as the referenced facility delivers nature-dependent electricity to the spot market, the occurrence of the hedged item is confirmed.
30. During the development of the proposed amendments, the IASB acknowledged the observations made in paragraph 41 of Agenda Paper 10 for the Committee’s [March 2019](#) meeting, about the risk of unintended consequences when designating a hedged item with reference to the hedging instrument. At the time, the Committee noted that such an approach may affect the general requirements of hedge accounting which requires the hedged item to be described independently from the hedging instrument and would affect measurement of the hedged item.
31. In developing the proposed amendments, the IASB considered that there is little, if any, risk of unintended consequences if there is a contractual link between the hedged item and hedging instrument such that the forecasted transactions to be hedged are the same as the transactions to which the hedging instrument relate (as described in paragraphs 61–63 of this paper). This would be the case when the entity generating nature-dependent electricity is using an NDE contract to hedge its forecasted sales or if the forecasted purchases are arising from the NDE contract used as the hedging instrument (sometimes referred to as all-in-one hedges).
32. With regards to the purchaser of forecasted electricity, the IASB acknowledged the lack of a similar clear contractual link. However, the IASB noted that a hedging relationship is not required to be perfectly effective to qualify for hedge accounting. IFRS 9 requires documentation of the hedging relationship, the entity’s risk management objective for undertaking the hedge, identification of the hedged item and hedging instrument, a description of the risk being hedged and how the entity will assess effectiveness.¹
33. We acknowledge that the proposed designation of the hedged item as articulated in the Exposure Draft could have been interpreted as the hedged item being defined by

¹ Paragraph 6.4.1 of IFRS 9 *Financial Instruments*.

reference to the hedging instrument. However, in our view this is not the case nor what the IASB's intention was.

34. The hedged item is an entity's forecasted spot electricity transactions (sales or purchases), which are independent from the NDE contract. The relevance of the hedging instrument in the proposed amendments, is with regards to determining what amount of forecasted transactions is to be hedged (ie how much). Unlike other typical hedging relationships, where the quantity can be determined as a proportion or specified volume, in these relationships, the volume of electricity expected to be delivered, cannot be defined in such a way. Therefore, reference is needed to how the designated volume is determined.
35. Also, we think it is important to clarify that the amount of forecasted transactions to be designated is not based on the hedging instrument itself, but rather on the amount of highly probable electricity transaction that are aligned to the electricity expected to be delivered by the particular facility *referenced* in the NDE contract. We recommend clarifying this when finalising the amendments.
36. With regards to hedge effectiveness, IFRS 9 requires that there is an economic relationship between the hedged item and hedging instrument. This means that the hedged item and hedging instrument have values that generally move in the opposite direction because of the hedged risk.²
37. We are therefore of the view that if the hedged item is designated as an amount equal to the (variable) amount of the nature-dependent electricity delivered by the particular facility that is referenced in the NDE contract (as stated in paragraph 28 of this paper) an economic relationship could still exist.
38. As stakeholders told us during the development of the Exposure Draft, entities' risk management objective is to hedge the price risk of forecasted electricity purchases only and not the uncertainty about the variable volume of electricity to be delivered.

² Paragraphs 6.4.1(c) and B6.4.4 of IFRS 9

Therefore, designating an amount of forecasted purchases that is aligned to the amount expected to be delivered, is consistent with the entity's risk management objective. This also means that when assessing whether an economic relationship exists, the entity is assessing only value changes that relate to the hedged risk (being the price risk).

39. We also think that designating an amount of forecast purchases without considering the variable amount expected to be delivered, could result in the designation of a deliberate under-hedge, which would not be consistent with the requirements in paragraph 6.4.1 of IFRS 9. We therefore recommend finalising the proposed amendments subject to clarifying that the hedged item is the amount of forecast transactions that is aligned to the (variable) amount of the nature-dependent electricity delivered by the particular facility that is referenced in the NDE contract.
40. We think it is also important to not conflate the designation and identification of the hedged item with [assessing the highly probable forecast transactions](#) available for designation and the [measurement of the hedged item](#). Both of these are analysed separately in the next sections of this paper.

Applying the 'highly probable' requirement (paragraph 6.10.4(b) and paragraph 6.10.5)

41. Respondents' feedback on the proposed requirements for forecast electricity transactions to be highly probable can be grouped based on the perspective of the entity as a seller or purchaser of electricity. We analyse the feedback on the purchaser and seller perspective separately in the sections below.
42. We have summarised the applicable hedge accounting requirements of IFRS 9 in our March 2024 [Agenda Paper 3B](#) in paragraphs 6–15 and therefore will not summarise them again in this paper.

*The purchaser perspective***Feedback**

43. Most of the requests for clarification of the proposed highly probable requirement were made in the context of the purchaser of electricity. These questions included:
- (a) how to determine whether future electricity purchases are highly probable and the level of probability that should be used when assessing whether a purchase is highly probable or not;
 - (b) the granularity of the time intervals over which purchases should be estimated; and
 - (c) what the intended meaning of the requirement is for the variable volume designated to ‘not exceed the volume of future electricity transactions that are highly probable’ and over which period this should be assessed (ie discrete purchase intervals, other time periods such as a month or the whole contract duration).
44. With regards to the feedback in paragraph 43(a), many respondents asked how to determine whether future electricity purchases are highly probable when the hedged period (being the contract duration of hedging instrument) is very long. In particular, respondents asked whether entities are expected to make detailed estimates of future electricity purchases for every potential purchase interval or for periods that are far into the future.
45. A few respondents also asked about the granularity of the time intervals over which purchases should be estimated for the purposes of the highly probable assessment—for example should estimates be done on a continuous basis because electricity is consumed on a continuous basis or could they be aggregated over a longer period, for example a month. In this regard respondents are particularly concerned about the operational complexities of implementing the proposed amendments when electricity is purchased on, or close to a continuous basis.

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46. With regards to the feedback in paragraph 43(a) some respondents asked how an entity determines the amount of highly probable electricity purchases. In particular, they asked for clarification on whether this should be determined as a best estimate (ie the most likely outcome), expected value (ie a probability-weighted estimate), the maximum amount possible, or any other basis.
47. If the highly probable forecast transactions should be determined as an expected value amount, respondents further asked what level of probability they should use, for example 90 or 50 per cent, and how this would link with the proposed requirement to measure the hedged item using the same volume assumptions as for the hedging instrument.
48. Some of these respondents recommended that the IASB provide further practical relief in this regard, for example, by:
- (a) specifying that entities are not required to make detailed estimates for periods far into the future similar to the own use-amendments in proposed paragraph 6.10.3(a) of the Exposure Draft; or
 - (b) specifying the ‘time buckets’ to be used for the highly probable assessment, for example shorter periods in the near future compared to longer periods in far future or permitting the use of a ‘rolling’ assessment of a predetermined time period such as 12 months.
49. With regards to the feedback in paragraph 43(c) of this paper, respondents asked what the period/time interval is over which the variable volume designated should ‘not exceed the volume of future electricity transactions that are highly probable’. They asked whether this refers to the periods over which electricity is purchased, the full contract duration or another period for example such as a month or the period over which the cash flow profile of the hedging instrument is estimated.

Staff analysis

50. Paragraph 6.3.3 of IFRS 9 requires the hedged item to be highly probable. In most hedging relationships determining whether the hedged item is highly probable is

usually a relatively straight-forward probability assessment to determine the amount of a forecast transaction that is highly probable to occur. For example, if an entity intends to hedge the future purchase of sunflower oil, the entity determines the amount of sunflower oil purchases that is highly probable based on a probability-based assessment of its past purchases as well as its current expectations about future purchases.

51. However, when the hedged item is the amount of forecast transactions that is aligned to the (variable) amount of the nature-dependent electricity delivered by the particular facility that is referenced in the NDE contract, it becomes more complex. This is because such designation requires the combination of two probability-based assessments over the hedged term—the amount of forecast purchases that are highly probable and the variable amount of nature-dependent electricity expected to be delivered. However, as mentioned in paragraph 40 of this paper, we think it is important to not conflate the highly probable assessment and the requirement to designate the hedged item with sufficient specificity. Although they are both based on probabilities, they are based on different sets of assumptions and inputs.
52. We acknowledge that determining whether forecasted purchases over a long period are highly probable is complex, however this is not a new concept and has been carried forward from IAS 39. Although IFRS 9 does not include specific application guidance on determining whether a transaction is highly probable, the Committee observed (in the 2019 agenda decision) that when assessing whether the hedged item is highly probable, an entity considers uncertainty over the timing and magnitude of a forecast transaction. In this regard, the Committee referenced two relevant examples from the *Guidance on Implementing IAS 39* as part of the 2019 agenda decision being examples F.3.7 and F3.11. Although these examples have not been carried forward to IFRS 9, paragraph BC6.95 of the Basis for Conclusions of IFRS 9 emphasises that not carrying forward the Implementation Guidance did not mean that the IASB had rejected that guidance.

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53. As such, we are of the view that these examples remain relevant when determining whether future electricity purchases are highly probable. Specifically, example F3.7 stated [emphasis added]:
- The term ‘highly probable’ indicates a significantly greater likelihood of occurrence than the term ‘more likely than not’. An assessment of the likelihood that a forecasted transaction will take place is not based solely on management’s intent because intent is not verifiable. **A transaction’s probability should be supported by observable facts and the attendant circumstances.**
54. The example goes on to list some circumstances an entity should consider in assessing the likelihood that a transaction will occur, including (but not limited to):
- (a) the frequency of similar past transactions;
 - (b) the financial and operational ability of the entity to carry out the transactions;
 - (c) the extent of loss or disruption of operations that could result if the transaction does not occur; and
 - (d) the entity’s business plan.
55. In any hedging relationship, the length of the hedged term is a consideration in determining a transaction’s probability. Generally, the more distant a forecasted transaction is, the less likely it is that the transaction would be considered highly probable.
56. However, the staff think that the nature of electricity is different from other commodities. This is because there is a rebuttable presumption that an entity that has been and is currently using electricity, will continue to use electricity in future. Therefore, unless there is evidence to the contrary, there is an assumption that an entity’s electricity purchases will be determinable based on its past and current levels of consumption, no matter how far in the future the estimate extends. We also considered that when entering into a long-dated NDE contract, the entity had to make

estimates and assumptions about its electricity consumption over the contract period. Such estimates and assumptions could also support the highly probable assessment.

57. With regards to the granularity of the time periods for which forecasted purchases should be assessed, we consider that although electricity purchases might occur on a near-continuous basis, an entity is not required to make detailed estimates of the volume of electricity expected to be purchased every minute of every day. IFRS 9 does not require the time and date of a forecasted transaction to be specified to qualify for hedge accounting.
58. In practice, transactions like electricity purchases that occur throughout a period, or on a near-continuous basis, are aggregated over a period (usually a month) and recorded or invoiced at the end of that period. In other words, the hedged cash flows on the hedged item usually occur only once during a month and that forms the basis for the designation of forecast transactions. Such an approach appears to be consistent with the examples used throughout IFRS 9 that designate forecast transactions for example as transactions occurring in a particular month.³
59. We therefore believe that for the purposes of estimating forecasted electricity purchases that are highly probable, the granularity or frequency of the time intervals should be consistent with the frequency with which the hedged cash flows occur.
60. With regards to finalising the proposed amendments, we recommend clarifying that for the purpose of the highly probable assessment:
- (a) there is an assumption that an entity's forecasted electricity purchases will be determinable based on its past and current levels of consumption; and
 - (b) an entity is not required to make detailed estimates of forecasted purchases for every minute of every day, but that the time intervals over which estimates are made are consistent with the frequency with which the hedged cash flows occur.

³ See paragraph B6.3.18(a)

*The seller perspective***Feedback**

61. Most respondents did not disagree with the proposed requirement in paragraph 6.10.5 of the Exposure Draft that stated that forecasted sales are not required to be highly probable if the hedging instrument relates to a proportion of the total future renewable electricity sales from the production facility. However, a few respondents said that this requirement is not needed for an entity that is the generator of nature-dependent electricity and for which every spot sale transaction of electricity produced by the specified production facility is subject to an NDE contract. They noted that although contracts for differences (such as a virtual PPA) do not *require* the sale of electricity, these contracts swap the spot price for a contractually specified price for each MWh of electricity sold. Therefore, if all spot sales of a specified production facility are subject to an NDE contract, each MWh of nature-dependent electricity sold will be highly probable to occur for the purposes of a cash flow hedging relationship.
62. On the other hand, a few other respondents noted that proposed paragraph 6.10.5 of the Exposure Draft does not require the seller of nature-dependent electricity to also be the generator of that electricity. They noted that, in the absence of such an explicit requirement, they are concerned about the proposed amendments being applied inappropriately and risk having unintended consequences. To illustrate their concern, they described a situation in which an entity that is selling, but not generating, nature-dependent electricity not being required to assess whether designated forecasted sales are highly probable to apply hedge accounting. However, as the entity is relying on sufficient purchases of nature-dependent electricity to fulfil its sales, the entity's forecasted sales might not be highly probable. Applying the relief in paragraph 6.10.5 of the Exposure Draft could therefore result in hedge accounting being applied inappropriately to those future sales.
63. A few other respondents do not agree with the proposed relief from the highly probable requirement only applying to sales transactions. In their view, similar relief should be available for purchasers in a physical PPA (NDE contract for receipt) to

which the own use requirements are not applied. This is because without the physical PPA, the entity has exposure to price variability with regards to future electricity purchases; in other words, the physical PPA is both the contract under which the electricity is purchased and the contract that fixes the price. They therefore consider the purchaser in such a contract to be in the same position as the seller to which this proposed relief would apply.

Staff analysis

64. We continue to consider the requirement for the hedged item (ie forecasted sales and purchases) to be highly probable, to be an important aspect of a cash flow hedging relationship. The reason for this is because hedge accounting is an exception to the normal accounting requirements. In the context of cash flow hedging specifically, the exception relates to the recognition of fair value changes of the hedging instrument in other comprehensive income (and not in profit or loss as for other derivatives) until the forecast transaction occurs.
65. Therefore, we think it is important that this exception is applied only when such a forecast transaction is highly probable to occur. This is especially true for situations in which cash flows could arise on the hedging instrument, but cash flows don't arise on the hedged item. In other words, if an entity could be required to make cash payments under the NDE contract without having any purchases or sales of electricity in the same period.
66. The highly probable assessment as described in paragraph 50–60 applies equally to forecasted sales and purchases. However, when cash flows under the NDE contract can arise only when there is a hedged sale or purchase, such forecast transactions could be considered to be highly probable by nature. Therefore, if an entity is a producer of nature-dependent electricity and the NDE contract only requires net settlement when the generated electricity is sold, every spot sale the entity makes, would be covered by the NDE contract. Said differently, no net settlement under the NDE contract is required unless there is a spot sale. Therefore, there is no risk of cash

flows arising on the hedging instrument but not on the hedged item. In practice, this is referred to as forecast transactions that are ‘highly probable by nature’.

67. We continue to agree with the proposed amendment in proposed paragraph 6.10.5 of the Exposure Draft. However, acknowledge respondents’ feedback that indicated that the proposed wording included in the Exposure Draft is open to misinterpretation that could result in the proposed requirements being applied when not intended by the IASB (such as situations described in paragraph 62 of this paper). We also acknowledge feedback that the same situation as described in paragraph 66 of this paper, could arise in the context of purchases of electricity (for example when a physical PPA is not accounted for applying the own use amendments).
68. We therefore recommend clarifying that the proposed requirement in paragraph 6.10.5 of the Exposure Draft applies to hedging relationships to which the proposed amendments are applied and for which cash flows of the hedging instrument are contractually linked to the hedged item such that the cash flows only arise when the forecasted transaction occurs.

Measuring the hedged item (paragraph 6.10.6)

Feedback

69. Notwithstanding their agreement in principle with the proposed hedge accounting requirements, many respondents asked for clarification of the proposed requirement to measure the hedged item using the same volume assumptions as those used for measuring the hedging instrument. A few respondents were concerned that this could result in the measurement of the hedging item to simply mirror the measurement of the hedging instrument (with no resulting ineffectiveness arising), which would be a fundamental departure from the current hedge accounting requirements.
70. The main areas for clarification identified by respondents included:

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- (a) whether measurement of the hedged item should reflect trading intervals for spot purchases (ie hourly intervals) or the intervals on which the hedging instrument is traded (for example 15 min);
 - (b) the level of granularity with which the hedged item needs to be modelled as they are concerned about the availability of relevant pricing information (such as spot prices and forward curves) on a very granular basis;
 - (c) how to reflect differences in the demand profile compared to the delivery profile of electricity between the hedged item and the hedging instrument when assessing the economic relationship or measuring ineffectiveness;
 - (d) how the operation of the ‘lower of’ test could work when forecast assumptions manifest (and likely to be different than the estimate) through actual settlement at different prices; and
 - (e) how other potential sources of ineffectiveness could be reflected in the comparison between the hedged item and the hedging instrument, for example when more electricity was delivered in a calculation period as estimated, or when there is basis risk between the hedged item and hedging instrument.
71. With regards to the concerns mentioned in paragraph 70(b), a few respondents noted that the application of the proposals may be too complex from a purchaser’s perspective, particular for smaller entities, if the modelling of the hedged item is required at a granular level.
72. With regards to the question in paragraph 70(c), respondents asked for clarification on how volume differences are eliminated but pricing differences result in ineffectiveness when the delivery profile of the NDE contract is subject to weather conditions but the demand profile (ie electricity purchases) only occur during business hours). These respondents are of the view that such situations could lead to significant systematic mismatches (structural price differences) and were concerned that ignoring volume differences would indirectly undermine the assessment for pricing differences and therefore could hide ineffectiveness.

Staff analysis

73. Although we acknowledge the concerns raised by respondents about the hedged item simply mirroring the hedging instrument if the same volume assumptions are used for measurement, we do not agree that the proposed amendments would result in such a situation. This is because we continue to believe the hedged item is defined independently from the hedging instrument.
74. As clarified in the earlier sections of this paper, in the hedging relationships to which the proposed amendments are applied:
- (a) the hedged item is the forecasted spot electricity sales or purchases of the entity and not the amount of electricity to which net settlement is required under the NDE contract;
 - (b) the extent to which highly probable forecasted electricity transactions are designated is aligned to the variable amount of the nature-dependent electricity delivered by the particular facility that is referenced in the NDE contract; and
 - (c) detailed estimates of forecasted transactions are not required to be made for every minute of every day, but for time intervals that are consistent with the frequency with which the actual cash flows occur (for example monthly).
75. With regards to measurement of the hedged item we note that paragraph 6.5.11(a) of IFRS 9 refers to:
- (a) the cumulative gain or loss on the hedging instrument from inception of the hedge; and
 - (b) the cumulative change in fair value (present value) of the hedged item, ie the present value of the cumulative change in the hedged expected future cash flows from inception of the hedge.
76. We are of the view that questions about the granularity of the time intervals over which the hedged cash flows are measured, are not unique to hedging relationships to which the proposed amendments are applied. There are many situations in which

forecasted transactions are expected to occur throughout a period, rather than at a particular point in time. In fact, we note that the same situation arises with regards to the NDE contract itself—the delivery of the nature-dependent electricity that requires net settlement under the contract could occur throughout the period. Therefore, in terms of a *methodology* to measure the hedged cash flows, in our view, an entity could use a similar methodology to how it is measuring other hedged items or hedging instruments for which transactions occur throughout the period.

77. Furthermore, we think it important to note that neither IFRS 9 nor the Exposure Draft, require the timing and amount of the cash flows under the hedged item to be perfectly aligned with the cash flows on the hedging instrument. If this was a requirement, no designation of, for example, a debt instrument could work if the hedging instrument had a different interest rate reset date and a different nominal. Similarly, hedging relationships that use commodity futures (that settles quarterly) to hedge future purchases that happen monthly would not be permitted.
78. We are of the view that the intention in the proposals with regards to using the same volume assumptions was to determine the variable volume of forecast transactions to be designated. As the variable volume of forecast transactions is aligned to the variable volume to which the NDE contract relates, it therefore follows that the entity uses the same assumptions to determine the variable volume for measurement. However, we acknowledge that this was not clear enough in the Exposure Draft and we therefore recommend that it be clarified in the final amendments.
79. However, we continue to be of the view that this does not mean that cash flows of the hedged item and hedging instrument would be the same. Differences in pricing of the hedged item and the hedging instrument must be incorporated. For example, if forecasted purchases occur only during business hours at peak prices, the measurement of the hedged item should reflect the expected peak prices. This might however be different from the expected price under the NDE contract, for example if electricity is generated during both peak and off-peak times, the expected price would be a weighted average of peak-and off-peak prices (see appendix B for an example).

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80. We think it is important to bear in mind that although prices may vary strongly between peak and off-peak pricing in absolute terms, the hedging instrument aim to reduce the delta variability of the price changes which is the risk component which is hedged. As a result, there still may be an economic relationship between off-peak and peak pricing but ineffectiveness would arise similar to basis risk (for example when the NDE contract for difference is referenced to a different electricity market).

Determining the reclassification adjustment when discontinuing the hedging relationship

81. Applying the general requirements of IFRS 9 the ‘lower of’ test in paragraph 6.5.11(a) would continue to be applied to a qualifying cash flow hedging relationship and so would the remainder of the requirements of the same paragraph. Therefore, the ‘normal’ valuation procedure would be applied to measure the hedged item and the hedging instrument, determine the amount in other comprehensive income and any reclassification adjustment to profit or loss over the term of the hedging relationship.
82. Respondents identified additional challenges in determining the reclassification adjustment when the hedged item is designated at an amount equal to the variable amount of nature-dependent electricity delivered to the spot market by the facility referenced in the NDE contract and the hedging relationship is discontinued. Discontinuation could occur for many reasons, but the two main reasons include:
- (a) a lack of sufficient highly probable forecast transactions but some of the hedged cash flows are still expected to occur;
 - (b) the NDE contract is closed out and derecognised.
83. The staff is of the opinion that in these situations, sufficient guidance in IFRS 9 already exists. An entity is expected to apply paragraph 6.5.11 of IFRS 9 in these situations consistently across all its hedging relationships.

Appendix A—Example of hedge accounting considerations

- A1. The purpose of this example is to illustrate the designation of forecast electricity purchases as the hedged item in a cash flow hedge applying the proposed amendments to IFRS 9.
- A2. This example illustrates only one potential approach to apply the proposed amendments. Its use is not intended to suggest that other alternatives could not or should be used.

Fact pattern

- A3. Entity A is a machine manufacturer based in Region 1, that purchases electricity from the spot market in that region to meet its consumption if and when it arises (ie on-demand). To obtain access to renewable energy in the form of electricity and to fix the unit price per purchased MWh from the market, Entity A enters into a 25-year virtual power purchase agreement which qualifies as an NDE contract for difference with Wind Farm X, based in Region 2.
- A4. The NDE contract for difference requires net settlement of the difference between the fixed unit price specified in the contract and the market price based on the renewable electricity delivered by Wind Farm X to the market in Region 2. The contract is net settled in arrears based on actual amounts delivered by the windfarm to the local grid.
- A5. The entity wants to hedge the cash flow variability of future electricity purchases arising from changes in the market price of electricity in the market

Hedge accounting considerations

Hedged item—designation of a variable nominal amount

- A6. The hedged item is the entity's forecast electricity purchases in the market over the hedged term (being 25 years). Based on Entity A's current and past monthly electricity purchases, which are assumed to remain stable over the hedged term, the entity uses a probability-based assessment to determine whether the designated amount of electricity purchases is highly probable to occur each month.

- A7. However, Entity A's wants to only designate as the hedged item a variable nominal amount of the entity's highly probable monthly electricity purchases that is aligned to the variable nominal amount of electricity delivered by Wind Farm X.

Effectiveness of the hedging relationship

- A8. In assessing the effectiveness of the hedging relationship, Entity A assesses whether there is an economic relationship between the hedged item (being future electricity purchases) and the hedging instrument (being the NDE contract for difference). Although the entity's future electricity purchases occur in a different market than the one in which the nature-based electricity is delivered by Wind Farm X, there could be an economic relationship if there is an expectation that the value of the hedged item will systematically change in response to movements in underlyings that are economically related.
- A9. However, Entity A identifies as a potential source of ineffectiveness the basis risk in the market prices of electricity between Region 1 and Region 2.
- A10. The forecast purchase prices for designated future electricity purchases are determined by the expected future volume-weighted average price (for example a future baseload price) adjusted for the expected consumption profile of the entity for that period.
- A11. Similarly, the forecast prices for the volume expected to be delivered under the NDE contract for difference are determined by the expected future volume-weighted average price (for example a future baseload price) adjusted for the expected production profile of the entity for that period (for example using capture rates).

Measurement

- A12. The variable notional amount of both the hedged item and hedging instrument is based on the variable volume of nature-dependent electricity expected to be delivered by Wind Farm X. Therefore, Entity A uses the same volume assumptions it uses to measure the NDE contract for difference, to construct a hypothetical derivative to measure the hedged item. Despite the hypothetical derivative being based on the same variable volume than the hedging instrument, with regards to price assumptions,

it must reflect the structural price differences compared to the hedging instruments (ie the same methodology used for effectiveness assessment).

- A13. The hedged item is calibrated to market at a fair value of zero reflecting available market data on price. As a result, the entity calculates the swap rate as the fixed leg of the hypothetical derivative relating to the electricity price.
- A14. For the purposes of measuring ineffectiveness, Entity A adjusts the cash flow hedge reserve to the lower of:
- (a) the cumulative change in fair value (present value) of the hedged item from inception of the hedge; and
 - (b) the cumulative gain or loss on the hedging instrument from inception of the hedge.
- A15. These cumulative changes in value includes consideration of the actual settled amounts under the NDE contract for difference and can be determined based on volume of actual delivery of the electricity under the NDE contract for difference.

Appendix B—Example of volume weighted average pricing

The concept of capture rates

- B1. The capture rate measures the volume-weighted average price that power production asset can earn in comparison to the overall average electricity price for a given time period.
- B2. The capture rate effect becomes more pronounced in the countries where renewables make up a large share in the power mix and as wind- and solar capacity continues to expand.
- B3. The (forecasted) spot market price is the starting point in the evaluation of the long-term financial viability of renewable generation assets. The capture rate measures the volume-weighted average price that a power production asset (e.g. wind farm) can earn in comparison to the overall average electricity price for a given period. So, while average market prices provide a useful benchmark, it is the captured price that determines actual revenues which are available for repayment on debt and profits.
- B4. Capture rate calculation:

$$\begin{aligned}
 &\text{Average price earned by wind turbines per unit of electricity} = \frac{\text{Monthly income of the wind turbine sector. This is calculated as the hourly price in the market multiplied by the wind energy production during this hour. This is then summed across the month}}{\text{Monthly energy production from wind turbines}} \\
 &\quad \swarrow \\
 \text{Capture rate (\%)} &= \frac{\text{Average price earned by wind turbines per unit of electricity}}{\text{Average market price}} \times 100
 \end{aligned}$$

- B5. Several factors affect the capture rate:

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- (a) expansion of the physical electricity grid. Increased opportunities to trade across markets helps to avoid situations of local over-supply in one market and the subsequent low prices.
 - (b) new demand from hydrogen production facilities or heat pumps consuming electricity when the price is low all contribute to ensuring that prices and capture rates do not fall too low.
 - (c) storage facilities buying electricity when it is cheap and selling when it is expensive contribute to keeping capture rates from falling too low (and help to prevent prices from rising too high).
 - (d) regulation. Subsidising renewables within a given market leads to greater investments than the market would otherwise have witnessed. This can make capture rates fall to lower levels.
 - (e) local resource availability /weather conditions, e.g. sunlight in Spain or wind in the North Sea, can lead to lower capture rates. Yet, lower income per unit of electricity produced can be offset by a greater overall production volume.
 - (f) technological progress and declining Levelised Cost of Electricity reduces project costs and mitigates the effect of falling income.
- B6. Average market prices are available for example as baseload contracts (futures) in various time intervals (for example refer to [EEX Power Exchange](#)). Baseload as referred to in these futures represents a commitment to buy or sell a specific amount of power on a continuous basis during the term of the contract.
- B7. In effect the idea is to average out the volume of power delivery / consumption and multiply it with a base price for the average period used. For the same average period an adjustment factor (capture rate or similar) which represents an average price for that period is calculated representing either the demand or supply profile of the entity. That then can show the effect of price differences when using stable volumes.
- B8. Essentially the short-term mismatch in price and volume between delivery and consumption of electricity which is difficult to model due to its continuous and variable nature is aggregated to an average level to enable modeling.