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OFF-TAKER OF LAST RESORT ADVISORY GROUP PAPER 1 (BARINGA SUPPORTING PAPER A): IMPACT OF THE OLR MECHANISM ON THE WIDER PPA MARKET

Objective of the Paper

1. The first paper submitted to the OLR advisory group considers the manner of allocation of backstop PPAs. Central to all options presented in that paper is the use of existing (and potentially future) participants in the normal PPA market as providers of backstop PPAs.

2. In this way, a key risk that needs to be explored is the impact that the use of providers of PPAs to underwrite the OLR mechanism will have on the wider PPA market. This is the subject of this paper.

3. In particular, it considers the risk that ***the presence of the OLR mechanism could adversely impact the availability and/or terms on which PPA providers will be willing to provide PPAs in the open market.***

4. We consider the risk of three specific outcomes as follows.

    a. Firstly, does the existence of the OLR mechanism, in effect, set the floor in the market, with all offtakers "pricing down" to the discount in the backstop PPA?

    b. Secondly, could the ability to access greater margins in providing backstop PPAs incentivise a PPA provider to withdraw liquidity from the PPA market and "drive" a generator into the backstop?

    c. Finally, what is the risk that the use of suppliers as mandatory offtakers might reduce the capacity of these entities to offer PPAs to generators in the open market?

5. To the extent that material risks of market distortions are identified in each of these scenarios, we consider:

    a. the materiality of that risk; and

    b. any mitigating steps that could be taken in the way that the OLR mechanism is designed to eliminate or remove that risk.

Question 1 – "Flooring" to the market

6. One of the concerns with the OLR mechanism is that the pricing in the backstop PPA will, in effect, set the floor in the market, with all offtakers "pricing down to that level". We consider this question separately assuming both an uncompetitive and competitive wider PPA market.

Competitive PPA market

7. If the wider PPA market is competitive then pricing of PPAs will be cost reflective. As such:

a. If the competitively priced discount in the wider PPA market is lower than the discount in a generator's backstop PPA, then the generator will continue to contract in the open market and the OLR mechanism will have no impact (i.e. the generator is in the same position with or without the presence of the OLR mechanism).

b. If the competitively priced discount is higher than the discount in a generator's backstop PPA, then the generator will chose to trigger its backstop and will be left in a better position than it would have been without OLR.

Uncompetitive PPA market

8. If the wider PPA market is uncompetitive, then it is of course possible that a monopolistic PPA provider would price its PPA offer to any generator at a level just below the discount in the backstop PPA. This would be a rational strategy, as to price the discount higher than the backstop PPA would effectively mean that it would share all the profits between the real route-to-market cost (say, in this example, £6/MWh) and the backstop price (say, £12/MWh) with the rest of the market through levelisation (i.e. socialisation)[1].

9. However, while we concede that it is plausible that the backstop price could set the floor to the PPA market in this way, the important question to ask is whether generators would have been in a better or worse position without the backstop?

10. As such we need to determine the counterfactual or what would be the maximum discount charged by a monopolistic PPA provider in the absence of the OLR mechanism?

11. This counterfactual will be different depending on whether:

    a. We are considering a generator that is trying to secure a PPA prior to deciding to invest in the project (i.e. a "**Pre-FID generator**"); or

    b. We are considering a generator who has already made its investment decision to construct the plant and is now returning to the PPA market to replace either a PPA that has expired or a PPA that has been terminated for the insolvency of the original provider (i.e. a "**Post-FID generator**").

    We take each of these in turn.

[1] We note this assumed that the OLR mechanism does not over compensate backstop offtaker to the extent that this logic is distorted. This is discussed in paragraphs 16 and 17 below. In any event is only likely to affect consumers as generators will always still be able to reply on the backstop price

12. **Pre-FID generators**:

    a. The natural limit on the discount that would be charged by a monopolistic PPA provider to *any given* Pre-FID generator is the level of discount at which the return on capital for the project overall falls below the hurdle rate required for investors.[2]

    b. The higher the discount charged by the monopolistic offtaker, the lower the number of viable projects in the market (assuming a merit order of different projects from the most marginal to the most profitable).

    c. As such, the *optimum* PPA discount charged by a monopolistic PPA provider (i.e. the "**Maximum Viable Discount**") will be the price at which the offtaker thinks it can maximise the aggregate rents that can be extracted from the market as a whole - i.e. it will look to maximise the numbers of viable projects on the one hand while at the same time maximising the discount charged (and therefore rents extracted) on the other.

13. **Post FID generators:**

    a. The position is different for a Post-FID generator that has already sunk capital into the construction of the plant, but is now looking for a new replacement PPA from a monopolistic provider. This is because the project return is now irrelevant as a post-FID generator has no option to "walk away" and invest its money elsewhere - it is, in effect, a "price taker".

    b. As such, the theoretical limit on the discount that can be charged by a monopolistic PPA provider to a Post-FID generator is the level of discount at which the generator would be better off simply spilling into the system a receiving the system spill price for their output (the "**Spill Discount**").[3]

14. The key point to make here is that ***neither a Pre-FID generator nor a post FID generator is in a worse position than it would have been in this monopolistic scenario where the OLR mechanism is in place***. This is because:

    a. If either of the "Maximum Viable Discount" or the "Spill Discount" is *less than* the level of the discount in the Backstop PPA, the monopolistic PPA provider would offer the relevant generator the "Maximum Viable Discount" or the "Spill Discount" (as applicable) for the reasons set out in paragraphs 10 and 11 above. As such, neither generator is *in a worse position* than it would have been if the OLR had had not been in-place.

    b. If either of the "Maximum Viable Discount" or the "Spill Discount" is *greater than* the level of the discount in the Backstop PPA, the monopolistic PPA provider would offer the

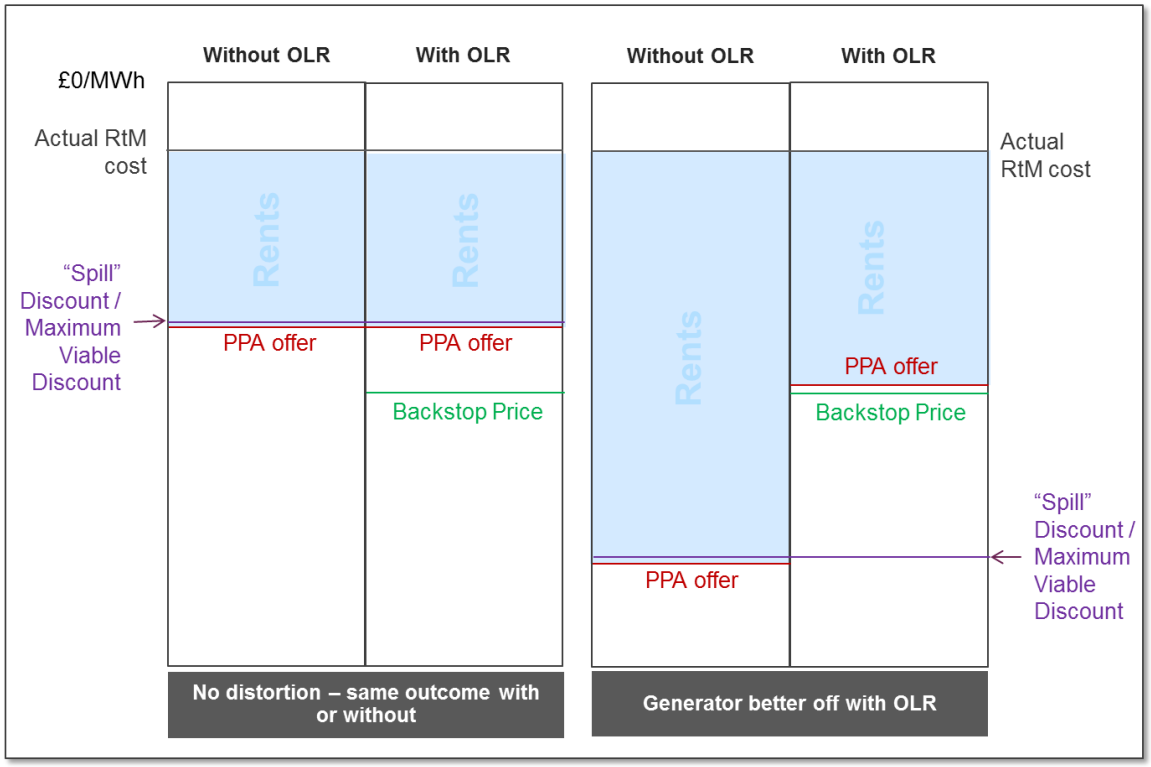
[2] Note this assumes that that the discount that represents the true cost to the offtaker is smaller than the discount that would give the required rate of return.

[3] The discount might be slightly higher for a generators that is not a party to the BSC as to enable it to receive the SSP it would need to register as a BSC party and post collateral in respect of its liabilities (which has a cost).

relevant generator a discount at just below the backstop price (for the reasons described in paragraph 8 above). As such, a Pre-FID generator *is in fact in a better position* than it would have been otherwise, as the Backstop PPA has in effect capped the rents that a monopolistic PPA provider can extract from the market.

15. We have illustrated this diagrammatically in Figure 1 below.

Figure 1: Impact of the OLR on PPA pricing in a monopolistic market



Question 2 – Impact on any incentives to withdraw liquidity from the open market

16. This section considers whether the ability to access greater margins in providing backstop PPAs might incentivise PPA providers (who are also potential backstop offtakers) to withdraw liquidity from the PPA market and "drive" a generator into the backstop where they can make those above-market returns.

17. The risk that a PPA provider may be able to access greater returns through the provision of backstop PPAs is a function of whether the OLR mechanism itself somehow over compensates that provider as backstop offtaker relative to the actual cost of doing so.

18. The materiality of this risk this differs depending on the form of allocation used:

    a. If backstop PPAs are allocated administratively, the regulated cost assessment process could over compensate a backstop PPA provider. However, this is unlikely to be material (as it is determined by Ofgem) and backstop PPAs are spread across the market

(therefore no PPA provider that is also a potential backstop offtaker can be sure of being allocated a generator);

b. If Backstop PPAs are competitively allocated, a backstop offtaker may be able to drive large rents if the competition for those contracts is low. This may be because there are significant structural barriers preventing wider PPA market participants from also offering backstop PPAs (discussed in more detail in Baringa Supporting Paper 1B).

19. However, even if there is a material risk that a backstop offtaker is able to access greater rents through the provision of backstop PPAs, the key question is whether that could somehow disadvantage generators relative to the counterfactual where the OLR did not exist at all. Again, as with question 1, we consider this question separately assuming both an uncompetitive and competitive wider PPA market.

Competitive PPA market

20. If the wider PPA market is competitive then, if any given backstop offtaker decided to withdraw liquidity from the market in the hope of making its returns in the provision of backstop PPAs, another PPA provider would presumably take its place and offer a competitively priced PPA at a discount the reflects the actual cost for providing that service (plus a margin).

21. If that competitively priced discount rises above the discount in a generator's backstop PPA, then the generators will presumably trigger its right to enter the OLR mechanism. If that results in the ability for backstop provider to make greater returns than would otherwise have been the case if there was no OLR, than this may drive up costs of the OLR scheme to consumers, but generators are unaffected.

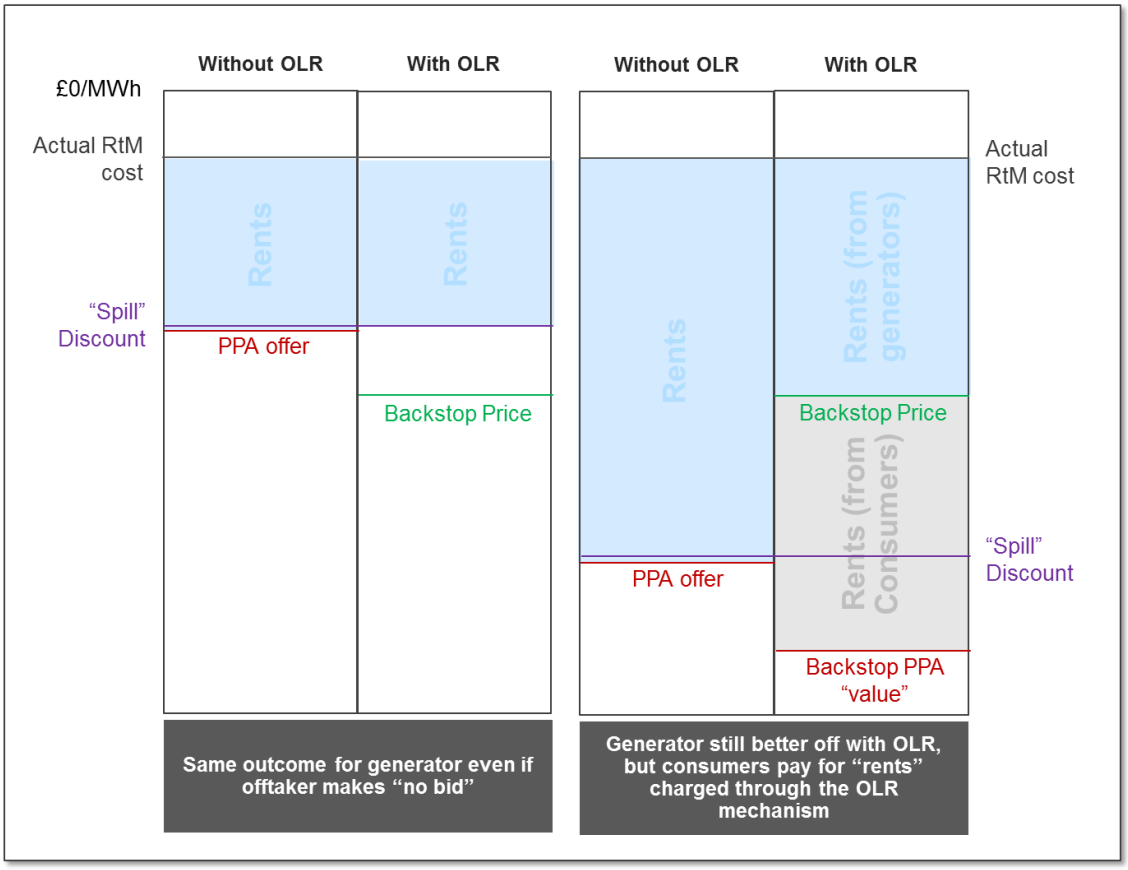
Uncompetitive market

22. If the underlying PPA market is actually uncompetitive, then a monopolistic provider who thought that it could drive a greater return in providing backstop PPAs could indeed withdraw liquidity from the market. However, this action could only actually force a generator into OLR where the discount implied by just spilling into the market is greater than the discount in the backstop PPA (i.e. as set out in paragraph 14b. above).

23. However, the important point to make here is to ask the question – would this generator have been worse off if the OLR did not exist at all? The answer is no given that if any PPA provider has sufficient market power to force a generator into the OLR mechanism in this way, then in a world without the OLR mechanism, it would have simply priced its PPA offer to the level of the spill anyway. Either way the generator is not worse off, it is just the consumer who is losing out by paying the backstop offtaker more for the provision of backstop PPAs than is actually required (or would have been charged in a scenario without the OLR).

24. This dynamic is set out in Figure 2 below.

Figure 2: Impact of the OLR on PPA pricing where a monopolistic provider is incentivised to withdraw liquidity from the market



Question 3 – Impact on the capacity of suppliers to offer PPAs

25. The section above considers the risk that the use of PPA market participants as backstop offtakers might affect their *appetite* to contract in the open market. This section asks the reverse – i.e. does it affect the *capacity* of these entities to provide PPAs to generators. In other words, will mandatory backstop offtakers need to "reserve" a certain amount of "PPA capacity" to protect against the risk that they will be required to enter into backstop PPAs?

26. Where backstop PPAs are allocated on a competitive basis, this is not likely to be a material concern as, even if suppliers over a certain size are required to bid in auctions (i.e. a "bidder of last resort"), prospective offtakers will be able to bid their actual costs of providing a backstop PPAs. As such, there is limited risk that a winning backstop offtaker will be required to offer a backstop PPA at a price that does not actually reflect its cost (or a reasonable estimate of its cost).[4]

27. In contrast, administrative allocation will specifically require suppliers over a certain size to enter into backstop PPAs (i.e. Mandatory Offtakers) and will compensate them using a regulated cost

[4] Assumes that the requirement to bid is at any price (i.e. there is no floor).

assessment which will estimate their likely costs of doing so. This has the potential to impact the business / balance sheet / credit rating of mandatory offtakers in the following ways:

a. If the tenors of the backstop PPAs being allocated to Mandatory Offtakers were sufficiently long to be treated by credit rating agencies as a long term liability that needs to be imputed onto their balance sheet for the purposes of determining credit ratings;

b. If the regulated cost assessment process is sufficiently uncertain or punitive that there is a risk that obligation to provide the backstop PPA will impose significant costs on Mandatory Offtakers that are not socialised; and

c. If there is significant uncertainty as to the likely "Backstop Burden" that any supplier might receive owing to a very "lumpy" potential supply of projects entering the scheme (e.g. a 10MW onshore wind farm or a 1.5GW offshore wind farm).

28. To the extent that these had a significant balance sheet impact then the use (or risk of the use) of the OLR mechanism could impact the capacity of these Mandatory Offtakers to be able to offer PPAs in the open market. Where suppliers continue to be significant players in the PPA market (as, arguably, they are today) this could adversely affect the terms and availability of PPAs to generators in the open market.

29. The materiality of these issues will need to be looked at more closely; however, potential mitigants in this regard include:

a. Firstly, the tenor of each backstop PPA could be restricted to 1 or 2 years (with an enduring right to a backstop PPA) and then re-allocated on a regular basis to minimise the impact on individual suppliers;

b. Secondly, Mandatory Offtakers could be allowed to back off their obligation to provide a backstop PPA to, for example, an aggregator who is better able to provide that service. That will ensure that suppliers are not facing the possibility of the differences between *their individual* costs of administering the Backstop PPA and the costs assumed in the cost assessment process. Rather they are absorbing the difference between the cost assessment assumptions and the "best in class" aggregator or PPA provider.

c. Thirdly, the regulated cost assessment should be carefully designed to ensure that it does not significantly under estimate the likely average cost of providing a RtM service to any eligible generator and that the basis on which that will be done is clear, transparent and not subject to significant uncertainty as to change. This will be explored more in Paper 4 (Longevity) and Paper 8 (Cost Assessment).

d. Thirdly, there may be merit in restricting the maximum size of generator that can access the OLR mechanism to "smooth" out the potential variances in "Backstop Burden". Alternatively, to the extent operationally or administratively possible, the output from large generators could be allocated to more than one Mandatory Offtaker through multiple backstop PPAs. This will be addressed in more detail in Paper 3 (Eligibility).