

## Market Coupling and Levy Exemption Certificates (LECs)

### RESPONSE IN RELATION TO OFGEM'S LEC TRADING CONSULTATION

Agder Energi is a generator located in Southern Norway (Agder Region). We are mainly a producer and investor in large and smaller scale hydroelectricity. Some of our stations in the latter category are accredited under the CCL, and have been issued LECs for a number of years.

Agder Energi underwent a comprehensive audit by Ofgem back in 2005. At that time all contractual evidence of power purchases over relevant exchanges from Norway (NordPool Spot) to the UK were documented. That particular audit, which differed in both scope and focus from the later Ofgem audits of several of our generating stations, did indeed draw our attention to ways of documenting auditable paper trails under various circumstances.

The circumstances have changed considerably since then. Exchanges have slowly been bundled throughout continental Europe and former explicitly auctioned border passages relevant to the 2005 audit are now integral to the coupled market. Furthermore, renewable source electricity in general has become more of a standardised commercial and legal commodity since then.

Agder Energi is therefore delighted to respond to this timely and highly important consultation.

In this response we:

- set out our view of the legislative context;
- highlight the changing market framework and what issues this raises for the LEC regime;
- identify the benefits of the LEC regime and hence the importance of ensuring the LEC regime is robust to these market developments;
- identify a range of potential solutions for Ofgem to consider across different future “states of the world”; and,
- finally, set out how this analysis applies to the specific consultation questions 1-3.

### ***Legislative context***

The CCL regulations state that a LEC should ‘represent electricity that is consumed or to be consumed in the UK’. Therefore the guiding principle for verification of international sources of LECs is ensuring there is reasonable proof of the physical flow of power from an accredited renewable generator into the UK market. This implies a certain degree of planning by generators to organise a contractual path for the flow of this power.

Prior to the implementation of market coupling over the GB interconnectors, proof of interconnector capacity to facilitate a physical power flow could be obtained via the purchase of a Physical Transmission Right (PTR). This proof should ideally include a statement that this right had not been resold. This enables a ‘clear audit trail to exist based on invoices and contracts’.

Under this “explicit” model of trade it is not possible for more LECs to be supplied into GB than there is interconnector capacity. Essentially the PTRs are a market wide cap. If there is more demand for interconnector capacity to transport LECs than there is interconnector capacity, the price of PTRs will be pushed up, passing some of the LEC value to the interconnector owner.

### ***The changing market framework***

The basis on which the validity of the contractual path is assessed may have to adapt depending on the evolution of the market framework for cross-border trade between GB and its neighbours. There are two important areas of change:

- **Movement away from PTRs** - the Forward Capacity Allocation (FCA) Network Code allows use of both PTRs and Financial Transmission Rights (FTRs). This creates the possibility of a move away from the use of PTRs on some interconnectors, with physical capacity allocated exclusively through implicit auctions.
- **Increases in ‘implicit’ trading** - market coupling over the GB interconnectors make it harder to create a contractual link between the physical power flow and specific renewable generators. As Ofgem states, ‘there is no specific flow of electricity across an interconnector linking the continent to GB that can be matched with a particular transaction’.

This could lead to a situation where multiple parties claim that they used implicitly auctioned capacity to transfer their LEC, potentially making it difficult for Ofgem to verify whether the interconnector capacity limit has been respected. This therefore raises the possibility that the UK taxpayer is foregoing tax revenue for LECs that bear no relation to the nomination of physical power.

This is therefore an important consultation for determining whether the LEC regime needs to evolve, and if so how it should evolve to maintain the integrity of the regime going forward. In particular, Ofgem will need to decide if nominations of physical power on the UK interconnectors are of central importance to future policy.

### ***Benefits of the LEC Regime***

We believe it is important for Ofgem to address these challenges. They are not insurmountable, and the benefits of the LEC regime are such, that Ofgem should take the necessary action to preserve the integrity of the LEC regime.

LEC trading is an important means for supporting renewables generation, and

hence is supporting European policy goals to continue increasing generation from renewable sources to 2030. Further it is based on the principle of renewables trading, which has been emphasised in the recent Guidelines on State aid for Environmental protection and Energy (2014). In other words, Member States, should allow participation in renewables support schemes by overseas generators, with the effect of developing projects and buying power from where it is cheapest to do so in Europe. This concept is likely to develop as the EU attempts to meet its renewables ambitions more cost-effectively. The existence of the LEC regime points to these benefits in principle.

LECs are the only way currently of demonstrating the supply of power from overseas to UK consumers. So maintaining the integrity of the regime will bring benefits not only to the LEC regime, but also to other non-CCL purposes. These were mentioned in the consultation and include FITs, Green Tariffs, Fuel Mix Disclosure and potentially CfDs. The options we go on to discuss in the context of LECs could potentially also be applied in each of these policy areas as well.

Finally, LECs also provide some direct benefit to commercial and industrial customers through an exemption from the CCL. Expanding the supply of LECs to include non-GB generation increases the number of businesses that can benefit.

## ***Solutions***

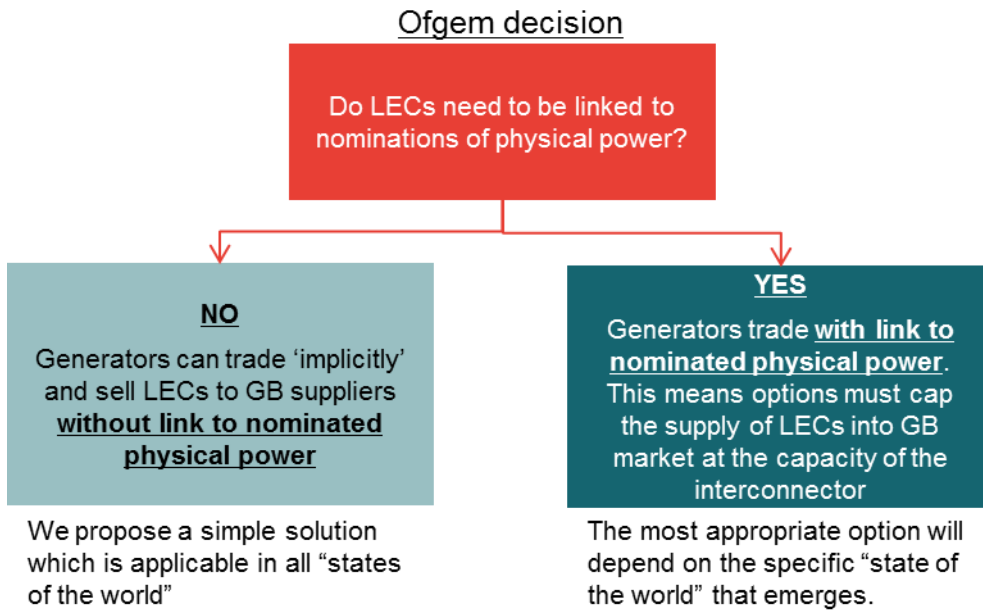
Ofgem has correctly identified the issues related to market coupling. In this section we identify the range of potential solutions for Ofgem to consider.

It is important that Ofgem provides certainty about the future of the LEC policy, as well as being very clear what the solution implies in terms of audit requirements. But this does not mean a single solution implemented now. We believe there are a range of potential solutions that might best apply in different situations. Therefore, it implies a more flexible approach in which Ofgem makes clear what it wants to achieve and how it will respond in different situations. This will provide participants with certainty as to the evolution of the regime however market coupling develops.

The appropriate solution will first, depend on Ofgem's view of the importance of linking LECs to the nomination of physical flows. And then potentially the particular "state of the world" that emerges. This is set out in a "decision tree" in

**Figure 1.**

Figure 1. Solutions “decision tree”



We think there are broadly three potential “states of the world” to consider. These could differ across time, but also across interconnectors. These are based around different potential applications of the FCA Network Code on GB borders. These are set out in **Table 1**.

**Table 1.** Alternative "states of the world"

“State of the world”	Description
<b>Full capacity PTRs</b>	PTRs continue to be made available up to the full capacity of interconnectors to GB, with only “non-nominated” PTR capacity being subject to implicit auctioning.
<b>Restricted capacity PTRs</b>	PTRs being made available up to a percentage of the capacity of interconnectors to GB, with the remainder being auctioned implicitly.
<b>Full implicit auctioning</b>	Implicit auctioning for all capacity on interconnectors to GB, with FTRs sold.

This consultation should therefore be about clarifying Ofgem’s preferences, identifying the possible states of the world, and designing solutions to match.

## **Solution without link to nominated physical power**

The simplest solution is for Ofgem to be content that, as implicitly traded power grows in importance, transactions do not need to be linked to a specific physical flow over the interconnector. Generators could therefore trade “implicitly” on the coupled exchange and sell their LECs to GB suppliers, as long as the supplier has also bought power from the same coupled market. This solution could be applied in each of the “states of the world” we have identified, as it relies on the availability of “implicit” trading options which are available in each of them.

In this solution, evidence of the contractual link between the generator and supplier should be sufficient. For example, non-GB generators could demonstrate a contractual link for the electricity corresponding to the LEC by showing that they sold a certain volume MWh into the coupled market, and had a contract with a GB supplier who is able to document a purchase of at least the same amount from the same market in any given month.

These types of contracts already exist and are used for trading LECs within other coupled European markets, including the Nordic market. This option would therefore simply be to extend the model for trading LECs within the rest of North West Europe to the GB border as well. And as a result, this solution fits with the extension of market coupling into the GB market.

The audit requirements for Ofgem would also be very clear and straightforward. For example, Ofgem would only need to see proof of trading on the coupled exchange anywhere in North West Europe, and a contract with a GB supplier confirming their equivalent trades on the same exchange. This would replace the more complex contractual chain that currently exists.

Further this model is more likely to leave more of the LEC value with renewable generators, which is the intention of the policy. This contrasts with the current situation where the majority of the LEC value ends up with the interconnector owner.

## **Solutions with link to nominated physical power**

If however, Ofgem is keen to maintain the link to physical power, then these types of contracts would not be sufficient. There is not a natural cap on their supply, raising the possibility that they will exceed the available interconnector capacity, removing the link to actual nomination of physical power.

Therefore, a solution to ration the supply of LECs to the capacity of the interconnector needs to be found. However, the choice of option should this be the case is more complicated.

We do not yet know the exact nature of the future market framework for trading over each interconnector to GB, and the approach taken to overseas LEC validation, will need to be tailored to the specific “state of the world” in which we

find ourselves.

## **Full capacity PTRs**

In this state of the world, there remains a route for generators to trade “explicit” power, through the purchase of a PTR. And given there are PTRs available for the full capacity of the interconnector, it could be reasonable for Ofgem to only consider “explicitly” nominated power for the purposes of LECs.

If Ofgem opted to do this, then trading parties would still be able to exploit all of the interconnector capacity. Ofgem would have confidence that LEC trades are limited to the physical capacity of the interconnector, thereby maintaining the link to the nominated physical power.

This is also simple as it requires no changes to the established LEC regime and auditing requirements; and because it is based on PTRs, it is consistent with the framework for cross-border trade. It is also efficient since if there is excess demand, prices of PTRs will rise passing some of the value of the LEC to the interconnector.

In the event that not all of the PTRs available in any given half hour were purchased and nominated, then spare capacity for energy would be made available to the day ahead and intra-day market coupling. We would not propose accounting for any LEC trading of “implicit” power in this scenario, with the total quantity of LECs remaining below the capacity of the interconnector.

## **Restricted capacity PTRs**

In this state of the world, solutions need to be found to account for both “implicitly” and “explicitly” traded power. Otherwise, the restriction on the quantity of PTRs effectively becomes an excessively tight cap on the trade of LECs from non-GB sources, limiting the benefits to trade from the LEC scheme.

Therefore Ofgem needs to design a solution for “implicitly” traded power to sit alongside the established method for “explicitly” traded power.

There are a number of ways in which Ofgem could consider rationing the supply of LECs in this scenario. For example, an auction could be conducted by the interconnector, for an explicit right to sell a LEC to a GB supplier. So for example, all renewable non-GB generators who plan to produce during the half-hour could participate in an ex ante auction to secure this right.

However, while this could be efficient, this requires the setting up and monitoring of a new auction simply for LEC capacity, which could be viewed as a significant intervention, out of line with the scale of the problem.

A simpler solution would be to allow implicitly auctioned capacity to be allocated (purely for LEC trading purposes) to PTR holders pro-rate to their PTR holding. For example, if PTRs were available for only 80% of the interconnector capacity, then the remaining 20% would be allocated to the holders of the PTRs. In this

scenario this would mean that the purchase of a 1MW PTR would provide the physical right to flow 1MW of energy, but 1.25MW of LECs. This in effect allows non-GB generators to trade a combination of “explicit” and “implicit” power, but Ofgem can be assured that the total supply of LECs does not exceed the capacity of the interconnector.

This is extremely simple to implement, and does not require any changes to the PTR market. When auditing the contractual chain, Ofgem simply need to see sufficient PTRs as a proportion of the LECs, to equal the same proportion available on the interconnector as a whole. So in the example above, a generator would need to produce enough PTRs to cover 80% of their LECs.

As well as its simplicity, the solution is efficient. We would expect the value of the PTRs to increase to take these pro-rate rights into account. And it is also consistent with the grain of the existing market, reinforcing the importance of PTRs.

### **Full implicit auctioning**

If all capacity was auctioned implicitly at the day ahead stage, the draft FCA Network Code would most likely require the creation of FTRs. This is the model currently preferred in Ireland for I-SEM. In this world there is no longer a viable solution involving PTRs.

In the same way as set out above, there is the option for a separate capacity auctioning process just for LECs. This time it would be for the full capacity of the interconnector rather than the share of capacity reserved for the market coupling auction. However, we believe that FTRs offer the basis of a simpler solution.

FTRs are not a legal right to flow power over the interconnector. They are a right to a share of the congestion rent resulting from a physical flow. However, while there is a legal distinction between the PTR and FTR, from the perspective of a generator’s revenues they amount to the same thing. In other words, both contracts allow the non-GB generator to sell power and effectively receive the GB price for that power. In the case of the FTR this is achieved because the non-GB generator receives the local price, plus or minus a payment from the FTR, the combined total of which is the GB price. And importantly, in the context of LECs FTRs are capped at the total capacity of the interconnector.

Therefore, an alternate administrative approach could be to consider that each FTR is an indication of the intent to sell power in GB at the GB price, for the purposes of LEC trading. The commercial outcome for the generator is as if they had bought a similar volume of PTRs, flowed power to GB, and sold the power there.

While the FTR is not an explicit right, the total quantity of FTRs cannot exceed the interconnector capacity. This is a simple method, consistent with the prevailing market arrangements and preventing the need for new complex



auctions to be created. The FTR price will also adjust according to LEC demand as is currently the case with PTRs.

## Solutions summary

A summary of our proposed menu of solutions is set out in **Feil! Fant ikke referanseilden..**

**Table 2.** Overview of solutions

State of the world	Solution without link to nominated physical power	Solutions with link to nominated physical power
<b>Full capacity PTRs</b>	Generators trade “implicitly” on the coupled exchange and sell their LECs to GB suppliers, as long as the supplier has also bought power from the same coupled market.	“Explicit” power traded only. Renewable generators are required to purchase and nominate capacity using PTRs.
<b>Restricted capacity PTRs</b>	This is demonstrated through a contract between renewable generator and GB supplier.	PTRs pro-rated so that their purchase is also necessary to cover the capacity reserved for the implicit market coupling auctions.
<b>Full implicit auctioning</b>		Renewable generators purchase FTRs alongside participation in the market coupling auction.

## Response to consultation questions

In response to the specific consultation questions:

**Question 1: Where renewable electricity is traded implicitly across coupled markets, is it possible to evidence the electricity is consumed (or to be consumed) in the UK? Please explain your answer.**

Yes it is possible. However, there are a range of potential solutions. These will first, depend on Ofgem’s view of the importance of linking LECs to the nomination of physical flows. And then potentially the particular “state of the



world” that emerges.

Should Ofgem be content that transactions do not need to be linked to a specific MWh of explicitly nominated power over the interconnector, then generators can demonstrate a contractual link. For example, by showing that they sold a certain level MW into the coupled market and had a contract with a GB supplier who committed to buy at least the same amount from the same market in any given month of generation.

This is the simplest solution for Ofgem. It fits with the current way LECs are traded across borders within the North West Europe coupled markets, and simply extends that model to the GB border. The audit requirements would be simple and straightforward, and most of the LEC value would remain with the renewable generator instead of the interconnector owner, which is the intention of the policy.

However, there is not a natural cap on the supply of these contracts, leading to the possibility that they exceed the available interconnector capacity. Should Ofgem consider it important that a link is maintained to actual nominations or physical properties of actual power connections, the key question is what mechanism can be put in place to ensure the quantity of LECs does not exceed the capacity of the interconnector?

In this situation, we have set out three options that fit with the different potential states of the world we have identified. In each state of the world, there is some level of “implicitly” traded power. The options differ based on the proportion of interconnector capacity that is able to be purchased using PTRs. We summarise the options in **Feil! Fant ikke referansekinden.** above, and also provide a detailed explanation of the rationale for them. In each of these options, the requirement to ration the supply of LECs in GB will result in more of the LEC value remaining with the interconnector owners, rather than the generators.

**Question 2: What evidence might generators use to demonstrate that an overseas LEC represents electricity that is consumed or is to be consumed in the UK when that electricity has been traded implicitly across coupled markets?**

See answer to question 1.

**Question 3: Are stakeholders aware of any reasons for limiting the issue of overseas LECs to electricity that has been or is to be explicitly traded? Please explain your answer.**

If Ofgem considers it important that a link is maintained between the LEC and nominated physical power, then a solution to ensure the quantity of LECs does not exceed the capacity of the interconnector must be found. However, we do not believe this means that only explicitly traded power should be allowed.

We have set out one state of the world above where it could make sense to limit LECs to explicitly nominated and traded physical power i.e. a world where there are still sufficient PTRs for the full capacity of the interconnector. However, at the other extreme, we have also set out ways of trading LECs where implicitly traded power is the only option.

In “states of the world” where there are insufficient PTRs available for the full capacity of the interconnector, a restriction to only trade LECs “explicitly” will limit the release of interconnector capacity for LEC trading. And in doing so, important benefits associated with LEC trading will be lost. These are set out in more detail above.