On 25 March 2020, Great Britain’s national regulatory authority (NRA) Ofgem issued a Decision to sanction InterGen (UK) Ltd ('InterGen'), Coryton Energy Company Ltd ('Coryton'), Rocksavage Power Company Ltd ('Rocksavage') and Spalding Energy Company Ltd ('Spalding') for breaching Article 5 of REMIT in the form of deception and dissemination of information which gave, or was likely to give, false or misleading signals to the UK electricity balancing markets.

Coryton, Rocksavage and Spalding are each the holders of an Electricity Generation Licence. InterGen is the administrative agent for the three licensees and provides market access for the licensees’ power stations. Importantly, InterGen employs energy traders who sell the plants’ power and dispatch them. Throughout this article, ‘InterGen’ collectively refers to InterGen, Coryton, Rocksavage and Spalding.

Market participants generating electricity in the UK are required to submit to National Grid, the transmission system operator for electricity (‘TSO’), the following:

- Physical notifications that inform the TSO whether or not a power plant will generate electricity over an interval of time (‘physical notifications’).
- Power plants’ operational characteristics, i.e. the minimum level at which a power station can, under stable conditions, generate electricity and place it on the wholesale market (‘dynamic parameters’).

The data submitted by electricity generators like InterGen is crucial to enabling the TSO to balance supply and demand, maintaining the security of UK’s energy supply and ensuring the lights stay on.

Ofgem’s investigation focused on InterGen’s behaviour on the UK balancing market during four days of winter 2016, i.e. 31 October, 7 November, 8 November and 15 November 2016. At the time of the market abuse, the margins between electricity supply and demand were very tight, signalling a potential shortage. The misleading signals provided by InterGen...
staff made margins appear even tighter and incentivised the TSO to spend money in the balancing mechanism that it did not actually need to. As a result of the misleading information provided by InterGen staff, the TSO paid the company high prices to generate electricity during those hours.

On each of the four days, InterGen’s behaviour may be summarised as follows:

- InterGen would send physical notifications to the TSO stating that one or more of their power plants would not be running for the remainder of the day, i.e. they indicated that InterGen would not be generating during the high-demand periods from around 17:00 to 19:00 (the ‘darkness peak’) in order to induce the TSO to pay them to generate. InterGen’s traders would usually submit these physical notifications between 07:00 and 11:30, typically indicating that the plants would not be producing any power from 12:00 until the end of the day. InterGen staff referred to this tactic as ‘dropping’ or ‘pulling the PN’.

- The information that InterGen provided to the TSO, which stated that their power plants would not be generating on the days in question, was false and misleading. InterGen intended for the power plants to generate electricity on those days, and had separate contractual commitments to provide electricity on the days in question, which could be satisfied by either generating or delivering electricity that they had purchased in the market.

Although InterGen took some steps, both before and after the relevant physical notification being ‘pulled’, to purchase electricity in the market to meet their contractual commitments, InterGen did not purchase sufficient volumes of electricity to meet these contractual commitments in full. In particular, InterGen did not purchase electricity to meet their obligations at the darkness peak.

InterGen staff knew, or ought to have known, that, due to the high prices in the within-day market, they would not be able to purchase sufficient electricity to meet their contractual obligations at the darkness peak. In other words, they needed to generate electricity to meet those commitments despite their original statements to the TSO that they would not generate. The submission of misleading physical notifications led to the manipulation of the market, from which InterGen derived profits.

- Anytime a breach occurred, at least one of the InterGen plants was extended/offered on by the TSO from 12:00 until the darkness peak or just before it. In other words, the TSO paid the plants money to produce power at their minimum level in a way that they will be available to generate at the darkness peak. InterGen disseminated false or misleading data about their supply of power for the darkness peak in order to be ‘extended on’ (i.e. paid to generate) during the day, in particular during the hours leading up to the darkness peak, for large sums of money in the balancing mechanism.

- From 13:30 - 15:30, generally once an offer had been secured from the TSO in the Balancing Mechanism to generate up until the darkness peak, and having failed to purchase electricity to satisfy its pre-existing commitments in the darkness peak, InterGen’s traders would then submit updated physical notifications showing that the plants would be running for the darkness peak and for the rest of the day.

- To boost profits even further, on several occasions InterGen’s staff increased the dynamic parameters reporting the minimum level at which a power station can, under stable conditions, generate electricity and inject it into the wholesale market. InterGen did so only to ensure that the TSO had to buy more power from InterGen’s plants at the misleading ‘minimum level’.

Article 5 of REMIT states that ‘any engagement in, or attempt to engage in, market manipulation on wholesale energy markets shall be prohibited’.

According to Ofgem’s investigation, InterGen engaged in market manipulation as defined in Article (2)(2)(a)(ii) and (2)(b) by entering into transactions and issuing orders to trade wholesale energy products which:

- employed, or attempted to employ, a fictitious device or any other form of deception or contrivance which gave, or was likely to give, false or misleading signals regarding the supply of, demand for, or price of wholesale energy products; and/or

- disseminated information which gave, or was likely to give, false or misleading signals as to the supply of, demand for, or price of wholesale energy products, where the disseminating person knew, or ought to have known, that the information was false or misleading.

In addition to the REMIT breach, Ofgem concluded that InterGen’s behaviour also breached the standard licence condition of their Electricity Generation Licence because they submitted dynamic parameters that did not reflect their true operating characteristics and failed to use reasonable endeavours to ensure that the data held by the TSO was accurate at all times.

InterGen agreed to pay the restitution payment of GBP 12,791,000 (approx. EUR 14.6 million) to recompense the losses suffered by the parties affected by their REMIT breach during the four days of their market manipulation.

In addition to the restitution payment, Ofgem also determined that the breach of Article 5 of REMIT warranted a penalty of GBP 35,000,000 (approx. EUR 39.9 million). Considering that InterGen admitted to breaching Article 5 of REMIT and agreed to settle this matter during the early settlement window, Ofgem discounted the penalty by 30% in accordance with their REMIT Penalties Statement. Accordingly, the penalty was reduced to GBP 24,500,000 (approx. EUR 27.9 million).
In total, InterGen was required to pay the financial sanction in the amount of GBP 37,291,000 (approx. EUR 42.5 million).

ACER believes this type of breaches of REMIT can easily undermine the transparency and integrity of wholesale energy markets. They have a direct impact on the final consumers, as the undue profit taken by the electricity producers is covered by the electricity bills of the final consumers. Ofgem’s sanction decision under REMIT sends out a clear message and importantly contributes to the good functioning, transparency and fair performance of wholesale energy markets.

ACER’s Guidance provides examples of the various types of trading practices which could constitute market manipulation through deception or dissemination of false and misleading information under REMIT. More information on market manipulation through deception or dissemination of false and misleading information can be found in the ACER Guidance.

Hungarian energy regulator sanctions market manipulation in ascending clock auction

The integrity of trading cross-border gas pipeline capacity is key to maintaining the security of supply. The Hungarian regulator has put structural measures in place and imposed a REMIT fine on manipulative behaviour.

In the first half of 2019, MEKH – the Hungarian NRA for energy – observed that some of the long-term gas transmission capacity auctions on the Hungary–Ukraine border resulted in the allocation of only a fraction of the available capacity, despite an apparent strong demand. In some instances, the unusual market outcome was related to a special bidding pattern that misused the market rules of these types of auctions2 (see textbox).

### Ascending clock auctions: long-term gas transmission capacity allocation in the EU

Harmonised rules offering equal access to gas transmission grids foster cross-border competition between suppliers from inside and outside the Union. Scarce yearly, quarterly and monthly gas transmission capacities are allocated via the ascending clock auctions. At these auctions, network users bid export or import quantities for the relevant interconnection starting at the reserve price. The auction price ticks up at regular intervals with the so-called ‘large price steps’. After each bidding round, the demand is published in an aggregated form. When the aggregate demand is lesser than the offered capacity, a new bidding phase is opened. Now, the price ticks up in ‘small price steps’ to find the final equilibrium price between the second-to-last and the last large price step.

The Ukrainian interconnection is the main gas import route to Hungary. It is capable of supplying all of the Hungarian households’ demand and is therefore key to maintaining the security of supply. Moreover, during the period under assessment, the negotiations for a new transit deal for Russian gas to Europe – via Ukraine’s gas transportation system – were underway; however some media reports speculated that the talks could fail3. As a result, demand was expected to soar in Hungary, as market participants started stockpiling gas by filling storages in anticipation of a possible non-renewal of the transit deal.

MEKH analysed the auction for the 2019/2020 annual gas transportation capacity product from Ukraine to Hungary4, and found that, due to the substantial demand, the price went up by 11% in subsequent bidding rounds, but only a fraction of the total offered capacity was allocated at the end. A market participant submitted bids for the total offered capacity up to a price level where most of the other interested network users exited the auction. At the end, the high bidder also exited the auction, leaving high prices and a low level of allocated capacities behind.

In particular, MEKH concluded that Valahia Gas SRL (‘Valahia’) bid for more than 99% of the 15 GWh/h/year capacity offered in the initial round. The aggregate demand together with the other bids meant that the next round was initiated with a higher price. Valahia kept on bidding for 99% of the capacity in the second bidding round, while some of the other bidders quit the auction. In the third round, Valahia quit as well; as a result, the aggregate demand fell well below the offer and, in the small price step phase, the auction ended with only around 1% of the capacity allocated.

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2 Source of the article: Ascending clock auctions are held according to the network code on capacity allocation mechanisms in gas transmission systems (Commission Regulation (EU) 2017/459).


When the Hungarian NRA inquired about Valahia’s bidding behaviour at the auction, Valahia explained that they had mistaken the unit of measurement when bidding. MEKH pointed out that unit of measurement is the same for all long-term auctions on all borders in Hungary and that the same person at Valahia who bid at the aforementioned auction bid correctly at all other auctions (using the same bidding unit) that took place on the same day. As a result of Valahia’s actions, some market participants paid a higher price and some could not buy any capacity even though there was still supply available at the end of the auction. Without Valahia’s bids, the auction would have closed at a lower price level with more capacity allocated.

According to MEKH, while the possibility of an error cannot be excluded, Valahia’s behaviour – irrespective of their intention – was likely to send misleading signals as to the demand for the yearly capacity product and meets the definition of market manipulation according to Article 2(2) a(i) of REMIT. Taking into account the lack of prior procedures against Valahia, MEKH issued a fine of HUF 30 million (approximately EUR 90,000).

As similar market results also appeared at other capacity auctions – in parallel to the REMIT investigation – MEKH decided to implement structural remedies to ensure an efficient outcome of the capacity auctions at the Hungary–Ukraine border. According to the Network Code on Capacity Allocation Mechanisms Article 2(6) of Commission Regulation (EU) 2017/459, NRAs may, after consulting network users, decide to take proportionate measures to limit upfront bidding for capacity by any single network user. Following a public consultation, MEKH imposed a bid restriction so that network users cannot submit bids with a volume larger than 75% of the offered capacities at the HU/UA entry and exit interconnection points.

Any disruption in the proper functioning of the long-term capacity allocation may have potential consequences for the security of supply, especially in the case of such an important import route. The REMIT Regulation remains an important tool in the toolbox of NRAs to contribute to the security of supply by maintaining the integrity and transparency of the allocation of scarce gas transmission capacities. In this instance, the Hungarian NRA chose to employ both a structural remedy in the form of a bid restriction, as well as a targeted approach in the form of a REMIT sanction for market manipulation.

251 REMIT breach cases under review at the end of the third quarter

ACER had 251 REMIT cases under review at the end of Q3 2020. REMIT cases are potential breaches of REMIT that are either notified to ACER by external entities or identified by ACER through its surveillance activities.

A case could, after a thorough investigation by the relevant national authority, lead to sanctions. A case could also be closed without sanctions, for instance if the suspicions were unfounded.

Figure 1 shows the number of cases that were under review by ACER at the end of Q3 2020.

Table 1 lists the cases where a Decision imposing a sanction was issued by the relevant national authority in the last four quarters. Some of these Decisions are currently under appeal. An overview of all market abuse Decisions (breaches of Articles 3 and 5) imposing sanctions can be found here.

ACER is responsible for the monitoring of wholesale energy markets and aims to ensure that national regulatory authorities carry out their tasks in a coordinated and consistent way, but it is not, however, responsible for the investigation of potential breaches of REMIT.
Hydrogen - a new energy wholesale market

Introduction

Hydrogen is expected to play a substantial role in the decarbonisation of the European energy sector by offering an alternative for energy transportation and storage. The EU Commission has recently published a roadmap on how to increase the use of hydrogen over the next decades, which could – according to several Member States – secure Europe's position as a front runner in innovation, industrial competitiveness and decarbonisation. In addition, the German Ministry of Economic Affairs and Energy and the French Ministry for Ecological and Solidarity Transition have both published long-term strategies for hydrogen on a national level.

Note: Article 18 of REMIT establishes that the rules on penalties for breaches of Article 3 and 5 of REMIT are established by the Member States. The implementation regime is therefore different across Member States and some breaches of REMIT may be sanctioned under national provisions. Please consult the sources for the status of the proceedings and more information on the Decisions.

* This amount includes both the (i) fine and (ii) confiscated profit.

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8 A hydrogen strategy for a climate-neutral Europe (published on 8 July 2020).
9 See the ‘Joint Political Declaration’ of the Pentalateral Energy Forum.
10 ‘The national hydrogen strategy’ published by the BMWi (June 2020).
The goal of the article is to address the challenges of the increased integration of hydrogen in the EU wholesale energy market, with a focus on the regulatory perspective. This article does not delve into the advantages hydrogen could have in order to complement renewable electricity production, nor does it describe technical aspects related to the production and utilisation of hydrogen.

**State of play**

According to an IEA publication, hydrogen is currently mainly produced by the reformation of natural gas and is almost exclusively used for industrial processes, namely refining and fertiliser production. As such, hydrogen currently cannot be characterised as a wholesale energy product, as its main use is industrial and therefore not related to wholesale energy markets.

**What to expect in the coming years?**

EU Commission’s hydrogen strategy for a climate-neutral Europe has a strong focus on the integration of hydrogen in the energy sector. There are detailed targets for hydrogen produced through electrolysis from renewable energy: 6 GW of renewable hydrogen electrolyser capacity by 2024, 40 GW by 2030 in the EU, and an additional 40 GW by 2030 in ‘Europe’s neighbourhood’ with the potential to export the hydrogen to the EU. For the early phase lasting until 2024, the recommendation is to install electrolysers next to existing demand centres (refineries, chemical production), which would initially result in rather local markets for hydrogen.

The target of 40 GW of hydrogen production capacity by 2030 would translate into a yearly hydrogen production of approximately 110 TWh. With an electrolysis capacity of 40 GW, which, in comparison, significantly exceeds the installed off-shore wind power capacity in the EU in 2019, hydrogen would very likely play a significant role as a daily or seasonal storage for the European electricity system.

**Hydrogen market structure terminology**

To better demonstrate the value chain for the future hydrogen market and its interaction with wholesale electricity and natural gas markets, the ‘traditional’ oil and gas terms ‘upstream’, ‘midstream’ and ‘downstream’ can be loosely extrapolated, for strictly illustrative purposes, in the following way:

**Upstream**

Used to describe everything that has to do with exploration and production of oil and gas. Applying this to hydrogen, it covers mainly:
1. production by electrolysis
2. production by reforming of natural gas

**Midstream**

Covers all aspects of trading and storage before refining. The same would apply to hydrogen:
3. trading
4. storage
5. transportation

**Downstream**

The downstream includes all processes turning crude oil and natural gas into final, consumable products. For hydrogen this last stage covers:
6. electricity generation
7. industrial processes
8. transport / mobility
9. application on household level

**Interplay with wholesale electricity and natural gas markets**

On the upstream level, the main interaction between a potential hydrogen wholesale market and electricity and natural gas wholesale market is that hydrogen production is a form of consumption of electricity (electrolysis) and of natural gas (reforming). For electrolysis production, there could be a differentiation in whether the electricity used emanated from emission-free sources (green hydrogen) or not. This could lead to a market for green certificates, similar to the existing market for green electricity certificates in some EU member states.

On the midstream level, synergies between natural gas and hydrogen concerning pipeline and storage infrastructure are expected. Hydrogen could be blended to some extent with natural gas (up to 20% of the volume could be hydrogen) and transported in the existing natural gas pipeline system. In the ambitious scenario elaborated by the EU Commission which foresees 110 TWh of hydrogen produced through electrolysis by 2030, the Commission’s objective is to have primarily a pure hydrogen network.

The trading of hydrogen could generate many synergies and interdependencies with wholesale electricity and natural gas markets. As an example, low or even negative electricity wholesale prices due to high availability of renewable energy could trigger an increased hydrogen production through electrolysis. In the first phase of the EU hydrogen strategic
plan until 2024, local hydrogen markets could be established. In the second phase until 2030, the increased hydrogen volume and the envisaged hydrogen import capacity could lead to a European network and create the need to develop an EU wholesale market in order to create correct and reliable price signals for the most efficient use of hydrogen and optimal cross-border flows.

The use of hydrogen for electricity generation could result in the creation of new wholesale products, directly linking hydrogen to electricity similar to clean spark spreads (which link electricity to natural gas), while the possibility to create hydrogen from natural gas could be used to link hydrogen wholesale products to natural gas wholesale products similar to crack spreads (which link crude oil to oil refinery products).

On the downstream level, the application of hydrogen for electricity generation has a direct link to wholesale electricity markets as electricity is generated. In case hydrogen is used at household level, this would necessitate a distribution system to the end customer and the market structure could become quite similar to electricity and natural gas retail markets. Such a scenario is likely to be affected by the potential availability of private, hydrogen-propelled cars.

The need for an accessible hydrogen market

The German Ministry of Economic Affairs and Energy sees the establishment of a strong market as one of the first steps to speed up the rollout of hydrogen20, arguing that a strong and reliable wholesale market for hydrogen would be an important signal to use hydrogen technology in order to make it projectable.

In case no wholesale market is established, the most logical business model for integrating hydrogen in the energy sector would be a fully integrated business model. This would mean that electrolysis production, hydrogen transportation and electricity generation from hydrogen would be operated by the same company without commercial transactions for hydrogen among different market participants. ACER believes that an advantage of a well-functioning wholesale market for hydrogen would be allowing companies to specialise in certain parts of the hydrogen value chain and trade their respective hydrogen exposure. For instance, a sales company which offers hydrogen to household clients could rely on the wholesale hydrogen market for the sourcing of hydrogen. In the event that the wholesale market develops a reasonable liquidity and time frame, this would make hydrogen investments much easier to project.

The need for a fair and transparent hydrogen market

A hydrogen market can only be successful if market participants have trust in the integrity and transparency of such a market. This would facilitate the generation a sufficient level of liquidity to ensure its successful functioning and the previously detailed outcomes. It would therefore be reasonable to establish an effective and efficient monitoring regime for hydrogen along with other regulatory prerequisites, such as non-discriminatory access to the hydrogen infrastructure for third parties to prevent the hydrogen grid from becoming a natural monopoly, which is likely to be the case in the second or third phase of the Commission’s strategy. While REMIT provides for a sector specific monitoring regime that could be extended to hydrogen, additional preparation is required.

If the development of the market is governed by the kind of dynamic that is predicted by the different strategy papers and roadmaps quoted in the introduction of this article, then the wholesale market for hydrogen would – just as the existing markets for gas and electricity – become an ‘energy wholesale market’ per se, as defined in Article 2(6) of REMIT.

The full-scale application of REMIT to hydrogen will become necessary by the second half of the current decade, i.e. during the second phase of the Commission’s strategy, and will include the reporting of hydrogen wholesale trades and orders to ACER, similarly to electricity and natural gas. Due to the expected high interdependencies with gas and electricity markets, an integrated approach to the surveillance and monitoring of these markets will be both the most effective and the most cost-efficient solution.

Conclusion and future steps

As a next step, the EU Commission will publish an impact assessment for the design of a regulatory framework on hydrogen21. Based on the outcome of this assessment, ACER will – in cooperation with the NRAs – launch a process which will determine the extent to which legal provisions will need to be adapted or further specified in order to provide the proper regulatory framework for the hydrogen wholesale market. In case market supervision that is applied to the hydrogen wholesale market under REMIT is similar to the one used for electricity and natural gas, ACER will start to prepare a consultation process on how to report wholesale hydrogen trades. Taking into account the experience with implementing REMIT reporting for the electricity and gas wholesale markets, it may take up to several years before actual reporting starts.

20 See ‘The national hydrogen strategy’ published by the BMWI, page 5.
Updates of REMIT documentation

New EICs reporting form now available

On 16 September 2020, a new EICs reporting form became available on the REMIT Portal. The form makes it possible for any stakeholder to i) request the inclusion of a new EIC code on the published List of accepted EIC codes, ii) ask for the delisting of a code, or iii) map a previously reported code with another one already included in the list. Any requests for the modification of the Accepted EIC codes list should be submitted via the new EICs reporting form.

Annex VI of TRUM has also been updated in order to include the link to the new EICs reporting form.

Access the new EICs reporting form here.

Update of the List of accepted EIC codes

On 30 September 2020, the quarterly update of the List of accepted EIC codes was published on the REMIT Portal. A total of 6 EIC codes that are no longer active have been delisted. Access the latest List of accepted EIC codes here.

The next update of the List of accepted EIC codes will occur in December 2020. The involved parties are invited to check the Annex VI of TRUM before submitting their requests, and to make sure to submit their requests for the inclusion of new codes in the List of accepted EIC codes no later than two weeks before the end of a quarter. Late requests will be considered for the next planned quarterly publication.

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