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For the attention of: Mr. President, Asst. Prof. A. Dagoumas

Copy

IPTO (ADMIE)
Dirachiou 89 & Kifisou,
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For the attention of: President & Managing Director, Dr. M. Manousakis

Prot. No.: 627
Athens, 30.08.2021

SUBJECT: Consultation on the design principles for the distinction between balancing energy and energy due to redispatching

Mr. President,

With this letter we submit the comments of our Association with regards to the Public Consultation of the Greek Regulatory Authority for Energy (RAE) on the design principles for the distinction between balancing energy and energy due to redispatching**.** Our comments have been prepared with the assistance of DFC Economics.

Our comments are presented in the format of a note which is structured in two sections: in section 1 we discuss the merit of the measures proposed by ADMIE, in the light of economic theory and the international experience. In section 2 we discuss implementation issues.

In a nutshell, please note that HAIPP strongly disagrees with the implementation of the proposed methodology since it misinterprets two important regulatory principles. The first one refers to the energy labeled/ flagged as re-dispatching. The second one refers to the priority provided in satisfying balancing instead of system constraints.

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Section 1: The opportunity of purpose-based remuneration of balancing energy bids and offers in the context of a centralised dispatch model

The Consultation document does not clarify what are the objectives pursued through the proposed measure, nor the flaws in the current design that the measure is meant to address.

Having noted the above, we identify the following objectives that ADMIE is intending to pursue with the proposed measures:

(a) Preventing imbalance prices from being affected by the prices of offers and bids accepted for purposes different from balancing;
(b) Preventing distortions in the price formation mechanism due to having to address in the balancing market major and systematic congestions;
(c) Lowering the cost of the balancing energy market *per se*;

We discuss next the merit of ADMIE's proposal with respect to each possible objective evaluating the degree that each one of those objectives find reasonable ground on the existing regulation and on the methodologies applied in other European countries.

(a) *Preventing imbalance prices from being affected by the prices of offers and bids accepted by the TSO for purposed different from balancing*

In Greece today, the Code already addresses this issue by providing that in RTBM the bids purposed different from balancing shall be excluded from the calculation of the imbalance price. In ISP though, the labelling of the bids with the distinction between 'for balancing' and 'for reasons other than balancing' cannot be precise due to the co-optimization algorithm between energy and reserves. Similarly in multiple countries implementing a centralised dispatch system, labelling is used to avoid that imbalance prices are affected by bids/offers accepted by the system operator for reasons other than balancing. The fundamental difference between what is implemented in Europe and what is proposed as a solution in the Greek balancing market is that when labelling in Europe is used for that purpose(meaning the minimization on the effect that the bids different from balancing have on the formulation of the imbalance price) make sure that this largely conventional distinction has no impact on the remuneration of the Balancing Service Providers (BSPs).

(b) *Preventing distortions in the price formation mechanism due to having to address major and systematic congestions in the balancing energy market*

According to RAE's 345/2021 Decision, the TSO is responsible for the delay in the expansion of the 400kV network to the Peloponnese which causes problem to the security of supply and the efficient operation of the electricity market. According to the latest TSO's Ten Year Development Plan and public announcements, the congestion in the Peloponnese region is going to be relieved

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when the new transmission line, expanding the 400kV network to the Peloponnese is constructed. HAIPP strongly believes that before implementing any new measure that would alter the market design and require a long and extensive dry-run period (to tackle all problems that might arise and that are not evident from the planning stage), and factoring in that measures related to the congestion in this region have already be put in place (non-acceptance of negative bids/offers in the balancing market), all priority should be given to the acceleration of the construction of the new line, using capacity from all relevant authorities (TSO, Regulator, Ministry of Energy) in order to tackle the difficulties that prevent the construction of the new line. Once this issue is resolved, it is most likely that the congestion in the system would not be present and that the proposed change would be purposeless.

In addition, power plant activation for network stability (e.g. voltage control in the northern system) should firstly be addressed in the same manner, i.e. remedying the origin of the issue itself, rather than proceeding to the activation of measures that jeopardise the smooth operation of the power markets.

However, if it is deemed that it is unavoidable that systematic congestions will continue, some bids and offers might have to be accepted to relieve congestions (redispatch), without participating in marginal price formation. Nevertheless, if ADMIE's proposal is applied as it stands in the document, then services purchased by the TSO for other than congestion purposes and in particular for purposes of balancing and reserve, will certainly end up being paid in a lower price that does not reflect their real value to the system.

Further, in case ADMIE's proposed methodology was implemented to single out *ex-post* those offers that were accepted for congestion management purposes, the implementation issue discussed in pay-as-bid paragraph must be addressed.

(c) *Lowering the cost of balancing energy market* per se

The Table 12 of the MRP which presents summary data on financial analysis of revenues of the power plants from wholesale markets and comparison to their associated costs presents the inability of the Greek market to attract investment in new capacity, which is motivating the Greek government to consider explicit capacity remuneration mechanisms.

Therefore, since the measure proposed by ADMIE reduces unreasonably the generator's income and taking into consideration the undoubtable missing money problem that exists in the Greek Market for the gas-fired electricity producers, it becomes really questionable whether this is desirable from the consumers' perspective since the proposed CRM is designed as a reliability option defining a cap on the revenues of a power generator from the wholesale market and can be considered as a risk management tool for the suppliers

In addition, the potential drawbacks of the measure proposed by ADMIE are evident, as we discuss next. In an efficient balancing energy market, the price paid for a certain action/service

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delivered by a generator should be the same independently of the reason why the system operator requires that action/service. This price should equal the cost for the system operator of achieving the same result in the cheapest alternative way, i.e., by using any alternative available resources on the basis of their bids and offers submitted in the market.

Obtaining efficient prices is at the very heart of the choice made in Greece to implement a centralised dispatch model based on ISP. The current design of the ISP achieves this objective; In particular, **it ensures full consistency of the compensation that generation capacity receives whether it is used to produce electricity or to provide operating reserve**. ADMIE's proposed measure would disrupt this desirable feature of the Greek balancing market. For this reason, we propose to exclude reserve margins from the set of 'system' constraints. The interpretation that ADMIE provides on the Decision No 16/2020 of ACER is rather limited and condemns the BSPs to the lowest remuneration of the energy they provide to the system for reserves. Additionally, we would like to point out that this interpretation is unique in Europe since it is not followed by any other Member State.

Indeed, a conventional pricing rule that discriminates activations after they are implemented, based to the reason why they were selected:

- Would create uncertainty for investors and generators;
- Might distort the (rational) bidding behaviour in the energy and in the ISP markets;
- Might result in less than efficient compensation for certain entities.

Note that in markets – such as the German and the Spanish – where BSPs bid separately for re-dispatching and balancing services, the TSO is not able to identify the purpose of each bid provided and the ability provided for a separate bidding is not allocated to the objective of lowering the cost of the balancing energy market. On the contrary, market participants can be remunerated at the maximum value among the services they provide \by bidding differently in the market sessions used to procure the different services. This will not be the case with the Greek market design, if ADMIE's proposed methodology is implemented.

For those reasons HAIPP believes that a reduction of the cost of the balancing energy market itselfShould not be pursued via an ex-post labelling system as the one proposed by ADMIE.

Section 2: Implementation issues

In the previous section we argued against price-discriminating accepted offers or bids, in the context of the ISP, according to their purpose, since the purpose cannot be easily identified. Only activations to relieve congestions can be flagged and objectively identified by the user. So an alternative methodology should be evaluated in order to comply with the EU Regulation indicating that "Balancing energy bids used for re-dispatching shall not set the balancing energy price"

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In this section we present HAIPP comments of implementation issues in ADMIE's proposal, regarding the labelling/flagging methodology and the pricing rule.

The labelling methodology

System constraints should not include reserve margins

ADMIE's methodology is based on the identification of activations performed for 'system services', defined as all other services other than balancing; reserve margins are considered as 'system services' in this context, i.e., the corresponding constraints are included in the Redispatch ISP (see also the next section).

We strongly disagree with ADMIE's proposal to treat offers and bids selected to build upwards and downwards reserve margins as offers 'for system services'. Such offers and bids have the same nature of, and should be treated in the same way, as balancing bids offers. Indeed, this is also confirmed by the current European Electricity Balancing Guidelines (EB GL), which assimilates balancing energy and balancing reserve [1]. In case RAE accepts ADMIE's interpretation of system services than Greece will directly breach the European Regulation. Under the same reasoning counter activations due to the acceptance of offer/bid pairs of opposite direction that are justified economically should not be labelled as due to system constraints.

In addition, the proposed methodology will unavoidably lead to the labelling as redispatching of offers that are being activated for economical reasons. For example, if a BSP has offered an upwards balancing energy offer of 70 €/MWh, and another BSP is offering at the same time a downwards balancing energy offer of 80 €/MWh, the optimization algorithm will obviously accept both offers/bids as they lead to the reduction of the overall system cost (decreasing it by 10 €/MWh activated). Of course, this does not constitute any form of redispatching, but using the proposed methodology, these activations will be labelled as such. The TSO should establish a methodology to take this issue into consideration, and exclude such activations from being labelled as redispatching. **HAIPP cannot accept any algorithm that treats the above-described economical activations as redispatching.**

The mechanism, which has been proposed to identify activations performed for system constraints purposes, requires an extensive testing and monitoring activity, given the conventional nature of the methodology

The Consultation document presents a methodology to conventionally identify 'redispatch' accepted offers (or 'system constraints' offers), based on an *ex-post* execution of a version of the

[1] Commission Regulation (EU) 2017/2195

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ISP algorithm featuring a reduced set of inputs (the 'Redispatch ISP'). In the following, we denote by 'Conventional ISP' the actual ISP algorithm used to dispatch the system[2].

The Redispatch ISP features the same inputs and (anticipated) system constraints as the Conventional ISP, but effectively assumes zero imbalances. Otherwise stated, the methodology underpinning the Redispatch ISP assumes that the market schedules coincide with the actual production decisions at real-time, and that no forecast errors are introduced (e.g., on the load or renewable electricity production levels).

If any given offer in the balancing market[3]:

- Is also selected by the Redispatch ISP and
- Is executed in real time;

the corresponding activation is labelled as 'redispatching', and priced accordingly. Otherwise, the activation is regarded as a 'balancing' action.

The methodology presented in the Consultation document presents some desirable features; in particular

- It is intuitively appealing;
- It does not depend on the discretionary assessment on the purpose of each activation by the TSO's employees
- It is fully auditable and verifiable, since it is implemented via a reproducible algorithm

However, the *ex-post* labelling methodology presented in the Consultation document is conventional by nature. Therefore, we believe that the plausibility of the results of the proposed algorithm should be:

- Empirically tested before its commercial implementation: this could be achieved for example by back-testing the algorithm over a long enough period of time (dry-run), and assessing whether its results are constantly consistent with the algorithm intended purpose;
- Regularly monitored during its commercial implementation, in order to detect any paradoxical outcomes and take the necessary measures to prevent their occurrence in the future.

Such testing and monitoring activity is necessary, among the other things, to assess the impact on the algorithm outcome of all features which may result in unintuitive labelling of activations.

[2] In the following, we refer as 'Conventional ISP' as the combination of all sub-phases of the ISP algorithm, namely , ISP2 and ISP3
[3] Or portion of.

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As an example, it is not clear from the Consultation document how the timing of the different market phases and ISP runs would interact with the proposed methodology. In particular, our understanding is that activations selected in the 'Conventional' ISP2 market phase would not enter the set of inputs used to run the Redispatch ISP. In this case, it might happen that the Redispatch ISP and the Conventional ISP algorithms perform different offer selections to address the same constraints of genuine 'redispatching' nature. This might in turn lead to an unintuitive labelling of 'balancing' and 'redispatching' activations.

Further, it is possible that real-time constraints differ materially from the anticipated ones used as input to the conventional/Redispatch ISPs. This would lead to a distortion in the labelling, since the actual market outcomes would include the real-time constraints. Thus, the congestion constraints entering the redispatch ISP should be the ones observed in real time, not the ones used a-priori in the conventional ISP execution.

Since it is not possible to plausibly assess in advance the impact of (ultimately conventional) implementation choices, we recommend the institution of an extensive activity of testing and monitoring of the methodology.

The pricing rule

Pay-as-bid is the appropriate pricing rule for system services

The Consultation document considers three options for pricing activations labelled as 'redispatching':

- Pay-as-bid
- Variable cost
- Day-ahead market clearing price.

We believe that any rule forcing a market participant to sell at a price lower than its offer price or buy at a price higher than is bid price is not consistent with the market-based procurement of ancillary services. Only in case that a non-market-based procurement of re-dispatching services is followed a variable cost approach could be evaluated. In Greece since the re-dispatching services cannot be clearly labelled a non-market-based approach cannot be recommended. In the presented methodology the entity delivering the service knows the labelling of the service provided together with the price that will be applied only after the production decision is taken.

We also note that capping the generator's revenues to a level that may, and generally will, fall below the market price, prevents full cost recovery, given that compensation of short-term variable costs solely does not lead to recuperation of capital and other fixed costs. This should be

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the objective of any well-functioning power market. Also, as discussed in section 1, bid caps are conceivable in the context of market power mitigation. However, their implementation:

- Should be independent of the pricing rule for accepted activations; and
- Must follow a thorough assessment of market power, over a suitably long period of time.

For this reason, we recommend that in case a special pricing rule is implemented for activations labelled as 'redispatching', such pricing rule be *pay-as-bid*.

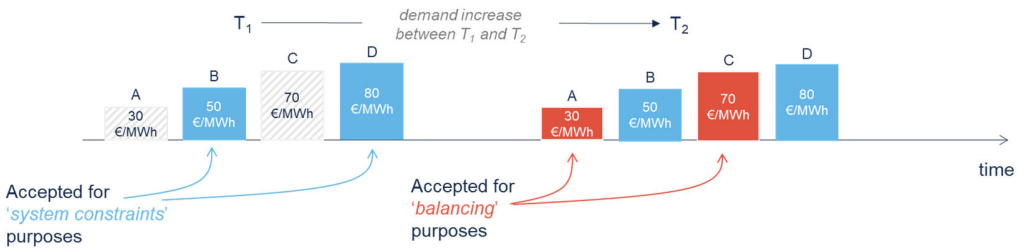
Further, as, already discussed earlier in the document, **counter activations should not be considered as activations 'for system constraints' since they are selected for restoring the energy balance**. For this reason, they should be remunerated with a marginal pricing rule.

Offers selected for re-dispatching purposes that turn out to be infra-marginal in the balancing market should be remunerated at the marginal price

The pricing rule should account for the possibility that an activation selected for redispatching purposes turns out to be infra-marginal also as a balancing offer.

Consider the following example, depicted in the figure below. At time T_1, Upward modulations with prices 50 €/MWh and 80 €/MWh accepted to address genuine system constraints; at the time the offer is accepted, alternative offers are available at 30 €/MWh and 70 €/MWh which are not accepted because they are not suitable to relieve the congestions (i.e., the upward modulations under examination is accepted 'out-of-merit'). After the 50 €/MWh and 80 €/MWh offers are accepted, a surge in demand leads to other offers for upward modulation to be accepted (both below and above the 50 €/MWh price level), so that the clearing (marginal) price of the upward activations selected for balancing purposes settles at 70 €/MWh.

In this case, it turns out that 50 €/MWh accepted offer – which we assume would be labelled by the methodology proposed in Consultation document as a 'redispatching' activation – would also have been accepted for balancing purposes in the absence of the congestion. This holds because the offer is infra-marginal, i.e., its price falls below the 70 €/MWh clearing price. There is therefore no reason to discriminate (negatively) such offer, by remunerating it below the clearing balancing price of 70 €/MWh.



This effect, which we deem would account as a design distortion, could be corrected by implementing the following pricing rule for 'redispatching' activations, that we recommend:

P_{upward}=max(offer price, balancing price) $P_{downward}$= min(bid price, balancing price)

where "balancing price" is the marginal price for offers selected for balancing purposes.

Redispatching activations should be selected before balancing activations in the merit order

The Consultation document (section 4) focuses on the issue of selecting offers for redispatching purposes 'before' or 'after' the offers for balancing purposes. As a matter of fact, this is crucial in determining the clearing price for balancing offers and thus the remuneration of all activations selected for balancing purposes. Further, we note that while the Consultation document discusses the case where activations for both redispatching and balancing purposes are performed on a single unit, the same issue arises when multiple units are selected by the ISP that can deliver the same 'redispatching' service (e.g., they are located on the same side of a congestion) as well as the balancing service.

We believe that a plausible methodology should select 'redispatching' activations before balancing activations (option 1 of the Consultation document, as depicted in Figure 5). It is intuitively appealing that 'redispatching' activations performed to resolve system constraints are performed in the context of a balanced system; should the system be found out-of-balance after the system constraints are solved, balancing activations will be selected. In the context of market designs where separate market phases are instituted to resolve system constraints (e.g., Spain), these usually take place **before** the market phases where balancing services are procured.

Finally, the Consultation document refers to the design of the MARI and PICASSO platforms to support the fact that redispatching activations should be selected 'after' balancing offers (option 2 in the Consultation document, as depicted in Figure 6). With this respect, it is true that the design of MARI and PICASSO provides that TSOs may retain from submitting in the platforms selected offers needed for local reasons (i.e., in the spirit of the Consultation document, for 'redispatching' purposes), starting from the most expensive ones. However, the reason for such design choice is not related to the fact that redispatching activations should in general be associated to more expensive offers than balancing offers. Rather, the design is aimed at removing the incentive for TSOs to submit only the higher-price offers on the MARI and PICASSO platforms – something that would clearly be detrimental to the market integration process. So the interpretation of ADMIE is misleading.

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In conclusion, we deem that should an *ex-post*, conventional labelling methodology such as the one presented in the Consultation document be implemented, **redispatching activations should be selected 'before' balancing activations in the merit order.**

Yours sincerely,

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General Manager

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