

**EFET position paper on the ownership and operation of storage assets****A guidance proposal for the implementation of the recast Electricity Directive  
(2019/944)****13 September 2019****Executive summary:**

The recast Electricity Directive (2019/944) reaffirms the principle of unbundling in the energy sector. The new Directive applies this precept to storage assets, which should be owned and operated by non-regulated actors in the competitive domain.

By way of derogation, Member States may allow TSOs and DSOs, after regulatory approval, to own and operate storage assets if and when:

- these assets are fully integrated network components (FINCs), or
- the market could not (or not at a reasonable cost) respond to the system operator needs following a tendering procedure

Regarding the first derogation option, EFET believes that **FINCs must be defined in a stringent manner**, as electricity storage facilities that are part of the uninterrupted power supply of a network component like a substation or a control centre. Under no circumstances may FINCs be used for congestion management.

Regarding the second derogation option, it is imperative that **system operators identify precise needs and organise a tender for the procurement of grid support services to fulfil these needs** before considering investing in new storage. This tender must be technology neutral and open to existing and new assets.

When reviewing offers received in a tender, the system operator must make sure that this review is based on a fair comparison with the alternative of an investment by the system operator itself, including all costs linked to the impossibility for a system operator to value an asset on the market.

When the tendering procedure is successful, the contract resulting from this tender may not result in an exclusive use of assets for the sole purpose of grid support. In other words: **the multi-use of an asset by non-regulated actors must always be possible**, within the limitations of the contract with the system operator.

The recast Electricity Directive (2019/944) foresees in Article 36 and Article 54 that Distribution System Operators (DSOs) and Transmission System Operators (TSOs) respectively (jointly referred to as system operators), in principle, shall not own, develop, manage or operate energy storage facilities<sup>1</sup> in the electricity system. However, by way of exception to this principle, Member States may allow system operators to conduct such activity in two cases: first, where they are fully integrated network components (FINCs) and such derogation is approved by the respective National Regulatory Authority (NRA); or second, where all of the conditions listed in Article 36 (2) or 54 (2) Electricity Directive are fulfilled.

The Electricity Directive will have to be transposed into national law by each Member State by the end of 2020. Whether or not such exceptions will be included in national legislation will thus need to be decided at Member State level, leaving the ultimate decision of whether included exceptions are applied with the respective NRAs.

**EFET strongly believes that electricity storage facilities should not be owned, developed, managed or operated by system operators for the following reasons:**

- **Network operators investing in electricity storage facilities undermines the unbundling principle, blurring the separation of the regulated electricity transportation/distribution business on the one hand, and market activities on the other hand. This can lead to conflicts of interests, where network operators would also act as a market participant.**
- **It distorts the dynamic competition between a wide range of future technologies, particularly the kind and scale of such technologies and whether they are being developed in a centralised or decentralised manner.**
- **Procuring market services will be cheaper than investments by system operators, because system operator assets can only be used for a limited range of purposes and the remaining value would be lost<sup>2</sup>.**
- **Network operators are monopoly entities and therefore not subject to competitive pressure as their investment costs are socialised across network users. Any expansion of their activities thus carries the risk of: 1) increasing network tariffs to be paid by network users, and 2) putting the threshold for any new private investment at a higher level.**

**Where Member States decide to allow for exceptions, we urge them to follow the recommendations expressed in this paper on how they could be implemented<sup>3</sup>.**

<sup>1</sup> Energy storage, as defined in the Electricity Directive and as referred to in this paper means, in the electricity

<sup>2</sup> This has also been confirmed by the ENTSO-E Advisory Council, see paper on “Storage – and other assets – and the role of TSOs/DSOs”, available at: <https://www.entsoe.eu/about/inside-entsoe/advisory-council/#advisory-council-recommendations-to-entso-e>.

<sup>3</sup> In this paper, EFET only refers to energy storage facilities in the electricity system as defined in the Electricity Directive and does not extend its views to the ownership and operation of gas storage facilities. For more details on the EFET position with regard to natural gas storage, please refer to our response to the European Commission consultation on an EU strategy for LNG and gas storage, dated 30 September 2015 and available at: [https://efet.org/Files/Documents/Gas%20Market/Security%20of%20Supply,%20Storage%20and%20LNG/EFETresponse\\_EC-LNG-and-Storage-Strategy.pdf](https://efet.org/Files/Documents/Gas%20Market/Security%20of%20Supply,%20Storage%20and%20LNG/EFETresponse_EC-LNG-and-Storage-Strategy.pdf).

## 1. Relevant provisions from the revised Electricity Directive

The new provisions of the Electricity Directive rely on the fundamental principle of unbundling in the energy markets. In this context, electricity storage and power-to-X facilities are considered ‘market assets’ (much like power generation plants) and should not, as a matter of principle, be built and/or operated by system operators. The unbundling principle was re-confirmed in the revision of the recast Electricity Directive and Regulation as referred to above.

According to the Electricity Directive, TSOs as well as DSOs, are responsible for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity, operating, maintaining and developing under economic conditions a secure, reliable and efficient transmission system<sup>4</sup>.

If non-frequency ancillary<sup>5</sup> services, as defined in the Electricity Directive, are required for this purpose, system operators must procure these subject to transparent, non-discriminatory and market-based procedures, as laid out in articles 31 and 40 of the Directive (unless the relevant NRA has assessed that the market-based provision of such services is not economically efficient and has granted a derogation). In order to ensure that market-based procedures are being applied, it should be highlighted that Member States will, as part of the transposition of the Electricity Directive, have to implement a regulatory framework to ensure that system operators are able to procure such services from providers of demand response, generation or energy storage. Such services will reduce the need to upgrade or replace transmission and distribution capacity, thus reducing costs, and will support the efficient and secure operation of the system.

**As a general principle, the Electricity Directive thus does NOT see system operators as the suppliers of non-frequency ancillary services, which should be provided by market participants through assets in the competitive domain (including the ownership, operation, management or development of energy storage facilities). A derogation from this principle must always be a measure of last resort in order to not distort the level playing field or breach unbundling principles, except where it solely relates to FINCs which can be considered as grid assets (see below in part 3 our proposed definition of FINCs).**

**In our view, procuring services from assets in the competitive domain will always be cheaper, as only non-regulated asset owners (market participant) can use such assets both on the market and to sell ancillary services to the system operator. Would a storage asset be owned by the TSO/DSO, then this asset could only be used for the provision of ancillary services as prescribed in Article 36 (2)b and Article 54 (2)b of the Electricity Directive which prohibit the use of such facilities to buy or sell electricity in the electricity markets, thus destroying part of the potential value of this asset.**

<sup>4</sup> See Article 31 and Article 40 of the Electricity Directive (2019/944)

<sup>5</sup> Does not apply to FINCS.

**Furthermore, we have serious concerns regarding the operation of an electricity storage facility, regardless of the purpose, by a system operator as electricity would have to flow in and out of the asset, affecting electricity markets and balancing perimeters of market participants through the shift of electricity in time.**

Where system operators are not able to guarantee the efficient and secure operation of the system despite the provision of non-frequency ancillary services by market participants, system operators should identify specific system requirements in an open and transparent process. In consultation with market participants, system operators should define broad requirements for such services in a generic and open way in order to ensure scope for competition between different technical and functional solutions.

Based on such a process, system operators may decide that the construction of assets (such as an electricity storage facility) could be a possible solution and may opt for one of the following two possibilities:

- Apply for regulatory approval to own, develop, manage or operate such electricity storage facility as a FINC (see Section 3); or
- Conduct an open, transparent and non-discriminatory tendering procedure (subject to an ex-ante review by the NRA to assess the applicability of a tender - see Section 2).

Only if an electricity storage facility is used as a FINC or if other parties have not been awarded a right to own, develop, manage or operate such facilities, or could not deliver those services at a reasonable cost and in a timely manner, may a system operator own, operate, manage or develop such facility in order to fulfil its obligations for the efficient, reliable and secure operation of the system. This is on the basis that such facilities are not used to buy or sell electricity in electricity markets and that the timely development of these activities is considered crucial.

**We would like to highlight that whether one or the other option becomes possible for system operators depends on the national implementation of the Electricity Directive by each Member State. EFET therefore calls on Member States to respect market-based procedures and the unbundling principle when it comes to the transposition of the Electricity Directive into national law and thus limit any derogations to the absolute necessary minimum. Again, we stress the concern that operating an electricity storage asset without affecting electricity markets as determined by the Electricity Directive seems impossible to us.**

**We also call for the highest possible degree of harmonisation between Member States in the transposition of the relevant provisions of the Electricity Directive.**

## 2. Storage facility required by the system operator

Where a system operator has identified specific needs, and all other measures, such as the tendering for grid support services, have failed to deliver the required services to meet these needs, the system operator may come to the conclusion that additional electricity storage facilities are necessary in order to maintain an efficient, reliable and secure operation of the electricity system (following the open consultation with market participants). In this case, the system operator must conduct an open, transparent and non-discriminatory tendering procedure. We believe that both this assessment of the necessity to develop storage assets and the fundamental requirements of the tendering procedures should be harmonised at European level in order to ensure a coherent application of the Directive across Member States and avoid any undue distortion to the Internal Electricity Market.

### 2.1 Review of the necessity of the investment by the NRA

Prior to conducting a tender, TSOs must request approval from their respective NRA. In doing so, we believe the NRA will not only have to review whether the construction of an electricity storage facility is required for grid purposes, but also whether there are any technology restrictions, alternative solutions or existing facilities (storage or other) that may be used instead.

In the course of this **assessment**, we advise that at least the following standard requirements are established for TSOs and DSOs to submit and specify to NRAs:

- Technical capabilities the system operator requires (for example voltage stability)
- Expression of the system operator's need that cannot be fulfilled by the current state of the system
- Purpose of the storage facility
- Technical specifications of the storage facility needed (reaction time, availabilities)
- Estimated demand
- Preliminary dimensioning of the storage facility
- Estimated operating time of the facility
- Possible geographical position of the facility (for example closeness to a specific network node, etc)

In its review, NRAs should also consult market participants and only approve the request where the investment is needed to guarantee grid stability.

In addition to the ex-ante review of the applicability of the **tendering procedure**, NRAs may draw up respective guidelines or procurement clauses to ensure a fair process.

We propose the following list of minimum requirements in the tendering guidelines:

- Expression of the service need that is required by the system operator.
- Unless all other options have been exhausted, the tender should not give a specific recommendation as to which technology may provide the required service(s). Instead, the tender should always be technologically neutral.
- The tender should be conducted in an open and transparent manner, allowing market participants from across the EU to participate. In order to achieve this, the tender should be made public and visible for a wide audience and be published in English language in addition to the respective national language.
- Responses to the tender should be based on a thorough analysis. In order to achieve this, sufficient time should be given to market parties in order to react to such tender.
- The tender requirements should not include any requirements that would not be expected as part of a financing proposal by the system operator itself. This relates especially to the risk premium factored in for strict liability clauses requested by the system operators.

## **2.2 Market Test**

Provided that the NRA gives its approval to the tendering by the system operator, a tender will be conducted in accordance with the guidelines and the system operator will have to inform the NRA with regard to:

- The results of the successful tendering process (specifying details of the chosen participant as well as the overall participation by market parties, financial aspects and specifications of the facility); or
- The results of the unsuccessful tendering process (specifying the number of participants and the reason(s) for not awarding the contract). The system operator should also provide the NRA details of results which show that only unduly high offers were received, or not on time or in an unacceptable form.

In order to guarantee an open process, the system operator should also make the results of the tendering process – anonymised where necessary – publicly available to all other market participants.

Upon receipt of this information, the NRA will review and decide whether the market test has been successful. In doing so, the NRA should, as an independent assessor, review the pricing and cost structure in order to determine whether an offer has correctly been deemed unduly high and therefore been unsuccessful in the tender process. There should be no competition of the cost between offers by market parties and the system operators themselves. Here, the NRA should again involve interested market parties in the assessment and publicly consult on the conducted tender process and subsequent results.

Only in case the tender has not been successful and the NRA has confirmed this, may the system operator own, develop, manage or operate an electricity storage facility.

### **2.3 Storage facility owned, developed, managed or operated by the system operator**

In case a system operator is allowed to own, develop, manage or operate a storage facility, the following principles must be maintained in order to limit any negative effects on the market:

- The electricity storage facility may only be used for the specified cases as determined by the Electricity Directive and confirmed in the NRA approval.
- The storage facility may not be used in the market by the system operator.
- The NRA must conduct a public consultation on existing energy storage facilities in order to assess the potential availability and interest of other parties in investing in such facilities in accordance with Art 36(3) and Art 54(4) of the Electricity Directive. Where the market has indicated an interest, the NRA must phase-out the system operators' activities within 18 months as set out in the Electricity Directive.

### **3. Approval process for fully incorporated network components**

The use of FINCs should be very restrictive and solely relate to electricity storage facilities that are part of the uninterruptible power supply of a network component like a substation or a control centre. Under no circumstances may FINCs be used for congestion management.

Where system operators consider applying for regulatory approval to own, develop, manage or operate an electricity storage facility as a FINC, the following information should form part of the application:

- Integration proposal of the storage facility into the transmission or distribution grid
- Assurance that the facility will only be used for the maintenance of an efficient, reliable and secure operation of the electricity system and that it will not be used in the market for congestion management or for balancing purposes
- Technical capabilities the system operator requires (for example voltage stability)
- Technical specifications of the storage facility needed (reaction time, availabilities)
- Estimated demand
- Preliminary dimensioning of the storage facility
- Estimated operating time of the facility
- Possible geographical position of the facility (for example closeness to a specific network node, etc)

When NRAs receive a request for approval as a FINC, they should review each application and consult market participants. If an NRA decides that a FINC is required, they may approve the request by the TSO. Where the NRA decides that the facility would not be considered as a FINC, the application should be rejected.

## **Annex - Definitions from the recast Electricity Directive (2019/944)**

**Energy storage**, as defined in the Electricity Directive means, in the electricity system, deferring the final use of electricity to a moment later than when it was generated, or the conversion of electrical energy into a form of energy which can be stored, the storing of such energy, and the subsequent reconversion of such energy into electrical energy or use as another energy carrier.

**Energy storage facility** means a facility where energy storage occurs.

**Fully integrated network components** means network components that are integrated in the transmission or distribution system, including storage facilities, and that are used for the sole purpose of ensuring a secure and reliable operation of the transmission or distribution system, and not for balancing or congestion management. FINCs can include energy storage facilities such as capacitors or flywheels which provide important services for network security and reliability, and contribute to the synchronisation of different parts of the system.

**Non-Frequency Ancillary Services** means a service used by a TSO or DSO for steady state voltage control, fast reactive current injections, inertia for local grid stability, short-circuit current, black start capability and island operation capability