COMPLIANCE NOTE
by the Energy Community Secretariat

Ukraine – electricity Public Service Obligations Act 2020

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In this Compliance Note, the Secretariat reviewed:

The Cabinet of Ministers Resolution No.483 of 5 June 2019 “On approval of the Regulations on imposition of specific duties of ensuring availability of electricity for household consumers on electricity market entities to ensure general public interests in the course of the electricity market operation” as amended in 2020 [http://materialy.kmu.gov.ua/2d6087f4/3f59c4b5.html].

1. Background

1.1. National legal framework governing public service obligations

The provisions from the Third Energy Package governing the electricity sector are transposed in Ukraine by the Law of Ukraine ‘On electricity market’, adopted by the Ukrainian Parliament on 13 April 2017 and in force since 11 June 2017 (hereinafter: “the Electricity Market Law, the EML”).

The Electricity Market Law provides for retail market opening starting from 1 January 2019, meaning that each customer including households and small non-household customers should be able to choose their supplier. The introduction of a new market model and the opening of the wholesale electricity market started on 1 July 2019.

Article 62 of the Electricity Market Law governs the imposition of public service obligations (hereinafter: “PSO”), as special obligations on market participants for ensuring general public interests in the process of the functioning of the electricity market. Article 62(2) of the EML contains a non-exhaustive list of PSOs in the electricity market, including “obligations to:

- increase the share of energy produced from alternative energy sources;
- perform functions of the universal service supplier;
- perform functions of the “last resort” supplier;
- provide services on supporting the development of generation capacity;
- increase the efficiency of combined electricity and heat production.”

Article 62(3) of the EML stipulates that the PSOs may be imposed by the Cabinet of Ministers of Ukraine (hereinafter: “CMU”) upon proposals prepared by the National Energy and Utilities Regulatory Commission (hereinafter: “NEURC”). The proposals shall be previously consulted with the Energy Community Secretariat. NEURC shall notify the Energy Community Secretariat of any possible measures taken pursuant to Article 62, including possible effects on competition on

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1 Law of Ukraine No.2019: ‘On electricity market’, adopted on 13 April 2017 by Verkhovna Rada. The Law was signed by the President on 08.06.2017 and was published in Official Journal on 10.06.2017. The Law entered into force on 11.06.2017.
the electricity market of Ukraine and on the electricity market of the Energy Community. The information on the measures taken for the implementation of Article 62 shall be updated by the Regulator and provided to the Energy Community Secretariat once every two years. Paragraph 4 of the same article sets the criteria for imposing PSOs, requiring that those obligations are clearly defined, transparent, non-discriminatory, temporary as well as necessary and proportional, thus creating least obstacles for development of the electricity market. Article 62(5) stipulates that the “decision of the Cabinet of Ministers of Ukraine on imposing special obligations on market participants shall determine:

- general public interests for the protection of which the special obligations are imposed on market participants;
- the scope and purpose of special obligations;
- market participants on which special obligations are imposed;
- the scope of rights of market participants on which special obligations are imposed, which are necessary to fulfil these obligations;
- categories of consumers related to special obligations;
- territory and timeframes for fulfilling special obligations;
- sources of financing and procedure of calculating the compensation paid to market participants, on which special obligations are imposed, subject to requirements of part 7 of this Article.”

Article 63 of the EML governs the provision of universal service as a type of PSO. Article 1, definition 93 of the EML, defines universal service as “electricity supply to household and small non-household consumers, ensuring their right to receive electricity of specified quality on terms prescribed by this Law within the entire territory of Ukraine.” The amendments to the EML of November 2018, amended the definitions of household and small non-household customers. After the changes, household customers include an “individual household consumer (an individual who uses electricity to meet own household needs which do not include professional and/or economic activities), or a collective household consumer (a legal entity which has been established by means of incorporation of individuals that are household consumers and settles accounts for the electricity under the general calculation accounting method within the volumes of electricity consumed to cover own household needs of individuals, which does not include professional and/or economic activity).” The small non-household customers are non-households “whose electrical installations are connected to electricity networks with contracted capacity up to 50 kW.” In addition, with the amendments to the EML from November 2018, for the period from 1 January 2019 to 31 December 2020 inclusive, the universal service, except for those two categories of consumers, “shall be provided by the supplier of such services also to the budgetary institutions irrespective of the amount of contracted capacity and other consumers whose electrical installations are connected to electricity networks with the contracted capacity up to 150 kW.”

Based on this, households, including collective household customers, the small non-household customers including the budgetary institutions and all other (including large customers) with contracted capacity of up to 150kW are entitled to the provision of universal service in Ukraine.

The universal service is to be provided by suppliers selected in a competitive procedure, and in cases where such competition has not been held, it should be provided for a period up to six months by suppliers appointed by the Cabinet of Ministers who, prior to the date on which the competition

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2 The Law #2628-VIII of 23.11.2018.
was held, have been providing universal services, or a state-owned electricity supplier, which meets the relevant qualification requirements and criteria. Article 63(3) of the EML stipulates that universal service is to be provided at “economically justified, transparent and non-discriminatory prices, calculated by the supplier based on the methodology (procedure), approved by the Regulator, and shall include, in particular, the purchase price for electricity on the electricity market [the new wholesale electricity market], price (tariff) for services of the supplier of universal services, prices (tariffs) of services of the transmission and distribution system operator in accordance with the concluded contracts on relevant service supplies.”

According to the final and transitional provisions of the EML, within the period of two years from 1 January 2019 (i.e. by 1 January 2021), the electricity supplier created in result of the unbundling process (i.e. the former incumbent suppliers) shall perform the functions of the universal service supplier (hereinafter: “USS”) on the assigned territory (per oblast) where, as part of a vertically integrated undertaking, it was performing such functions prior to unbundling. The Cabinet of Ministers of Ukraine shall by 1 July 2020 in any case conduct a tender for the selection of the USS in accordance with the EML.

Prior to the date of the introduction of the new market model (based on the transitional provisions of the EML envisaged for 1 July 2019), the universal service supplier was purchasing electricity for supplying consumers in accordance with the Law of Ukraine ‘On Electricity Sector’ of 1998 (hereinafter: “Electricity Law”), i.e. through Energorynok, and prices under which the electricity was supplied by the USS to household consumers were established by the Regulator. Afterwards, the USS was expected to purchase electricity at the electricity market at free prices. In any event, universal service prices (before and after the introduction of the new market model) should be economically justified, and covering costs. The PSO Act in place in Ukraine, subject to this assessment, prevented such market purchase of electricity by the USS.

De facto, the universal service prices as cost-reflective prices in Ukraine are applied to non-households only. In practice, the former Oblenergos, newly established companies as suppliers, are providing universal services in Ukraine starting from 1 January 2019. They provide universal service to non-households at prices calculated in accordance with a methodology adopted by NEURC.³ On the other hand, the USS supply electricity to households at fixed (or actual) prices (tariffs for households) also set by NEURC.⁴ The fixed prices⁵ are not covering the costs of supply of electricity, and the difference is cross-subsidised. Besides the fixed prices, for the households that have metering differentiated by time, based on NEURC resolution,⁶ coefficients are applied to the fixed prices for consumption in the concrete period of time. The later prices are even lower (at certain periods of time) then the fixed tariffs. NEURC refers to those prices as “actual prices” for

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³ In principle, each USS has to have its own regulated price for provision of the universal service (defined according to the methodology approved by NEURC). According to this methodology, USS shall sell electricity to the households and small non-households (as these consumers are defined by the EML) under prices based on the formula covering the electricity price + regulated price for provision of the universal service by USS + transmission tariff + distribution tariff. See: http://www.nerc.gov.ua/?id=37483
⁴ See: http://www.nerc.gov.ua/?id=15013
⁵ Fixed prices in the amount of 1,03 UAH/kWh is calculation made by NEURC to define weighted average tariff/price for all categories of HHs.
After the introduction of the new market model, and based on the PSO Act, the Cabinet of Ministers has to set those (below cost) fixed prices for households, which has not happened yet.

### 1.2. Public service obligations in the electricity sector of Ukraine

The PSOs in place in the electricity sector of Ukraine have been adopted in an act of the Cabinet of Ministers of 5 June 2019, amended several times in 2019 and 2020, with latest amendments of 20 May 2020.8 The PSO Act, as amended in its latest version, is subject to the present assessment. This act contains the following PSOs:

- **PSO imposed on incumbent state-owned generation companies**: National Nuclear Energy Generation Company *Energoatom* (85%) and Private Joint Stock Company *Ukrhydroenergo* (35%) to sell electricity to the Guaranteed Buyer at regulated prices, and a corresponding obligation to the Guaranteed Buyer to purchase electricity from these producers.

These sales are at “marginal” prices or so-called “price caps”, but basically linked with weighted prices from before market opening (before 1 July 2019) as defined in p.6 of the PSO pact: “marginal” price defined at the level of the actual average weighted price in period April-May 2019 (including excise levy since 1 July 2019) for each producer.

- **PSO imposed on the Guaranteed Buyer to sell electricity to the USS at regulated prices**, and corresponding obligation on the USS to purchase from the Guaranteed Buyer all volumes necessary for the household customers.

The USS cannot purchase electricity freely on the market but has to buy from the Guaranteed Buyer all actual volumes (forecasted then adjusted) for household customers, under bilateral contracts at the price set in accordance with clause 7 of the PSO Act (the difference between fixed prices and the cost for transmission, distribution, and universal service tariffs), but not less than 10UAH/MWh. A model form of the said contract shall be approved by the Ministry of Energy and Environmental Protection of Ukraine.

- **PSO imposed on the Guaranteed Buyer to compensate the USS**

When the price at which the Guaranteed Buyer sells to the USS is less than 10UAH/MWh, the Guaranteed Buyer is compensating the USS up to 10 UAH.

- **PSO imposed on the USS to supply household customers at regulated prices (tariffs)**

The prices at which the USS sells to households are also regulated. However, the rules for such regulation are not implemented in practice. The USS prices, which are based on a NEURC methodology and are cost-

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7 The actual tariffs before 1 July 2019 were split for households on different categories. See: [http://www.nerc.gov.ua/?id=15013](http://www.nerc.gov.ua/?id=15013) and applied:
- up to 100 kWh/month paid at 0,90 kWh/UAH;
- if consumption per month is more than 100 kWh/month (for example 300): 100 will be paid at 0,90 kWh/UAH, other 200 kWh/month will be paid at 1,68 UAH/kWh;
- for HH who has electric heating tariffs are different for different seasons (1 May- 30 September, 1 October - 30 April) and also varied for consumption up to 3000 kWh/month or above 3000 kWh/month.

reflective, are only applied to non-households. The USS in practice are supplying households under lower prices (fixed tariffs)\(^9\) that are cross-subsidised and have to be set by the Cabinet of Ministers. But the CMU has not yet approved any prices for the households. So, the USS are still applying households prices approved by NEURC in 2015,\(^{10}\) the latest increasing for HH was introduced in March 2017.

- **PSO imposed on Energoatom to sell 5% of its forecasted volumes to industrial customers**

*Energoatom* has been obliged to sell up to 5% of the forecasted volume of electricity output for the relevant month under bilateral contracts at special sessions of electronic auctions. Even though the PSO Act does not specify or justify such an obligation, the Ministry explained that such special auctions will be only for industrial customers that would benefit from cheap electricity produced from the incumbent nuclear generator.

**2. Review and procedural issues**

On 4 March 2019, NEURC submitted to the Secretariat a “draft mechanism for assignment of PSO to ensure public interest in the availability of electricity for household customers” and requested assessment of compliance of such a mechanism with European legislation. The draft submitted did not contain a proposal for a specific PSO, but it rather consisted in information on the cost of the service to ensure availability of electricity for household customers and contained a formula for defining that cost. NEURC did not propose direct sales and obligation for selling electricity between incumbent companies. It rather proposed that the economic entity producing electricity from nuclear power plants, i.e. *Energoatom* provides compensation of the USS costs on the basis of a contract for provision of service (by the universal service suppliers to *Energoatom*). The duration of the service was envisaged for two years, until 1 July 2021. No detailed proposal accompanied the draft proposal. On 5 March 2019, the Secretariat responded to the request for consultation per email. The Secretariat noted that the act on imposing a concrete PSO was still to be drafted, and it advised NEURC to consider imposing concrete obligations to the universal service suppliers. The Secretariat considered that it would be very important to ensure a roadmap for the difference (the actual cost of the PSO as difference between cost-reflective universal service supply and regulated fixed price) to be lowered over time, because even the Electricity Market Law stipulated the obligation for removing cross-subsidies before 1 July 2019.

On 11 April 2019, NEURC submitted its proposal for a concrete PSO. The Secretariat assessed the proposal, and on 30 April it sent its opinion to NEURC. The Secretariat concluded that without further changes to the proposal, the Secretariat could not approve the draft as compliant with Energy Community law.

In reality, the process of adoption of the actual PSO Act and its following amendments by the Cabinet of Ministers has been confusing and not transparent, and has thus been criticised by the energy undertakings and stakeholders in Ukraine and beyond. The approved acts did not follow the requirements of the Electricity Market Law. Not only that the acts adopted by the Cabinet of Ministers do not take into account any of the Secretariat’s substantial comments to NEURC and the Ministry on substance (comments that the Secretariat was providing after reviewing publicly available drafts), the actually adopted acts adopted by the Cabinet of Ministers have not even been consulted with the Secretariat in the first place. This amounts not only to a breach

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\(^{9}\) See above fn 6-8, explanation about difference between fixed prices (1,03 UAH) and actual prices which are actually lowered and actually applied to households.

\(^{10}\) NEURC Resolution No.220 of 26.02.2015.
of the obligations of Ukraine with the Electricity Directive applicable to it under the Energy Community Treaty, but also to the Ukrainian Electricity Market Law which explicitly requires notification and consultation with the Secretariat before adoption of any PSO measure.

Nonetheless, the Secretariat has been reviewing and sending comments to all draft acts related to the PSO. In addition, it has also submitted concrete proposals and wording for a PSO Act that are to be found as recommendations in Section 4 below.

3. Assessment

3.1. General Observations

The EU Member States, as well as the Contracting Parties, have wide discretion to define PSOs in line with the needs of end users. It is therefore the responsibility of the Contracting Parties, including Ukraine, to define public services or services of general economic interest provided that the rules of Article 3(2) of Directive 2009/72/EC are observed. Consequently, the State’s discretion to define PSOs in line with national circumstances may be exercised only in full compliance with the acquis. Accordingly, while relatively free to define them, the countries can use the public service obligations’ provision only in exceptional and clearly defined circumstances, provided that they satisfy the criteria indicated in the European rules and case law. Therefore, PSOs which are prone to constituting an obstacle to the realisation of an operational internal market in electricity, shall be an exception and not a rule, and they shall not be invoked to cover purposeful deviations from mandatory internal energy market rules.

Given that it constitutes a requirement under the Directive 2009/72/EC, there is no doubt about the legitimacy of imposing a universal service obligation. According to the definition provided for in the Directive 2009/72/EC, universal service means enjoying the right to be supplied with electricity at “reasonable, easily and clearly comparable, transparent and non-discriminatory prices.” This however, does not constitute a requirement for price regulation and does not indicate that price regulation is the only approach for achieving prices that will be clearly comparable, transparent and reasonable. Nevertheless, if prices with such characteristics could not be achieved by the market itself, price regulation could be an option under Article 3(3) of the Directive 2009/72/EC, and only for the categories of customers defined in this provision, households and small enterprises, provided that the criteria from Article 3 of the Directive 2009/72/EC and the principle of proportionality is satisfied.

Article 3(2) of Directive 2009/72/EC allows for national legislation imposing PSOs on energy undertakings provided that such obligations: 13

- pursue a general economic interest;

13 Case C-265/08, Federutility, Assogas, Libarna Cas SpA, Collino Commercio SpA, Sadori Cas Srl, Egea Commerciale Srl, E On Vendita Srl, Sorgenia SpA v Autorità per l’energia elettrica e il gas [2010] 20.04.2010 (Federutility case), para. 47
comply with the principle of proportionality, i.e. impose public service obligations only in so far as is suitable and necessary to achieve their objectives in the general economic interest and, consequently, for a period that is necessarily limited in time; and
- are clearly defined, transparent, non-discriminatory, verifiable and guarantee equal access for energy undertakings of the Energy Community to national consumers.

The Secretariat assesses the PSOs in the electricity sector imposed by the Cabinet of Ministers of Ukraine against this background.

3.2. Ensuring Objective of General Economic Interest

As a first condition, Article 3(2) of Directive 2009/72/EC demands that a national measure be adopted in the general economic interest. To this effect, it is the prerogative of the Contracting Party to determine what services of general economic interest to pursue and to define the scope and the organisation of such services. Taking into account that the condition of the general economic interest is not expressly defined by Directive 2009/72/EC and considering the Court’s interpretation of this condition in the light of Article 106 TFEU, a Contracting Party is entitled, to the extent complying with Energy Community law, to define the scope and the organisation of its services in the general economic interest and, in particular, to pursue objectives pertaining to its national policy. At the same time, any interest invoked by a Contracting Party in the context of establishing PSOs must contribute or be suitable to contribute to a general economic interest as opposed to individual commercial interests.

One of the Directive’s main objectives is to promote fair competition in the generation and the supply of electricity in a liberalised market, “which enables all consumers freely to choose their suppliers and all suppliers freely to deliver to their customers.” At the same time, the Directive requires the Contracting Parties to ensure that household customers and, if Contracting Parties deem it appropriate, small enterprises enjoy the right to be supplied with electricity of a specified quality at easily and clearly comparable, transparent and reasonable prices, and if they so require - they may appoint a supplier of last resort.

In its proposal for a PSO in 2019, NEURC referred to the Resolution of the Cabinet of Ministers, No.420, dated 23 May 2018 on approving the list of services of general economic interest, which includes services to perform functions of the universal service supplier, as well as services to ensure the availability of electric energy for household consumers. The proposal aimed at addressing the issue of low regulated prices that do not cover the costs at which household

16 Para. 29 Federutility case; Para. 104 Albany case; Para. 40-45 ANODE case
17 See the Secretariat’s position regarding justification in the general economic interest of public service obligations imposed on Ukraine’s natural gas market participants: Conditional Approval of 22 August 2016 (Re: PSC “Odessa Port Plant”), Rejection of 21 December 2016 (Re: State-owned enterprises) and Conditional Approval of 7 March 2017 (Re: imposition of public service obligations for the period of 2017-2018).
18 See Recitals 3 and 57 of Directive 2009/72/EC.
19 Article 3(3) Directive 2009/72/EC.
20 See: https://zakon.rada.gov.ua/laws/show/420-2018-%D0%BF
customers are now being supplied with electricity. It aims at finding sources for compensating the costs of such low prices.

Even though, after April 2019, no new rationale and justification for PSOs has been submitted to the Secretariat, since the basic PSOs are still the same, it could be incurred that the general economic interest addressed with the PSO Act is maintaining availability of electricity supply at reasonable prices, with the necessity for gradual increase over time in order to prevent price shocks for the household customers. That would indeed constitute a legitimate purpose for imposing PSOs.

However, no justification has been submitted for the obligation imposed on Energoatom to sell 5% of its forecasted volumes to industrial customers. This obligation cannot be related to the protection of households or small enterprises, because the industrial customers are large customers and they are not allowed to benefit from such protection in principle.

3.3. Undertakings to be entrusted with provision of PSOs and scope of PSO

The Cabinet of Ministers in Article 4 of the PSO Act has clearly identified the undertakings to which PSOs are imposed:

- Guaranteed Buyer,
- Two state-owned electricity producers (listed in Annex 1 of the PSO Act – Energoatom and Ukhrhydroenergo)
- USS (without specifying which companies exactly).

The EML stipulates that universal service supply is to be provided by the USS selected in a competitive procedure and before that – based on the transitional provisions of the EML – for two years, by 1 January 2021, to be provided by the incumbent suppliers (which were previously part of the vertically integrated companies, Oblenergos). Therefore, it could be considered that the USS are entrusted with providing universal service by the Electricity Market Law itself.

The Electricity Market Law and the PSO Act of the Cabinet of Ministers represent acts of entrustment of certain undertaking with provision of PSO. The acts of entrustment, and the PSO Act in particular, define the scope of the PSOs to be performed by the electricity undertakings, as detailed in Section 1.2. above.

3.4. Beneficiaries of PSOs

The scope ratione personae of the measure and its beneficiaries must be clearly defined and assessed. While the households, as the only category of final customers are the beneficiaries of the PSO provision of universal service supply, the USS are the direct beneficiaries of the PSO related to the compensation received by the Guaranteed Buyer. Neither NEURC nor the Cabinet of Ministers have elaborated on the link between these obligations. However, even though the households are not the direct beneficiaries of the PSO imposed on Energoatom, related to compensation of the costs to the USS, they are indirectly benefiting from this PSO as well. The compensation provided to the

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21 Federutility case, para. 39; ANODE case, para. 67.
USS is actually to compensate for the cost that those undertakings would incur by providing electricity at reasonable prices to the households.

Therefore, it could be considered that the households are the main beneficiaries of the different PSOs.

Neither NEURC nor the Cabinet of Ministers have elaborated on the extended category of household consumers - “collective consumers” which has been clearly defined by the EML but existed and was treated as a separate category of households already before;22 the PSO includes also that category of customers within the scope of the present PSO and an assessment of the impact of such protection on the whole cost of compensation is missing.

In relation to the limitations set to universal service obligations within Article 3(3) of Directive 2009/72/EC, it must be noted that, according to the first sentence of that provision, universal service is to be limited to household customers and small enterprises as defined in the Directive (enterprises with fewer than 50 occupied persons and an annual turnover or balance sheet not exceeding € 10 million). The Court of Justice held that the Directive "does not in principle exclude the possibility" that the “undertakings irrespective of their size”, as final consumers of gas, “benefit from the Public Service Obligations which Member States may adopt in the context of Article 3(2) of that directive.”23 The important requirement that the Court of Justice sets nevertheless, is that it would be necessary "to take account, in assessing the proportionality of the national measure in question, of the fact that the situation of undertakings is different from that of domestic consumers, the objectives pursued and the interests present being not necessarily the same and also of objective differences between the undertakings themselves, according to their size,” and it would be disproportionate only if these two types of customers "were to benefit in an identical manner".24 Without any justification, allowing large industrial customers to benefit from cheap electricity from Energoatom (even if that constitutes 5% of its volumes) fails to comply with this requirement.

3.5. Principle of proportionality

Following the establishment of an objective of general economic interest, the national measures must comply with the principle of proportionality. In this context it needs to be assessed whether the national measure is restricting the price-setting mechanism based on market competition only in so far as it is necessary to achieve the objective in the general economic interest which it pursues and, consequently, for a period that is necessarily limited in time.25

- **Firstly**, the measure in question must be appropriate for securing the objective of general economic interest which it pursues26 and the PSO imposed must be the least onerous means realistically conceivable in pursuing the objectives of ensuring reasonable level of electricity supply. In other words, the necessity of the imposition of the PSO in question needs to be

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23 **Federutility** case, para. 41.
24 **Federutility** case, paras. 42-43.
25 Para. 33 **Federutility** case; Para. 54-55 ANODE case
26 Case C-121/15, ANODE case, para. 55; Case C-242/10, Enel Produzione SpA v Autorità per l’energia elettrica e il gas, [2011] ECR I-13665, para. 55.
established in a situation where the market alone cannot guarantee the achievement of an acceptable level of the customer protection.

The USS shall purchase all the electricity necessary to satisfy the demand of households from Energoatom and Ukrhydroenergo. The generation price of the domestic generators has been regulated. The exclusive relationship between the incumbents has been maintained with all amendments of the PSO Act and additional exclusive relationship with the Guaranteed Buyer (a new single buyer in a way) has been introduced. Since the Directive 2009/72/EC aims at fostering competition in the generation and supply segment of the electricity market, regulating the price of the generation runs contrary to that objective.

In the present case, it is questionable whether the PSOs imposed will appropriately deliver the desired results. Regulation of generation prices, as well as of wholesale prices (for sales from the Guaranteed Buyer to the USS) and full end-user price regulation for households goes beyond what is necessary to achieve the objective of general economic interest pursued and is also not the least onerous means. The market is foreclosed effectively, the USS cannot choose their supplier, and the households lack incentives to exercise eligibility. In addition, the exclusive relationship between the generators and the Guaranteed Buyer on the one hand, and the Guaranteed Buyer and the USS on the other, also contributes to market foreclosure.

Furthermore, based on NEURC’s calculations from April 2019, the difference between fixed prices and universal service prices is almost 150%. In its estimation, the current fixed prices of 1,03 UAH/kWh (without VAT) would have to be increased to 2,48 UAH/kWh (without VAT) in order to cover economically justified costs. Such a difference in price amounts to an annual cost of 53,5 billion UAH (excluding VAT). Having in mind the objective of eliminating cross-subsidies, having prices that reflect the economically justified costs and removing obstacles to establishing a competitive electricity market while balancing those objectives with customer protection and ensuring that households are supplied with electricity at reasonable prices (and gradual instead of sharp increase), it might indeed be that imposing a PSO for compensation of the difference in prices is appropriate for ensuring the provision of general economic interest. However, imposing an obligation for full compensation of the costs from one incumbent to another, in addition to providing it with cheap electricity, does not incentivise efficient work of the USS.

What NEURC and the Cabinet of Ministers did not elaborate on, is the gradual change in prices, and a plan for phasing out the need for compensation.

- Secondly, a PSO must be limited in duration to what is strictly necessary in order to achieve its objective so as not to render permanent a measure which, by its very nature, constitutes an obstacle to the realization of an operational internal electricity market. Then the duration


28 Similarly, based on the latest monitoring report (published by NEURC http://www.nerc.gov.ua/data/filearch/monitoring/elektro/2019/monitoring_elektro_III-2019.pdf) on the retail market functioning for III Q 2019 on the page 8 said the next: the total amount of the universal service in II Q2020 was 10 489 thousand MWh at the total amount of 14,9 bln UA (excl.VAT) (figure. 1.6). Multiply it on 4: 14,9 x 4 = 59,6 bln.UAH annually.

29 Para. 35 Federutility case, para. 53; ANODE case.
of State intervention in prices must be limited to what is strictly necessary in order to achieve the objective pursued, for such intervention in the end-user price "constitutes an obstacle to the realization of an operational internal market."\textsuperscript{30} NEURC and the Cabinet of Ministers are required to "make a periodic re-examination, at close intervals, of the need for it to intervene in the [electricity] sector and the manner of its doing so, having regard to the development of that sector."\textsuperscript{31}

In its transitional provisions, the EML contains a clause that within the period of two years from 1 January 2019 (i.e. by 1 January 2021) the electricity supplier created in result of the unbundling process, shall perform the functions of the universal service supplier. According to the submitted draft in April 2019, NEURC proposed imposing a PSO for the compensation by \textit{Energoatom} to the USS for two years (in the period 1 July 2019 – 1 July 2021). In its draft proposal, NEURC has provided estimation of the annual cost for compensation (i.e. for the service) to amount to 53.5 billion UAH annually (excluding VAT). However, NEURC has not explained whether those two years of the PSO are sufficient for reaching the objectives. It has also not elaborated at all how is the fixed price (i.e. the price that households actually pay) going to be changed over time – in the two years of the PSO - in order to reach the economically justified households prices. NEURC has also not proposed any periodic review of the PSOs, and has not provided a plan for phasing those out. It has also not explained what would be the consequences, i.e. follow-up after the initial two years if the objectives are not reached.

Similarly, the adopted PSO Act by the Cabinet of Ministers, does not contain explanation on any of these issues. The adopted act does not even contain a clause of validity and a period for which the concrete PSOs are imposed. Annex 2 to the PSO Act, containing the template contract between \textit{Energoatom} and the Guaranteed Buyer, stipulates that the contract is valid for the period from 1 July 2019 until 31 December 2020.

Therefore, it is questionable whether the PSOs have been designed to address the issues for which they are imposed (ex. reaching the economically justified prices that households pay while protecting them at the same time). The period of validity and the obligation for regular reviews should be part of the PSO Act, and prolongation of the PSOs should be avoided in order not to become permanent. As the PSO Act presently stands, it fails to comply with the proportionality requirements related to duration.

- \textbf{Thirdly}, the national measure must not go beyond what is necessary to achieve the general economic interest being pursued. The prices could be regulated \textit{in order to} limit the impact of the increase in the price of fuel that – in the absence of intervention – would have had a major impact on the sale price offered to final customers, in cases where the competition, in particular on the wholesale market, was not fully developed.\textsuperscript{32} \textit{The regulation} however, \textit{should be limited only to the price component influenced by the specific circumstances}.\textsuperscript{33}

The PSO Act fails to elaborate and propose an explanation of why the proposed PSOs are the most suitable to achieve the objective, and has not assessed whether less restrictive measures exist to reach the same objective with less intrusion in the market development.

\textsuperscript{30} \textit{Federutility} case, para 35.
\textsuperscript{31} \textit{Federutility} case, para. 35.
\textsuperscript{32} \textit{Federutility} case, para 37
\textsuperscript{33} \textit{Federutility} case, para. 38.
As already noted above, full generation price regulation, coupled with full regulation of wholesale prices between the Guaranteed Buyer and all the USS, as well as full end-user price regulation for sales to household customers, fails to comply with this requirement. Such full regulation, with exclusive relationships related to the sale of electricity go well beyond what is necessary to achieve ensuring supply to households at reasonable prices within the scope of universal service supply. Moreover, the measures for ensuring compensation for the difference in prices is limited to households only. However, being obliged to provide electricity at regulated prices, and in addition to compensate for costs to the USS, would be difficult to justify. The Secretariat has consistently proposed the introduction of a financial PSO instead of direct obligation to actually sell physical electricity, and that would certainly be a less onerous and restrictive measure.

Finally, organising special auctions for sale of cheap electricity by the incumbent nuclear generator to industrial customers could not be justified either. It would be difficult to envisage a need for allowing access to cheap electricity to large customer and could not be explained why such measure would be better than allowing them to purchase electricity on the market.

3.6. Ensuring non-discrimination and access to customers by suppliers

Compliance with the Directive's provisions on universal services must comply with the last sentence of Article 3(3) of Directive 2009/72/EC, i.e. it must be "implemented in a transparent and non-discriminatory way and shall not impede the opening of the market provided for in Article 33". However, impeding the proper opening of the market in accordance with Article 33(1)b) of Directive 2009/72/EC is precisely the effect of foreclosing the wholesale and retail electricity market through price regulation and exclusive sellers-buyers relations. The obligation of the Guaranteed Buyer to purchase the required quantity of electricity from Energoatom and Ukrhydroenergo and the obligation of the later to sell to the Guaranteed Buyer 80% and 35% of their forecasted electricity production respectively, constitutes one such exclusive seller-buyer relationship. In addition, the Guaranteed Buyer and the USS are obliged to establish additional exclusive relationships.

It follows from Article 33(1)b) of Directive 2009/72/EC, that the market should have been open for all non-household customers by 1 January 2008. This means that all domestic and foreign suppliers of electricity should have been given the right to directly sell to all non-household customers in Ukraine. The provision of the PSOs as implemented by the PSO Act entail foreclosure effects. The proposed PSOs should not represent an obstacle for competition development and should not prevent customers including end-users to change supplier. At the same time, the PSOs should not amount to obstacles to suppliers other than universal service suppliers to supply household customers, or to access the cheap nuclear (and hydro) resources. The USS should have been given a right to choose the best offer for electricity and to purchase electricity at the open market. Imposing an obligation to the USS to purchase electricity exclusively from the Guaranteed Buyer (and of the later to purchase exclusively from Energoatom and Ukrhydroenergo) impedes market opening contrary to Article 3(3) of Directive 2009/72/EC. Such an exclusive relationship, including an obligation on Energoatom to provide its full electricity generation in first place to the Guaranteed Buyer and coupling it with an obligation of the later for compensating the USS in a situation where cross-subsidies are not eliminated, is likely to have the effect of reinforcing the position of the dominant undertakings in the wholesale electricity supply market.

By not reflecting on the necessity for changes in the fixed prices in order to reach the economically justified prices for households, NEURC and the Cabinet of Ministers failed to explain whether maintaining such fixed prices (and providing compensation for its cost) would not represent a barrier
for customer switching and development of retail competition over time. While limited to households only, the authorities did not take into consideration that maintaining fixed prices at levels not even reflecting the costs would not incentivise the households to consider supplier switching and obtaining electricity supply at market prices.

In addition, NEURC and the Cabinet of Ministers failed to examine the impact on competition by maintaining in force an obligation on Energoatom to compensate such costs to the USS. Therefore, all possible effects of the PSOs in place on competition should be assessed taking into account the participation of this important market player on the wholesale market in Ukraine and on the electricity market of the Energy Community.

Finally, obliging Energoatom to organise special auctions for large customers, even if it is for only 5% of its generation portfolio, amounts to discrimination.

3.7. Free movement rules

Article 41 of the Treaty warrants the free movement of electricity between the Parties to the Energy Community. It is modelled in conjunction with several provisions of the Treaty on the Functioning of the European Union. Article 41 of the Treaty constitutes the cornerstone of the single energy market established by Title IV of the Treaty. In Ukraine, the exclusive relationships established by the PSO Act concerning the supply of electricity may represent an obstacle to trade. No other generator or supplier of another Party to the Treaty could supply the Guaranteed Buyer and the USS in Ukraine. The Secretariat is thus of the view that such relationships hinder trade in electricity between the Parties and thus contravene Article 41 of the Treaty.

According to the well-established case law of the Court of Justice, the prohibition of measures having an effect equivalent to a quantitative restriction, as laid down in Article 41 of the Treaty, conflicts with any rule or measure enacted by a Party capable of directly or indirectly, actually or potentially, hindering trade among the Parties. Consequently, measures adopted by a Party having the objective or the effect of treating electricity generated in another Party less favourably, or hindering their access to the domestic market, amount to discrimination and are to be regarded as measures having equivalent effect to quantitative restrictions on imports within the meaning of Article 41 of the Treaty.

The PSOs imposed lead to discrimination of imported electricity. This is done by establishing the statutory principle that electricity purchased by the Guaranteed Buyer and electricity consumed by all households must come from domestic sources, which is not suitable to implement the principles of free trade enshrined in Article 41 of the Treaty as well as the wording and the spirit of Directive 2009/72/EC on the establishment of competitive (integrated) wholesale markets. This approach is not counter-balanced by adequate safeguards ensuring transparency and non-discrimination, but is rather based on fully regulated agreements between the incumbent generators and the Guaranteed Buyer, as well as between the Guaranteed Buyer and the USS, as incumbent undertakings on the Ukrainian electricity market. Giving legal preference to domestic production, in itself, gives rise to discrimination against importers and encroaches upon the principle of free movement of goods enshrined in Article 41 of the Treaty, one of the key principles of an internal market. This finding is in full coherence with the case law of the Court of Justice. Just as exclusive import rights, the preference given to domestic electricity production to the extent it is available “directly affects the

conditions under which goods are marketed [almost] only as regards operators or sellers in other Member States." 35

The Secretariat is not aware of any justification under Article 41(2) of the Treaty. In this respect, the Secretariat recalls that well-established case law by the Court of Justice requires provisions permitting derogations from the Treaty rules to be interpreted strictly. 36 Furthermore, it is incumbent on the Party concerned to show that their rules fulfil the conditions for application of these derogating rules. 37 Moreover, any derogation from the free movement principle needs to satisfy the principle of proportionality, which requires that the measures adopted be appropriate to secure the attainment of the objectives that they pursue and not go beyond what is necessary in order to attain it. 38 A national rule or practice cannot benefit from the derogation provided for in Article 41(2) of the Treaty if the objective (such as security of supply) may be protected just as effectively by measures which are less restrictive of intra-Energy Community trade. 39

In any event, it is for Ukraine to invoke and sustain possible justification grounds for derogation from the free movement principles and to show that the measures are proportionate, do not go beyond what is necessary and the objectives could not be achieved with less restrictive measures.

3.8. Compensation for PSOs and State Aid

Compensation for provision of a PSO has to comply with the requirements enshrined in Article 3(6) of Directive 2009/72/EC that "[w]here financial compensation, other forms of compensation and exclusive rights which a Contracting Party grants for the fulfilment of the obligations set out in paragraphs 2 and 3 are provided, this shall be done in a non-discriminatory and transparent way."

The draft proposal for establishing compensation for provision of a PSO developed by NEURC and consulted with the Secretariat before officially being proposed to and adopted by the CMU, could be considered a transparent manner of establishing such compensation. However, in order to satisfy such criteria, NEURC failed to elaborate on the questions and the open issues identified by the Secretariat related to the actual calculation of such a compensation. In addition, NEURC has only considered compensation to be provided by Energoatom to the USS for the provision of PSOs by the USS (consisting in availability of electricity for households through universal service). It has not considered that foregoing profits by Energoatom could amount to State aid as well because the aid is provided from state resources as the state-owned company is foregoing potential profit, and has not explained how Energoatom is going to be compensated for providing the PSO (compensation to the USS).

The adopted PSO Act by the Cabinet of Ministers is not accompanied by any such assessment of the compensation mechanism as part of the actually adopted PSO. The obligation to compensate the USS is even not imposed on Energoatom as proposed by NEURC but on the Guaranteed Buyer.

Moreover, any practices deviating from Article 18 of the Treaty shall be assessed on the basis of criteria arising from the application of the rules stipulated in Annex III to the Treaty. In implementing

imposed PSOs, individual energy undertakings may receive an economic advantage which they would not have obtained under normal market conditions. Such an economic advantage, under certain conditions, may qualify as State aid and thus would be required to be justified and monitored in compliance with the Energy Community acquis.

In relation to the assessment for compliance with the State aid rules, NEURC refers to the Resolution of the Cabinet of Ministers, No.420, dated 23 May 2018 on approving the list of SGEI, adopted on the basis of Article 3 of the Law of Ukraine “On State Aid to economic entities” (hereinafter: “State Aid Law”). The State Aid Law provides that it does not apply to the “compensation of reasonable expenses for the provision of SGEIs” as established by the Cabinet of Ministers of Ukraine. This would be acceptable under Energy Community law as long as it is a properly entrusted SGEI and the compensation for the provision of the SGEI does not go beyond what is necessary in accordance with the detailed guidance of the European Commission.40

Even if the compensation calculated amounts to compensation for provision of SGEI, this does not mean that granting such compensation does not need to be assessed by the Antimonopoly Committee of Ukraine (hereinafter, “AMCU”), in particular in order to avoid overcompensation. In the present case, such assessment is missing.

4. Recommendations

In the sections above, the Secretariat assessed the PSO Act adopted by the Cabinet of Ministers against its compliance with the Energy Community rules, and has come to a conclusion that several issues are still unclear and raise compliance concerns.

Even though the PSO Act has been amended several times already, the last amendments from May 2020 did not improve the situation substantially. They relate to the following issues:

- The Guaranteed Buyer is allowed to purchase and sell electricity at bilateral contracts (in addition to the organised markets) at auctions. The period of sale under a bilateral contract shall not be longer than one month, and the starting price and the sale price following the results of electronic auctions shall not be less than the price cap for electricity of the producer generating electricity on nuclear power plants.

First of all, while allowing the Guaranteed Buyer to sell and purchase electricity in bilateral contracts is to be welcomed, it is not clear whether only the starting price of the auction is the Energoatom’s selling price because the amendment refers to “the starting price and the sale price.”

Secondly, it is not clear at which price could the Guaranteed Buyer sell at auctions electricity that it purchased from other traders or generators (ex. from TPPs), the price of which would most probably be higher than Energoatom’s price.

40 European Commission, Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest, Brussels, 29.4.2013 SWD (2013) 53 final/2.
- No separate price cap for the Guaranteed Buyer is imposed when selling on the organised markets (in the previous PSO Act, the Guaranteed Buyer had to observe a cap of 75% of the price during peak hours).

With these amendments, the Guaranteed Buyer would be allowed to sell at the price as other DAM participants which is also to be welcomed. Price caps reform and eventual phase out should apply at a later stage to the Guaranteed Buyer as well as to all other participants. However, having in mind the large volumes of electricity (from RES as well as Energoatom and Ukrhydroenergo), the bids of the Guaranteed Buyer would have significant impact on the formation of the DAM prices.

- Lowering the volumes that Energoatom has to sell to the Guaranteed Buyer from 90% to 80% and a new obligation for selling 5% of its generation to industrial customers.

With these changes, Energoatom would have the following portfolio of obligations: to sell 80% to the Guaranteed Buyer; 15% at the DAM and 5% in bilateral auctions. While lowering further the volumes sold to the Guaranteed Buyer relate to resolving the need for revenues to the Guaranteed Buyer related to RES, the 5% sale in bilateral contracts is also questionable and raises compliance concerns as elaborated above. Offering those quantities only to large industrial customers and not to all interested market participants seems to be discriminatory.

4.1. Gradual introduction of financial PSO

The Secretariat has actually submitted several proposals for improvement of the PSOs to the Ukrainian stakeholders. The main proposal by the Secretariat relates to a phased approach in introducing a financial PSO. Such a proposal has been part of its assessment in 2019, but has also been discussed in cooperation with USAID in early 2020.

While in a first stage, the Guaranteed Buyer could still be involved and imposed with PSOs, at a later stage, service contracts could be concluded only between the generation company and the USS.

The first stage of introducing service contracts could involve the following PSOs:

- the Guaranteed Buyer to purchase electricity from Energoatom and Ukrhydroenergo and to sell it on the (organised) market;
- the USS to have an obligation to purchase electricity on the market;
- the USS to have a service contract with the Guaranteed Buyer based on which the Guaranteed Buyer would compensate the USS for the difference between their cost for purchasing on the market and the price of supply to household customers.

The second stage would consist in the following PSOs:

- Energoatom and Ukrhydroenergo to sell electricity on the market;
- the USS to purchase electricity on the market;
- Energoatom to be obliged to compensate the USS for the difference.

In short, the USS should enter into a physical framework contract with Energoatom on a forward basis, in at least a yearly contract. Further, the individual physical contracts may be concluded on a
yearly, half-yearly, quarterly and/or monthly basis between Energoatom and the USS through bilateral auctions.

The USS should also enter into a financial / service framework contract with Energoatom on a forward basis, in at least a yearly contract. The individual financial contracts may be concluded on a yearly, half-yearly, quarterly and/or monthly basis. The tenor and the volume of each individual financial contract should be harmonized with the tenor of the contracts with physical delivery executed between Energoatom and USS through bilateral auctions. A yearly individual financial contract shall be executed related to the activity that is physically procured via the DAM. The volume for the financial individual contracts should be set on an ex post basis based on the volume concluded via the DAM.

The details explaining such a financial PSO through the introduction of service contracts are to be found in the Annex to this assessment, prepared by the Secretariat in cooperation with USAID.

4.2. Price reform for supply of electricity to households

In order to reach the second phase, and to address the compliance concerns identified by the Secretariat, the price reform of household (actual and fixed) prices to reach cost-reflectivity and to eliminate cross-subsidies is of utmost importance.

The Cabinet of Ministers of Ukraine and NEURC should work out solutions for household protection without the involvement of the Guaranteed Buyer, including but not limited to:

- use NEURC’s findings on cost and real prices (difference between fixed / actual and USS prices) which amounts to approximately 53.5 UEAH annually;
- NEURC should make a plan for decreasing this cost long-term and to propose to the Cabinet of Ministers reaching cost-reflectivity in a longer-term;
- NEURC’s plan should include elimination of cross-subsidies;
- EML amendments to be prepared and adopted defining vulnerable customers;
- the Cabinet of Ministers to work on measures for vulnerable customer protection that would be really targeted;
- to use Energoatom’s profit for compensating USS (for household supply till prices do not reflect costs and afterwards for vulnerable customers only) through introducing financial contracts.

The Secretariat recommends that changes to the PSO Act, backed up with an analysis by NEURC, could be drafted along the following lines:

“For the period 1 June 2020 until 30 June 2022 the fixed prices for different categories of households shall be determined on a semi-annual basis:

- for the period [1 June 2020 - 31 December 2020], the fixed prices shall be at the level of the regulated tariffs for different categories of households defined by NEURC;
- for the period [1 January 2021 - 30 June 2022], the fixed prices shall increase every six months by 25% from the fixed price determined on 01.06.2020.
Until 30 June 2022 fixed prices should reach the level of USS prices now applicable to non-households only. As of 1 July 2022, USS shall supply electricity to household consumers at USS prices.

The USS prices are determined by USS based on the methodology approved by the NEURC Resolution.

4.3. Resolving issues related to RES

Once the issue with compensating RES producers would be resolved and the Guaranteed Buyer is stabilized, the PSO Act should be amended to remove the obligation of the Guaranteed Buyer to purchase electricity in large volumes from Energoatom and selling such electricity on the organised market in order to ensure sufficient revenues for purchasing electricity at green tariffs.

In the second phase, the Guaranteed Buyer would only remain in charge with PSOs related to RES. The EML (Article 65(7) indent 10 EML) and the PSO Act would thus need to be amended in order to remove the right of the GB to allocate freely revenues and expenses between different PSOs. This provision in practice, now amounts to a cross-subsidy between different PSOs - for USS and RES producers (to decrease the amount of compensation, which is to be done by the Transmission Service Operator). The EML previously did not allow the Guaranteed Buyer to maintain cross-subsidies between different PSOs; the Guaranteed Buyer had the right only to compensate for the RES producers under the “green tariff” (as according to the EML the Guaranteed Buyer should have only been responsible for the PSO to the RES producers under “green tariff”). Only after the latest amendments to the EML from December 2019, the Guaranteed Buyer received the right to perform PSO for USS. So, the Guaranteed Buyer purchases large volume of cheap electricity at regulated prices from NPP and HPP, sells it on the organised market (DAM / IDM) and the revenues made after compensating the USS, are used to compensate the RES producers.
ANNEX

Concept for implementing service contracts as part of the PSO mechanism

The entry into force of the new market model in Ukraine as of 1 July 2019 requires a mechanism that addresses the risk of potential price shocks. During the transitional phase and in particular until REMIT enters into force in Ukraine, price caps are considered the best means to address such potential issues. This proposal relates to implementing introduction of Service Contracts for Differences prepared by the Secretariat in cooperation with USAID.

Based on the PSO act in place, the Universal Suppliers (USS) supply a certain category of consumers (i.e. households and small customers). Whereas the prices at which USS supply electricity to the small customers are determined based on the methodology adopted by NEUCR and are in principle covering costs, households are supplied at prices which are below the cost level. Such prices for households have been determined by NEURC in the past and have to be set by the CMU after 1 July 2019. However, the CMU has not yet set the household prices itself, and the prices set by NEURC before 1 July 2019 are still in place. None of these prices constitute a market price. In addition, there is also a big difference between the USS prices (which are now applied to non-households) and the fixed tariffs (applied to households), amounting to an annual cost of 53.5 billion UAH (excluding VAT). This difference should shrink over time and be phased out as household prices are raised gradually to reach at least the levels covering costs (i.e. the USS prices). There is no plan for reaching this objective, and no action has been taken in this regard almost a year after introducing the new market model as of 1 July 2019.

With the entry into force of the new market model, the USS was to procure physical electricity in the market under market conditions at the market price (as restricted by price caps). However, based on the PSO act in place, the USS are procuring electricity from the Guaranteed Buyer, which in turn purchases electricity from the state-owned generation companies (nuclear and hydro). The state-owned generation companies have the obligation to sell electricity in the market, bilaterally through auctions as forward products or on DAM, at the price set in such market segments (as restricted by price caps).

Due to the price caps, a certain amount of the generators’ economic welfare is likely to be redistributed to consumers in general. In addition, and in order to ensure that the USS are hedged under the PSO (i.e. to ensure that the cost of the difference between the USS price covering cost and the fixed tariffs at which they have to supply electricity to households will be covered), a mechanism that transfers additional economic welfare from the state-owned generators to consumers supplied through the USS should be implemented. Such economic welfare re-distribution means that the potential windfall profits created by the state-owned generation companies will be transferred to consumers.

The proposed service contracts, which resemble the features of a market hedging instrument, are considered the best mechanism to cover and ensure hedging the USS to which a PSO has been imposed. A fixed price for supply to households will be regulated/approved by the CMU and will ensure that both, the USS and the state-owned generators are financially secured and will be able to cover their costs related to supplying consumers under a PSO. The USS will be procuring energy at market prices (since also state-owned generation companies will be freely selling on market terms) and, using a service contract, it will be covering the difference between the cost for purchasing at market prices and the prices at which it sells to the households set by the CMU. The windfall profit gained in the market (or potential loss) by the state-owned generators outside the activity linked to
the PSO will not be subject to any regulatory measure. This mechanism can be applied with nuclear power plants (hereinafter referred to as the NPP) and potentially hydro power plants (HPPs) in the integrated power system of Ukraine (IPS market) or other generators on the Burshtyn energy island (BEI market), but requires that service contracts are concluded with each one by the USS.

The following (and the example in the annex) clarifies the concept of how the proposed mechanism for signing service contracts works:

**Key assumption:** Purchases and sale of electricity (physically) by the state-owned generators and the USS is done in the market at market prices. This part is not subject to the service contracts.

- Service contracts do not involve the physical delivery and/or scheduling with the TSO.
- Service contracts are calculated as the difference between the market price and the fixed price determined by NEURC multiplied by the volume of procured electricity for households.
- The purpose of the service contracts is to transfer the economic welfare from state-owned generators to consumers with as less as possible impact in the market.

**Practical example**

Capacity of the state-owned generators: 100 MW; USS demand: 60 MW

Market price – as an example let’s say DAM index, i.e. the simple average of the DAM hourly prices

Service contract: 6 months, executed on 1 June for the period 1 July – 31 Dec 2020. Volume of the service contract is not fixed and linked to all the trades that USS has done in a certain month)

Fixed price of the service contract as set by NEURC – let’s say 15 €/MWh

**Physical market activity:**

<table>
<thead>
<tr>
<th>Generation sale on DAM 100MW x 24h = 2 400 MWh @ price 40 €/MWh Same every day for July For 31 days = 74 400 MWh</th>
<th>Payment 2 976 000 €</th>
</tr>
</thead>
<tbody>
<tr>
<td>USS Purchase on DAM 60MW x 24h = 1 440 MWh @ price 40 €/MWh Same every day for July For 31 days = 44 640 MWh</td>
<td>Payment 1 785 600 €</td>
</tr>
</tbody>
</table>

Assuming the settlement period of the contract is on a monthly basis
Service contract between state-owned generator and USS:

According to the example presented above:

The generator made during July 2 976 000 € from sales as follows:
1. For 60 MW @ 40 €/MWh = 1 785 600 € from sales to households
2. For 40 MW @ 40 €/MWh = 1 190 400 €

The generator’s expenses for the period include purchase of the service from USS of 1 116 000 €

The USS’s costs of electricity purchases during July are 1 785 600 € from purchases as follows:
For 60 MW @ 40 €/MWh = 1 785 600 €

The USS’s revenue under the service contract is 1 116 000 €