



Renewable Energy of Ukraine: Monthly Monitoring

April 13, 2021

European-Ukrainian Energy Agency

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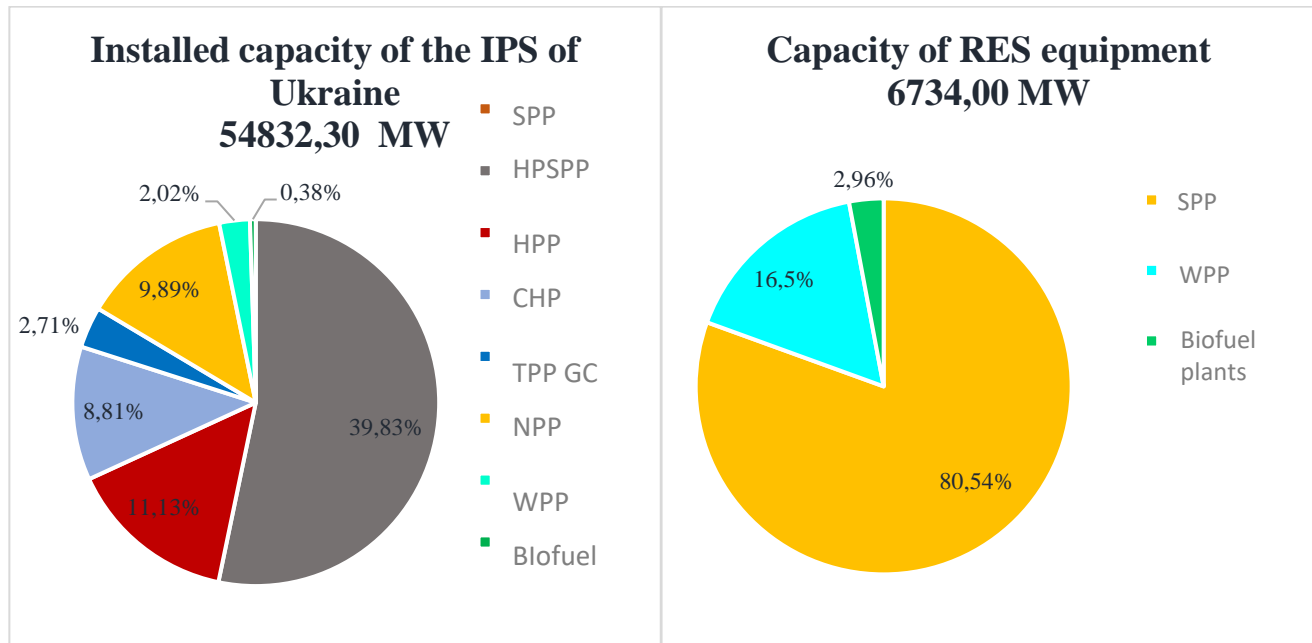
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*Established in November 2009, **European-Ukrainian Energy Agency (EUEA)** as a non-governmental, non-profit organization, business association has grown into an effective advocate for the realization of Ukraine's massive renewable energy and energy efficiency potential, by working within Ukraine's business community, government structures, and with other key energy market stakeholders.*

Members of EUEA: Acciona, Arzinger, Beycelik-Elawan Renewable Energy LLC, CCT Energy, CES, DTEK, EMSOLT, Electrum, Elementum Energy, Eurocape, GOLAW, Guris, Green Genius, GrECo Ukraine, GSE&C, Huawei, iC consulenten, IMEPOWER, Indian Solar, IRUN Engineering, Irshanska SPP, Khmelnytsky Bio Power Plant, NBT AS, Met Energy, Scatec, Schneider Electric Ukraine, Sfera, Smart Energy, Sungrow, West Solar, Terra Solar, Thermosystems, TIC Energia, Total Eren, Ukraine Power Resources, Ukrwindinvestments, Voltage Group.

Electricity from RES generation statistics

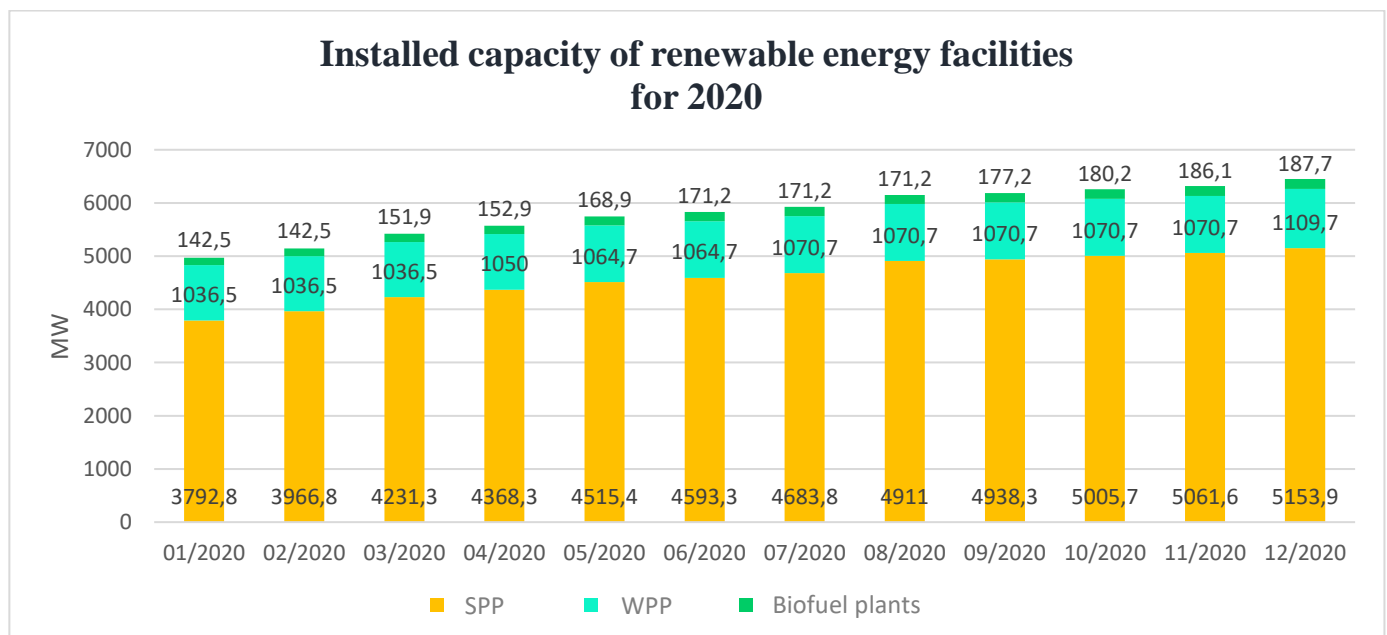
Installed capacity of the power system of Ukraine as of March 9, 2021.



Resource: <https://ua.energy/vstanovlena-potuzhnist-energosityemy-ukrayiny/>

The installed capacity of the power system of Ukraine as of March 9, 2021, according to NPC "Ukrenergo" is a total of **54832,30 MW**, and separately for RES – **6734,00 MW (12,3%)**.

However, compared to March 2020, the capacity of RES equipment increased by **1315 MW** in 2021 - **24%**. In particular, the installed capacity of SPP increased by **1196 MW - 28%**, WPP by **74 MW – 7,1%**, and biofuels by **48 MW - 31%**.



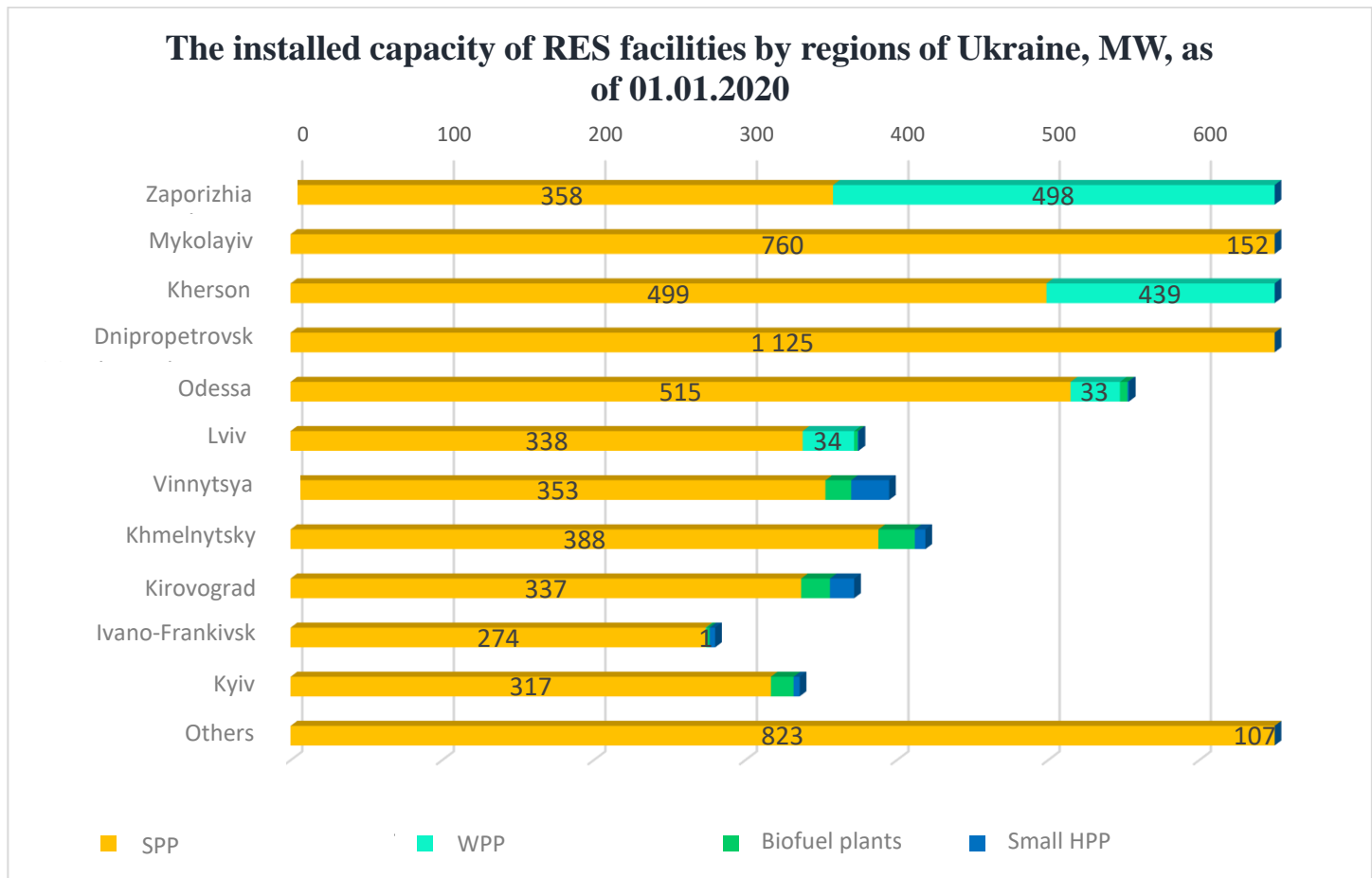
The total installed capacity of renewable energy facilities as of 01.01.2021 is **7737 MW**.



Resource: <https://www.nerc.gov.ua/?id=50471>

According to the NEURC, the total installed capacity of renewable energy facilities at the "green" tariff - as of 01.01.2021 is **7737 MW**.

Most of the solar capacity is installed in Dnipropetrovsk region - 1125 MW, in Mykolayiv - 760 MW and Odessa - 515 MW. Zaporizhia and Kherson regions show the largest number of wind power installations, having 489 MW and 439 MW, respectively.

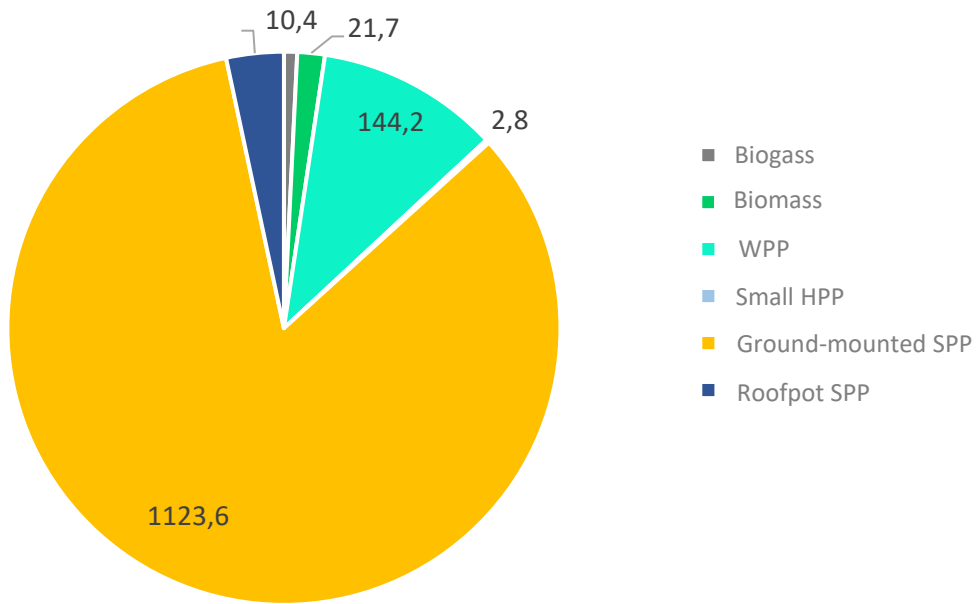


Resource: <https://www.nerc.gov.ua/?id=50471>

Regarding capacities installed by categories, according to the NEURC, most of the installed ground-mounted solar stations, namely - 1123, 6 MW. The second position was taken by wind power plants, which at the end of 2020 amounted 144,2 MW of capacity. Rooftop solar stations are 45,3 MW, biomass – 21,7 MW and biogas 10, 4 MW. Small hydropower plants are 2,8 MW.

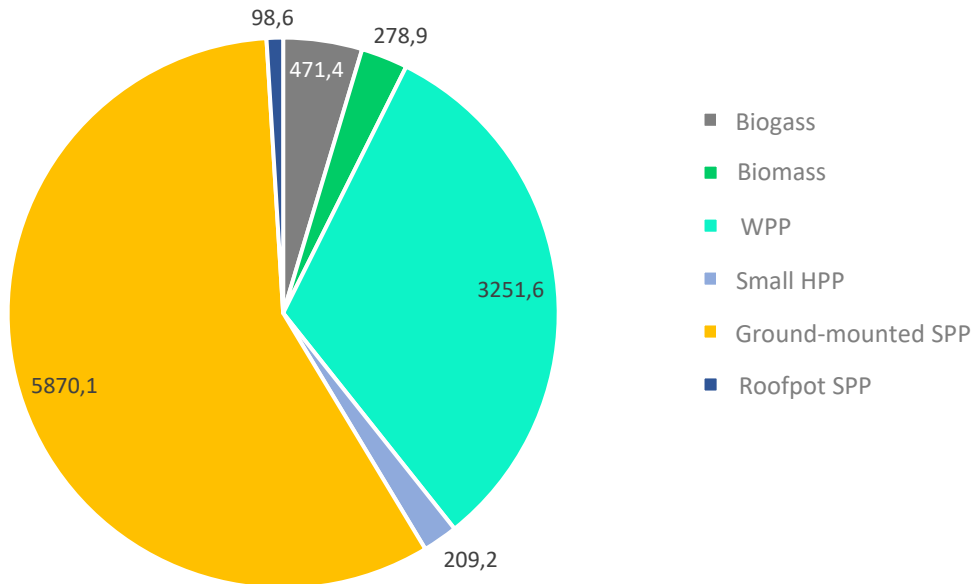
In terms of electricity generation in 2020, ground-mounted solar power plants have the highest rate of 5,870 million kWh. The next are wind power plants – 3251,6 million kWh, biogas – 471,4 million kWh, biomass – 278,9 million kWh, small hydropower plants - 209,2 million kWh and rooftop solar power plants – 98,6 million kW / year.

Installed capacity for RES facilities in 2020, MW



Resource: <https://www.nerc.gov.ua/?id=50471>

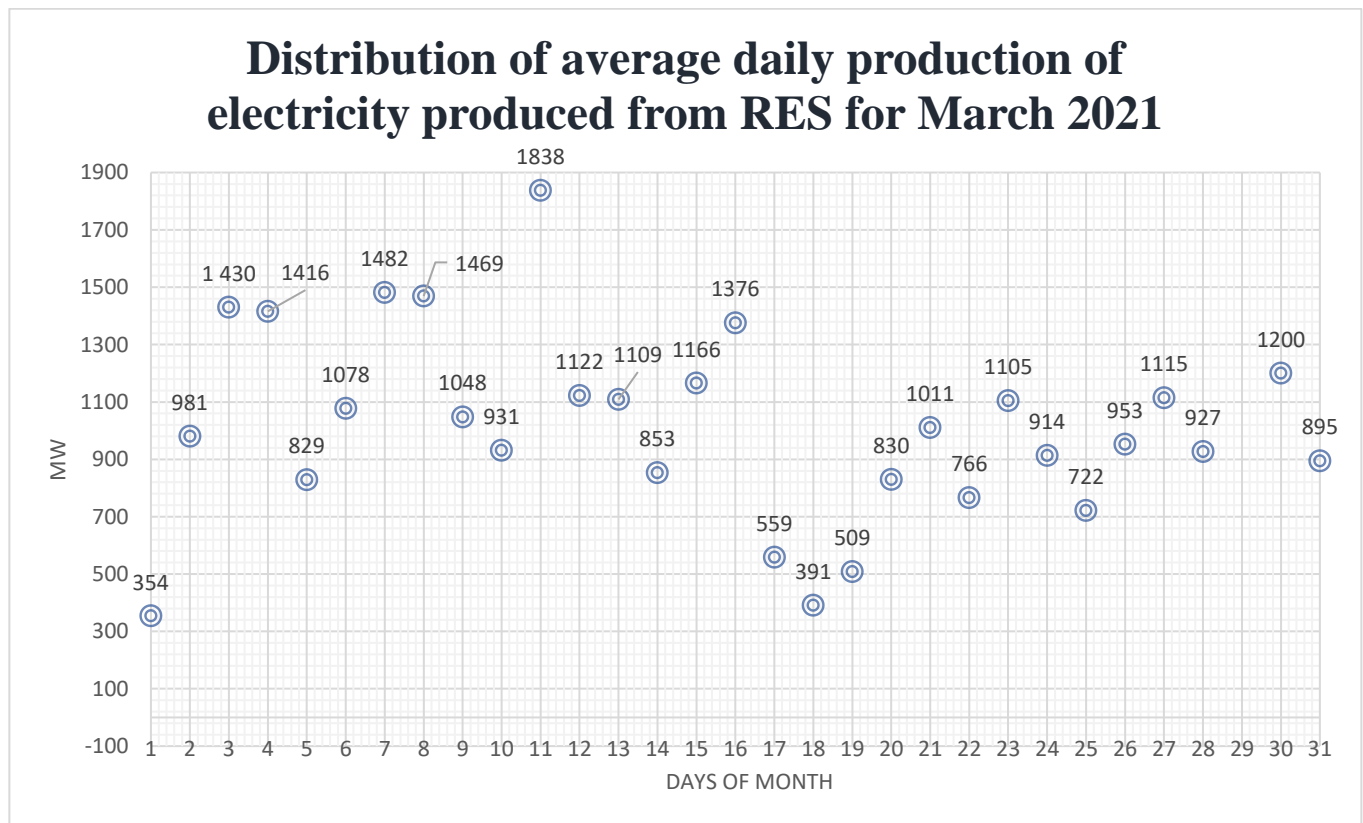
Electricity production in 2020, million kWh



Resource: <https://www.nerc.gov.ua/?id=50471>

Review of RES share in the power system for March 2021

2,54% - the share of RES generation in the total amount of energy produced by the United Energy System of Ukraine in March 2021. Electricity production at solar and wind power plants (SPPs and WPPs) in **the first week of March increased by 5,7%** compared to the last week of February - from 26,3 to 27,8 million kWh. 56,4% of the total volume was generated by SPPs (125,2 million kWh). SPP and WPP production ranged from 9,2 million kWh (March 1) to 40 million kWh (March 3).¹ **In the second week of March,** electricity production at solar and wind power plants (SPPs and WPPs) **increased by 7,8%** compared to last week - from 28 to 30,8 million kWh. 58% of the total volume from 9 to 14 March was produced by SPPs (107 million kWh). SPPs and WPP production ranged from 22 million kWh (March 14) to 48,3 million kWh (March 11).²



Resource: <https://ua.energy/peredacha-i-dyspetcheryzatsiya/dyspetcherska-informatsiya/roboata-oes-ukrayiny-za-tyzhden/>

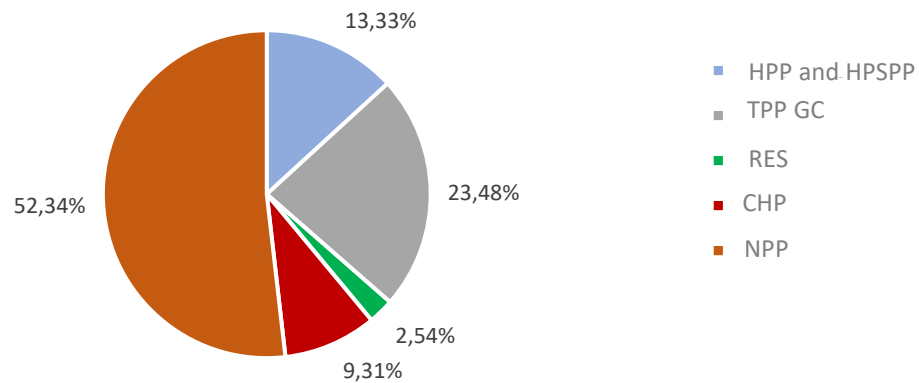
In the third week of March, electricity production at solar and wind power plants (SPPs and WPP) **decreased by 32,2%** compared to last week - from 30,8 to 20,9 million kWh.

¹ <https://ua.energy/zagalni-novyny/roboata-energosystemy-protyagom-1-8-bereznia-2021-roku/>

² <https://ua.energy/zagalni-novyny/roboata-energosystemy-protyagom-9-14-bereznia-2021-roku/>

57,2% of the total volume was generated by SPPs (83,6 million kWh). SPP and WPP production ranged from 11,9 million kWh (March 18) to 37 million kWh (March 16).³ **In the fourth week of March**, electricity production at solar and wind power plants (SPPs and WPPs) **increased by 13,4%** compared to last week - from 160 to 181,6 million kWh. 73,2% of the total volume was generated by SPPs (132,9 million kWh).⁴

IPS generation structure for March 2021



Resource: <https://ua.energy/peredacha-i-dyspetcheryzatsiya/dyspetcherska-informatsiya/robota-oes-ukrayiny-za-tyzhden/>

Information on the generation limitation of Ukrenergo for March 2021

It will be recalled, that since January 1, 2021 changes to the Rules of the market which were brought by the resolution of NEURC №2818 from December 30, 2020 came into force. According to them, compensation is provided for electricity not supplied as a result of dispatch restrictions with RES only to those producers who have joined the public contract for load reduction and are connected to the RES Restriction Management System (RMS RES), as well as fulfilled all requirements for transmission of TV meters, submission of proposals. for unloading, etc.

Ukrenergo emphasizes the obligation of RES to connect to the RMS and comply with all the requirements of the Market Rules. After all, during the spring-summer period, the air temperature, as well as the generation of SPPs and WPPs, will increase and the level of consumption will decrease. Therefore, in the future there will be more and more prerequisites for limiting the generation of RES.

³ <https://ua.energy/zagalni-novyny/robota-energosityemy-protyagom-15-21-bereznya-2021-roku/>

⁴ <https://ua.energy/zagalni-novyny/robota-energosityemy-protyagom-22-28-bereznya-2021-roku/>

The total volume of electricity production in March from RES amounted to **30,379 MW**, and the volume of the limitation was **1,154 MW (3.8%)**.

On Thursday, March 11, there was a significant surplus of electricity in the power system. On this day, after the morning maximum consumption in the IPS of Ukraine as of 9:30 was 20,8 GW. As of 12:30, consumption has dropped to 19,5 GW. At the same time (at 12:30) the **load of RES reached its peak and amounted to 4,46 GW**, which is almost twice as much as the previous day for the same hour (2,35 GW). To ensure the limits of operational safety of the power system from 12:30 to 14:00, **commands were given to unload SPP and WPP a total of 400 MW**.⁵

On Sunday, March 28, there was a significant surplus of electricity in the power system with extremely low consumption. The surplus for the day was up to 25 million kWh. At the same time, consumption on March 28 amounted to 377 million kWh, which is the lowest figure for the whole of 2021. Also, on this day, a record was set for electricity production at nuclear power plants – 63,5% of daily volume (239,8 million kWh out of 377 million kWh). The Dispatch Center of NPC "Ukrenergo" from 11:34 to 15:37 **three times gave commands to unload SPP and WPP totaling about 754 MW**.⁶

Monitoring of the Memorandum Implementation and Law of Ukraine No. 810-IX

On June 10, 2020, a Memorandum was signed between the Government of Ukraine and sectoral associations in the field of RES (European-Ukrainian Energy Agency and Ukrainian Wind Energy Association).

As of April 10, 2021, it will be 10 months from the signing of the Memorandum of Understanding between the Government of Ukraine by sectoral associations in the RES sector and 8 months from the entry into force of the Law of Ukraine №810-IX on reducing "green" tariffs for electricity producers from renewable sources energy (RES).

A list of commitments made by the state of Ukraine, in addition to reducing the "green" tariff is the following:

Registration and support of the Government Bill and its support during the hearings in the relevant committee of the Verkhovna Rada.	Law of Ukraine 810-IX was adopted by the majority of people's deputies in the Verkhovna Rada on July 21, 2020. ⁷
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⁵ <https://ua.energy/zagalni-novyny/roboata-energosystemy-protiyagom-9-14-bereznaya-2021-roku/>

⁶ <https://ua.energy/zagalni-novyny/roboata-energosystemy-protiyagom-22-28-bereznaya-2021-roku/>

⁷ <https://zakon.rada.gov.ua/laws/show/810-20#Text>

<p>Granting the right to SE "Guaranteed Buyer" to sell electricity produced from RES at auctions under bilateral agreements.</p>	<p>Since October 2020, SE "Guaranteed Buyer" has received such a right and carries out the relevant sales transactions.</p> <p>In February 2021, the Guaranteed Buyer sold 177,520 MWh on the stock exchange, which accounted for 3% of the total volume of electricity sold by the Guaranteed Buyer.⁸</p>
<p>Improving the procedure for organizing and conducting auctions for the distribution of support quotas.</p>	<p>Adopted in the Law of Ukraine 810-IX.</p>
<p>Stabilization clause</p>	<p>The Law of Ukraine No 810-IX includes, however, the Law of Ukraine “On the Foreign Investment Mode” has a note, that there may be changes in tax legislation.</p>
<p>100% payment to RES producers, which were to occur from August 1, 2020.</p>	<p>Current payments: January 93%, February 90%, March (29 days) 87%.⁹</p>
<p>Repayment of existing debt of UAH 22.4 billion accumulated for the period up to August 1, 2020 to RES producers.</p> <p>The repayment schedule is provided in the Memorandum of Understanding: 40% in the 4th quarter of 2020; 15% percent on a quarterly basis during 2021.</p>	<p>As of March 31, the Guaranteed Buyer paid UAH 1,5 billion for electricity at the "green" tariff for 2020. Thus, a total of UAH 4,625 billion was paid out of UAH 22,4 billion (about 21%, but according to the obligations under the Memorandum, it should be 55% by the end of March 2021).</p> <p>On April 1, 2021, the NEURC decided to sign agreements on measures to ensure the fulfillment of obligations under debt repayment agreements. From now on, the NEURC will be obliged to cover the costs of repaying the liabilities of NPC Ukrenergo provided for in the loan agreements at the expense of the tariff for electricity transmission of NPC Ukrenergo.</p>
<p>Development and implementation of a mechanism to compensate producers for unproduced electricity from RES due to restrictions by TSO.</p>	<p>The Regulator has adopted the relevant Amendments to the Market Rules regarding such compensation, which came into force on November 17, 2020.¹⁰ The issue of compensation for the period from November 2019 to December 2020 remained unresolved.</p>
<p>Increasing the tariff for the services of electricity transmission of PJSC NPC “Ukrenergo” to a sufficient level.</p>	<p>The current mechanism of RES support in Ukraine is carried out at the expense of the electricity transmission tariff of the Transmission System Operator (TSO) - NPC “Ukrenergo”. The current tariff is UAH 293,93 / MWh without VAT. A meeting on the adoption of the Resolution on raising the tariff to the amount of UAH 300,60 / MWh without VAT is scheduled for March 10;</p>

⁸ <https://www.gpee.com.ua/main/news?id=609>

⁹ <https://www.gpee.com.ua/main/news?id=342>

¹⁰ <https://www.nerc.gov.ua/index.php?id=55949&find>

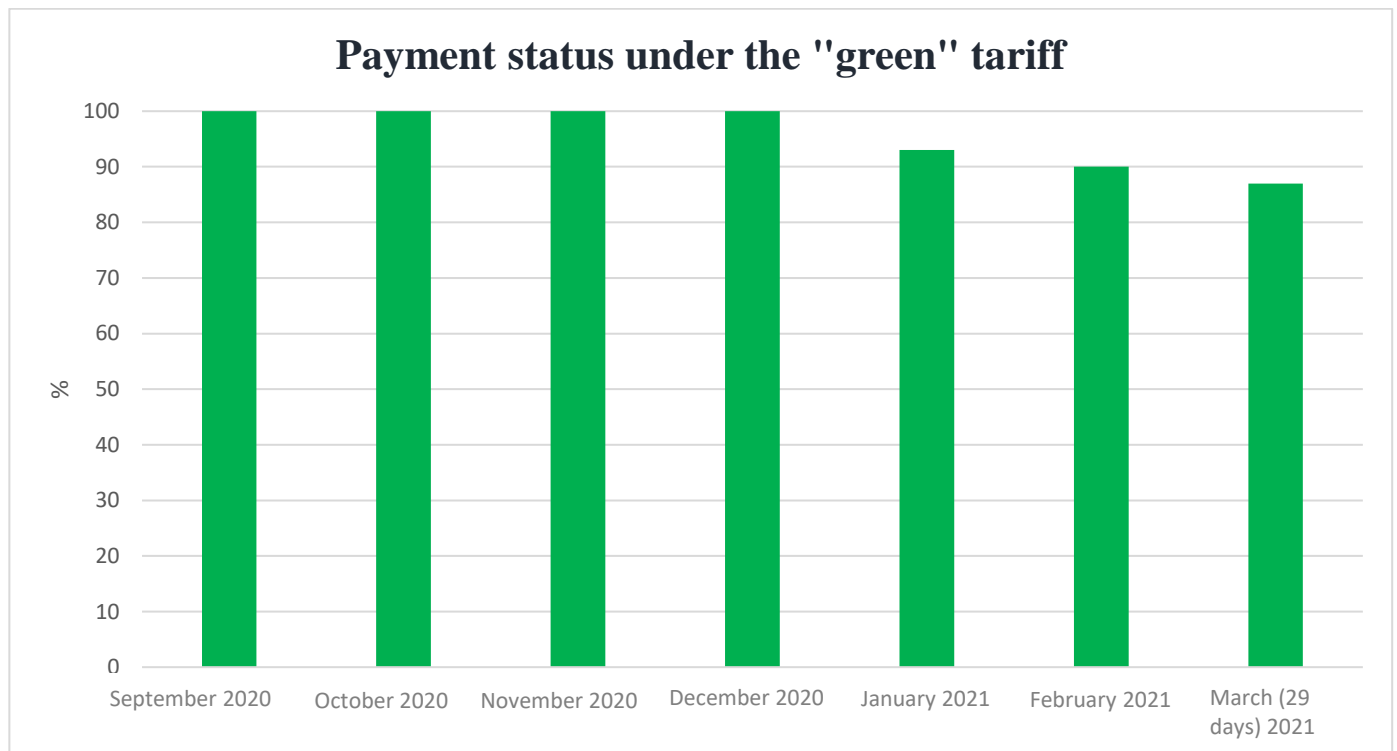
	According to the results of calculations performed by NPC “Ukrenergo”, the tariff for electricity transmission services for 2021 from 01.04.2021 should be UAH 414,66 / MWh . ¹¹
Compensation of 20% of the "feed-in" tariff from the State Budget.	Not provided in the State Budget 2021.
The right of RES producers to leave the balancing group of the Guaranteed Buyer.	Proposals for the Bill were sent by EUEA to the Ministry of Energy of Ukraine in October 2020. News on the consideration of proposals and the Bill itself has not yet been made public.
Stimulation of balancing and energy storage systems.	<p>The Acting Minister of Energy of Ukraine, Yuriy Vitrenko, held a meeting with market participants to discuss the stimulus of the construction of balancing facilities, emphasizing the market incentive mechanisms.</p> <p>The tender has not been announced yet.</p> <p>Resolution of the Cabinet of Ministers of Ukraine dated 10.07.2019 № 677 on approval of the Procedure conducting a tender for the construction of generating capacity and implementation of demand management measures. It is planned to finalize the conditions of such a tender and make changes to the current procedure for the tender NPC “Ukrenergo” submitted to the Ministry of Energy for processing a proposal to hold a tender for the required generating capacity of 500 MW. The Bill №3657 dated 15.06.2020 was registered, which improves the procedure of the tender.¹²</p>
Conducting auctions for the distribution of RES support quotas until the end of 2020.	Acting Minister of Energy of Ukraine, Yuriy Vitrenko, in recent public statements and interviews did not express support for the earliest possible auctions. We will remind that the previous acting Minister of Energy of Ukraine, Olga Buslavets presented on December 3, 2020 (not yet approved by the Cabinet of Ministers of Ukraine) annual support quotas and the schedule of auctions. You can find it here on page 9.

¹¹ https://www.nerc.gov.ua/data/filearch/Materialy_zasidan/2021/berezen/10.03.2021/p12_10-03-21.pdf

¹² https://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=69137

Information on payments for electricity at the "green tariff" as of April 2, 2021

As of April 2, 2021, SE "Guaranteed Buyer" paid only UAH **29,4 billion** at the "green" tariff. Currently, the payment rate for **February is 90%** and **87% for March (29 days)**. The average level of payment since the beginning of the year is 90% (for the first three months of 2021).



Resource: <https://www.gpee.com.ua/main/news?id=342>

Constitutional Court Proceedings against RES

According to the latest news, on March 27, 2021, the President of Ukraine revoked the Decrees on the appointment of judge Kasminin, who considered the case of "green" tariffs. Thus, it remains unclear, after the appointment of a new judge, whether the case will be reconsidered from the very beginning or continued based on existing developments.

It will be recalled, that on July 17, 2020, 47 people's deputies of Ukraine appealed to the Constitutional Court to declare unconstitutional the legislative provisions of the Law of Ukraine No 555-IV "On Alternative Energy Sources" of February 20, 2003 and the Law of Ukraine No 2019-VIII "On the Electricity Market" of April 13, 2017 year. According to people's deputies, when adopting the law "On Alternative Energy Sources", the Verkhovna Rada went beyond its powers, interfering in the sphere of constitutional powers of the

executive branch, without alternatively establishing coefficients and mechanisms for calculating the "feed-in" tariff, which deprived the executive branch of its discretion and authority to change it. Accordingly, there is a threat of declaring the "feed-in" tariff in Ukraine unconstitutional.¹³

The chronologic review and the role of industry associations, including EUEA, is highlighted in the previous Monthly Monitoring of the Renewable Energy Sector (RES) in Ukraine of 5 October 2020.¹⁴

On November 2, an expert discussion was held on the topic: "Constitutional proceedings against RES: the Ukrainian phenomenon."¹⁵ The results of the key theses of the experts are described in the Monthly Monitoring of the RES sector dated November 9, 2020.¹⁶

On December 8, 2020, the European-Ukrainian Energy Agency received a letter from the Office of the President of Ukraine – supporting position to RES, regarding the constitutional submission of 47 people's deputies of Ukraine. The President, in particular, notes that the disputed provisions of the laws of Ukraine "On Alternative Energy Sources" and "On the Electricity Market" determine the principles of establishing a "feed-in" tariff to stimulate the development of alternative energy sources, and emphasizes that the development of alternative energy including through its economic stimulus, is a matter of energy security.

The position of the President of Ukraine based on the analysis of the provisions of the Constitution of Ukraine and the legal positions of the Constitutional Court of Ukraine concludes that there are no grounds for declaring the provisions of the laws of Ukraine "On Alternative Energy Sources" and "On the Electricity Market" unconstitutional.¹⁷

On 17 December 2020, the Grand Chamber of the Court completed its examination of the case file in the open part of the plenary session and moved to the closed part of the plenary session for a decision. Consideration of the case will be continued at one of the next plenary sessions.¹⁸

¹³ http://www.ccu.gov.ua/sites/default/files/3_332_2020.pdf

¹⁴ https://euea-energyagency.org/wp-content/uploads/2020/10/SHHomisyachnyy-monitoryng-VDE_05.10.2020-1.pdf

¹⁵ https://www.youtube.com/watch?v=BoUwHuEWDcw&feature=youtu.be&fbclid=IwAR3Qp7wwMglxTmL4swYd2ThQKkYlQbIM3HtOWZupMu_RBJZ40cQRNdHsEaE

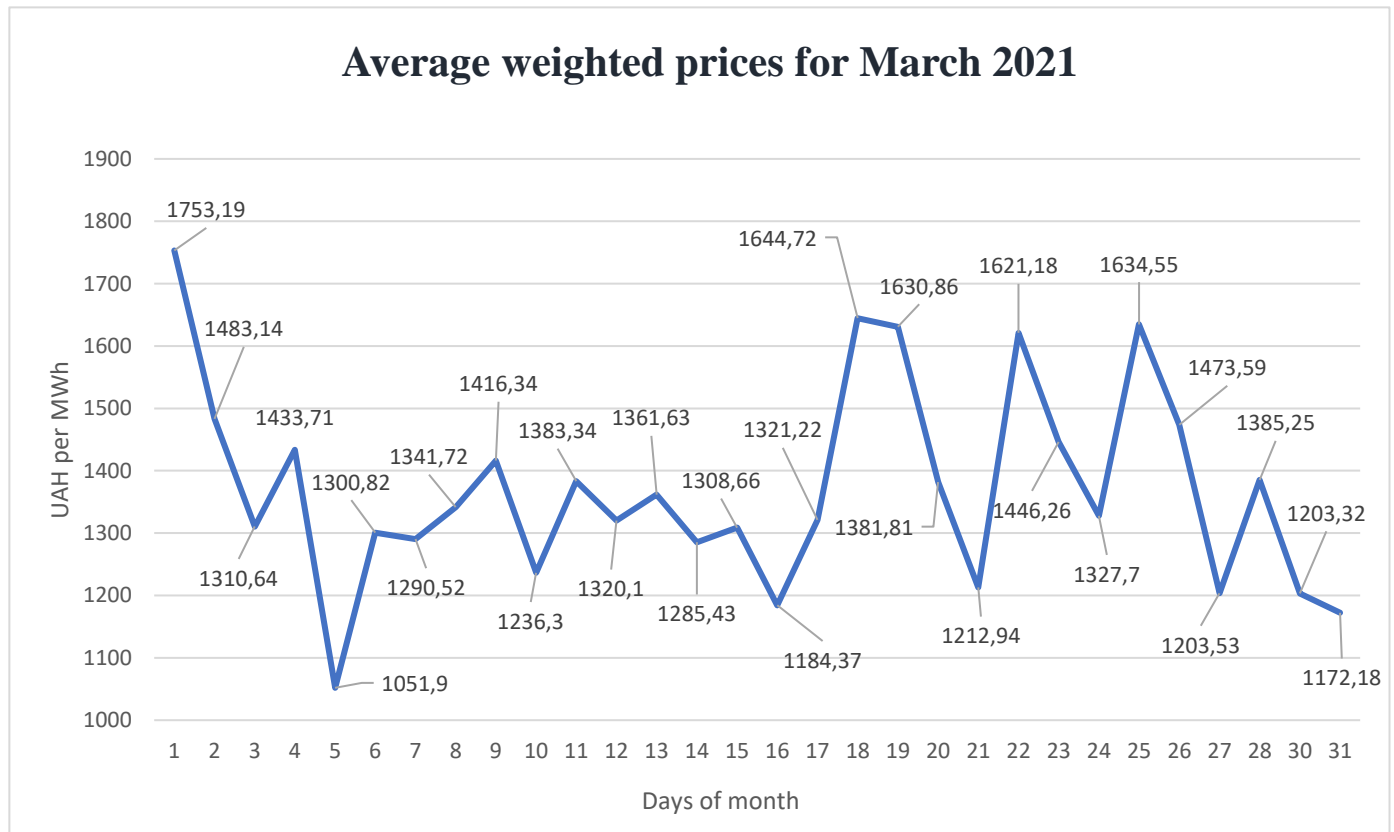
¹⁶ <https://euea-energyagency.org/uk/novyny-ta-podiyi/novyny-rynku/shhomisyachnyj-monitoryng-galuzi-vde-v-ukrayini/>

¹⁷ <https://euea-energyagency.org/uk/novyny-ta-podiyi/dosyagnennya-ta-diyalnist-yeuea/yeuea-otrymalo-vidpovid-na-svij-lyst-vid-kerivnyka-aparatu-ofisu-prezydenta-ukrayiny/>

¹⁸ <http://www.ccu.gov.ua/novyna/17-grudnya-poryadok-dennyi-zasidan-ksu-zatverdzhennyi-rezultaty-rozglyadu-sprav>

Average weighted prices of DAM (Day-ahead market) on IPS (Integrated power system) of Ukraine for March 2021

The weighted average price of electricity for March DAM on the IPS of Ukraine was **1326, 48 UAH per MWh**.¹⁹



Legislative initiatives for the period of March 2021, affecting the activities of RES producers

The results of changes in legislative and regulatory initiatives for the first and second half of March 2021 were prepared by the EUEA Energy Adviser – [IMEPOWER](#).

The first part of March (1 – 15): <https://cutt.ly/NcIbzKH>

The second part of March (16 - 31): <https://cutt.ly/McLvNLP>

¹⁹ <https://www.oree.com.ua/index.php/indexes>



Європейсько-українське
енергетичне агентство
European-Ukrainian Energy Agency

Volodymyrska str., 61 b, 2nd floor,
Kyiv 01033, Ukraine
Tel. +38 091 331 00 10
office@euea-energyagency.org
www.euea-energyagency.org

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