

## **Investments into the past**

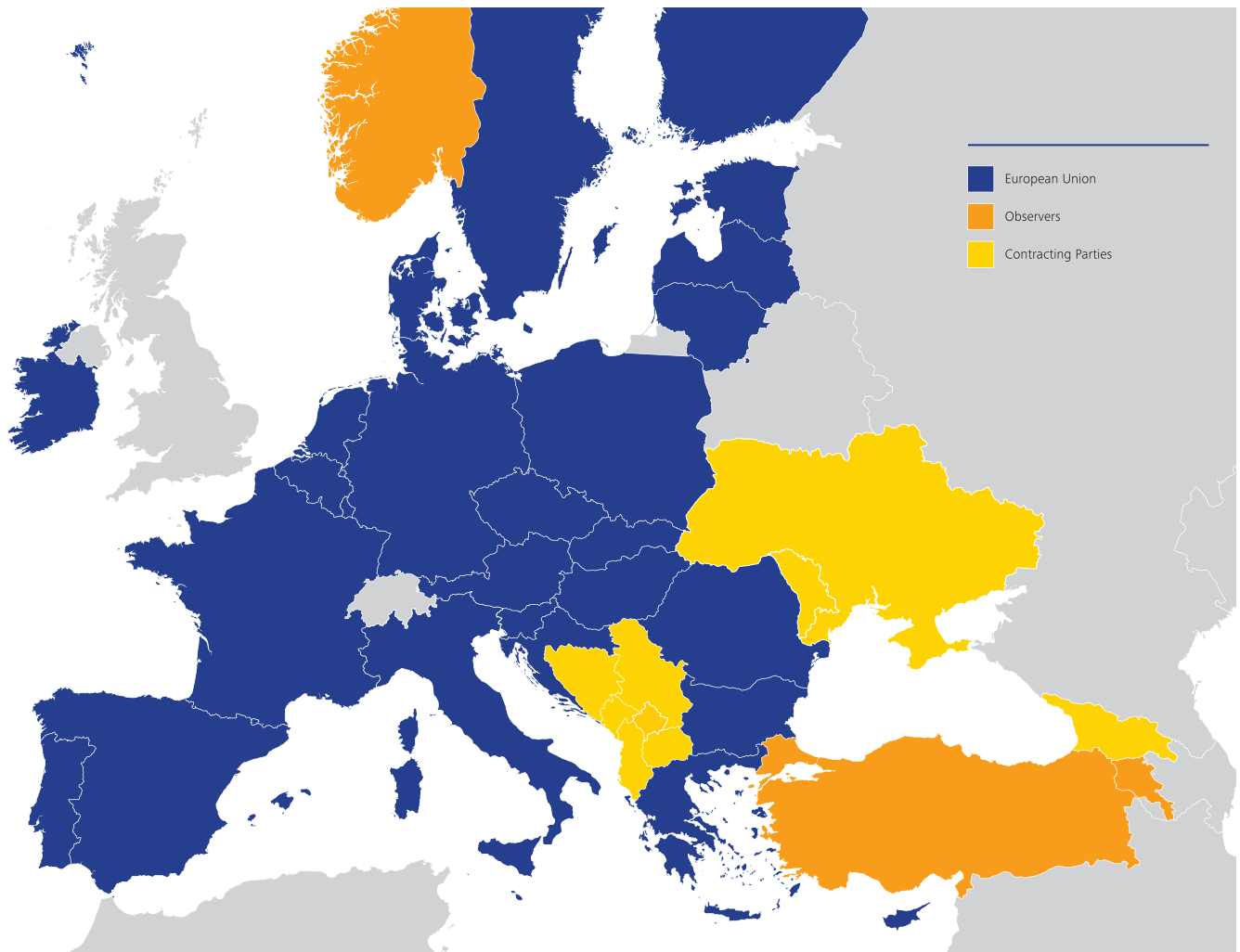
**Analysis of Direct Subsidies to  
Coal and Lignite Electricity  
Production for the  
year 2020 in the Energy  
Community Contracting Parties**

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## About the Energy Community

The Energy Community is an international organization which brings together the European Union and its neighbours to create an integrated pan-European energy market. The organization was founded by the Treaty establishing the Energy Community signed in October 2005 in Athens, Greece, in force since July 2006. The key objective of the Energy Community is to extend the EU internal energy market rules and principles to countries in South East Europe, the Black Sea region and beyond on the basis of a legally binding framework. Presently, the Energy Community has nine Contracting Parties - Albania, Bosnia and Herzegovina, Kosovo\*, North Macedonia, Georgia, Moldova, Montenegro, Serbia and Ukraine.



Energy Community map

## Contents

1. Executive Summary .....	5
2. Introduction and Background .....	7
3. Methodology .....	8
4. Overall Findings .....	11
5. Contracting Party Reports .....	13
5.1. Bosnia and Herzegovina .....	13
5.2. Kosovo* .....	14
5.3. Montenegro .....	15
5.4. North Macedonia .....	16
5.5. Serbia .....	17
5.6. Ukraine .....	18
6. Concluding Remarks .....	20
7. ANNEXES .....	21

## Abbreviations

ECS – Energy Community Secretariat

EnC – Energy Community

EPS – Elektroprivreda Srbije

ERO – Energy Regulatory Office of Kosovo\*

ERC – Energy Regulatory Commission of North Macedonia

ERS - Elektroprivreda RS

EPBIH – Elektroprivreda BiH

ESM – Elektroprivreda North Macedonia

EU – European Union

EUROSTAT - Statistical office of the European Union

IEA – International Energy Agency

LCPD – Large Combustion Plants Directive

MERA – Montenegro Energy Regulatory Agency

NCSREPU – Ukraine National Commission for State Regulation of Energy and Public Utilities

NECP – National Energy and Climate Plan

NERP - National Emission Reduction Plan

OECD – Organization for Economic Cooperation and Development

SOE – State-Owned Enterprise

SERC - State Electricity Regulatory Commission of Bosnia and Herzegovina

WTO – World Trade Organization

## 1. Executive Summary

This report analyzes the scale of direct subsidies in the six Energy Community Contracting Parties that owned and utilized generation capacities and resources from coal and lignite in 2020: Bosnia and Herzegovina, Kosovo\*<sup>1</sup>, Montenegro, North Macedonia, Serbia and Ukraine. The other three Contracting Parties, Albania, Moldova and Georgia, do not have coal-fired electricity generation capacity. The report builds on previous research and studies encompassing the periods 2018 - 2019<sup>2</sup> and 2015 - 2017<sup>3</sup>.

The report revealed that all six analyzed Contracting Parties provided direct subsidies to electricity generation from coal/lignite during 2020. These subsidies amounted to more than EUR 400 million. In absolute terms, the amount of subsidies was the highest in Ukraine, Serbia and Bosnia and Herzegovina.

Contracting Party	Fiscal support subsidies	Public finance support subsidies	SOE investment subsidies	Total
<b>Bosnia and Herzegovina</b>	3.59	20.44	10.50	<b>34.53</b>
<b>Kosovo*</b>	5.49	0.12	0.00	<b>5.61</b>
<b>Montenegro</b>	0.12	0.13	0.00	<b>0.25</b>
<b>North Macedonia</b>	0.00	0.70	0.00	<b>0.70</b>
<b>Serbia</b>	21.37	12.50	1.13	<b>35.00</b>
<b>Ukraine</b>	283.01	0.00	59.73	<b>342.74</b>
<b>Total</b>	<b>313.59</b>	<b>33.88</b>	<b>71.36</b>	<b>418.83</b>

Source: based on calculation in Annexes

The World Trade Organization's (WTO) definition of subsidies<sup>4</sup> was used to identify and calculate the subsidies, which were classified into three categories:

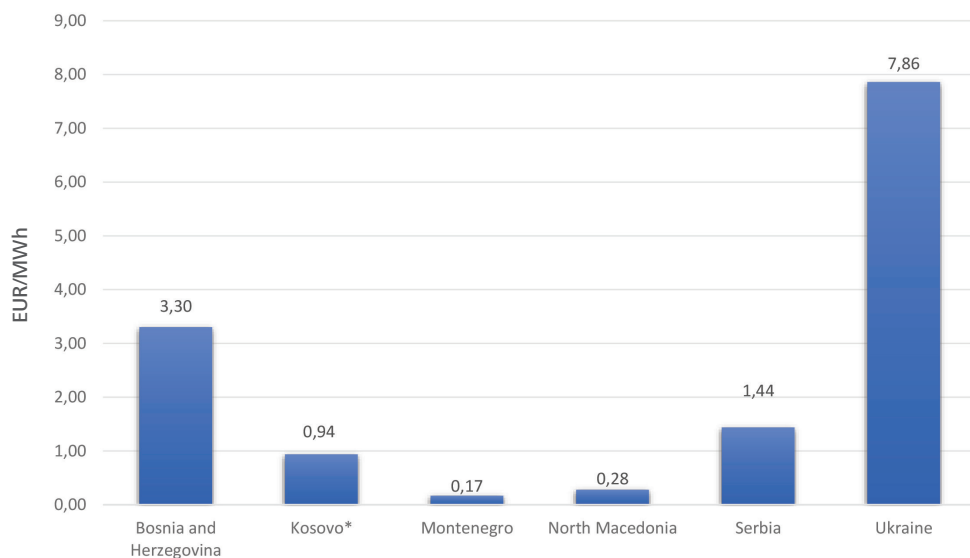
- fiscal support-type subsidies;
- public finance support subsidies; and
- State-Owned Enterprises (SOE) investment support subsidies.

The most significant and most frequently used type of subsidy falls under the category of fiscal support, reported in all analyzed Contracting Parties except North Macedonia. The most frequent form of this subsidy was tolerating the non-payment or delayed payment of financial obligations to the State and direct transfers from the state budget.

Whereby the subsidy levels in absolute terms are the highest in Ukraine and Serbia, the subsidies per unit of coal-fired electricity generation are the highest in Ukraine and Bosnia and Herzegovina, closely followed by Serbia.

1 \* This designation is without prejudice to positions on status, and it is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence  
2 [https://www.energy-community.org/dam/jcr:482f1098-0853-422b-be93-2ba7cf222453/Miljevic%20Coal\\_Report\\_122020.pdf](https://www.energy-community.org/dam/jcr:482f1098-0853-422b-be93-2ba7cf222453/Miljevic%20Coal_Report_122020.pdf) Accessed 20.01.2022  
3 [https://www.energy-community.org/dam/jcr:ae19ba53-5066-4705-a274-0be106486d73/Draft\\_Miljevic\\_Coal\\_subsidies\\_032019.pdf](https://www.energy-community.org/dam/jcr:ae19ba53-5066-4705-a274-0be106486d73/Draft_Miljevic_Coal_subsidies_032019.pdf) Accessed 20.01.2022  
4 WTO defines a subsidy as "any financial contribution by a government, or an agent of a government, that confers a benefit on its recipients", [https://www.wto.org/english/docs\\_e/legal\\_e/24-scm\\_01\\_e.htm](https://www.wto.org/english/docs_e/legal_e/24-scm_01_e.htm) Accessed 22.01.2021

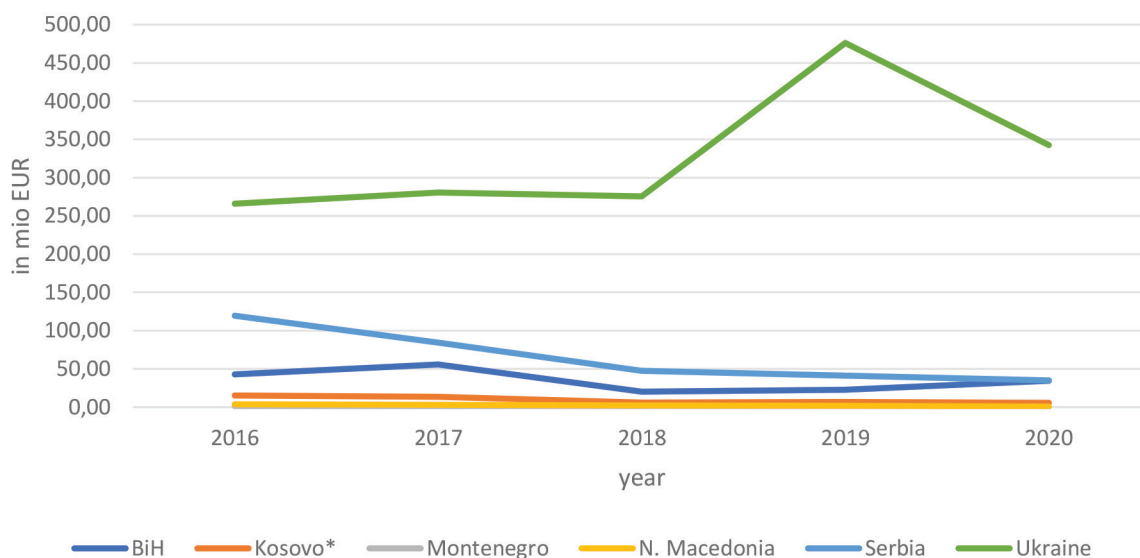
**Graph 1 – Direct subsidies in EUR/MWh electricity produced from coal in 2020**



Source: based on calculation in Annexes and data from energy regulators

In the period 2016-2020, the cumulative amount of direct subsidies in all Contracting Parties reached EUR 2.2 billion. The findings for the year 2020 show an absolute decline in the amount of direct subsidies compared to the previous period in all observed Contracting Parties except Bosnia and Herzegovina.

**Graph 2 – Direct subsidies to coal-fired production of electricity 2016-2020**



Source: based on calculation in Annexes and data from previous research

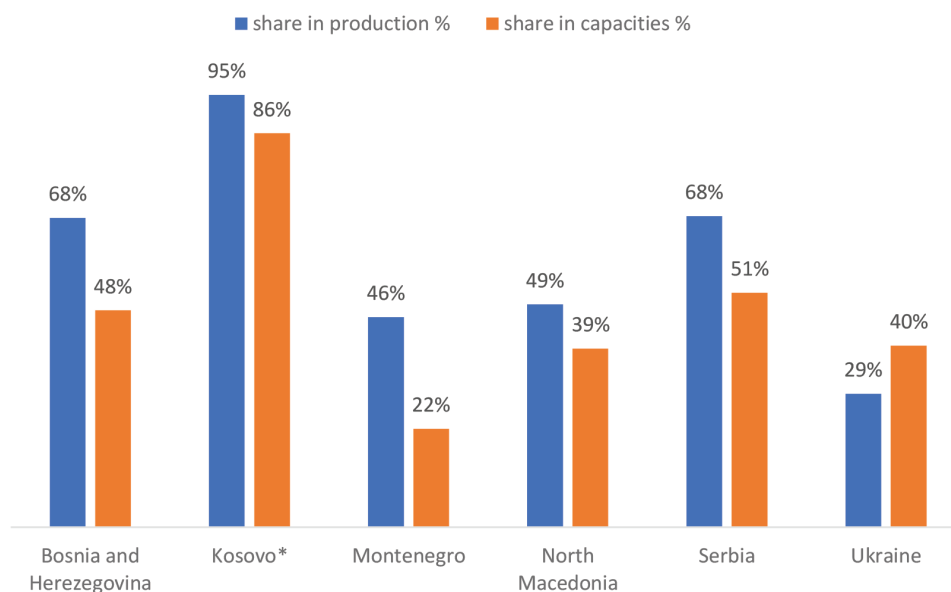
## 2. Introduction and Background

All Contracting Parties (except Kosovo\*) are signatories to the Paris Agreement and have committed to reduce greenhouse gas emissions and create conditions for climate-resilient development. The Paris Agreement requires the signatory Contracting Parties to review their existing energy policies, harmonize them with the signed obligations and redirect funds to achieve the Agreement's abatement goals. Moreover, the Western Balkan Contracting Parties signed the Sofia Declaration on the Green Agenda for the Western Balkans<sup>5</sup> in November 2020, again confirming their commitment to decrease and gradually phase-out coal subsidies and strictly respect State aid rules.

On 30 November 2021, the Ministerial Council adopted the General Policy Guidelines on the adoption of a Decarbonisation Roadmap a political document outlining the sequence of adoption, transposition and implementation of decarbonisation-focused rules in order to put the Contracting Parties on a path towards achieving 2030 and mid-century decarbonisation targets, including a shared political message on coal phase-out and fossil fuel subsidies. The Contracting Parties are expected to include such measures in their National Energy and Climate Plans (NECPs). The NECPs are to be adopted on the basis of the Governance Regulation, which was incorporated in Energy Community law also at the 2021 Ministerial Council.

As electricity generation from coal and lignite makes up a significant share of electricity production in the Energy Community, the Energy Community Secretariat contracted a consultant to prepare a report on direct subsidies provided to coal and lignite electricity generation in the Energy Community for the year 2020. The analysis covers those Contracting Parties where coal is used for electricity generation: Bosnia and Herzegovina, Kosovo\*, Montenegro, North Macedonia, Serbia and Ukraine.

**Graph 3 - Share of coal in the electricity generation fuel mix in 2020**



The main objective of the report is to identify and calculate the level of subsidies to coal mines and companies producing electricity from coal, classified into three categories: fiscal support, public finance support and investment by State Owned Enterprises. In order to obtain comparable results, the research for 2020 uses the same approach and methodology used to prepare the previous two reports, which covered the periods 2015 - 2017 and 2018 - 2019.

All data gathered and presented in this report are based on information collected from public sources. The consultant examined the laws and government decisions used as a basis for channelling direct subsidies to support the generation of electricity from coal/lignite. This included official gazettes, budget execution documents and governmental reports. Reports and publications produced by international organizations were also used. Additional information was gathered by interviewing government officials and from company audit reports and financial sector databases<sup>6</sup>.

<sup>5</sup> <https://www.rcc.int/docs/546/sofia-declaration-on-the-green-agenda-for-the-western-balkans-rn> Accessed on 25.12.2021

<sup>6</sup> The list of subsidies in the Annex indicates the sources of information.

### 3. Methodology

There is no commonly agreed definition of what constitutes a subsidy. This research is based on the definition of subsidies provided by the WTO Agreement on Subsidies and Countervailing Measures (WTO 1994)<sup>7</sup>:

“Article 1, Definition of a Subsidy

For the purpose of this Agreement, a subsidy shall be deemed to exist if:

(a) (1) there is a financial contribution by a government or any public body within the territory of a Member (referred to in this Agreement as “government”), i.e. where:

(i) a government practice involves a direct transfer of funds (e.g. grants, loans and equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees);

(ii) a government revenue, that is otherwise due, is forgone or not collected (e.g. fiscal incentives, such as tax credits);

(iii) a government provides goods or services other than general infrastructure, or purchases of goods;

(iv) a government makes payments to a funding mechanism, or entrusts or directs a private body to carry out one or more of the type of functions illustrated in (i) to (iii) above which would normally be vested in the government and the practice, in no real sense, differs from practices normally followed by governments; or

(a) (2) there is any form of income or price support in the sense of Article XVI of the General Agreement on Tariffs and Trade (GATT) 1994<sup>8</sup>; and

(b) a benefit is thereby conferred.”

It is important to note that the WTO definition of subsidies rests on two fundamental elements: first, a government or any other public body in the country provides a financial contribution, and, second, this contribution provides a benefit to the recipient. What matters is not what categories or groups the subsidies fall in, but that they target precisely defined entities/sectors or products/services that benefit from such measures. In this context, the WTO methodology does not recognize the classification into direct or indirect subsidies, but instead it focuses on the calculation of the scale of the benefits generated by subsidies which at the same time presents costs or potential costs for the government.

In order to advance the understanding of national policies and levels of subsidization, all subsidies with a defined monetary value that may be traced to a specific final beneficiary while providing a direct benefit will be considered direct subsidies.

To better understand the instruments that governments use to subsidize electricity generation from coal, the assembled data and information are aggregated to show the amount of direct subsidies derived from total support measures.

The rules for calculation of the amount of subsidy are presented below.

To obtain as comprehensive insights into the subsidy levels as possible, it was necessary in some cases to depart from the WTO approach when calculating the amount of direct subsidies. The reason was that, according to the Annex IV of the WTO Treaty<sup>9</sup>, the calculation of the subsidy amount is treated solely in terms of the actual cost incurred by the subsidizing government, i.e., observed from a government’s expenditure viewpoint. Recalling that the costs to governments may be lower or higher than the benefits obtained by subsidy recipients<sup>10</sup>, the impact of subsidies on the electricity generation from coal is better shown when the subsidy amount is calculated as benefit transferred to a beneficiary. The risk for the government is not estimated, nor is its potential financial liability.

Based on the WTO definition of subsidies, this report divides support and subsidies to coal/lignite based electricity production into three main categories<sup>11</sup>:

<sup>7</sup> [https://www.wto.org/english/docs\\_e/legal\\_e/24-scm\\_01\\_e.htm](https://www.wto.org/english/docs_e/legal_e/24-scm_01_e.htm) Accessed 12.02.2022

<sup>8</sup> GATT is a multilateral agreement regulating international trade. According to its preamble, its purpose is the “substantial reduction of tariffs and other trade barriers and the elimination of preferences, on a reciprocal and mutually advantageous basis.” GATT was signed in 1947 and lasted until 1993. It was replaced by the WTO in 1995. The original GATT text (1947) is still in effect under the WTO framework, subject to the *GATT 1994 modifications*.

<sup>9</sup> [https://www.wto.org/english/docs\\_e/legal\\_e/24-scm\\_03\\_e.htm#annIV](https://www.wto.org/english/docs_e/legal_e/24-scm_03_e.htm#annIV) Accessed 12.02.2022

<sup>10</sup> For instance: A government may borrow in financial markets under much better terms than a commercial entity. Therefore, when e.g. a government provides a loan or a loan guarantee, the benefit to the subsidy recipient is far greater than the cost to the government and is reflected in the interest rate difference between the interest rate on the loan to the beneficiary and the interest rate to a similar loan extended on commercial terms without government involvement.

<sup>11</sup> This approach is mainly based on the Overseas Development Institute and Climate Action Network methodology, see more at: <https://odi.org/en/publications/g20-coal-subsidy-tracking-government-support-to-a-fading-industry/> Accessed 28.01.2022



### Fiscal support

Fiscal support is defined as any direct spending by the government from the budget, tax breaks and income or price support or any government revenue forgone, deferred or not collected and could be divided in two categories:

- a. Direct budget transfers for any purpose for coal mines supplying thermal power plants or for companies involved in coal-fired electricity generation including budgetary direct expenditures and government loans; and
- b. Forgone revenues, including arrears for taxes, contributions or other public revenues connected with entities involved in coal-fired electricity generation, debt write-offs, and exemptions from payment of costs or reduction of liabilities for such costs, and lower tax rates or other fiscal charges relative to other entities.

These types are categorized under 'fiscal support' because they directly impact the budget, either as a direct budget outlay or as forgone or deferred budget revenue.

Direct transfers from the budget are shown in the amounts transferred in the year when the transactions were completed. All direct budget transfers, with the exception of government loans, were included in full as an amount of the subsidy in the year when they were executed.

The data for government loans is shown as the amount of outstanding debt as of year-end. The data for debt for public revenues is demonstrated as the end-year due balance. The reason is that the failure to collect such claims results in lower budget revenues for the given year. Subsidy levels from loans obtained from governments were calculated by considering the comparison of interest rates on loans provided by governments and interest rates on comparable commercial loans in the domestic markets. In all presented cases, the market loan interest rates were higher than interest rates on the government issued loans. The subsidy amount was calculated as the benefit incurring to the loan recipient arising from the interest rate difference. The interest rate difference on the previous year's outstanding loan portfolio was calculated and shown as a subsidy in the current year.

The subsidization effect of arrears to governments for various taxes and contributions was computed by recognizing that such arrears constituted unrealized budget revenues and governments must borrow equivalent amounts in the financial markets to balance budgetary revenues and expenditures. In this case, the subsidy is equal to the cost to the government of borrowing the amount equivalent to budget revenue arrears. The actual government costs were computed using the yield on government bonds as the rate payable on total arrears in the given year.

Other data in this category were calculated and estimated based on the decisions of the government to grant to the producers of electricity from coal or to the coal mines that supply such producers a privileged status in the market or to reduce their liabilities or charges during the period. This data is shown as an annual amount of foregone revenues.

### Public finance support

Public finance support constitutes the second category of direct subsidies covered in this study. This category includes loans, grants, guarantees, and equity provided by institutions under government control or by international financial institutions to entities involved in coal-fired electricity generation.

The level of direct subsidies in the form of loans provided by government-controlled institutions was computed by comparing the interest rates on loans received with interest rates on comparable commercial loans to determine the level of benefits obtained by the subsidy recipient. The difference between the two interest rates was used to calculate the amount of the direct subsidy. In situations where such loans were provided interest-free, the interest rates on comparable commercial loans were applied to outstanding loan balances in the previous year to compute the subsidy amount for the given year.

Grants are treated as subsidies in their total amount in the year when they were provided and shown in the year when the beneficiary received them. There was no equity provision in the observed year.

The direct subsidy from government guaranteed loans is calculated as the direct benefit accruing to the beneficiary because of the government's guarantee. The direct benefit and, consequently, the subsidy amount to the beneficiary results primarily from the fact that, without a guarantee, such beneficiaries might not even receive such loans in terms of size, interest rate or repayment period, which makes it difficult to accurately estimate the received benefit and the actual subsidy amount.

For this study, the difference between the market interest rate and the interest rate on government guaranteed loans was used to calculate the amount of subsidy. This difference is applied to the outstanding balance of the guaranteed loan in the previous year to determine the amount of subsidy in the given year.

### SOE investment support

Investment by State-Owned Enterprises (SOEs) constitutes the third category of direct subsidies. All companies, which are majority-owned by a government or government-controlled entities, are considered SOEs. As a majority owner, the State, through the governance bodies, has a decisive influence on decisions about investment and allocation of resources.

In the given context, all funds in the form of capital investment loans, debts for electricity, or advances extended by such enterprises to other business entities involved in coal-fired electricity generation (mainly suppliers) could not be justified as rational economic decisions based on market principles as they negatively impact their own business performance and are thus treated as support with direct subsidy elements. They are shown either as the amount extended in the given year (capital investment) or as the total amount at end-year (credits, debts for electricity and advances). The equity investments are identified as subsidies in their full amount, in the year when they were provided.

The level of direct subsidies in the form of loans provided by SOEs was determined by comparing the effective interest rates on received loans from SOEs by the subsidy recipient with interest rates on comparable commercial loans. The difference between the interest rate on loans received and the interest rate on comparable commercial loans was used to calculate the amount of direct subsidy.

In situations where such loans were provided interest-free, the interest rates on comparable commercial loans were applied to outstanding loan balances in the previous year to compute the subsidy amount for the given year.

Advance payments and tolerated debts for consumed electricity are treated as interest-free short-term loans. The interest rates on comparable commercial loans were applied to outstanding loan balances in the given year to compute the subsidy amount.

## 4. Overall Findings

The research has shown that all Energy Community Contracting Parties that produced electricity from coal/lignite in 2020 continued providing direct subsidies in various forms. The total calculated amount of all types of direct subsidies amounted to EUR 418.83 million.

**Table 2 – Total amount of subsidies by category in 2020 in EUR million**

Contracting Party	Fiscal support subsidies	Public finance support subsidies	SOE investment subsidies	Total
<b>Bosnia and Herzegovina</b>	3.59	20.44	10.50	<b>34.53</b>
<b>Kosovo*</b>	5.49	0.12	0.00	<b>5.61</b>
<b>Montenegro</b>	0.12	0.13	0.00	<b>0.25</b>
<b>North Macedonia</b>	0.00	0.70	0.00	<b>0.70</b>
<b>Serbia</b>	21.37	12.50	1.13	<b>35.00</b>
<b>Ukraine</b>	283.01	0.00	59.73	<b>342.74</b>
<b>Total</b>	<b>313.59</b>	<b>33.88</b>	<b>71.36</b>	<b>418.83</b>

Source: Based on calculation in Annexes

The subsidies were provided through direct budget subsidies (fiscal support) mainly as direct budget transfers and by tolerating the non-payment of tax and other liabilities to the State and reprogramming such liabilities. In 2020, only North Macedonia did not provide subsidies in the form of fiscal support. In most cases, direct fiscal support measures were channelled as support to coal production rather than to thermal power plants.

Public finance support subsidies were mainly in the form of government or government-controlled institution loans and guarantees for different kinds of loans taken by public energy companies and coal mines. Ukraine is the only Contracting Party that is not providing this kind of support.

In the Contracting Parties where some coal mines operate as independent businesses (Bosnia and Herzegovina, Serbia, Ukraine), it was possible to identify subsidies classified as SOE investment support. This type of subsidy mainly relates to state-owned energy power companies providing continuous advance payments to coal producers, investments into the capital of the mines, tolerating the mines' unpaid electricity bills and loans to support coal production. SOE investment subsidies could not be determined where the coal mines and thermal power plants are integrated in a single electric power company. It is logical to assume that coal production is also subsidized in the fully integrated systems.

**Table 3 – Total amount of subsidies for the 2016 - 2020 period in EUR million**

Contracting Party	2016	2017	2018	2019	2020	Total
<b>Bosnia and Herzegovina</b>	42.86	55.77	20.20	22.71	34.53	<b>176.06</b>
<b>Kosovo*</b>	15.23	13.42	6.11	6.59	5.61	<b>46.96</b>
<b>Montenegro</b>	1.16	1.05	0.73	0.41	0.25	<b>3.60</b>
<b>North Macedonia</b>	3.72	2.93	2.19	1.64	0.70	<b>11.18</b>
<b>Serbia</b>	119.50	84.37	47.40	41.37	35.00	<b>327.64</b>
<b>Ukraine</b>	265.93	280.44	275.44	476.08	342.74	<b>1640.63</b>
<b>Total</b>	<b>448.40</b>	<b>437.98</b>	<b>352.06</b>	<b>548.80</b>	<b>418.83</b>	<b>2206.06</b>

Source: Based on calculation in Annexes and data from previous research

In 2020, the level of subsidies was lower in all observed Contracting Parties compared to the previous year, except in Bosnia and Herzegovina.

The data for 2016 - 2020 shows a steadily decreasing trend in Kosovo\*, Montenegro and North Macedonia. This could signify an important shift in subsidy policies.

Although both Ukraine and Serbia recorded a decrease in direct subsidies in 2020 compared to the previous year, a substantial portion of that decrease resulted from falling market interest rates on government bonds and comparable commercial loans used to calculate direct subsidies. Both Contracting Parties continued to subsidize coal production directly from the budget and to tolerate unpaid obligations by coal mines.

Unlike all other analyzed Contracting Parties, Bosnia and Herzegovina has increased the level of direct subsidies in 2020. The increase primarily results from issuing additional state guarantees for loans to thermal power plants and continuing the policy of tolerating the non-payment of obligations by coal mines.

The next chapter provides an overview of the research results by Contracting Party.

## 5. Contracting Party Reports

### 5.1. Bosnia and Herzegovina

Electricity Facts and Figures	2016	2017	2018	2019	2020
<b>Description of data (unit)</b>					
Electricity production [GWh]	16509	15151	17873	16074	15391
Gross electricity consumption [GWh]	12865	13366	13294	12330	11330
Final consumption of electricity [GWh]	11432	11735	11793	10960	9971
<b>Consumption structure [GWh]</b>					
Industrial, transport, services and other non-residential	6699	6979	7107	6234	5176
Households (residential customers)	4733	4756	4685	4726	4795
Capacity of power plants [MW]	4352	4385	4462	4508	4529
of which					
Coal-fired	2156	2156	2156	2156	2156
Hydro	2181	2207	2236	2239	2249
Other renewable	15	22	71	113	124
Electricity generation in coal-fired TPP [GWh]	10608	10918	10954	9613	10443
Share of coal in electricity production [%]	64.26	72.06	61.29	59.80	67.85

Source: SERC Annual Reports

Coal-fired capacities in Bosnia and Herzegovina accounted for 47,6% of the total installed electricity generation capacity and 67.8% of electricity production in 2020.

Electricity is produced in five coal-fired thermal power plants, of which four are majority state-owned. One thermal power plant is owned by Energy Financing Team Group<sup>12</sup> (capacity 300 MW), while the state-owned companies "Elektroprivreda Republike Srpske" (ERS)<sup>13</sup> and "Elektroprivreda BiH" (EPBiH)<sup>14</sup> each own two thermal power plants. The capacity of the TPPs in ERS is 600 MW and 1,256 MW in EPBiH. Three thermal power plants have integrated coal mines, while the remaining two TPPs are supplied from seven coal mines that operate as separate undertakings within the concern Elektroprivreda BiH.

In 2020, direct subsidies for electricity production from coal were identified in all three categories.

Subsidies in the fiscal support category in the amount of EUR 3.59 million relate to reprogrammed and uncollected tax, social security contributions, concession fees arrears and other unpaid public revenues for the state-owned coal mines in Federation of Bosnia and Herzegovina (FBiH); unpaid taxes by two TPPs in Republika Srpska; and a loan provided by Tuzla Canton Government to coal mines Kreka and Djurdjevik.

In terms of public finance support, there are currently six outstanding state or entity guarantees issued. The sum total of subsidies in this category is EUR 20.44 million. It is important to note that the primary source of subsidies is the FBiH government issued guarantee for constructing the new block 7 of the Tuzla TPP. Capital investments of Elektroprivreda BiH in the mines as well as loans and advance payments to the mines were categorized as SOE investment support subsidies in the amount of EUR 20.44 million (see Annex 1).

The sum total of subsidies in 2020 was EUR 34.53 million. Comparing the average annual amount of identified subsidies with the average yearly coal-fired electricity generation in Bosnia and Herzegovina, each MWh of electricity generated from coal received in 2020 an average subsidy of EUR 2.40.

<sup>12</sup> EFT Rudnik i termoelektrana Stanari <http://www.eft-stanari.net/> Accessed on 16.01.2022

<sup>13</sup> Elektroprivreda Republike Srpske <https://ers.ba/home-en-template/> Accessed on 17.01.2022

<sup>14</sup> Elektroprivreda BiH <https://www.epbih.ba/eng> Accessed on 17.01.2022

**Table 4 - Estimated amount of direct subsidies provided to coal/lignite electricity producers in million EUR 2016 - 2020**

Activity / instrument	2016	2017	2018	2019	2020	Total for 5 years
Fiscal support	14.36	14.14	6.36	4.75	3.59	<b>43.20</b>
Public finance support	3.66	2.78	4.76	4.27	20.44	<b>35.90</b>
SOE investment support	24.84	38.85	9.08	13.69	10.50	<b>96.96</b>
<b>TOTAL:</b>	<b>42.86</b>	<b>55.77</b>	<b>20.20</b>	<b>22.71</b>	<b>34.53</b>	<b>176.06</b>

Comparing subsidies in 2020 with the previous year shows that they are growing mainly due to the state guarantees issued for loans taken by public companies in the energy sector for coal-fired TPPs.

## 5.2 Kosovo\*

Electricity Facts and Figures	2016	2017	2018	2019	2020
<b>Description of data (unit)</b>					
Electricity production [GWh]	5835	5300	5311	5718	6301
Gross electricity consumption [GWh]	5346	5463	5671	6001	6167
Final consumption of electricity [GWh]	3686	4008	4022	4408	4558
<b>Consumption structure [GWh]</b>					
Industrial, transport, services and other non-residential	1472	1717	1648	1893	1780
Households (residential customers)	2214	2291	2374	2515	2778
Capacity of power plants [MW]	1033	1038	1076	1099	1110
<b>of which:</b>					
Coal-fired	960	960	960	960	960
Hydro	71	75	76	90	90
Other renewable	2	3	40	49	60
Electricity generation in coal-fired TPPs [GWh]	5601	5121	5008	5404	5984
Share of coal in total electricity production %	95.99	96.62	94.29	94.51	94.97

Source: ERO Annual Reports

In Kosovo\*, electricity generation from lignite is dominant, with the share of coal-fired thermal power plants in the total installed electricity generation capacity at 86% and 95% of the total electricity production in 2020. The installed capacity consists of two state-owned coal-fired thermal plants, vertically integrated with the mines of KEK (Kosovo Energy Corporation)<sup>15</sup>.

In 2020, the EUR 5.49 million in fiscal support subsidies for electricity generation from coal in Kosovo\* (see Annex 2) were related to the government loan to cover the cost of KEK's regular operating activities caused by the low operational efficiency of the TPP and problems with the collection of electricity bills. Public finance subsidies of EUR 0.12 million were related to the Government's guarantee for the Energy Clean up and Land Reclamation World Bank (IDA) loan. The total sum of subsidies in 2020 was EUR 5.61 million.

Electricity generated from coal in 2020 received on average the support of 0.94 EUR /MWh.

**Table 5 - Estimated amount of direct subsidies provided to coal/lignite electricity producers in million EUR 2016 - 2020**

Activity / instrument	2016	2017	2018	2019	2020	Total for 5 years
<b>Fiscal support</b>	15.10	13.30	5.99	6.46	5.49	<b>46.34</b>
<b>Public finance support</b>	0.13	0.12	0.12	0.13	0.12	<b>0.62</b>
<b>SOE investment support</b>	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>TOTAL:</b>	<b>15.23</b>	<b>13.42</b>	<b>6.11</b>	<b>6.59</b>	<b>5.61</b>	<b>46.96</b>

<sup>15</sup> Kosovo energy corporation <http://kek-energy.com/kek/en/> Accessed on 18.01.2022

Subsidies during 2018 - 2020 were significantly lower than in 2016 - 2017 as the Government did not implement any new measure which would amount to a new subsidy to KEK.

A planned Instrument for Pre-Accession Assistance (IPA) grant<sup>16</sup> in the amount of EUR 76 million for a project to reduce air pollution from the Kosovo B coal-fired power plant officially started its three year implementation period in mid-2020. Keeping in mind the commencement date and the expected period of implementation, subsidies resulting from this project were not included in the calculation for 2020.

### 5.3. Montenegro

Electricity Facts and Figures	2016	2017	2018	2019	2020
<b>Description of data (unit)</b>					
Electricity production [GWh]	3023	2347	3744	3383	3225
Gross electricity consumption [GWh]	3328	4744	3468	3461	N/A
Final consumption of electricity [GWh]	2794	4210	2945	2967	2819
<b>Consumption structure [GWh]</b>					
Industrial, transport, services and other non-residential	1543	2924	1659	1677	1578
Households (residential customers)	1251	1286	1286	1290	1241
<b>Capacity of power plants [MW]</b>					
by source:					
Coal-fired	219	219	219	225	225
Hydro	674	681	681	686	699
Other renewable	0	72	72	118	121
Electricity generation in coal-fired TPP [GWh]	1216	1265	1444	1390	1487
Share of coal in total electricity production %	40.22	53.90	38.57	41.09	46.11

Source: RAE Annual Reports

In Montenegro, the installed capacity for electricity generation from coal accounted for 21% of the total capacity and 46% of the total production in 2020. The only thermal power plant operates as part of the majority state-owned company "Elektroprivreda Crne Gore" (EPCG)<sup>17</sup>. The Pljevlja Thermal Power Plant is supplied with coal from the Pljevlja coal mine<sup>18</sup>, which is from 2018 wholly owned by EPCG.

In 2020, the EUR 0.12 million of fiscal support subsidies includes the arrears of the Pljevlja coal mine in tax and contributions, which the Government consolidated and reprogrammed over five years, with repayment starting from 2017.

Public finance subsidies of EUR 0.13 million are related to a government guaranteed loan provided by KfW to the TPP Pljevlja (see Annex 3).

The total sum of subsidies in 2020 was EUR 0.25 million.

Electricity generated from coal received in 2020 support of only 0.17 EUR/MWh on average.

**Table 6 - Estimated amount of direct subsidies provided to coal/lignite electricity producers 2016 - 2020 in million EUR**

Activity / instrument	2016	2017	2018	2019	2020	Total for 5 years
<b>Fiscal support</b>	0.72	0.50	0.36	0.16	0.12	<b>1.86</b>
<b>Public finance support</b>	0.44	0.55	0.37	0.25	0.13	<b>1.74</b>
<b>SOE investment support</b>	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>TOTAL:</b>	<b>1.16</b>	<b>1.05</b>	<b>0.73</b>	<b>0.41</b>	<b>0.25</b>	<b>3.60</b>

The total subsidies during the period 2016 - 2020 were EUR 3.6 million, the lowest of all Contracting Parties analyzed in this study. There were no activities that could amount to a new direct subsidy to EPCG.

<sup>16</sup> <https://balkangreenenergynews.com/kek-starts-eu-funded-project-to-reduce-air-pollution-from-tpp-kosovo-b/> Accessed 08.01.2022

<sup>17</sup> Elektroprivreda Crne Gore <https://www.epcg.com/en/about-us/about-us> Accessed on 02.02.2022

<sup>18</sup> Pljevlja coal mine <https://www.rupv.me/en/vlasnicka-struktura> Accessed on 02.02.2022

## 5.4. North Macedonia

Electricity Facts and Figures	2016	2017	2018	2019	2020
<b>Description of data (unit)</b>					
Electricity production [GWh]	5384	5378	5468	5658	5128
Gross electricity consumption [GWh]	7435	7271	7391	7483	7459
Final consumption of electricity [GWh]	6455	6377	6395	6504	6476
<b>Consumption structure [GWh]</b>					
Industrial, transport, services and other non-residential	3398	3281	3406	3466	3285
Households (residential customers)	3057	3097	2989	3038	3191
<b>Capacity of power plants [MW]</b>					
of which:					
Coal-fired	824	824	824	824	824
Gas-fired	287	287	287	287	287
Oil-fired	210	210	210	210	210
Hydro	685	689	693	698	705
Other renewable	60	61	63	68	76
Electricity generation in coal-fired TPP [GWh]	2777	3290	2703	3294	2510
Share of coal in electricity production %	51.58	61.18	49.43	58.22	48.95

Source: ERC Annual Reports

In North Macedonia, coal-fired thermal power plants accounted for 39% of installed electricity generation capacity and 49% of the total electricity production in 2020. Electricity from coal is generated in two TPPs (Bitola and Oslovej), which, together with the coal mines, operate as part of the vertically integrated state company "Elektrani na Severna Makedonija" (ESM)<sup>19</sup>.

There were no new direct subsidies for electricity generation from coal in 2020, except for the existing public finance support in the form of two state loan guarantees for the modernization of TPP Bitola (see Annex 4).

In 2020, the total subsidies amounted to EUR 0.70 million, the second lowest of all Contracting Parties. Electricity generated from coal received an average support of 0,14 EUR/MWh.

**Table 7 - Estimated amount of direct subsidies provided to coal/lignite electricity producers 2016 - 2020 in million EUR**

Activity / instrument	2016	2017	2018	2019	2020	Total for 5 years
<b>Fiscal support</b>	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>Public finance support</b>	3.72	2.93	2.19	1.64	0.70	<b>11.18</b>
<b>SOE investment support</b>	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>TOTAL:</b>	<b>3.72</b>	<b>2.93</b>	<b>2.19</b>	<b>1.64</b>	<b>0.70</b>	<b>11.18</b>

The annual level of subsidies in the period 2016 – 2020 shows a declining trend. No new measures have been identified that could amount to new direct subsidies to ESM.

<sup>19</sup> Elektrani na Severna Makedonija <https://www.esm.com.mk/?lang=en> Accessed on 28.02.2022



## 5.5. Serbia

Electricity Facts and Figures	2016	2017	2018	2019	2020
<b>Description of data (unit)</b>					
Electricity production [GWh]	35633	33582	34336	35066	35540
Gross electricity consumption [GWh]	35138	35592	35317	32536	33853
Final consumption of electricity [GWh]	28904	29406	29233	26587	29468
<b>Consumption structure [GWh]</b>					
Industrial, transport, services and other non-residential	14973	15229	15818	13247	15750
Households (residential customers)	13931	14177	13415	13340	13718
<b>Capacity of power plants [MW]</b>	7443	7480	7783	7899	7935
<b>of which:</b>					
Coal-fired	4032	4054	4079	4079	4079
Oil/Gas-fired	357	357	368	329	330
Hydro	3016	3029	3045	3060	3050
Other renewable	38	40	291	431	476
<b>Electricity generation in coal-fired TPPs [GWh]</b>	25016	24240	22954	23169	24330
<b>Share of coal in electricity production %</b>	70.20	72.18	66.85	66.07	68.46

Source: AERS Annual Reports

In Serbia, generation from coal constitutes the primary source of electricity, accounting for 51% of installed capacity and 68% of the total electricity production in 2020.

Electricity generation from coal is run by the state-owned "Elektroprivreda Srbije" (EPS)<sup>20</sup> in two segments. "Termoelektrane Nikola Tesla" includes the TPP Nikola Tesla A (6 blocks), TPP Nikola Tesla B (2 blocks), TPP Kolubara (5 blocks) and TPP Morava (1 block). "Termoelektrane Kostolac" includes the TPP Kostolac A (2 blocks) and TPP Kostolac B (2 blocks). Coal is primarily sourced from EPS open mines located in the vicinity of the TPPs. In addition, EPS procures coal from underground coal mines owned by the state-owned company PEU "Resavica"<sup>21</sup>.

In 2020, direct subsidies for electricity production from coal were identified in all three categories.

Fiscal support subsidies in the amount of EUR 21.37 million consisted of direct budget transfers; a government loan for the underground coal mines and for covering coal mine taxes and contributions in arrears; and direct budget transfers and loans to EPS. The EUR 12.50 million in public finance support subsidies are derived from the eight international loans to EPS guaranteed by the Government and two loans provided to PEU Resavica by institutions under government control (Development Fund of Serbia and Deposit Insurance Agency of Serbia).

In 2020, the EUR 1.13 million in SOE investment support subsidies result from EPS support to PEU "Resavica" in the form of a loan and electricity bill debts (see Annex 5).

The level of total subsidies in 2020 amounted to EUR 35 million, the second-highest in absolute terms but much lower than in the previous period. This is primarily due to the fact that there were no new write-offs and international grants in the last three years. The interest rates on commercial loans and yields on government bonds, used to calculate subsidy results, were also significantly lower from 2018 on.

In 2020, electricity produced from coal received a direct subsidy of 1.44 EUR/MWh on average.

**Table 8 - Estimated amount of direct subsidies provided to coal/lignite electricity producers 2016 - 2020 in million EUR**

Activity / instrument	2016	2017	2018	2019	2020	Total for 5 years
<b>Fiscal support</b>	91.24	44.53	23.29	21.75	21.37	<b>202.18</b>
<b>Public finance support</b>	27.30	38.78	22.53	17.97	12.50	<b>119.08</b>
<b>SOE investment support</b>	0.96	1.06	1.58	1.65	1.13	<b>6.38</b>
<b>TOTAL:</b>	<b>119.50</b>	<b>84.37</b>	<b>47.40</b>	<b>41.37</b>	<b>35.00</b>	<b>327.64</b>

20 Elektroprivreda Srbije <http://www.eps.rs/eng> Accessed on 06.01.2022

21 PEU Resavica <https://www.jppeu.rs/> Accessed on 08.01.2022

The most significant share of subsidies in the period 2016 - 2020 was used to sustain underground coal mines operated by PEU "Resavica", which continued to be supported by the Government and EPS in 2020.

As part of the restructuring and financial consolidation of PEU "Resavica", implemented by the Government with the support of the World Bank Group, the closing of two underground coal mines<sup>22</sup> was announced for 2018 but it is still pending. In 2020, new investment in underground mining equipment in PEU Resavica was also announced by the management of the company<sup>23</sup>. In addition, EPS plans<sup>24</sup> to continue the revitalization and modernization of coal mines and TPP facilities.

## 5.6. Ukraine

Electricity facts and figures	2015	2016	2017	2018	2019	2020
<b>Description of data [unit]</b>						
<b>Electricity production [GWh]</b>	157.635	154.817	155.414	159.350	153.967	148.854
<b>Gross electricity consumption [GWh]</b>	136.262	133.513	147.559	137.838	147.117	143.414
<b>Consumption structure (GWh)</b>						
<b>Industrial, transport, services and other non-residential sectors</b>	117.140	116.873	118.927	120.842	120.219	117.907
<b>Households (residential customers)</b>	80.122	80.413	83.907	84.348	84.983	81.353
<b>Net maximum electrical capacity of power plants [MW]</b>	37.018	36.461	35.020	36.494	35.236	36.554
of which						
coal-fired	54.355	54.130	54.204	49.965	52.788	54.771
gas-fired	25.334	24.565	24.565	18.626	21.842	21.842
nuclear	8.392	8.392	8.392	9.316	6.091	6.105
hydro, total	13.835	13.835	13.835	13.835	13.835	13.835
Other renewables	5.884	6.311	6.229	6.170	6.297	6.317
	910	1.028	1.184	2.019	4.723	6.673
<b>Production of electricity in coal-fired TPP [GWh]</b>	44.457	44.904	40.526	43.108	48.834	43.602
<b>Share of coal in electricity production, %</b>	28,20%	29,00%	26,08%	27,05%	31,72%	29,29%

Source: Ministry of energy of Ukraine

After nuclear energy, coal is the second most important source of energy for the production of electricity in Ukraine, with a 27% share of the total electricity produced in 2020. Electricity generation capacity from coal accounts for 40% of the installed capacity but not all plants are operational all year round or operate on other fuels.

Production is organized in three enterprises: Donbasenergo<sup>25</sup> (1 TPP – capacity 0.88 GW), majority privately held, DTEK<sup>26</sup> (9 TPPs<sup>27</sup> - capacity 16.3 GW), privately held, and Centrenergo<sup>28</sup> (3 TPPs – capacity 7.6 GW), which is majority state-owned. Coal is supplied from private and state-owned mines and imported.

According to the Secretariat of the Cabinet of Ministers of Ukraine (2018), there were 102 state-owned coal mines in 2020, with the majority located in the territory not controlled by the Government. Out of the 33 state-owned coal mines controlled by the Government, only four were profitable<sup>29</sup>.

In 2020, direct subsidies for electricity production from coal were identified in two categories.

<sup>22</sup> <https://www.blic.rs/biznis/drzava-daje-pet-miliona-evra-za-pocetak-zatvaranja-rudnika-resavica/1ztwfgq> Accessed 01.02.2022

<sup>23</sup> See more: [https://www.b92.net/biz/vesti/srbija.php?yyyy=2020&mm=05&dd=07&nav\\_id=1681668](https://www.b92.net/biz/vesti/srbija.php?yyyy=2020&mm=05&dd=07&nav_id=1681668) Accessed 04.02.2020

<sup>24</sup> <http://www.eps.rs/cir/SiteAssets/Pages/planovi/Trogodisnji%20program%20poslovanja%20JP%20EPS%20za%202020-2022.pdf> Accessed 26.01.2022

<sup>25</sup> Donbasenergo <https://de.com.ua/en> Accessed on 28.12.2021

<sup>26</sup> DTEK <https://dtek.com/en/> Accessed on 29.12.2021

<sup>27</sup> Excluding Zuivska TPP, over which DTEK lost control in 2017

<sup>28</sup> Centrenergo <http://www.centrenergo.com/en/> Accessed on 06.01.2022

<sup>29</sup> Secretariat of the Cabinet of Ministers (2018), Head of Government: We should hear the noise of production in the mines, not knocking of helmets due to wages arrears, <https://www.kmu.gov.ua/ua/news/glava-uryadu-na-shah-tah-maye-buti-shum-virobnictva-ne-stuk-kasok-cherez-borgi-po-zarplati> Accessed 08.02.2022

In terms of fiscal support, the calculated amount of subsidies in 2020 was EUR 283.01 million. The state-owned mines received direct subsidies from the budget for miner wages, operational expenditures, essential modernization and improving mine safety. Other subsidies related to the debts of state-owned mines and Centrenergy for tax and other arrears to the State; loan guarantee payments from the budget for a loan of the Lisichanskvugillya PJSC coal mine to the State Development Bank of the PRC; and VAT exemption for operations to supply coal or/and other products of its enrichment.

In 2020, no publicly available data would indicate subsidization falling into the public finance support category, such as new Government loan guarantees or loans under preferential conditions given by state-controlled institutions.

The EUR 59.73 million of subsidies derived from the coal mines' arrears in payment of electricity bills constitute SOE investment support (see Annex 6).

The total sum of subsidies was EUR 342.74 million in 2020, which is a significant decrease compared to the previous year resulting mainly from lower budgetary spending for coal mines. The average annual amount of identified subsidies per unit of electricity produced from coal amounted to 8.29 EUR/MWh, by far the highest in the Energy Community.

**Table 9 - Estimated amount of direct subsidies provided to coal/lignite electricity producers 2016 - 2020 in million EUR**

Activity / instrument	2016	2017	2018	2019	2020	Total for 5 years
<b>Fiscal support</b>	199.27	224.26	204.79	388.00	283.01	<b>1299.33</b>
<b>Public finance support</b>	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>SOE investment support</b>	66.66	56.18	70.65	88.08	59.73	<b>341.30</b>
<b>TOTAL:</b>	<b>265.93</b>	<b>280.44</b>	<b>275.44</b>	<b>476.08</b>	<b>342.74</b>	<b>1640.63</b>

In the period 2016 - 2020, measures classified in the fiscal support group accounted for almost 80% of all subsidies, with direct budget transfers still being the primary tool to support and subsidize electricity production from coal.

In 2021, the Ukrainian government adopted the "State Target Program for the Just Transition of Coal Regions until 2030 Concept"<sup>30</sup> as the first official document related to the coal phase-out. At the same time, DTEK, the biggest energy producer in the country, announced that it will abandon the use of coal in electricity production by 2040. Unfortunately, the Russian aggression in Ukraine stopped all planned activities in the country.

30 <https://en.ecoaction.org.ua/gvt-supported-just-transition.html> Accessed on 20.12.2021

## 6. Concluding Remarks

The findings of this study show that electricity generation from coal and lignite still receives significant direct subsidies in Ukraine, Serbia and Bosnia and Herzegovina.

These subsidies distort competition in the electricity market and obscure the sector's financial and economic performance. They often sustain the operation of unprofitable and inefficient thermal power plants and coal mines, sending wrong signals to potential investors and consumers and adversely impacting decision-making about the future development of the electric power sector. Moreover, the continued reliance on subsidies impedes the energy transition and achievement of carbon neutrality goals.

In light of the recent developments in the energy markets and considering international and national obligations, the coal-dependent Contracting Parties of the Energy Community should review their energy policies and strategies without delay. This should be accompanied with comprehensive plans to eliminate subsidies to electricity from coal and lignite, followed by the gradual, sustainable and fair process of coal phase-out.

## 7. ANNEXES<sup>31</sup>

Annex 1. Bosnia and Herzegovina – Detailed list of subsidy measures.....	22
Annex 2. Kosovo* – Detailed list of subsidy measures.....	29
Annex 3. Montenegro – Detailed list of subsidy measures.....	31
Annex 4. North Macedonia – Detailed list of subsidy measures.....	33
Annex 5. Serbia – Detailed list of subsidy measures.....	35
Annex 6. Ukraine – Detailed list of subsidy measures.....	43

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<sup>31</sup> All amounts are stated in both national currencies and in euros, with the exchange rates of national currencies into euros calculated on the basis of the average annual exchange rates of the central bank of each given Contracting Party for which the data are shown.

## Annex 1. Bosnia and Herzegovina – Detailed list of subsidy measures

Bosnia and Herzegovina - Fiscal support direct subsidies						
Fixed exchange rate 1 EUR = 1,955830 BAM						
Measure or project (written description)	Source of subsidy (entity / institution name, or ministry if available)	Subsidy type	Beneficiary	2020 (million BAM)	2020 (million EUR)	Notes
<b>Concession fees in arrears - coal mines in Federation BiH</b>	Government of Tuzla Canton <a href="http://www.vladatk.kim.ba/Uprave/KZK/Izvjestaj_o_radu_Komisije_za_koncesije_za_2020._godinu.pdf">http://www.vladatk.kim.ba/Uprave/KZK/Izvjestaj_o_radu_Komisije_za_koncesije_za_2020._godinu.pdf</a>	Concession fees in arrears	state coal mines Kreka, Djurdjevik	18.82	9.62	
<b>Taxes and contributions in arrears - coal mines in Federation BiH</b>	Government / Tax administration Federation of BiH <a href="http://pufbih.ba/v1/public/upload/files/DUG%20PREKO%205000000%20KM%20NA%20DAN%2031_12_2020_.pdf">http://pufbih.ba/v1/public/upload/files/DUG%20PREKO%205000000%20KM%20NA%20DAN%2031_12_2020_.pdf</a>	tax and contributions in arrears	state coal mines	510.30	260.91	
<b>Loan from budget</b>	Government of Tuzla Canton <a href="http://www.vrifbih.ba/javni-izvj/Report.aspx?id=9525&amp;langTag=bs-BA">http://www.vrifbih.ba/javni-izvj/Report.aspx?id=9525&amp;langTag=bs-BA</a>	Government loan	state coal mines Kreka and Đurđevik	7.97	4.07	Loan was approved in 1999, repayment period 10 years, interest rate 0%
<b>Unpaid concession fees</b>	Government of ZEDO Canton <a href="https://parlamentfbih.gov.ba/v2/bs/propis.php?id=774">https://parlamentfbih.gov.ba/v2/bs/propis.php?id=774</a>	Lost revenue	state coal mines Kakanj, Breza and Zenica	3.04	1.56	Breza and Zenica mines do not have concessions for coal mining (estimate made by consultant based on 0,8 KM per ton of coal)
<b>Taxes in arrears TPP Gacko and Ugljevik</b>	Government / Tax administration RS <a href="https://www.capital.ba/spisak-duznika-ukc-rs-najveci-poreski-duznik-sa-80-miliona-km/">https://www.capital.ba/spisak-duznika-ukc-rs-najveci-poreski-duznik-sa-80-miliona-km/</a>	tax and contributions in arrears	TPP Gacko and Ugljevik	8.45	4.32	
<b>TOTAL</b>				<b>540.14</b>	<b>276.17</b>	

## Subsidies calculation

	2020		
<b>Yield on government bonds* (%)</b>	<b>1.24</b>		
*Source: BiH Central Bank Report <a href="https://www.cbbh.ba/Content/Archive/36?lang=bs">https://www.cbbh.ba/Content/Archive/36?lang=bs</a>			
<b>Subsidy calculation (outstanding balance of the arrears multiplied by yield on government bonds)</b>			
	Year	2020	2020
	Currency	million BAM	million EUR
Outstanding balance of the arrears and unpaid concession fees		540.62	276.41
Yield on government bonds		1.24	1.24
<b>Amount of the subsidy per year</b>		<b>6.70</b>	<b>3.43</b>
<b>Loan from budget</b>			

<b>Subsidy calculation (outstanding balance of a loan in previous year X plus interest rate on commercial loans)</b>			
	Year	2020	2020
	Currency	million BAM	million EUR
Outstanding balance in previous year		7.97	4.07
Interest rate on comparable commercial loan*		3.92	3.92
<b>Amount of the subsidy per year</b>		<b>0.31</b>	<b>0.16</b>
<b>Summary of calculated subsidies</b>			
	Year	2020	2020
	Currency	million BAM	million EUR
Arrears and unpaid concession fees		6.70	3.43
Loan form Budget		0.31	0.16
<b>Total:</b>		<b>7.02</b>	<b>3.59</b>

## Annex 1. Bosnia and Herzegovina – Detailed list of subsidy measures

Bosnia and Herzegovina - Public Finance support direct subsidies									
Measure or project (written description)	Source of subsidy (entity / institution name)	Subsidy type	Amount (in original currency)	Repayment period and interest rate	Beneficiary	International support	2020 (million BAM)	2020 (million EUR)	Source
<b>Loan 1 -Support for coal mining</b>	Ministry of Finance Council of Ministers BiH	Government loan guarantee	4,110 million JPY	40 years, 10 years grace period, 0,75%	EPBiH i EPS	Government of Japan	37.41	19.13	<a href="https://mft.gov.ba/Content/OpenAttachment?id=200c0970-b4db-4521-ae9c-8f550c013c91&amp;lang=bs">https://mft.gov.ba/Content/OpenAttachment?id=200c0970-b4db-4521-ae9c-8f550c013c91&amp;lang=bs</a>
<b>Loan 2 - IDA Loan RITE Ugljevik and Gacko</b>	Ministry of Finance Council of Ministers BiH	Government loan guarantee	N/A	10 -15years, 075 %	MH EPS	WB IDA	7.42	3.79	<a href="https://www.blberza.com/Pages/DocView.aspx?id=94951">https://www.blberza.com/Pages/DocView.aspx?id=94951</a>
<b>Loan 3 -Flue Gas Desulphurization Construction Project for Ugljevik</b>	Ministry of Finance Council of Ministers BiH	Government loan guarantee	12,633 million JPY	30 years, 10 years grace period, 0,55%	MH EPS	Government of Japan	175.31	89.63	<a href="https://mft.gov.ba/Content/OpenAttachment?id=200c0970-b4db-4521-ae9c-8f550c013c91&amp;lang=bs">https://mft.gov.ba/Content/OpenAttachment?id=200c0970-b4db-4521-ae9c-8f550c013c91&amp;lang=bs</a>
<b>Loan 4 - TPP Tuzla Block 7 construction</b>	Government of FBiH	Government loan guarantee	613,99 million EUR+ interest	20 years, 5 years grace period, 6 month EURIBOR+2,3%	EPBiH	CEXIM Bank China	1,606.58	821.43	<a href="http://www.szdp.gov.ba/data/dokumenti/pdf/JP%20Elektroprivreda%20BiH%20-%20blok%207%20Tuzla.%20HRV.pdf">http://www.szdp.gov.ba/data/dokumenti/pdf/JP%20Elektroprivreda%20BiH%20-%20blok%207%20Tuzla.%20HRV.pdf</a>
<b>Loan 5 - RITE Gacko</b>	Government of RS	Government loan guarantee	6 million KM	5 years, 2,4%	MH EPS	Sberbank BiH	4.75	2.43	<a href="https://mft.gov.ba/Content/OpenAttachment?id=200c0970-b4db-4521-ae9c-8f550c013c91&amp;lang=bs">https://mft.gov.ba/Content/OpenAttachment?id=200c0970-b4db-4521-ae9c-8f550c013c91&amp;lang=bs</a>
<b>Loan 6 - RITE Gacko</b>	Government of RS	Government loan guarantee	12,4 million KM	5 years, 2,39%	MH EPS	Nova Bank BiH	10.46	5.35	<a href="https://mft.gov.ba/Content/OpenAttachment?id=200c0970-b4db-4521-ae9c-8f550c013c91&amp;lang=bs">https://mft.gov.ba/Content/OpenAttachment?id=200c0970-b4db-4521-ae9c-8f550c013c91&amp;lang=bs</a>
<b>TOTAL OUTSTANDING BALANCE</b>							<b>1,841.93</b>	<b>941.76</b>	



## Subsidies calculation

<b>Loan 1</b>	<b>2020</b>
Interest rate on government guaranteed loan	0.75
Interest rate on comparable commercial loan*	3.92
<b>Difference in interest rate</b>	<b>3.17</b>

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million BAM	million EUR
Outstanding balance of the loan in previous year		40.91	20.91
Difference in interest rate ( %)		3.17	3.17
<b>Amount of the subsidy per year</b>		<b>1.30</b>	<b>0.66</b>

<b>Loan 2</b>	<b>2020</b>
Interest rate on government guaranteed loan	0.75
Interest rate on comparable commercial loan*	3.92
<b>Difference in interest rate</b>	<b>3.17</b>

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million BAM	million EUR
Outstanding balance of the loan in previous year		9.41	4.81
Difference in interest rate ( %)		3.17	3.17
<b>Amount of the subsidy per year</b>		<b>0.30</b>	<b>0.15</b>

<b>Loan 3</b>	<b>2020</b>
Interest rate on government guaranteed loan	0.55
Interest rate on comparable commercial loan*	3.92
<b>Difference in interest rate</b>	<b>3.37</b>

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million BAM	million EUR
Outstanding balance of the loan in previous year		182.62	93.37
Difference in interest rate ( %)		3.37	3.37
<b>Amount of the subsidy per year</b>		<b>6.16</b>	<b>3.15</b>

<b>Loan 4</b>	<b>2020</b>
Interest rate on government guaranteed loan	1.93
Interest rate on comparable commercial loan*	3.92
<b>Difference in interest rate</b>	<b>1.99</b>

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million BAM	million EUR
Outstanding balance of the loan in previous year		1,606.58	821.43
Difference in interest rate ( %)		1.99	1.99
<b>Amount of the subsidy per year</b>		<b>31.95</b>	<b>16.34</b>

<b>Loan 5</b>	<b>2020</b>
Interest rate on government guaranteed loan	2.40
Interest rate on comparable commercial loan*	3.92
<b>Difference in interest rate</b>	<b>1.52</b>

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million BAM	million EUR
Outstanding balance of the loan in previous year		5.60	2.86
Difference in interest rate ( %)		1.52	1.52
<b>Amount of the subsidy per year</b>		<b>0.09</b>	<b>0.04</b>

<b>Loan 6</b>	<b>2020</b>
Interest rate on government guaranteed loan	2.39
Interest rate on comparable commercial loan*	3.92
<b>Difference in interest rate</b>	<b>1.53</b>

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million BAM	million EUR
Outstanding balance of the loan in previous year		12.40	6.34
<b>Difference in interest rate ( %)</b>		<b>1.532</b>	<b>1.53</b>

<b>Amount of the subsidy per year</b>	<b>0.1900</b>	<b>0.10</b>
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<b>Summary of the subsidy calculations (Loan 1-6)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million BAM	million EUR
<b>Amount of the subsidy per year</b>		<b>39.98</b>	<b>20.44</b>

## Annex 1. Bosnia and Herzegovina – Detailed list of subsidy measures

Bosnia and Herzegovina SOE Investment support direct subsidies						
Fixed exchange rate 1 EUR = 1,955830 BAM						
Measure or project (written description)	Source of subsidy (entity / institution name)	Subsidy type	Beneficiary	2020 (million BAM)	2020 (million EUR)	Source
Investment in coal mines capital base	JP EPBiH d.d.	SOE investment	7 coal mines in FBiH	12.43	6.36	<a href="https://www.epbih.ba/upload/documents/Izvjestaj%20nezavisnog%20revizora%20za%20JP%20Elektroprivreda%20BiH%202020_final.pdf">https://www.epbih.ba/upload/documents/Izvjestaj%20nezavisnog%20revizora%20za%20JP%20Elektroprivreda%20BiH%202020_final.pdf</a>
Loans for coal mines	JP EPBiH d.d.	SOE investment	7 coal mines in FBiH	1.29	0.66	<a href="https://www.epbih.ba/upload/documents/Izvjestaj%20nezavisnog%20revizora%20za%20JP%20Elektroprivreda%20BiH%202020_final.pdf">https://www.epbih.ba/upload/documents/Izvjestaj%20nezavisnog%20revizora%20za%20JP%20Elektroprivreda%20BiH%202020_final.pdf</a>
Interest free financing (advance payment)	JP EPBiH d.d.	SOE investment	7 coal mines in FBiH	205.85	105.25	<a href="https://www.epbih.ba/upload/documents/Izvjestaj%20nezavisnog%20revizora%20za%20JP%20Elektroprivreda%20BiH%202020_final.pdf">https://www.epbih.ba/upload/documents/Izvjestaj%20nezavisnog%20revizora%20za%20JP%20Elektroprivreda%20BiH%202020_final.pdf</a>
<b>TOTAL:</b>				<b>219.57</b>	<b>112.26</b>	

## Subsidies calculation

Loans for coal mines	
	2020
Interest rate on SOE loan	1.5
Interest rate on comparable commercial loan*	3.92
<b>Difference in interest rate</b>	<b>2.42</b>

Subsidy calculation (outstanding balance of the loan multiplied by interest rate difference)			
	Year	2020	2020
<b>Short term loans to coal mines</b>	Currency	million BAM	million EUR
Outstanding balance of the loan		1.29	0.66
<b>Interest rate difference ( %)</b>		<b>2.42</b>	<b>2.42</b>
<b>Amount of the subsidy per year</b>		<b>0.03</b>	<b>0.02</b>

Subsidy calculation for advance payment to coal mines (amount of advance payment multiplied by interest rate on comparable commercial loan*)			
	Year	2020	2020
<b>Advance payment</b>	Currency	million BAM	million EUR
Outstanding balance of advance payment		205.85	105.25
Interest rate on comparable commercial loan* (%)		3.92	3.92
<b>Amount of the subsidy per year</b>		<b>8.07</b>	<b>4.13</b>

SOE investment support - summary of calculated subsidies			
	Year	2020	2020
	Currency	million BAM	million EUR
Equity investment		12.43	6.36
Loans to coal mines		0.03	0.02
Advance payment		8.07	4.13
<b>Total:</b>		<b>20.53</b>	<b>10.50</b>

## Annex 2. Kosovo\* – Detailed list of subsidy measures

Kosovo* - Fiscal support direct subsidies						
Measure or project (written description)	Source of subsidy (entity / institution name)	Subsidy type	Beneficiary	2020 (million EUR)	Source	Notes
<b>Loans from Budget</b>	Ministry of Finance	Government loans	KEK	150.21	<a href="https://mf.rks-gov.net/desk/inc/media/A3C6FC70-032A-440A-ABBD-3148F7995E37.pdf">https://mf.rks-gov.net/desk/inc/media/A3C6FC70-032A-440A-ABBD-3148F7995E37.pdf</a>	New re programme made in 2015. 191,952 million EUR repayment 18 years interest rate 2,5%
<b>TOTAL</b>				<b>150.21</b>		

## Subsidies calculation

Loan 1	2020
Interest rate on government loan (%)	2.5
Interest rate on comparable commercial loan* (%)	5.90
<b>Interest rate difference</b>	<b>3.4</b>

Kosovo\* Central Bank Report : [https://bqk-kos.org/wp-content/uploads/2021/03/BQK\\_S-F\\_TM4\\_2020-1.pdf](https://bqk-kos.org/wp-content/uploads/2021/03/BQK_S-F_TM4_2020-1.pdf)

Subsidy calculation (outstanding balance of the loan in previous year multiplied by interest rate difference)		
Loan 1	Year	2020
	Currency	million EUR
Outstanding balance of the loan in previous year		161.55
Interest rate difference (%)		3.4
<b>Amount of the subsidy per year</b>		<b>5.49</b>

## Annex 2. Kosovo\* – Detailed list of subsidy measures

Kosovo* - Public finance support direct subsidies									
Measure or project (written description)	Source of subsidy (entity / institution name)	Subsidy type	Amount (in original currency)	Repayment period and interest rate	Beneficiary	International support	2020 (million EUR)	Source	Notice
<b>Energy Clean up and Land Reclamation project</b>	Ministry of Finance	State loan guarantee	2,8 million SDR	20 years, 2%	KEK	WB IDA	2.85	<a href="https://mf.rks-gov.net/desk/inc/media/B2B024AA-B18C-41AE-9B4D-3D47314D6539.pdf">https://mf.rks-gov.net/desk/inc/media/B2B024AA-B18C-41AE-9B4D-3D47314D6539.pdf</a>	Repayment of the loan started in July 2018.
<b>TOTAL OUTSTANDING BALANCE</b>							<b>2.85</b>		

## Subsidies calculation

Loan	Year	2020
Interest rate on government guaranteed loan (%)		2.00
Interest rate on comparable commercial loan* (%)		5.90
<b>Interest rate difference</b>		<b>3.9</b>
*Source: Kosovo* Central Bank Report <a href="https://bqk-kos.org/wp-content/uploads/2021/03/BQK_S-F_TM4_2020-1.pdf">https://bqk-kos.org/wp-content/uploads/2021/03/BQK_S-F_TM4_2020-1.pdf</a>		

Subsidy calculation (outstanding balance of the loan in previous year multiplied by interest rate difference)		
	Year	2020
	Currency	million EUR
Outstanding balance of the loan in previous year		3.01
Interest rate difference ( %)		3.9
<b>Amount of the subsidy per year</b>		<b>0.12</b>

## Annex 3. Montenegro – Detailed list of subsidy measures

Montenegro - Fiscal support direct subsidies						
Measure or project (written description)	Source of subsidy (entity / institution name, or ministry if available)	Subsidy type	Beneficiary	2020 (million EUR)	Source	Notes
RU Pljevlja	Ministry of Finance/ Tax administration	Tax and contributions in arrears	RU Pljevlja	2.89	<a href="https://mnse.me/upload/documents/issuer/rupw/2020%20-%20Revizija%20finansijskih%20iskaza%20-%20RUPV.pdf">https://mnse.me/upload/documents/issuer/rupw/2020%20-%20Revizija%20finansijskih%20iskaza%20-%20RUPV.pdf</a>	Re-programme 5 years started in 2017. Completely repaid in January 2021
<b>TOTAL</b>				<b>2.89</b>		

## Subsidies Calculation

Year	2020
<b>Yield on government bonds* (%)</b>	<b>4.01</b>
*Source: Montenegro Central Bank Report <a href="http://www.cb-cg.org/index.php?mn1=statistika">http://www.cb-cg.org/index.php?mn1=statistika</a>	
<b>Subsidy calculation (outstanding balance of the tax and contributions in arrears multiplied by yield on government bonds)</b>	

	Year	2020
	Currency	million EUR
Outstanding balance of the tax and contributions		2.89
Yield on government bonds		4.01
<b>Amount of the subsidy per year</b>		<b>0.12</b>

## Annex 3. Montenegro – Detailed list of subsidy measures

Montenegro - Public finance support direct subsidies								
Measure or project (written description)	Source of subsidy (entity / institution name)	Subsidy type	Amount (in original currency)	Repayment period and interest rate	Beneficiary	International support	2020 (million EUR)	Source
<b>Filters replacement in TE Pljevlja</b>	Ministry of Finance	State loan guarantee	9,5 million EUR	9 years 6m Euribor+1%	EPCG	KfW	2.29	<a href="http://www.scmn.me/me/ucesnici-na-trzistu/emiteniti/e-f-g-h/elektroprivreda-crne-gore">http://www.scmn.me/me/ucesnici-na-trzistu/emiteniti/e-f-g-h/elektroprivreda-crne-gore</a>
<b>TOTAL OUTSTANDING BALANCE</b>							<b>2.29</b>	

## Subsidies calculation

<b>Interest rate on government guaranteed loan</b>	<b>0.63</b>
<b>EURIBOR*</b>	<b>-0.367</b>
<b>interest rate</b>	<b>1.00</b>
<b>Interest rate on comparable commercial loan**</b>	<b>4.12</b>
<b>Interest rate difference</b>	<b>3.49</b>
**Source: Central Bank Report <a href="http://www.cb-cg.org/index.php?mn1=statistika">http://www.cb-cg.org/index.php?mn1=statistika</a>	
*Source: <a href="https://www.global-rates.com/en/interest-rates/euribor/2020.aspx">https://www.global-rates.com/en/interest-rates/euribor/2020.aspx</a>	

Subsidy calculation (outstanding balance of the loan in previous year multiplied by interest rate difference)		
	Year	2020
	Currency	million EUR
Outstanding balance of the loan in previous year		3.73
Interest rate difference( %)		3.49
<b>Amount of the subsidy per year</b>		<b>0.13</b>



## Annex 4. North Macedonia – Detailed list of subsidy measures

Public finance support direct subsidies - North Macedonia									
Measure or project (written description)	Source of subsidy (entity / institution name)	Subsidy type	Amount (in original currency)	Repayment period and interest rate	Beneficiary	International support	2020 (million MKD)	2020 (million EUR)	Source
Modernization of Units 2 and 3 of Boilers in TPP Bitola (loan 1)	Ministry of Finance	State Loan guarantee	49,2 million EUR	12 years, 6month EURIBOR + 1,675%	AD ESM	Deutsche Bank	876.88	14.21	<a href="https://finance.gov.mk/guarantees-for-foreign-loans/?lang=en">https://finance.gov.mk/guarantees-for-foreign-loans/?lang=en</a>
Modernization of TPP Bitola (loan )	Ministry of Finance	State Loan guarantee	30 million EUR	14 years, 1month EURIBOR + 2,6%	AD ESM	Stopanska Banka	420.62	6.82	<a href="https://www.esm.com.mk/?page_id=530">https://www.esm.com.mk/?page_id=530</a>
<b>TOTAL OUTSTANDING BALANCE</b>							<b>1,297.50</b>	<b>21.03</b>	

<sup>1</sup> EUR = 61.694 MKD source:: [http://www.nbrm.mk/kursievi\\_na\\_nbrm\\_za\\_potriebitie\\_na\\_drzhavnitie\\_orghani.nsp](http://www.nbrm.mk/kursievi_na_nbrm_za_potriebitie_na_drzhavnitie_orghani.nsp)

## Subsidies calculations

<b>Loan 1</b>	<b>2020</b>
Interest rate on government guaranteed loan	1.308
EURIBOR*	-0.367
interest rate	1.675
Interest rate on comparable commercial loan**	3.54
<b>Interest rate difference</b>	<b>2.232</b>
**Source: Central Bank Report <a href="https://nbstat.nbrm.mk/pxweb/en/MS%20i%20KS/">https://nbstat.nbrm.mk/pxweb/en/MS%20i%20KS/</a>	
*Source <a href="https://www.global-rates.com/en/interest-rates/euribor/2020.aspx">https://www.global-rates.com/en/interest-rates/euribor/2020.aspx</a>	

Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)			
<b>Loan 1</b>	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million MKD	million EUR
Outstanding balance of the loan in previous year		1,388.19	22.50
Interest rate difference ( %)		2.232	2.232
<b>Amount of the subsidy per year</b>		<b>30.98</b>	<b>0.50</b>

<b>Loan 2</b>	<b>2020</b>
Interest rate on government guaranteed loan	2.101
EURIBOR*	-0.499
interest rate	2.60
Interest rate on comparable commercial loan**	3.54
<b>Interest rate difference</b>	<b>1.439</b>
**Source: Central Bank Report <a href="https://nbstat.nbrm.mk/pxweb/en/MS%20i%20KS/">https://nbstat.nbrm.mk/pxweb/en/MS%20i%20KS/</a>	
* Source: <a href="https://www.global-rates.com/en/interest-rates/euribor/2020.aspx">https://www.global-rates.com/en/interest-rates/euribor/2020.aspx</a>	

Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)			
<b>Loan 2</b>	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million MKD	million EUR
Outstanding balance of the loan in previous year		832.32	13.49
Interest rate difference ( %)		1.439	1.439
<b>Amount of the subsidy per year</b>		<b>11.98</b>	<b>0.19</b>

<b>Summary of calculated</b>	<b>Year</b>	<b>2020</b>	<b>2020</b>
subsidies	Currency	million MKD	million EUR
Loan 1		30.98	0.50
Loan 2		11.98	0.19
<b>Total:</b>		<b>42.96</b>	<b>0.70</b>

## Annex 5. Serbia – Detailed list of subsidy measures

Serbia - Fiscal support direct subsidies							
Measure or project (written description)	Source of subsidy (entity / institution name)	Subsidy type	Beneficiary	2020 (million RSD)	2020 (million EUR)	Source	Notes
<b>Budgetary expenditure for underground coal mines</b>	Government	Direct budget transfer	JP PEU Resavica	2,284.30	19.43	Audit and Company Reports. <a href="http://www.jppeu.rs/informator.html">http://www.jppeu.rs/informator.html</a>	Calculated 50% of total amount (50% of total coal production goes to electricity production)
<b>Taxes, contributions and other public revenues in arrears (underground coal mines)</b>	Tax administration	Taxes and contribution in arrears	JP PEU Resavica	618.14	5.26	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>	Calculated 50% of total arrears (50% of total coal production goes to electricity production)
<b>Taxes and contributions in arrears reprogrammed (underground coal mines)</b>	Government / Tax administration	Taxes and contribution in arrears	JP PEU Resavica	1,839.35	15.64	Audit and Company Reports. <a href="http://www.jppeu.rs/informator.html">http://www.jppeu.rs/informator.html</a>	Reprogrammed by RS Tax Administration Calculated 50% of arrears (50% of total coal production goes to electricity production)
<b>Budgetary expenditure for filters in TENT</b>	Government	Direct budget transfer	JP EPS Belgrade	164.59	1.40	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>	
<b>Loan to JP PEU Resavica from budget (loan 1)</b>	Government	Government loan	PEU Resavica	335.07	2.85	Audit and Company Reports. <a href="http://www.jppeu.rs/informator.html">http://www.jppeu.rs/informator.html</a>	Calculated 50% of total amount (50% of total coal production goes to electricity production) no repayment, no interest rate - Conditional loan
<b>Agreement about old debts SFRJ - SSSR, Serbia and Russian Federation (loan 2)</b>	Government	Government loan	JP EPS Belgrade	5,007.70	42.59	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>	10 years repayment period, 2 years grace period, interest rate LIBOR+1%
<b>TOTAL</b>				<b>10,249.15</b>	<b>87.17</b>		
Exchange rate : 2020 1 EUR = 117.5776 RSD <a href="https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/">https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/</a>							

## Subsidies calculations

	2020
<b>Yield on government bonds* (%)</b>	<b>2.61</b>

\*Source: National Bank of Serbia  
[https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the tax and contributions in arrears multiplied by yield on government bonds)</b>			
	Year	2020	2020
	Currency	million RSD	million EUR
Outstanding balance of the tax and contributions. in arrears		2457.50	20.90
Yield on government bonds		2.61	2.61
<b>Amount of the subsidy per year</b>		<b>64.14</b>	<b>0.55</b>

	2020
<b>Loan 1</b>	
Interest rate on government conditional loan	0.00
Interest rate on comparable commercial loan*	3.65
<b>Interest rate difference</b>	<b>3.65</b>

\* Source: National Bank of Serbia  
[https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by interest rate difference)</b>			
	Year	2020	2020
	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		335.07	2.85
Interest rate difference (%)		3.65	3.65
<b>Amount of the subsidy per year</b>		<b>12.23</b>	<b>0.10</b>

	2020
<b>Loan 2</b>	
Interest rate	1.00
USD Libor*	0.77
Interest rate on government loan	1.77
Interest rate on comparable commercial loan**	3.65
<b>Interest rate difference</b>	<b>1.88</b>

\* Source:  
<https://www.global-rates.com/en/interest-rates/libor/american-dollar/2020.aspx>

\*\* Source: National Bank of Serbia  
[https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by interest rate difference)</b>			
	Year	2020	2020
	Currency	million RSD	million EUR
<b>Loan 2</b>			
Outstanding balance of the loan in previous year		5007.70	42.59
Interest rate difference (%)		1.88	1.88
<b>Amount of the subsidy per year</b>		<b>94.34</b>	<b>0.80</b>

	Year	2020	2020
	Currency	million RSD	million EUR
<b>Fiscal support summary of calculated subsidies</b>			
Budgetary expenditures		2448.89	20.83
Taxes and contributions in arrears		64.14	0.55
Government Loans		106.58	0.91
<b>Total:</b>		<b>2513.03</b>	<b>21.37</b>

## Annex 5. Serbia – Detailed list of subsidy measures

Serbia - Public finance support direct subsidies									
Measure or project (written description)	Source of subsidy (entity / institution name, or ministry if available)	Subsidy type	Amount (in original currency)	Repayment period and interest rate	Beneficiary	International support	2020 (million RSD)	2020 (million EUR)	Source
<b>Loan to JP PEU Resavica (loan 1)</b>	Development Fund of Serbia	Loan provided by state institution	2234 million RSD	no repayment	JU PEU Resavica	no	1117.27	9.50	Audit and Company Reports. <a href="http://www.jppeu.rs/informator.html">http://www.jppeu.rs/informator.html</a>
<b>Loan to JP PEU Resavica (loan 2)</b>	Deposit Insurance Agency of Serbia	Loan provided by state institution	261701 EUR	no repayment	JU PEU Resavica	no	15.29	0.13	Audit and Company Reports. <a href="http://www.jppeu.rs/informator.html">http://www.jppeu.rs/informator.html</a>
<b>“Flue Gas Desulphurization Construction Project for Thermal Power Plant Nikola Tesla A.” (loan 3)</b>	Ministry of Finance	State loan guarantee	28,252 billion Yen (cca. 213 million EUR)	15 years, 0,6%	JP EPS Belgrade	JICA ODA Loan	10533.83	89.59	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>
<b>Flue Gas Desulphurization Construction Project for Thermal Power Plant Kostolac B (loan 4)</b>	Ministry of Finance	State loan guarantee	286,6 million USD (cca 242,9 million EUR)	15 years, 3%	JP EPS Belgrade	China Exim Bank	18189.31	154.70	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>
<b>Kolubara project A - design, production and installation of the BTO system for the future surface kop Field C (loan 5)</b>	Ministry of Finance	State loan guarantee	78,5 million EUR	8,5 years, 6M EURIBOR + 1%	JP EPS Belgrade	EBRD	3045.13	25.90	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>
<b>EPS Restructuring project (refinancing of existing loans in commercial banks 2015) (loan 6)</b>	Ministry of Finance	State loan guarantee	200 million EUR	15 years, 6 M EURIBOR +1%	JP EPS Belgrade	EBRD	16548.32	140.74	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>

<b>Kolubara project B and C - Interlayer stacker for Tamnava West Field and coal quality management system for Tamnava surface mine (loan 7)</b>	Ministry of Finance	State loan guarantee	65 million EUR	6,5 years, variable 0,86%	JP EPS Belgrade	KfW	4703.20	40.00	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>
<b>Part of emergency flood recovery project (loan 8)</b>	Ministry of Finance	State loan guarantee	14,96 million EUR	21 years, 6 M EURIBOR + 0,8%	JP EPS Belgrade	IBRD	1756.58	14.94	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>
<b>TENT A, modernization and ash transportation system (loan 9)</b>	Ministry of Finance	State loan guarantee	45 million EUR	12 years, 5 years grace period, 1 %	JP EPS Belgrade	KfW	17.26	0.15	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>
<b>Kostolac B second phase Drmno open pit mine and 350 MW unit at Kostolac B (loan 10)</b>	Ministry of Finance	State loan guarantee	608 million USD (cca. 529 million EUR)	20 years, 2,5%	JP EPS Belgrade	China Exim Bank	16800.38	142.89	<a href="http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf">http://www.eps.rs/cir/SiteAssets/Pages/Finansijski-izvestaji/JP%20EPS%20izvestaj%202020%20sa%20misljenjem%20revizora.pdf</a>
<b>TOTAL OUTSTANDING BALANCE</b>							<b>72726.56</b>	<b>618.54</b>	
Exchange rate : 2020 1 EUR = 117.5776 RSD <a href="https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/">https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/</a>									

Note: for PEU Resavica, 50% of the total loan amounts have been calculated, considering that 50% of the total coal production goes to the production of electricity

### Subsidies calculations

Loan 1	2020
Interest rate on government loan	0
Interest rate on comparable commercial loan*	3.65
<b>Interest rate difference</b>	<b>3.65</b>

\* Source: National Bank of Serbia  
[https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)			
Loan 1	Year	2020	2020
	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		1,117.27	9.50
Interest rate difference ( %)		3.65	3.65
<b>Amount of the subsidy per year</b>		<b>40.78</b>	<b>0.35</b>

<b>Loan 2</b>	<b>2020</b>
Interest rate on government conditional loan	0
Interest rate on comparable commercial loan*	3.65
<b>Interest rate difference</b>	<b>3.65</b>

\* Source: National Bank of Serbia  
[https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
<b>Loan 2</b>	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		15.29	0.13
Interest rate difference ( %)		3.65	3.65
<b>Amount of the subsidy per year</b>		<b>0.56</b>	<b>0.00</b>

<b>Loan 3</b>	<b>2020</b>
Interest rate on government guaranteed loan	0.6
Interest rate on comparable commercial loan*	3.65
<b>Interest rate difference</b>	<b>3.05</b>

\* Source: National Bank of Serbia  
[https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
<b>Loan 3</b>	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		6,438.11	54.76
Interest rate difference ( %)		3.05	3.05
<b>Amount of the subsidy per year</b>		<b>196.36</b>	<b>1.67</b>

<b>Loan 4</b>	<b>2020</b>
Interest rate on government guaranteed loan	3.00
Interest rate on comparable commercial loan*	3.65
<b>Interest rate difference</b>	<b>0.65</b>

\* Source: National Bank of Serbia  
[https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
<b>Loan 4</b>	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		23,018.09	195.77
Interest rate difference ( %)		0.65	0.65
<b>Amount of the subsidy per year</b>		<b>149.62</b>	<b>1.27</b>

<b>Loan 5</b>	<b>2020</b>
Interest rate	1.00
Euribor*	-0.37
Interest rate on government guaranteed loan	0.63
Interest rate on comparable commercial loan**	3.65
<b>Interest rate difference</b>	<b>3.02</b>

\* Source: <https://www.global-rates.com/en/interest-rates/euribor/2020.aspx>  
\*\* Source: National Bank of Serbia  
[https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
<b>Loan 5</b>	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		4,263.48	36.26
Interest rate difference ( %)		3.02	3.02
<b>Amount of the subsidy per year</b>		<b>128.63</b>	<b>1.09</b>

<b>Loan 6</b>	<b>2020</b>
Interest rate	1.00
Euribor*	-0.37
Interest rate on government guaranteed loan	0.63
Interest rate on comparable commercial loan**	3.65
<b>Interest rate difference</b>	<b>3.02</b>

\* Source: <https://www.global-rates.com/en/interest-rates/euribor/2020.aspx>  
\*\* Source: National Bank of Serbia, [https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
<b>Loan 6</b>	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		18,292.21	155.58
Interest rate difference ( %)		3.02	3.02
<b>Amount of the subsidy per year</b>		<b>551.88</b>	<b>4.69</b>

<b>Loan 7</b>	<b>2020</b>
Interest rate	0.86
EURIBOR*	-0.37
Interest rate on government guaranteed loan	0.49
Interest rate on comparable commercial loan**	3.65
<b>Interest rate difference</b>	<b>3.16</b>

\* Source: <https://www.global-rates.com/en/interest-rates/euribor/2020.aspx>  
\*\* Source: National Bank of Serbia, [https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
<b>Loan 7</b>	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		5,585.45	47.50
Interest rate difference ( %)		3.16	3.16
<b>Amount of the subsidy per year</b>		<b>176.33</b>	<b>1.50</b>

<b>Loan 8</b>	<b>2020</b>
Interest rate	0.80
Euribor*	-0.37
Interest rate on government guaranteed loan	0.43
Interest rate on comparable commercial loan**	3.65
<b>Interest rate difference</b>	<b>3.22</b>

\* Source: <https://www.global-rates.com/en/interest-rates/euribor/2020.aspx>  
\*\* Source: National Bank of Serbia, [https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
<b>Loan 8</b>	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		1,762.74	14.99
Interest rate difference ( %)		3.22	3.22
<b>Amount of the subsidy per year</b>		<b>56.71</b>	<b>0.48</b>

<b>Loan 9</b>	<b>2020</b>
Interest rate	1.00
Interest rate on government guaranteed loan	1.00
Interest rate on comparable commercial loan**	3.65
<b>Interest rate difference</b>	<b>2.65</b>

\*\* Source: National Bank of Serbia  
[https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/ks\\_stat/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/)

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
	<b>Year</b>	<b>2020</b>	<b>2020</b>
<b>Loan 9</b>	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		17.26	0.15
Interest rate difference ( %)		2.65	2.65
<b>Amount of the subsidy per year</b>		<b>0.46</b>	<b>0.00</b>



<b>Loan 10</b>	<b>2020</b>
Interest rate on government guaranteed loan	2.50
Interest rate on comparable commercial loan**	3.65
<b>Interest rate difference</b>	<b>1.15</b>
** Source: National Bank of Serbia <a href="https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/">https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/</a>	

<b>Subsidy calculation (outstanding balance of the loan in previous year multiplied by difference in interest rate)</b>			
<b>Loan 10</b>	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million RSD	million EUR
Outstanding balance of the loan in previous year		14,613.97	124.29
Interest rate difference ( %)		1.15	1.15
<b>Amount of the subsidy per year</b>		<b>168.06</b>	<b>1.43</b>

<b>Public finance support - summary of calculated subsidies</b>	<b>Year</b>	<b>2020</b>	<b>2020</b>
	Currency	million RSD	million EUR
Loan 1		40.78	0.35
Loan 2		0.56	0.00
Loan 3		196.36	1.67
Loan 4		149.62	1.27
Loan 5		128.63	1.09
Loan 6		551.88	4.69
Loan 7		176.33	1.50
Loan 8		56.71	0.48
Loan 9		0.46	0.00
Loan 10		168.06	1.43
<b>Amount of the subsidies per year</b>		<b>1,469.38</b>	<b>12.50</b>

## Annex 5. Serbia – Detailed list of subsidy measures

Serbia - SOE Investment support direct subsidies							
Measure or project (written description)	Source of subsidy (entity / institution name)	Subsidy type	Beneficiary	2020 (million RSD)	2020 (million EUR)	Source	Notes
<b>Loan to underground coal mines</b>	JP EPS Belgrade	Loan provided by SOE	JP PEU Resavica	1166.91	9.92	Audit and Company Reports. <a href="http://www.jppeu.rs/informator.html">http://www.jppeu.rs/informator.html</a>	Loan could be converted in capital , no interest payment, no repayment up to privatization
<b>Debt for electricity</b>	JP EPS Belgrade	Right not to pay	JP PEU Resavica	2466.59	20.98	Audit and Company Reports. <a href="http://www.jppeu.rs/informator.html">http://www.jppeu.rs/informator.html</a>	
<b>TOTAL</b>				<b>3,633.50</b>	<b>30.90</b>		
Exchange rate : 2020 1 EUR = 117.5776 RSD <a href="https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/">https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/</a>							

## Subsidies calculation

	2020
<b>Interest rate on comparable commercial loan*</b>	<b>3.65</b>
* Source: National Bank of Serbia <a href="https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/">https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/ks_stat/</a>	

Subsidy calculation (outstanding balance of the loan and debt for electricity multiplied by interest rate on comparable commercial loan)			
	Year	2020	2020
	Currency	million RSD	million EUR
Outstanding balance		3,633.50	30.90
Interest rate on comparable loan		3.65	3.65
<b>Amount of the subsidy per year</b>		<b>132.62</b>	<b>1.13</b>

## Annex 6. Ukraine – Detailed list of subsidy measures

Ukraine - Fiscal support direct subsidies						
Measure or project (written description)	Source of subsidy (entity / institution name, or ministry if available)	Subsidy type	Beneficiary	2020 (in million UAH)	2020 (million EUR)	Source
<b>Restructuring of coal and peat industry</b>	Ministry of Energy of Ukraine	Direct budget transfer	State coal mines	5038.74	163.66	<a href="https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik">https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik</a>
<b>Rescue measures at coal mining enterprises</b>	Ministry of Energy of Ukraine	Direct budget transfer	State coal mines	289.99	9.42	<a href="https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik">https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik</a>
<b>Decommissioning of unprofitable coal and peat mining enterprises</b>	Ministry of Energy of Ukraine	Direct budget transfer	State coal mines	265.42	8.62	<a href="https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik">https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik</a>
<b>Repayment of arrears of wages to employees of PJSC “Nadiya Mine”</b>	Ministry of Energy of Ukraine	Direct budget transfer	State coal mines	51.00	1.66	<a href="https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik">https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik</a>
<b>Loan guarantee payment from budget for Loan Lisichanskvugillya PJSC and the State Development Bank of the PRC</b>	Ministry of Finance	Direct budget transfer	State coal mine	603.76	19.61	<a href="https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik">https://www.treasury.gov.ua/ua/file-storage/richnij-zvit-pro-vikonannya-derzhavnogo-byudzhetu-ukrayini-za-2020-rik</a>
<b>Taxes and contributions in arrears - state coal mines</b>	Government/Tax administration	Taxes and contributions	State coal mines	9796.15	318.18	<a href="https://tax.gov.ua/datasets.php?d=DFS20160211185056">https://tax.gov.ua/datasets.php?d=DFS20160211185056</a> <a href="https://tax.gov.ua/datasets.php?d=DFS20160211185056">https://tax.gov.ua/datasets.php?d=DFS20160211185056</a>
<b>Taxes and contributions in arrears - Centrenergo</b>	Government/Tax administration	Taxes and contributions	Centrenergo	15.45	0.50	<a href="https://tax.gov.ua/datasets.php?d=DFS20160211185056">https://tax.gov.ua/datasets.php?d=DFS20160211185056</a> <a href="https://tax.gov.ua/datasets.php?d=DFS20160211185056">https://tax.gov.ua/datasets.php?d=DFS20160211185056</a>
<b>State support for repair of TPP</b>	Ministry of Energy of Ukraine	Direct budget transfer	Centrenergo	41.86	1.36	<a href="http://www.centrenergo.com/upload/document/b21fb33cb8c5.pdf">http://www.centrenergo.com/upload/document/b21fb33cb8c5.pdf</a>
<b>VAT exemption for operations on supplying coal and/or products of its enrichment on the customs territory of Ukraine</b>	Ministry of Finance	Revenue foregone	TPPs	1421.76	46.18	<a href="http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=72775">http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=72775</a>
<b>Total support</b>				<b>17524.12</b>	<b>569.19</b>	

<sup>1</sup> EUR = 30.79 UAH Source: National Bank of Ukraine: [www.bank.gov.ua/files/Exchange\\_r.xls](http://www.bank.gov.ua/files/Exchange_r.xls) [www.bank.gov.ua/files/Exchange\\_r.xls](http://www.bank.gov.ua/files/Exchange_r.xls)

## Subsidies calculation

	2020		
<b>Interest rate on government bonds*</b>	<b>10.20%</b>		
*Source: National Bank of Ukraine <a href="https://bank.gov.ua/en/statistic/sector-financial/data-sector-financial#1ms">https://bank.gov.ua/en/statistic/sector-financial/data-sector-financial#1ms</a>			
<b>Subsidy calculation for taxes and contributions in arrears (amount of debt) multiplied by interest rate on government bonds*</b>			
	Year	2020	2020
	Currency	million UAH	million EUR
Outstanding balance of tax and con. in arrears		9811.59	318.68
Interest rate on government bonds yield* (%)		10.20%	10.20%
<b>Amount of the subsidy per year</b>		<b>1000.78</b>	<b>32.51</b>

Financial support summary of calculated subsidies	Year	2020	2020
	Currency	million UAH	million EUR
Taxes and contributions in arrears		1000.78	32.51
Direct budget Transfer and VAT ex		7712.52	250.51
<b>Total:</b>		<b>8713.31</b>	<b>283.01</b>

## Annex 6. Ukraine – Detailed list of subsidy measures

Ukraine - SOE Investment support direct subsidies							
Measure or project (written description)	Source of subsidy (entity / institution name, or ministry if available)	Subsidy type	Beneficiary	2020 (in million UAH)	2020 (million EUR)	Source	Note
Electricity arrears of coal mines to suppliers	SOE "Regional Electricity Networks"/SOE "Ukrinterenergo"	Right not to pay	Coal mines	14037.88	455.96	<a href="https://uie.kiev.ua/wp-content/uploads/2021/06/Audytorskyj-zvit_.pdf">https://uie.kiev.ua/wp-content/uploads/2021/06/Audytorskyj-zvit_.pdf</a> ,	<a href="https://www.unn.com.ua/uk/exclusive/1816730-usi-derzhavni-shakhti-zaborguvali-za-elektroenergiyu-blizko-15-mlrd-grn-volinets">https://www.unn.com.ua/uk/exclusive/1816730-usi-derzhavni-shakhti-zaborguvali-za-elektroenergiyu-blizko-15-mlrd-grn-volinets</a>
<b>TOTAL</b>				<b>14037.88</b>	<b>455.96</b>		

<sup>1</sup> EUR = 30.79 UAH Source: National Bank of Ukraine: [www.bank.gov.ua/files/Exchange\\_r.xls](http://www.bank.gov.ua/files/Exchange_r.xls)

## Subsidies calculation

	2020
Interest rate on short term commercial loan*	13.10%

\*Source: National Bank of Ukraine <https://bank.gov.ua/en/statistic/sector-financial/data-sector-financial#1ms>

Subsidy calculation for electricity arrears (amount of debt multiplied by interest rate on comparable commercial loan*)			
	Year	2020	2020
	Currency	million UAH	million EUR
Electricity arrears		14037.88	455.96
Interest rate on comparable commercial loan* (%)		13.10%	13.10%
<b>Amount of the subsidy per year</b>		<b>1838.96</b>	<b>59.73</b>

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