REPUBLIC OF SERBIA NET-METERING STUDY

FIRST REPORT: ANALYSIS OF LEGAL FRAMEWORK AND MARKET STRUCTURE IDENTIFYING ANY IMPEDIMENTS

ENHANCING CAPACITY FOR LOW EMISSION DEVELOPMENT STRATEGIES (EC-LEDS) PROGRAM

CONTRACT NUMBER AID-OAA-M-15-00005

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FOREWORD

RTI International was asked by the U.S. Agency for International Development (USAID) to perform a study of net-metering in the Republic of Serbia (Serbia), the purpose of which is to assist Serbia to define and introduce, if feasible, a successful approach to net-metering. In broad terms, the study comprises three reports:

First Report: An analysis of the present market structure and legal and regulatory framework with special emphasis on impediments or issues preventing the introduction of net-metering in Serbia. This report contains that analysis.

Second Report: A study of examples and models of net-metering practice in other countries, resulting in a report on examples of good practice in countries that have successfully implemented net-metering. This report was delivered on April 16, 2018.

Third Report: A proposal for introducing net-metering in Serbia, including a concise set of recommendations on how Serbia may re-shape existing rules to incentivize the introduction of, and engagement of investors in, net-metering.

This first report under the net-metering study:

• contains a description of the legal/regulatory framework presently applying to, and the market structure of, the electricity sector in Serbia;

• examines the key elements of net-metering and their present status or treatment under legislation in Serbia, and whether impediments to the introduction of a net-metering scheme exist—such as electricity pricing and incentives for potential small-scale investors in renewable energy (RE), and the regulatory regime applicable to installation and construction, connection, and metering;

• identifies in broad terms the areas of Serbia’s Energy Law and other relevant laws that would require amendment if such a scheme were to be introduced, and why. A more detailed description of the recommended amendments will be contained in the third report;

• examines the taxation regime that would be applicable to prosumers;

• describes the institutions and companies whose roles in the energy sector are important in terms of any introduction of a net-metering scheme;

• reports on the potential for RE investment in Serbia and the incentives for investment in RE that presently exist; and

• looks at other potential issues that could create impediments to the introduction of a net-metering scheme.
# TABLE OF CONTENTS

FOREWORD ............................................................................................................................. III
LIST OF FIGURES .................................................................................................................... VI
LIST OF TABLES ....................................................................................................................... VI
DEFINITIONS AND ACRONYMS............................................................................................. VII
EXECUTIVE SUMMARY ............................................................................................................ 1

1. INTRODUCTION TO NET-METERING ................................................................... 4

2. SERBIA’S ENERGY LEGAL/REGULATORY FRAMEWORK AND MARKET
   STRUCTURE ..................................................................................................................... 5
   2.1 Present Structure ................................................................................................... 6
   2.2 Small-Scale Renewable Energy and Net-Metering .............................................. 7

3. KEY ELEMENTS OF NET-METERING AND THEIR PRESENT STATUS
   UNDER SERBIAN LAW ........................................................................................... 8
   3.1 Electricity Pricing ................................................................................................. 8
       3.1.1 Electricity sale to households and SMES at the regulated prices
            (guaranteed supply) ................................................................................. 9
       3.1.2 Other relevant financial and economic indicators used in cost-
            benefit analyses ................................................................................. 11
   3.2 Energy Activities and Classification of Prosumers ............................................. 13
   3.3 Construction and Environmental Permitting of Electricity Facilities by
       SMEs/Domestic Consumers ................................................................................. 14
       3.3.1 Construction and Permitting Legislation ................................................. 14
       3.3.2 Environmental Legislation ...................................................................... 15
   3.4 Metering ................................................................................................................ 16
   3.5 Connection to Distribution Network ...................................................................... 17
       3.5.1 Typical process and cost of connection to the distribution network ...... 17
   3.6 Taxation Overview as It Applies to Small Producers ............................................ 18

4. DIVISION OF RESPONSIBILITIES ACROSS INSTITUTIONS, AGENCIES,
   AND ELECTRICITY SECTOR COMPANIES ......................................................... 20
   4.1 Ministry of Mining and Energy ............................................................................. 20
   4.2 Energy Agency of the Republic of Serbia .............................................................. 20
   4.3 JP Elektroprivreda Srbije ...................................................................................... 21
   4.4 EPS Distribucija d.o.o. Beograd ........................................................................... 21
   4.5 JP EPS – Ogranak EPS Snabdevanje ................................................................. 22
   4.6 Ministry of Finance ............................................................................................... 22
   4.7 Ministry of Construction, Transport, and Infrastructure (MCTI) ....................... 22
   4.8 Elektromreza Srbije ............................................................................................. 22
   4.9 Commission for Protection of Competition ....................................................... 22
   4.10 Other Entities of Interest ..................................................................................... 23
5. POTENTIAL FOR RENEWABLE ENERGY IN SERBIA AND PRESENT INCENTIVES

5.1 Potential of Renewable Energy Sources in Serbia
   5.1.1 Solar PV
   5.1.2 Small hydro
   5.1.3 Wind

5.2 Current Incentives for Generation of Electricity using Renewable Energy Sources

6. OTHER POTENTIAL ISSUES OR IMPEDIMENTS

7. POSSIBLE LEGAL AMENDMENTS/CHANGES RECOMMENDED
   7.1 Energy Law
   7.2 Other Legislation

ANNEX 1. RELEVANT LEGISLATION
DEFINITIONS AND ACRONYMS

AERS Energy Agency of the Republic of Serbia
CO₂ carbon dioxide
DSO distribution system operator
EC-LEDs Enhancing Capacity for Low Emission Development Strategies Program
EMS Joint stock company Elektromreža Srbije, the Serbian Transmission System and Market Operator
EPS JP Elektroprivreda Srbije, Electricity Industry of Serbia
EPS Distribution EPS Distribucija d.o.o. Beograd
EPS Supply JP EPS – Ogranak EPS Snabdevanje
Energy Law the Energy Law “Official Gazette of RS” No. 145/14, enacted on December 29, 2014, by the National Assembly of the Republic of Serbia
EU European Union
FiT feed-in-tariff
GWh gigawatt-hour
IEC information, education, communication
kW kilowatt
kWh kilowatt-hour
MCTI Ministry of Construction, Transport, and Infrastructure
MO market operator
MoF Ministry of Finance
MoME Ministry of Mining and Energy
MW megawatt
MWh megawatt-hour
NAP National Action Plan
Prosumer electricity producer and consumer
Prosumption excess electricity generated by the prosumer and injected into the distribution network
PV photovoltaic
RE renewable energy
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RES</td>
<td>renewable energy sources</td>
</tr>
<tr>
<td>RS</td>
<td>Republic of Serbia</td>
</tr>
<tr>
<td>RTI</td>
<td>RTI International</td>
</tr>
<tr>
<td>SEE</td>
<td>South Eastern Europe</td>
</tr>
<tr>
<td>Serbia</td>
<td>Republic of Serbia</td>
</tr>
<tr>
<td>SME</td>
<td>small- and medium-sized enterprises</td>
</tr>
<tr>
<td>USAID</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>VAT</td>
<td>value-added tax</td>
</tr>
<tr>
<td>VAT Law</td>
<td>Law on Value Added Tax</td>
</tr>
</tbody>
</table>
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EXECUTIVE SUMMARY

Serbia has proceeded a significant distance along the path of restructuring and reforming its electricity sector in line with European Union (EU) requirements, and the government continues to make progress. The government’s interest in exploring net-metering is to be lauded. Net-metering is not presently provided for in Serbia’s electricity legislation, but the introduction of such a scheme can easily be accommodated within the country’s existing legal and regulatory structure. Section 7 of this report contains the results of our examination of the Energy Law and other laws and secondary legislation, including broad suggestions as to where reform is needed. We believe that through judicious amendments in certain areas of the Energy Law, a net-metering scheme can be accommodated—that is, there is no need to design a new instrument specifically focused on net-metering.

Serbia offers incentives in the form of feed-in-tariffs (FiTs) and guaranteed electricity sales for commercial generation facilities utilizing renewable energy sources (RES). A net-metering scheme that enables domestic and small- and medium-sized enterprise (SME) consumers to save by producing their own electricity from Serbia’s abundant solar resources would also require consideration of some form of incentives. Without some changes being made to those parts of Serbia’s Energy Law that deal with the electricity sector and renewable energy (RE), and perhaps to other laws, the introduction of a net-metering scheme is unlikely to result in take-up other than by wealthy, large domestic consumers and larger SMEs. The other laws that may require changes are those governing taxation and value-added tax (VAT), as well, possibly, as those governing the forms of entities permitted to engage in commercial activity.

The Government of Serbia has concerns about providing subsidies for potential prosumers—defined as domestic and SME electricity consumers that produce energy to cover part of their electricity needs from their own power plants, convey any excess energy they produce to the broader distribution network, and withdraw electricity from that distribution network when what they produce is not sufficient to meet their own needs.1 However, it is believed that the cost to public revenues of any prosumer incentives would not be substantial. Our third report will contain an analysis of the costs and benefits of introducing net-metering.

Such incentives will also be covered in the third report. They relate to reducing VAT (and other taxes) on the purchase and installation of RE plant and equipment, ensuring favorable financing options are available, and ensuring prosumers are not classified as entrepreneurs or required to form legal entities.

However, the main barrier to a net-metering scheme being successful remains Serbia’s relatively low electricity prices. Small consumers’ knowledge and awareness of the long-term structural changes occurring in energy systems and their willingness to participate in the transition from centralized thermal- and nuclear-dominated technologies to cleaner, RE options are dimmed if the savings generated by investing in, for instance, rooftop solar, are insufficient to repay the costs. Whatever structure of a net-metering scheme may be adopted, opportunities

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for electricity consumers created by the recent massive decreases in costs of small-scale RE technologies will be limited if electricity prices remain low.

Initial analysis indicates that the financial attractiveness of net-metering for consumers in Serbia is also hindered by the following:

- Natural persons (such as households) may be required to register as a form of business entity or entrepreneur and will be subject to VAT and income tax if they wish to participate in net-metering (issues the team is seeking to clarify with the Ministry of Finance (MoF) and Tax Administration), because a prosumer may be classified as being involved in business. Registration as an entrepreneur carries compliance costs of €1,800–2,500 annually, which would effectively prevent household consumers from joining a net-metering scheme. SMEs are not affected, as they are already required to be registered as business entities.

- Delays in the introduction of smart meters in Serbia would require prosumers to install smart meters at their own cost, increasing the overall cost of net-metering. It may be necessary for the Ministry of Mining and Energy (MoME) to review EPS Distribucija d.o.o. Beograd’s (EPS Distribution) current plans to introduce advanced metering.

- Absence of carbon taxing and any opportunity for consumers to monetize achieved reductions of carbon dioxide (CO₂) emissions.

As of the date of this report, a meeting with the MoF to discuss findings and to gauge reaction to the possibility of introducing incentives for domestic and small commercial consumers to engage in net-metering is still to be confirmed.

Lastly, the extent to which consumers are well informed about the possibilities and benefits of using small-scale RES and net-metering options will be an important factor in the success of any introduction of a net-metering scheme.
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1. INTRODUCTION TO NET-METERING

Net-metering (also known as net energy metering) can be viewed as an incentive that allows an electricity consumer to store energy in the electricity delivery network. It is more akin to, and it is helpful to view it as, an energy efficiency measure. Net-metering is most commonly associated with consumer-installed small renewable energy (RE) systems for electricity needs, particularly rooftop-installed solar panels. Excess power produced by such systems is sent to the distribution network; in exchange, the consumer draws energy from the network at times when their own system is under-producing. In the early days of net-metering the meter ran in reverse, but today greater importance is placed on securing the capability of metering flows in both directions.

Net-metering has become a common means of encouraging homeowners and small businesses to install small solar energy systems. Solar systems typically hit peak electricity production in the afternoon, when household consumption is low; electricity use is typically higher in the mornings and evenings. Net-metering helps a consumer account for these variations in electricity production and consumption.

There are different approaches to the handling of the financial transactions involved in net-metering, including bi-directional flow, which is based on volumes of electricity flowing into or from the network through one meter, and “net-billing,” which is based on financial flows separated (using two meters) for both directions of electricity flow. There are many other options developed for the needs of different countries.

The Energy Law of Serbia does not presently recognize net-metering but contains the framework within which a net-metering scheme can be introduced in Serbia.
2. SERBIA’S ENERGY LEGAL/REGULATORY FRAMEWORK AND MARKET STRUCTURE

The legal framework in the field of energy in Serbia is primarily governed by the Energy Law (“Official Gazette of RS” No. 145/14, enacted on December 29, 2014) and the Law on Efficient Use of Energy (“Official Gazette of RS” No. 25/13), and the secondary legislation promulgated under these laws. Secondary legislation under the Energy Law includes regulations and other instruments adopted by Serbia’s energy regulatory body, the Energy Agency of the Republic of Serbia (AERS). Such instruments include documents such as specific-sector plans and codes developed by entities regulated by AERS under the Energy Law, such as the distribution system operator (DSO). In addition, other legislation and regulations governing other areas, such as commerce, companies and incorporated entities, and taxation also play an important role.

The institutions, governmental agencies and companies that have responsibilities in the energy sector of Serbia are discussed in Section 4 below. In addition to the Serbian Parliament and Government, the Ministry of Mining and Energy (MoME), AERS, and Commission for Protection of Competition are the key institutions and agencies.

In 2006 Serbia ratified the Treaty Establishing the Energy Community and in 2008 the Stabilization and Association Agreement, which committed the country to implementing the EU’s energy legislation. In order to comply with European Union (EU) policies aimed at achieving sustainable development, the energy sector in Serbia is bound by EU energy legislation promoting the use of renewable energy sources (RES) and encouraging energy efficiency, in terms of reducing greenhouse gases and protecting the environment from the impact of energy activities. Serbia has partially incorporated EU energy legislation into its legal framework and partially implemented the requirements of the legislation. The unbundling requirements of the Second Energy Package have largely been implemented, and implementation of the requirements of the Third Energy Package is well advanced.

The Energy Law is comprehensive, but does not include any specific authorization of, or regulation of the functions and responsibilities of the relevant parties involved in, net-metering. The law determines those energy sector activities that are subject to the licensing regime; the manner of their performance; the basis and manner of regulation of the various sectors and electricity market; the legal position of the transmission and distribution network operators, and market operators; the requirements for connection to the electricity networks; and terms of third-party access to the electricity networks, etc.

Serbia’s legislation governing RE and the use of RES is also contained in the Law on Energy, which in Part V establishes the concept of “privileged electricity producer,” which is defined as an entity generating electricity from RES and performing highly efficient cogeneration. Such producers are entitled to incentive measures and support such as feed-in-tariff (FiTs) and long-
term power purchase agreements with the guaranteed supplier. None of these provisions apply to small generators such as households and small- and medium-sized enterprises (SMEs) that generate electricity principally for self-supply—unless such prosumers form a corporate entity or register as entrepreneurs, the compliance costs of which are prohibitive. Serbia also has a Law on Efficient Use of Energy, adopted in 2013, that sets rules for energy performance contracting and, in Article 65, promotes self-production of electricity and heat. These two laws have also been reviewed and are covered in Section 7.

The Energy Law and secondary legislation under the Law are the main source of regulation and means of promotion of the use of RES and issues that relate to net-metering. Therefore, introduction of any net-metering scheme decided upon would be through amendments to the Energy Law and the implementation of a regulation.

2.1 Present Structure

The electricity market in Serbia is still dominated by state-owned public companies, and full liberalization in line with the Third Energy Package has not yet been achieved. There is an absence of significant participation by private companies. From January 1, 2015, all customers, including households and small customers, became eligible to choose their supplier; however, they also are still entitled to supply by the government-owned guaranteed supplier EPS Supply at prices regulated by AERS. In practice, then, the majority continue to choose to be supplied by EPS Supply at Serbia’s low regulated prices. Transmission has been unbundled from the other electricity sector activities, and recent decisions have resulted in the unbundling and separation of the distribution and supply sectors. In February 2016, SEEPEX a.d. Beograd, Serbian Power Exchange, the licensed market operator (MO), commenced operations as an organized electricity market/power exchange, with standardized electricity products and delivery within day-ahead and intra-day timeframes, and with the aim of offering products for trading in Serbia and in the South Eastern Europe (SEE) region.

Serbia has witnessed a steady increase in investment in RE, of which the main source is hydropower. Other RES include solar power, wind power, and biogas. Since 2005, the operation of the transmission system and the electricity wholesale market has been under the responsibility of the public enterprise Elektromreža Srbije, the Serbian Transmission System and MO, which at the beginning of 2017 legally changed its structure to become a joint stock company (EMS). The remaining functions (generation, distribution, and supply) are performed by the vertically integrated public company Elektroprivreda Srbije, Electricity Industry of Serbia (EPS), from which EMS was split—and its subsidiary companies or branches:

- JP EPS—Ogranak EPS Snabdevanje (EPS Supply, a branch of EPS) as the public supplier (now guaranteed supplier), created in 2013 and merged with EPS in 2016
- EPS Distribucija d.o.o. Beograd (EPS Distribution, wholly owned by EPS), the distribution company headquartered in Belgrade, into which was consolidated Serbia’s 33 regional distribution branches.

The government, through EPS, also created EPS Trgovanje Ljubljana, an electricity trading business in Slovenia.

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2 [https://www.energy-community.org/implementation/Serbia/EL.html](https://www.energy-community.org/implementation/Serbia/EL.html).
Currently, because of the persistence of regulated prices set at levels well below actual cost and market prices, EPS Supply holds a de facto monopoly in these areas. Consequently, consumers such as qualified customers—those who may now choose their own supplier—generally chose to continue supply under regulated tariffs. This has occurred even as the market has become increasingly liberalized, in accordance with the framework established by the Energy Law, and consumers, including households, have increasingly become authorized to purchase electricity at market prices. Figure 1 shows the general flow of the electricity market in Serbia.

**Figure 1. Electricity Market in Serbia**

![Electricity Market in Serbia Diagram](https://www.energy-community.org/implementation/Serbia.html)

**2.2 Small-Scale Renewable Energy and Net-Metering**

Serbia has a relatively well-developed legal and regulatory framework for larger-scale RES developments. Much of this framework is not very relevant for net-metering, which applies to small-scale developments (in most cases, at the household or SME level) rather than to commercial electricity generation projects or generating plants connected to the transmission grid.

At this lower level—especially the ultra-small scale (below 30 kilowatts [kW])—the structure and scope of primary laws and regulations provide a basis for the introduction of net-metering to enable small investors to benefit from investment in RE, provided that certain amendments are made to the Energy Law, coupled with specific regulations required in certain areas (principally, metering and connection rules applicable to prosumers). It is the households and SMEs that are most likely to be the primary users of net-metering. These amendments and regulations needed are identified in Section 7 of this report and will be further elaborated on in the third report. Another approach we considered but discounted would be for Serbia to consider passing a specific legislative or regulatory instrument dedicated to the introduction of net-metering.
3. KEY ELEMENTS OF NET-METERING AND THEIR PRESENT STATUS UNDER SERBIAN LAW

3.1 Electricity Pricing

Electricity prices are relatively low in Serbia, which means that the potential savings from self-consumption—and, likewise, sales of excess electricity from net-metered installations—are limited. This lack of financial incentive to invest in, for instance, rooftop solar presents an impediment to the introduction of net-metering in Serbia.

A key reason for the relatively low cost of electricity is the lifeline-like tariff system in Serbia in use by the guaranteed (regulated) supplier, EPS Supply. Electricity in the first band of consumption (<350 kilowatt-hours [kWh]) is priced three times lower than tariffs in the highest band of consumption.

The main motivation behind the advent of net-metering in other countries has been potential savings achievable by a consumer who invests in a RE facility (such as rooftop solar), i.e., savings generated from self-producing electricity offsets purchases the consumer would otherwise make from the utility or a supplier. These savings are the main contributor to recovery of the investment and installation costs of the RE facility. The concept of net-metering developed to enable prosumers to continue to receive benefits by selling excess electricity during periods when the prosumer’s consumption is low. However, in the case of Serbia’s current tariff framework, because the cost of electricity that the consumer offsets, and the value of power sold into the network, are relatively low, achievable savings are not significant.

Investing in net-metering requires high front-end costs, exacerbated by a lack of access to cheap financing. Government-sponsored incentives that would address these problems for potential prosumers are currently lacking. Additionally, the absence of carbon taxing and of opportunities for consumers to monetize achieved reductions of CO₂ emissions limit the financial attractiveness of net-metering for consumers.

A hypothetical cost-benefit financial analysis of net-metering in Serbia under current conditions will be contained in our third report. The analysis will estimate financial performance indicators to assess the profitability of net-metering for roof-top solar photovoltaic (PV) installations and whether net-metering is worth financing from the perspective of the consumer, based on current conditions.

The average price of electricity for guaranteed supply paid by households and small customers such as SMEs and entrepreneurs (regulated by AERS) in 2016 amounted to €55.63/megawatt-hours (MWh; VAT- and duty-free), including wholesale price (50%), average transmission

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charge (6%), and distribution charge (44%), as shown in Figure 2. Almost all households and SMEs are under guaranteed supply of electricity, and at the prices above the average monthly electricity bill for such customers\(^4\) is €28.35 (VAT- and duty-free). This low cost of electricity means that electricity generated by an installed RE facility would result in only modest savings. Likewise, prosumers’ proceeds from sales of relatively insignificant quantities of excess electricity delivered to the network would not be particularly high, given the low value of the electricity itself, for which the value received would be less the transmission, distribution and supply charges, which (as mentioned above) constitute approximately 50% of the household bill.

**Figure 2. Structure of Average Price of Electricity for Guaranteed Supply, EUR/MWh (VAT- and duty-free)**

Forty-three percent of electricity is sold in the open market, at an average price of €56.9 /MWh (VAT- and duty-free). Customers ineligible for regulated supply who did not select a supplier in the open market are supplied by the last-resort supplier (for a maximum of 60 days). The average price of electricity for the last-resort supply was €84 /MWh in 2016 (VAT- and duty-free). The average annual price of electricity in Serbia, for guaranteed supply, open market, and the last resort supply was €56.4 /MWh (VAT- and duty-free) in 2016.

3.1.1 ELECTRICITY SALE TO HOUSEHOLDS AND SMES\(^5\) AT THE REGULATED PRICES (GUARANTEED SUPPLY)

Prices of generation and supply were deregulated as of January 1, 2015, except for the price of electricity supplied to households and small customers entitled to universal service. The regulated price of guaranteed supply does not provide sufficient incentive for alternative offers to emerge in the market. The lack of competition is used as a justification to continue regulation of these prices and postpone further the selection of a guaranteed supplier in a competitive procedure, thus hampering the effective opening of the market for small customers and households.

The purchase price of electricity for guaranteed supply is €0.03011 /kWh (€30.11 /MWh). This is the price that the DSO pays for provision of electricity for guaranteed supply, comprising a

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\(^4\) Based on the average monthly consumption of households of 360 kWh.

\(^5\) SMEs with up to 50 employees, annual turnover up to €10 million, electricity consumption <30,000 kWh annually, connected to the distribution network of <1kV voltage.
generation price of €0.02611 /kWh (€26.11 /MWh), and transmission grid charge of €0.004 /kWh (€4 /MWh).

The generation price of electricity for guaranteed supply is 32% lower than the reference market wholesale price of electricity. The price of electricity for guaranteed supply is established according to the process presented in Figure 3.

Figure 3. Process of Establishing Electricity Prices for Guaranteed Supply

The retail price of electricity for guaranteed supply is determined based on the methodologies and tariff system.

The Serbian electricity pricing system contains three consumption zones, to stimulate the more rational use of electricity:

- Green—monthly consumption <350 kWh
- Blue —monthly consumption 350-1,600 kWh
- Red—monthly consumption >1,600 kWh.

Further, each consumption zone has different tariffs for consumed active energy:

- Higher (day) tariff—for energy consumed between 07.00-23.00 hours
- Lower (night) tariff—for energy consumed between 23.00-07.00 hours.

In addition to consumption of active energy (expressed in kWh), households and SMEs are charged on a monthly basis for the following:

- Active capacity, i.e., per kW of approved capacity of connection (typically, approved capacity for household is 17.25 kW, but for the purpose of electricity billing active capacity is considered to be 11.04 kW, or 6.9 kW for households that consume <350 kWh monthly)
- Cost of guaranteed supplier (fixed amount).

The values of tariff elements (VAT exclusive) for establishing electricity prices for households are presented in Table 1.

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6 AERS uses wholesale price of electricity (futures) at the Hungarian Power Exchange as a benchmark; reference price for 2018 was €38.55 /MWh.
8 Valid as of 1 October 2017.
Table 1. Tariff Element for Calculation of Electricity Price for Households

<table>
<thead>
<tr>
<th>Tariff element</th>
<th>Unit</th>
<th>€</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green (&lt;350 kWh)</td>
<td>Higher (day) tariff kWh</td>
<td>0.049</td>
</tr>
<tr>
<td></td>
<td>Lower (night) tariff kWh</td>
<td>0.012</td>
</tr>
<tr>
<td>Blue (350-1,600 kWh)</td>
<td>Higher (day) tariff kWh</td>
<td>0.074</td>
</tr>
<tr>
<td></td>
<td>Lower (night) tariff kWh</td>
<td>0.018</td>
</tr>
<tr>
<td>Red (&gt;1,600 kWh)</td>
<td>Higher (day) tariff kWh</td>
<td>0.147</td>
</tr>
<tr>
<td></td>
<td>Lower (night) tariff kWh</td>
<td>0.037</td>
</tr>
<tr>
<td>Active (approved) capacity</td>
<td>kW</td>
<td>0.400</td>
</tr>
<tr>
<td>Cost of guaranteed supplier</td>
<td></td>
<td>1.093</td>
</tr>
</tbody>
</table>

Average price of electricity for households (VAT exclusive), expressed in EUR, has not been significantly changed since 2011 (see Figure 4).

Figure 4. Average Annual Electricity Price for Households in Serbia (VAT exclusive), 2011–2016

In spite of the intention to stimulate rational use of electricity through the tariff system (where households with consumption <350 kWh monthly pay the lowest price for electricity, and consumers with larger monthly consumption pay up to a 30% higher price), a regulated price of electricity that is well below market price—and among the lowest in Europe—does not provide an incentive for consumers to invest in alternative options such as net-metering.

3.1.2 OTHER RELEVANT FINANCIAL AND ECONOMIC INDICATORS USED IN COST-BENEFIT ANALYSES

One of the tasks that will be completed under this project and contained in the third report encompasses detailed financial and economic cost-benefit analyses. Prior to developing these in detail, the team conducted detailed research on financial and economic indicators, which will be used in further analyses. These are summarized in Table 2.
### Table 2. Assumptions for Financial and Economic Analysis

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>Unit</th>
<th>Value</th>
<th>Reference/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment cost</td>
<td>EUR/kW</td>
<td>1,770</td>
<td>Estimated based on the investment costs of €17,000 for CRESPQ 9.6 kW solar PV plant in Novi Sad (investment costs for smaller solar PV plant of 3kW are 20% higher due to size)</td>
</tr>
<tr>
<td>Annual yield of solar PV plant</td>
<td>kWh/kW</td>
<td>1,173</td>
<td>Based on operational data of CRESPQ 9.6 kW solar PV plant in Novi Sad, Serbia (<a href="http://www.sunnyportal.com/Templates/PublicPageOverview.aspx?page=3cf82f1f-4105-46d8-a46b-9ce564bd556d&amp;plant=b7b61e6c-0b56-4247-aadf-fbdecf4660ab&amp;splang=en-US">www.sunnyportal.com/Templates/PublicPageOverview.aspx?page=3cf82f1f-4105-46d8-a46b-9ce564bd556d&amp;plant=b7b61e6c-0b56-4247-aadf-fbdecf4660ab&amp;splang=en-US</a>)</td>
</tr>
<tr>
<td>Tariff for electricity consumption</td>
<td>EUR/MWh</td>
<td>58-62</td>
<td>Based on the price list of EPS Supply (exclusive of VAT and levies)</td>
</tr>
<tr>
<td>Tariff for excess PV generation fed into network</td>
<td>EUR/MWh</td>
<td>30.11</td>
<td>Price of electricity without charge for distribution network (price that DSO pays for provision of electricity for guaranteed supply, comprising generation price of €26.11 /MWh, and transmission grid charge of €4 /MWh)</td>
</tr>
<tr>
<td>Price of electricity – annual escalation rate</td>
<td>%</td>
<td>2%</td>
<td>Consultant assumption</td>
</tr>
<tr>
<td>Annual efficiency decrease of solar panels</td>
<td>%</td>
<td>1</td>
<td>Consultant assumption</td>
</tr>
<tr>
<td>Time horizon of the analysis</td>
<td>years</td>
<td>20</td>
<td>Consultant assumption based on technical lifetime of solar PV plant</td>
</tr>
<tr>
<td>VAT</td>
<td>%</td>
<td>20%</td>
<td>Law on VAT</td>
</tr>
<tr>
<td>Excise on electricity</td>
<td>%</td>
<td>7.5%</td>
<td>Law on Excises</td>
</tr>
<tr>
<td>Profit tax</td>
<td>%</td>
<td>15%</td>
<td>Law on Profit Tax</td>
</tr>
<tr>
<td>Depreciation rate</td>
<td>%</td>
<td>5% p.a.</td>
<td>Consultant assumption</td>
</tr>
<tr>
<td>Annual operation and maintenance costs</td>
<td>% of investment cost</td>
<td>1%</td>
<td>Consultant assumption</td>
</tr>
</tbody>
</table>
### Assumptions

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>Unit</th>
<th>Value</th>
<th>Reference/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual cost for registering business entity</td>
<td>EUR</td>
<td>1,800</td>
<td>Annual cost for registering as an Entrepreneur for employed citizens</td>
</tr>
<tr>
<td>Financing: debt/equity</td>
<td>%</td>
<td>80/20</td>
<td>Consultant assumption</td>
</tr>
<tr>
<td>Grace period</td>
<td>years</td>
<td>0.5</td>
<td>Consultant assumption – based on construction period for solar PV plant</td>
</tr>
<tr>
<td>Repayment period</td>
<td>years</td>
<td>7</td>
<td>Consultant assumption – based on currently available financing options</td>
</tr>
<tr>
<td>Interest rate</td>
<td>%</td>
<td>4.5%</td>
<td>Consultant assumption based on the market conditions</td>
</tr>
<tr>
<td>Financial Discount Rate (FDR) for calculation of return on investments</td>
<td>%</td>
<td>4.9%</td>
<td>Based on weighted average cost of capital (WACC) used by AERS</td>
</tr>
<tr>
<td>CO₂ emissions generation factor for electricity</td>
<td>gCO₂/kWh</td>
<td>0.671</td>
<td>According to IEA emission factors 2011</td>
</tr>
<tr>
<td>Overall losses in distribution</td>
<td>MWh</td>
<td>3,917,000</td>
<td>AERS Annual Report 2016</td>
</tr>
<tr>
<td>Distribution losses</td>
<td>%</td>
<td>13%</td>
<td>AERS Annual Report 2016</td>
</tr>
<tr>
<td>Transmission losses</td>
<td>%</td>
<td>2.15%</td>
<td>AERS Annual Report 2016</td>
</tr>
<tr>
<td>Distribution system peak</td>
<td>MW</td>
<td>5,369</td>
<td>AERS Annual Report 2016</td>
</tr>
<tr>
<td>Cost of purchasing electricity to cover losses</td>
<td>EUR/MWh</td>
<td>30.11</td>
<td>Consultant assumption</td>
</tr>
<tr>
<td>RSD/EUR exchange rate</td>
<td>RSD/EUR</td>
<td>(2017) 121.41</td>
<td>National Bank of Serbia</td>
</tr>
</tbody>
</table>

### 3.2 Energy Activities and Classification of Prosumers

Under the Serbian Company Law, a natural person who performs a commercial or business activity with the aim of generating income (another phrase is "conducts an activity for profit") is classified as an entrepreneur (similar to a sole trader) and must register as such (or as another form of business entity such as a company) under the appropriate law. It seems likely that a prosumer in Serbia would be classified as an entrepreneur, because passing excess electricity back to the distribution network would yield a benefit that may be deemed to be income. This situation may apply even where a prosumer does not generate an invoice (another test of doing

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a net-metering scheme generally does not require the prosumer to invoice the supplier.

The classification of a prosumer in this way is quite critical, because the compulsory compliance costs for entrepreneurs and business entities (which include the need to hire an accountant) are roughly €150–250 monthly, or €1,800–2,500 annually. There are numerous regulations governing the classification of entrepreneurs, and clarification is being sought from the MoF and Tax Administration.

If prosumers are classified as entrepreneurs, the extra costs (and complexity) would be a significant barrier for households. SMEs are registered as business entities by default, and so already have these compliance costs. Regardless of the form and structure of any net-metering scheme that is introduced, it also appears that the treatment for VAT purposes of prosumption might also result in a prosumer’s having to register as an entrepreneur or business entity (see Section 3.5 of this report).

The Energy Law does not presently specifically recognize prosumers and the activities undertaken by them, so a person who installed a RE facility for self-consumption and also for passing excess electricity back to the network, could technically be classified as conducting the energy-related activity of generation under Article 16(1). Article 17 states that an energy-related activity may be performed only by a public enterprise, business entity, or other legal entity or entrepreneur having a license to perform the activity, unless otherwise prescribed by the Law. Projects that generate under 1 megawatt (MW) are exempt from having to obtain a license, but because most prosumers will be individuals, Article 17 would also require them to become a business entity or entrepreneur.

This issue arising under the Energy Law could quite easily be remedied by prescribing in the Law that prosumers (or final consumers with own generation) do not carry on an energy-related activity, or that prosumers may be individual persons.

### 3.3 Construction and Environmental Permitting of Electricity Facilities by SMEs/Domestic Consumers

#### 3.3.1 CONSTRUCTION AND PERMITTING LEGISLATION

The Law on Planning and Construction regulates typical procedures for the construction of electricity generation facilities. The procedures include preparation of technical documentation and obtaining necessary approvals, a building permit and usage permit, conclusion of an agreed connection, and performance of an impact assessment study before commencing construction. These procedures are complex and apply for the most part to generation facilities that are built for commercial purposes. Although the Energy Law exempts electricity production facilities up to 1 MW (except hydropower projects) from having to obtain a license from AERS or an energy permit, such facilities require construction and other permits under the Law on Planning and Construction.

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Presently, the Law contains exceptions for two types of projects:

1. It prescribes in Article 144 a simplified procedure for very small RES facilities that are not connected to the electricity distribution network (investors in such facilities need only obtain approval from the local authority in whose jurisdiction the facility is to be located).

2. The Law also provides in Article 145 a simplified procedure to obtain approval for construction of “power plants using renewable energy sources of installed power of 50 kW.” No construction permit is required for such facilities, but an investor who wishes to have the facility recorded in the real estate register would need to seek the issue of an operation permit from the local authority following completion of construction and installation.

The second exception is relevant for net-metering and amending Article 145 to refer to all electricity generation facilities utilizing RES with installed capacity of up to 50 kW could help. However, we would recommend that the DSO be the competent authority\textsuperscript{14} to perform the technical inspection following installation and to issue the permit allowing commencement of operation of the facility, rather than the local authority. In that case, in order to register the facility in the public real estate register, the operation permit could be provided to the local authority.

Additionally, the procedures for construction and installation by a prosumer of a RES electricity generation facility must be made clearer and simpler than the present rules.

This study team met with a representative of the Department for Spatial and Urban Planning of the Ministry of Construction and Planning in Belgrade and learned that the Ministry is in the process of amending the Law on Planning and Construction. In the process, the Ministry is willing to include amendments necessary to ensure prosumers who install small RE facilities, such as solar panels, are not required to comply with the requirements of the Law. A public hearing has already been held, but it is not too late for us to provide our suggestions, which would go through the MoME. The possible amendments discussed with the Ministry are contained in Section 7 of this report.

3.3.2 ENVIRONMENTAL LEGISLATION

Under a sub-law\textsuperscript{15} of the main Serbian environmental protection legislation,\textsuperscript{16} the Law of Environmental Protection,\textsuperscript{17} a duty is imposed on a developer of an electricity generation facility to prepare an Environmental Impact Assessment Study to determine any significant environmental impacts before beginning construction. This duty is very unlikely to apply to a small-scale RE facility such as would participate in net-metering, except if it was located in a natural or cultural protection area.

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\textsuperscript{14} Articles 3 and 16 of the Rulebook on the Content and Method of Carrying Out a Technical Inspection of the Building, the Composition of the Commission, the Content of the Proposal of the Commission on Determining the Similarity of the Facility for Use, Observing the Soil and the Building During Construction and Use and the Minimum Guarantee Periods for Certain Types of Facilities ("Official Gazette of RS" Nos. 27 / 15 and 29/16).

\textsuperscript{15} Regulation on the Establishment of the List of Projects for Which the Impact Assessment is Mandatory and the List of Projects for Which an Environmental Impact Assessment Can be Requested ("Official Gazette of RS" No. 114/08).

\textsuperscript{16} The Law on Environmental Impact Assessment ("Official Gazette of RS" Nos. 135/04 and 36/09).

\textsuperscript{17} Law on Environmental Protection ("Official Gazette of RS" Nos. 135/04, 36/09, 43/11 and 14/16)
3.4 Metering

The total number of metering points for electricity delivery in Serbia was 3.62 million at the end of 2016; each point has old, mechanical meters installed, and 89% of the points are households. Installed meters are in line with national metrology legislation, General conditions delivery and supply of electricity,18 national information, education, and communication (IEC) and other standards and rules.

Currently, any potential prosumer entering a net-metering scheme would need an additional meter installed to measure electricity generated by its RE facility and delivered into the distribution network (besides the existing meter for measurement of consumption).

By mid-2021, the DSO is obliged by the Energy Law to take over ownership of metering devices, switchboards, connection lines, installation, and equipment in the switchboard and other devices within the connection in the facilities of existing customers or producers, since these devices and equipment are part of the distribution network.

The DSO is also obliged by the Energy Law to prepare an implementation plan for the introduction of various forms of advanced metering systems to cover at least 80% of the existing metering points with advanced meters. Installation of smart meters should enable a significant reduction of technical and commercial losses, including electricity theft. However, there is significant delay in the introduction of smart meters in Serbia.

EPS Distribution is rolling the new smart meters out, starting first with the highest-consumption customers and then lower consumption customers. However, the smart meters that EPS Distribution plans to roll out do not allow for the bi-directional measurement of electricity necessary to enable fully cost-efficient prosumption; EPS Distribution plans to install bi-directional smart meters only for small RE power plants. Hence the need, mentioned above, for a prosumer to have an additional meter installed.

In terms of the costs of installation of smart meters, existing consumers with installed old mechanical meters, or new, smart, single-directional meters, would pay only the difference in cost between the replaced and new meter. New consumers, currently not connected to network, would pay the full price of installation of a new meter.

EPS Distribution suggested that the cost difference between these single- and bi-directional meters is not particularly high and that the cost of adjusting the existing connection to the requirement of a prosumer should not be high either.

Thus, it can be concluded that the current situation, which requires installation of an additional, separate meter for the measurement of produced electricity, would increase the overall cost of net-metering. Therefore, it is recommended, if the government decides to introduce a net-metering scheme, to review EPS Distribution’s current plans to introduce advanced metering. Such a review should assess whether a potential prosumer should be entitled to have smart bi-directional meter installed by EPS Distribution at no cost to the prosumer.

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18 Official Gazette of RS No.63/2013.
3.5 Connection to Distribution Network

Distribution network connection is defined by the Energy Law, the Decree on Conditions of Delivery and Supply of Electricity and the Rules of the Operation of the Distribution System of ODS (i.e., EPS Distribution). These rules presently cover consumers and producers connected directly to the distribution network; there are as yet no rules covering the connection of a prosumer—either a network-connected consumer wishing to install a RE facility such as rooftop solar or a new customer who at the time of connection possesses such a facility.

Below a consumer’s typical costs of connection to the network are described. In principle, these costs ought to also apply to a prosumer without addition, although any costs relating to the technical capabilities of the RE installation itself (such as requirements around frequency ranges and electromagnetic compatibility) are for the prosumer. This is because the installed capacity of a facility installed by a prosumer should not exceed the capacity agreed upon with the DSO.

For larger prosumers such as industrial or commercial consumers, connection costs based on the requested capacity would have to be negotiated on a case-by-case basis.

EPS Distribution will have to amend the Distribution Code (and submit it to AERS for approval) to ensure a transparent, simple connection procedure applies for prosumers that seek to install an RE facility.

3.5.1 Typical Process and Cost of Connection to the Distribution Network

EPS Distribution sets the level of costs of connection to the distribution network, in line with the methodology for setting connection costs adopted by AERS. The Distribution Network Code that among other things regulates technical conditions for connection of customers to the system, rules on third-party access to the distribution system, and functional requirements of metering devices has been in force in Serbia since 2017.

As mentioned, current rules discriminate against RES or micro/small generation in terms of technical conditions for using the network, because the distribution network code recognizes small generators as generators with installed power up to 10 MVA (rather than as prosumers).

The cost of connection to the electricity distribution network (see Table 3) includes the costs of equipment, devices, and material; works; project design; gathering necessary documents; and a part of costs for network development arising due to facility connection, depending on the approved capacity. Standard connections are defined in line with the place where the switching board will be placed, necessary connection capacity, the number of phases and type of network (overhead or cable) to which a customer is being connected. The cost of connection, born by consumers, includes installation of the metering device specified by the DSO. It is procured by EPS Distribution and paid for by the consumer. However, currently installed metering devices are not bi-directional smart meters. On completion of the connection process, EPS Distribution assumes ownership of the meter and becomes responsible for servicing and any required replacement of a faulty meter.

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19 Methodology for setting costs of connection to electricity transmission and distribution system, Official Gazette of Republic of Serbia, No. 109/15; valid as of 01/03/2016.
### Table 3. Attribution of the Costs of Connection to Distribution Network

<table>
<thead>
<tr>
<th>ASPECT</th>
<th>Who bears the cost in the short-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical realization of the connection – trenches/poles, wiring, testing</td>
<td>DSO (EPS Distribution)</td>
</tr>
<tr>
<td>Direct connection cost</td>
<td>Prosumer</td>
</tr>
<tr>
<td>Further system expansion costs</td>
<td>EPS</td>
</tr>
<tr>
<td>Meter purchase and installation</td>
<td>Prosumer</td>
</tr>
<tr>
<td>Meter servicing (daily)</td>
<td>DSO (EPS Distribution)</td>
</tr>
<tr>
<td>Meter replacement</td>
<td>DSO (EPS Distribution)</td>
</tr>
</tbody>
</table>

For example, the cost of a typical connection to the distribution network for households and small businesses (three phases, maximum power up to 43.5 kW), connected using underground cable (L=50m) amounts to approximately €1,000 EUR. Please see Table 4 for details.

### Table 4. Typical Cost of Connection of Households and Small Businesses to the Distribution Grid

<table>
<thead>
<tr>
<th>Costs</th>
<th>EUR (VAT(^{22}) incl.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of connection (three-phase, max load up to 43.5 kW, underground cable L&lt;25m)</td>
<td>834</td>
</tr>
<tr>
<td>Cost of additional cables (L=25m, 580 RSD/m)</td>
<td>145</td>
</tr>
<tr>
<td><strong>Total Cost of Connection to Distribution Network</strong> (three-phase, max load up to 43.5 kW, underground cable L=50m)</td>
<td><strong>979</strong></td>
</tr>
</tbody>
</table>

In line with the Decree on Conditions of Electricity Delivery and Supply, for facilities with a three-phase system that do not have an approved level of connection capacity, their capacity amounts to 17.25 kW (complimentary with 25A fuses).

### 3.6 Taxation Overview as It Applies to Small Producers

Serbia's VAT regime has no specific provision related to supply of electricity by households (households are not taxable persons). A supplier must issue an invoice to end consumers for all energy withdrawn from the network, and producers must issue invoices to the supplier for all active energy fed into the network, including VAT.

Serbia's VAT regime is regulated by the Law on Value Added Tax (VAT Law), which was last amended in 2018.\(^{23}\) Regarding the definition of a chargeable event and chargeability, the VAT Law lists that “the exchange of goods for other goods or services” is a chargeable event. This

\(^{21}\) Source: own calculation based on the price list for the electricity distribution system connection

\(^{22}\) VAT rate in the Republic of Serbia is 20%.

provision is applicable to the net-metering concept. The market value of all exchanged goods or services is considered as a VAT tax base. The VAT rate for the trade of electricity in Serbia is 20%.

VAT registration is mandatory for persons established in Serbia with a turnover higher than RSD 8 million (~€65,000). Consequently, small taxpayers, whose yearly turnover is less than RSD 8 million are not obliged to register for VAT and have no right to VAT deduction.

Where the amount of energy produced on the site is less than the amount of energy withdrawn from the network, the prosumer would be invoiced the difference between the energy withdrawn and the energy supplied to the grid as well as, according to the VAT Law, the applicable VAT.

The existing Law on Accounting and Auditing prevents invoicing by physical entities (i.e., households) based on the net difference between energy delivery and injection. If the energy supplied to the network exceeds the energy withdrawn, the excess energy supplied will become the property of the energy supplier, for which the prosumer would receive financial compensation. This means, it is believed, that the prosumer/physical entity must be registered as a form of business entity (such as an entrepreneur), which, again, implies mandatory payment to cover health and social security costs (€150–250 monthly, i.e., €1,800–2,500 annually).

If a prosumer is deemed to have received a benefit or financial compensation, it is assumed that there will also be income tax implications.

As regards additional taxes and levies, electricity is levied with:

- Excise duties for consumed electricity (7.5% ad-valorem) paid by final consumers
- Charge for financing RES through FiTs scheme, paid by final consumers for each kWh of consumed electricity: this charge was €0.000766 /kWh (0.093 RSD/kWh) in 2017, and is determined annually by the MoME; it depends on the total installed capacity of the grid-connected RE plants. Considering the planned increase of electricity produced from RES in Serbia, this charge is expected to rise in the coming years
- Tax for financing public broadcasting company—€1.23 /month (150 RSD/month).

As mentioned in Section 3.1 of this report, the price of electricity for households that consume 2,000 kWh monthly is approximately 28% higher than the price of electricity for households that consume 360 kWh monthly (excluding VAT and levies).

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4. DIVISION OF RESPONSIBILITIES ACROSS INSTITUTIONS, AGENCIES, AND ELECTRICITY SECTOR COMPANIES

The institutional framework in Serbia’s energy sector resembles that of most other countries that have pursued reform and restructuring, particularly countries that belong to the Energy Community. This section describes the institutions and agencies that perform policy and regulatory roles in the electricity sector and the companies that generate and deliver electricity and perform related functions. The focus, naturally, is on those entities that are relevant to the possible introduction of net-metering in Serbia.

4.1 Ministry of Mining and Energy

The MoME performs public administration duties related to energy and energy policy and energy development planning in the areas of electricity, natural gas, oil, and oil derivatives. The MoME has many responsibilities, such as calculating the energy balance of Serbia, oversight of the oil and gas economy, and appointment and dismissal of management bodies. The Ministry is also responsible for other acts related to the work and operation of public companies and companies that perform production and supply of electricity or natural gas, energy security strategy and policy, development of annual and mid-term energy security programs, reserves of energy products, pipeline safety, production, distribution and supply of heat energy, nuclear power plants and disposal of radioactive materials, rational use of energy and energy efficiency, RES, environmental protection and climate change in the field of energy, coordination of activities related to energy investments, and inspection supervision in the field of energy, as well as other tasks determined by the Law on Ministries.\(^\text{28}\)

The MoME also has regulatory responsibilities, such as to adopt rulebooks and to propose regulations to the government, mostly of a technical nature.

4.2 Energy Agency of the Republic of Serbia

AERS is an independent legal entity and the sole regulatory body for the electricity sector, established in 2005 pursuant to the first Energy Law adopted in 2004. Under Part IV, Activities of the Energy Agency of the Republic of Serbia of the Energy Law, AERS is responsible for development of the electricity market based on the principles of non-discrimination and efficient competition, through the creation of a stable regulatory framework. In performing its regulatory

functions, the Agency is required to take measures to achieve objectives that are fundamental to the energy sector\(^{29}\):

- Ensuring safe supply to customers through efficient functioning and sustainable development of energy systems, in accordance with the government’s energy policy, including environmental protection and development of RES
- Developing the electricity market and integrating it into regional and Pan-European markets
- Ensuring a stable, transparent and non-discriminatory regulatory framework for energy customers, system users, and investor;
- Stimulating efficient functioning of energy systems
- Ensuring high standards of service in supply and the protection of energy-vulnerable customers.

AERS issues licenses; approves numerous market and technical rules, and supervises their implementation; approves development and investment plans; and decides on methodologies for determining prices, mostly of access and connection to delivery systems, but including that of guaranteed electricity supply. AERS is also responsible for calculating unauthorized electricity consumption.

AERS hears disputes and decides appeals, including against a system operator failing to decide upon a request for connection or denying system access. AERS is required to give its opinion on the implementation plan for advanced metering systems adopted by EPS Distribution.

AERS also has supervisory powers over unbundling, cross-subsidies, and the fulfilment by energy entities of their obligations under the Energy Law. The Agency may impose measures for non-performance, including initiating court proceedings.

### 4.3 JP Elektroprivreda Srbije

A state-owned public company, EPS performs electricity generation, electricity supply, and wholesale electricity supply.

### 4.4 EPS Distribucija d.o.o. Beograd

A daughter company of EPS, EPS Distribution is the DSO and performs the functions associated with owning, operating, and maintaining an electricity distribution network. EPS Distribution is responsible for developing the rules of operation of the distribution system and the distribution code, the approval of which is the responsibility of AERS. AERS also gives consent to the development plans and investment plans of EPS Distribution for the distribution network, as well as plans for replacing measuring devices and all associated connecting lines, installations, and equipment in the facilities of existing customers and/or producers.

\(^{29}\) Energy Law, Article 48.
4.5 JP EPS – Ogranak EPS Snabdevanje

EPS Supply, now a branch of JP EPS, is the main electricity supplier company in Serbia through its role in supplying end customers with the right to guaranteed supply, pursuant to general conditions for electricity supply. EPS Supply is also responsible for contracts for electricity purchase with privileged power producers, under which pays incentives (FiTs) for set incentive periods. Households and small customers can remain under guaranteed supply in accordance with existing contracts, but have the right to contract supply with any licensed electricity supplier in the free market.

4.6 Ministry of Finance

The MoF performs public administration tasks related to Serbian national fiscal and economic matters. It has under its responsibility several state administration units, including the Tax Authority and the Customs Authority. The key areas the MoF is responsible for include the state budget, consolidated balance of public revenues and public expenditures, the tax system and policy and other public revenues, policy on public expenditures, management of public finances, public debt and financial assets of the Serbia, public procurement, macroeconomic and fiscal analysis, quantification of measures of economic policy, foreign currency exchange system and foreign loan relations, the customs system, credit and monetary system, banking system, planning, obtaining and using EU and other foreign development assistance, securities and capital market, and accounting and audit systems.

4.7 Ministry of Construction, Transport, and Infrastructure (MCTI)

The MCTI acts as a responsible body for spatial planning, determining the requirements for technical documentation and construction of facilities; monitoring, controlling, and recording of certificates issued on the energy performance of buildings; and exercising supervisory activities in the field of civil engineering and urban planning.

4.8 Elektromreza Srbije

EMS, a state-owned joint stock company, manages the electricity transmission system and is the licensed Transmission System Operator.

4.9 Commission for Protection of Competition

The Commission for Protection of Competition established under the Law on Protection of Competition30 is the primary agency overseeing and enforcing the protection of competition in Serbia. Competition infringement includes acts or actions of undertakings that have or may have the purpose or effect of a significant restriction, distortion, or prevention of competition. One of the purposes of the Law is the protection of consumers. The Commission cooperates with regional competition agencies and in recent years has played an active role in pursuing infringements of the Law. The Serbian government recently announced that a new law designed to improve the business atmosphere in Serbia and help better protect market competition, as well as final customers, is being drafted. In 2016 the Commission sanctioned EPS Distribution

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for abuse of its dominant position and levied a fine of €2.6 million, for commercially favoring its affiliate EPS Supply against other electricity suppliers and discriminating between different suppliers.

4.10 Other Entities of Interest

Other key players (see Figure 1) in the Serbian electricity market include:

- **SEEPEX a.d. Beograd**, the licensed MO of the organized market/power exchange
- Private electricity producers that have obtained privileged power producer status
- Private electricity suppliers
- Potential financing institutions for net-metering (mostly international financing institutions that provide credit lines to local banks) and sources of financial and credit incentives and programs. An example is KfW Development Bank of Germany, which is presently running a program in Serbia to provide loans for households and SMEs for energy efficiency and RE purposes through commercial banks operating in Serbia using financing of €58 million secured through existing credit lines and is a partner with the European Bank for Reconstruction and Development through its Green Energy Financing Facility, which provides financing for SMEs.
- Other interested parties. An example is the RES Foundation, which facilitates networks among key sector stakeholders to assist participatory policy making.
5. POTENTIAL FOR RENEWABLE ENERGY IN SERBIA AND PRESENT INCENTIVES

5.1 Potential of Renewable Energy Sources in Serbia

5.1.1 SOLAR PV
Solar radiation data in Serbia show values that allow optimism for solar technology, especially in the central and southern part of the country. The average yearly radiation in Serbia amounts to about 1,400 kWh/m², which is higher than that in other countries with well-developed solar markets, such as Germany and Austria (the average for Europe is about 1,000 kWh/m²). The average daily estimated radiation yield for the whole of Serbia amounts to about 3.8 kWh/m².

The scenario for estimating potential demand for solar PV in Serbia is based on the existing technical possibilities of the electricity system to accept this energy. Based on the currently available capacities of the system for the provision of tertiary reserves, Serbia adopted a maximum technically usable capacity of solar power plants of 450 MW, i.e., their technically usable potential is 540 gigawatt-hours (GWh)/per year.31

5.1.2 SMALL HYDRO
The potential for construction of small hydro power plants in Serbia is estimated to be 1,590 GWh/year, in 856 locations, according to the Small Hydro Power Plants Cadastre conducted in 1987. These locations include capacities between 90 kW and 8.5 MW. The potential for the construction of micro hydropower plants (<90kW) has not been estimated thus far in Serbia.

5.1.3 WIND
Wind energy in Serbia can be used in several areas of Serbia, including the area covered by the “Kosava wind,” which blows regularly and predictably from the Carpathian Mountains north-west to Belgrade, south Banat, east Serbia, the east side of Kopaonik, Zlatibor, and Pester and at mountain passes at heights over 800m. The technically usable potential is determined based on the existing technical capabilities of the electricity system to accept wind energy. It is estimated that with the current size of tertiary reserves, it is possible to install 500 MW of wind power plants, with generation of 1,200 GWh /per year.32

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32 Ibid.
5.2 Current Incentives for Generation of Electricity using Renewable Energy Sources

As of now in Serbia, incentive measures for electricity generation using RES are primarily defined by the Energy Law, but apply solely to professional generators (called privileged power producers). As Serbia does not have in place a scheme for small consumers to generate for the purpose of self-consumption, with delivery of any excess electricity to the network, no incentives to encourage net-metering are presently in place.

Incentive measures, in accordance with Article 60 of the Energy Law, include the obligation to purchase electricity from a privileged RES producer (RES producer) at FiTs for set periods of time, and the assumption of balancing responsibility.

*Table 5* below summarizes the FiTs presently in place.

**Table 5. Existing Incentives (FiTs) for Privileged Power Producers**

<table>
<thead>
<tr>
<th>No.</th>
<th>Type of power plant</th>
<th>Installed capacity (MW)</th>
<th>Incentive price (c€ / kWh) 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hydro power plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Up to 0.2</td>
<td></td>
<td>12.60</td>
</tr>
<tr>
<td>1.2</td>
<td>from 0.2 to 0.5</td>
<td></td>
<td>10.60-12.59</td>
</tr>
<tr>
<td>1.3</td>
<td>from 0.5 to 1</td>
<td></td>
<td>10.60</td>
</tr>
<tr>
<td>1.4</td>
<td>from 1 to 10</td>
<td></td>
<td>7.50-10.60</td>
</tr>
<tr>
<td>1.5</td>
<td>from 10 to 30</td>
<td></td>
<td>7.50</td>
</tr>
<tr>
<td>1.6</td>
<td>With the existing infrastructure</td>
<td>Up to 30</td>
<td>6.00</td>
</tr>
<tr>
<td>2</td>
<td>Biomass-fired power plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Up to 1</td>
<td></td>
<td>13.26</td>
</tr>
<tr>
<td>2.2</td>
<td>From 1 to 10</td>
<td></td>
<td>8.22-13.26</td>
</tr>
<tr>
<td>2.3</td>
<td>Over 10</td>
<td></td>
<td>8.22</td>
</tr>
<tr>
<td>3</td>
<td>Biogas-fired power plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>From 0 - 2</td>
<td></td>
<td>16.11-18.32</td>
</tr>
<tr>
<td>3.2</td>
<td>from 2 to 5</td>
<td></td>
<td>15.00-16.11</td>
</tr>
<tr>
<td>3.3</td>
<td>Over 5</td>
<td></td>
<td>15.00</td>
</tr>
<tr>
<td>4</td>
<td>Power plants fired by landfill gas and gas from plants for treatment of public utility waste water</td>
<td></td>
<td>8.44</td>
</tr>
<tr>
<td>5</td>
<td>Wind powered power plants</td>
<td></td>
<td>9.20</td>
</tr>
<tr>
<td>6</td>
<td>Solar power plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1</td>
<td>Roof-mounted</td>
<td>Up to 0.03</td>
<td>12.20-14.52</td>
</tr>
<tr>
<td>6.2</td>
<td>Roof-mounted</td>
<td>From 0.03 to 0.05</td>
<td>12.06-12.20</td>
</tr>
<tr>
<td>6.3</td>
<td>Ground-mounted</td>
<td></td>
<td>9.00</td>
</tr>
<tr>
<td>6.4</td>
<td>from 0.2 to 2</td>
<td></td>
<td>9.00</td>
</tr>
<tr>
<td>6.5</td>
<td>from 2 to 10</td>
<td></td>
<td>9.00</td>
</tr>
<tr>
<td>No.</td>
<td>Type of power plant</td>
<td>Installed capacity (MW)</td>
<td>Incentive price (c€ / kWh) 2016</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------</td>
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<td>--------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Geothermal power plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1</td>
<td>Up to 1</td>
<td></td>
<td>8.20</td>
</tr>
<tr>
<td>7.2</td>
<td>from 1 to 5</td>
<td></td>
<td>8.20</td>
</tr>
<tr>
<td>7.3</td>
<td>Over 5</td>
<td></td>
<td>8.20</td>
</tr>
</tbody>
</table>

Source: Decree on Incentive Measures for Privileged Power Producers

For wind and solar PV technologies there is a cap (Article 10 of the Energy Law) on the total installed capacity that can benefit from the support scheme (FiTs). As a result, because all other technologies are eligible to acquire the status of privileged power producer and benefit from the existing FiTs, it can be concluded that only wind and solar PV technologies should be included in a net-metering scheme.

Since the introduction of the FiTs in 2009, 80.3 MW of plants producing electricity from RES have been constructed:

- 61 small hydropower plants with total installed capacity of around 41.2 MW
- 104 solar power plants with capacity of 8.8 MW
- 2 wind power plants with capacity of 10.4 MW
- 7 biogas power plants with total capacity of around 9.1 MW.

Electricity generation of privileged power producers reached 313 GWh in 2017. From the above it is apparent that, despite a relatively generous (compared to consumer tariffs) FiT scheme, investment has not been particularly high. This may mean that other elements of the legal and regulatory framework in Serbia may make utilization of incentives insurmountable for some investors.

It is also apparent that even with application of the most generous option for net-metering, i.e., if prosumers were reimbursed for excess electricity at the average retail kWh cost, net-metering would provide electricity at lower cost to the system than by utilizing the available FiTs.

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6. OTHER POTENTIAL ISSUES OR IMPEDIMENTS

The matters discussed in this report are the key issues—or impediments—to the introduction of a net-metering scheme in Serbia uncovered by the team during the short timespan under which this study has been conducted. Opportunity for the international consultants to discuss net-metering with representatives of the key entities in Serbia was limited, but the team did uncover issues with the potential to have an impact on the introduction of a net-metering scheme. While these are likely not significant in the sense of posing obstacles, as with any new concept, they will need to be managed or at least considered.

Serbia has been a leader in energy reform in the Balkans, and the drive to implement quite fundamental changes stands the country in good stead for the further introduction of modern thinking and technologies. Generally, the concept itself of net-metering is not well understood, which is understandable given that this is a new concept for Serbia, of which there is little experience. But this means that the many benefits of further utilizing RES through net-metering are also not appreciated.

Although the concept appears complex, it is believed that with a few well-designed amendments to the Energy Law, it will not be difficult to create the legal and regulatory environment necessary to enable introduction of a net-metering scheme. Significant work in this area has now been performed (see Section 7 below), and it would be disappointing if the enabling environment was not enacted.

Areas of potential concern can be summarized as follows:

- EPS Distribution has concerns about the potential impact on the security and operations of its network. This is not surprising, but once the concept of net-metering is understood more as an energy efficiency measure than as a scheme of numerous small generators, fears should be allayed. Further, it must be understood that electricity injected into the distribution network is fed into other consumers’ metering points that are supplied from the same transformer as the prosumer, thus limiting any impact on the network.

- There may exist a level of mistrust of the utilities and owners that might result in consumer unwillingness to participate.

- AERS will have an important role to perform, especially in developing the methodology for pricing excess electricity and ensuring amendments prepared by EPS Distribution to the distribution code adequately support net-metering.

- The present lack of opportunity for independent suppliers means that EPS Supply will likely be the default supplier under any net-metering scheme.

- The complexity, or at least perceived complexity, involved in net-metering for domestic consumers, i.e., households, means that public information campaigns will be necessary. The nature of information provided and its mode of communication to the general public will be critical.
7. POSSIBLE LEGAL AMENDMENTS/CHANGES RECOMMENDED

This section contains the results of our examination of the Energy Law and other laws and regulations, and identifies those articles and sections that, if it is decided to introduce a net-metering scheme, either: (i) create an impediment and so need to be amended; or (ii) are otherwise relevant to net-metering and need to be considered. It should be noted that the matters below (Table 6 and Table 7) have not yet been discussed with the key entities in Serbia. The suggestions in Tables 6 and 7 are preliminary at this stage.

7.1 Energy Law

If the government decides to introduce a net-metering scheme, this can be accomplished by designing appropriate amendments to the Energy Law, rather than passing a specific regulation or other form of secondary legislation. However certain other related amendments—most particularly to the distribution code—would also need to be made and approved by AERS.

Table 6. Law on Energy

<table>
<thead>
<tr>
<th>Article/s</th>
<th>Impediment/Potential impediment or relevance to net-metering</th>
<th>Suggestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 2 contains certain definitions that would include a prosumer, but not the function of generation and delivery to the network/sale to the supplier, e.g. (30) “system user” (31) “final customer” (33) “household category customer” (34) “customer” (37) small electricity customers.</td>
<td>Prosumer functions are not recognized in the Law.</td>
<td>Insert new definition of “prosumer.” For example: ‘Prosumer’ is an electricity consumer that produces part of his/her electricity needs from his/her own power plant and uses the distribution network to inject excess production and to withdraw electricity when self-production is not sufficient to meet his/her own needs.</td>
</tr>
<tr>
<td>Article 2 (45) defines non-standard system operator services as services provided by the operator at the request of a customer or a system user, which are not included in the price of access to the system or in the costs of connection.</td>
<td>Services required by a prosumer should be included in the price of access and costs of connection.</td>
<td>Clarify that services required by a prosumer are not additional to the existing price of access or costs of connection. Appropriate article to be determined.</td>
</tr>
<tr>
<td>Article/s</td>
<td>Impediment/Potential impediment or relevance to net-metering</td>
<td>Suggestion</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------------------------------</td>
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</tr>
<tr>
<td>Articles 16(1) and 17: 16(1) states that generation is an energy-related activity, and 17 states that an energy-related activity can be performed only by a public enterprise, business entity, or other legal entity or entrepreneur having a license to perform the activity, unless otherwise prescribed by the Law.</td>
<td>Because a prosumer generates electricity and domestic prosumers will be individuals, Article 17 would require a prosumer to become a business or other legal entity or entrepreneur, which would be complex and expensive for homeowners (prosumers would have to comply with the laws governing business entities and entrepreneurs, which would be complex, time-consuming and expensive). A prosumer would not need to obtain a license, because of Article 21(1), which exempts generation facilities of up to 1MW.</td>
<td>Prescribe in the Law that prosumers (or final consumers with own generation) do not carry on an energy-related activity, or that prosumers may be individual persons.</td>
</tr>
<tr>
<td>Articles 30 et seq, Energy Permit. The requirement to apply for an energy permit does not apply to generation facilities of less than 1MW. Application is submitted with the application for issuance of a construction permit.</td>
<td>No impediment—household and SME facilities are not required to obtain energy permit.</td>
<td>None, but confirm this would not be made a requirement in relation to prosumers.</td>
</tr>
<tr>
<td>Article 48, AERS Operations. Requires AERS to take measures to achieve, or contribute to the achievement of, a lengthy list of objectives in performing its regulatory operations.</td>
<td>No impediment—but note that the list of objectives is sufficiently broad to ensure AERS has authority to oversee oversight and regulation of net-metering.</td>
<td>None, but confirm with AERS that it has authority over regulations on net-metering.</td>
</tr>
<tr>
<td>Article 50, AERS required to adopt various pricing methodologies.</td>
<td>The list of methodologies does not include the price of excess electricity.</td>
<td>Insert new sub-article covering the methodology for calculating the price of excess electricity.</td>
</tr>
<tr>
<td>Article 53 requires AERS to consent to the electricity distribution code and to the development plan for the electricity distribution system with the investment plan and plan for the takeover of metering devices, metering, and distribution boxes.</td>
<td>No impediment, but AERS will need to give its consent to changes in these areas by EPS Distribution.</td>
<td>Amendments will have to be made to the distribution code by EPS Distribution, and possibly to the plan for metering devices.</td>
</tr>
<tr>
<td>Article 55 requires AERS to give its opinion on the implementation plan of economically justifiable forms of advanced metering systems adopted by the DSO.</td>
<td>No impediment, but if the implementation plan is to change, AERS' consent will be required.</td>
<td>Implementation plan to be reviewed.</td>
</tr>
<tr>
<td>Article/s</td>
<td>Impediment/Potential impediment or relevance to net-metering</td>
<td>Suggestion</td>
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<tr>
<td>Article 65, National objectives and the plan for use of RES, sub-article (9) requires the National Action Plan (NAP) to include measures ensuring the development of appropriate programs for informing citizens and businesses of the incentive measures, benefits and practical aspects of the development and use of energy from RES. The NAP is to be harmonized with regulations governing reduction of greenhouse gas emissions and economic development and energy policy.</td>
<td>No impediment, but the NAP may by this section of the Energy Law be required to be amended and harmonized if a net-metering scheme is introduced.</td>
<td>NAP to be reviewed if it is decided to introduce a net-metering scheme.</td>
</tr>
<tr>
<td>Article 66 requires the MoME to monitor NAP implementation and submit a report on its implementation to the Government every other year.</td>
<td>No impediment.</td>
<td>Note that the MoME will need to monitor implementation of the scheme if net-metering system is introduced.</td>
</tr>
<tr>
<td>Article 69 obliges the MoME to (i) ensure that the information on RES incentive measures is available to all concerned parties and (ii) in cooperation with other state bodies and with the participation of the Autonomous Province and local self-government units, prepare information, programs, training, and instructions to inform citizens about the advantages and practical aspects of the development of RES.</td>
<td>No impediment.</td>
<td>Note that this article can be used to promote self-generation and net-metering.</td>
</tr>
<tr>
<td>Article 70, Status of a privileged electricity producer and status of an electricity producer from RES, provides that an energy entity may acquire the status of a privileged electricity producer if it fulfills regulated conditions.</td>
<td>No impediment.</td>
<td>A prosumer would not be an energy entity.</td>
</tr>
<tr>
<td>Article 135, Responsibilities and duties of the electricity distribution system operator.</td>
<td>The responsibilities of the DSO do not explicitly include net-metering (accepting prosumption and reconciling quantities taken and delivered) but are broad enough to cover this.</td>
<td>Consideration should be given to including a specific function of the DSO covering net-metering.</td>
</tr>
<tr>
<td>Article 136 contains a lengthy list of duties the electricity DSO must perform.</td>
<td>The duties cover performance of responsibilities that relate to</td>
<td>Consider adding prosumers in various sub-articles that are relevant to prosumers and the connection, verification of</td>
</tr>
<tr>
<td>Article/s</td>
<td>Impediment/Potential impediment or relevance to net-metering</td>
<td>Suggestion</td>
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</tr>
<tr>
<td>For prosumers sub-articles (15), (27), (28), (29), (36) and (37) of paragraph 1 of this article are particularly important.</td>
<td>prosumers, but do not specifically mention prosumers.</td>
<td>compliance, acceptance of electricity, etc. of prosumers’ RE facilities. These may be dealt with in a separate new article that describes the specific duties of the DSO in respect of prosumers and their facilities.</td>
</tr>
<tr>
<td>Article 138, Advanced metering systems, obliges the DSO to determine technical requirements for the introduction of forms of advanced metering systems and analyze the technical and economic justifiability of introducing advanced metering systems, the effects on market development, and benefits for individual categories of end electricity customers. Based on this analysis the DSO must prepare an implementation plan. The system development plan must include the introduction of metering systems in accordance with the implementation plan and must cover at least 80% of the points of takeover in the category of end electricity customers.</td>
<td>This raises the question whether the existing system development plan and implementation plan sufficiently take into account the needs of prosumers, should a net-metering scheme be introduced.</td>
<td>Consider reviewing and revising the existing system development plan and implementation plan.</td>
</tr>
<tr>
<td>Article 139 defines the content of the rules on electricity distribution system operation. Points (3), (5), (15), (17), (18), and (19) especially need to be amended to cover prosumers.</td>
<td>Content of the rules of the DSO should include prosumers.</td>
<td>Note also that the DSO’s duties regarding the distribution code must include amending the code to provide a transparent, simple procedure for connection of prosumers.</td>
</tr>
<tr>
<td>Article 140, Connection to the distribution system, and covers building permits issued by the MCTI.</td>
<td>Provisions of this article do not recognize prosumers.</td>
<td>Amend to ensure article covers the connection of prosumers to the network. Also review the regulation on conditions of electricity delivery and supply to ensure these cover prosumers. Also, if it is decided that a building permit does not need to be issued by the MCTI, amend to provide for the DSO to approve.</td>
</tr>
<tr>
<td>Articles 141 to 145, Connection of a power producer.</td>
<td>No impediment but these should be applicable to a prosumer.</td>
<td>Ensure the provisions on consumer connection apply to prosumers.</td>
</tr>
<tr>
<td>Articles 159 to 162, System access.</td>
<td>Ensure that the rules on system access applied to prosumers are those applicable to consumers rather than to producers.</td>
<td>Sections to be reviewed.</td>
</tr>
</tbody>
</table>
### 7.2 Other Legislation

Again, these are our preliminary recommendations.

#### Table 7. Other Legislation

<table>
<thead>
<tr>
<th>Law and Article/s</th>
<th>Impediment/Potential impediment or relevance to net-metering</th>
<th>Suggestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law on Planning and Construction, articles 144 and 145 contain lengthy compliance procedures that apply to small generation facilities.</td>
<td>If a prosumer was required to follow these procedures it would (i) add time, complexity and cost that is disproportionate to the activity and (ii) is not necessary.</td>
<td>Ensure that articles 144 and 145 do not apply to prosumers. Prosumers should instead be required (i) to pass inspection by the DSO and relevant authorities responsible for housing/fire standards and (ii) to provide a copy of the inspection certificate to the Ministry of Construction in order to meet the requirements of the Law on Planning and Construction. The suggested provisions could be contained in the Network Code, but the Law on Planning and Construction would probably also need to be amended. Certification, which is required under the EU Renewable Energy Directive would also be required. The team suggests Serbia implement whatever meets EU requirements.</td>
</tr>
<tr>
<td>Law and Article/s</td>
<td>Impediment/Potential impediment or relevance to net-metering</td>
<td>Suggestion</td>
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</tr>
<tr>
<td>Law on Environmental Protection</td>
<td>The activity of electricity generation has certain legal requirements placed upon it, such as the conduct of an environmental impact assessment. Because the prosumer activity technically falls within generation these legal requirements would apply, yet they do not need to. Further, compliance would add complexity and cost and likely cause potential prosumers to decide not to proceed.</td>
<td>Ensure that prosumers are not subject to the Law on Environmental Protection. The Law might should be examined fully to determine whether any parts of it do need to apply to prosumers.</td>
</tr>
<tr>
<td>Law on Energy Efficiency</td>
<td>Article 50 puts an obligation on network operators to install the meters enabling metering of the electricity pushed into the network by prosumers.</td>
<td>It is not necessary to amend. Note that this obligation is important in terms of securing bi-directional metering by the DSOs.</td>
</tr>
<tr>
<td>Regulation on Conditions of Delivery and Supply of Electricity</td>
<td>This Regulation potentially creates obligations on prosumers as both producers and customers, some of which (especially those relating to producers) should not apply to prosumers.</td>
<td>Amend to cover prosumers. Some of the articles should be amended, especially regarding connection to the system, method of measurement of delivered electricity, manner of performing the obligations of the supplier and the public supplier, the accounting period, the content of billing for delivered electricity and the content of the contract for the sale of electricity.</td>
</tr>
<tr>
<td>Decision on Determining the Methodology for Determining the Price of Access to the Electricity Distribution System</td>
<td>The Methodology has potential to, but should not, apply to prosumers as producers accessing the network.</td>
<td>The methodology needs to be reviewed.</td>
</tr>
<tr>
<td>The Decision on Determining the Methodology for Determining the Costs of Connection to the System for Transmission and Distribution of Electricity</td>
<td>The Methodology has potential to, but should not, apply to prosumers’ facilities.</td>
<td>The methodology needs to be reviewed.</td>
</tr>
<tr>
<td>Law and Article/s</td>
<td>Impediment/Potential impediment or relevance to net-metering</td>
<td>Suggestion</td>
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</tr>
<tr>
<td>Rules of the Operation of the Distribution System issued by EPS Distribution regulate: (i) planning for network development; (ii) conditions for safe and reliable operation and obligations of users; (iii) integration of electricity generation capacities and optimum use of those using RES; (iv) management of consumption; (v) technical conditions for connection; (vi) conditions for reliable and safe receipt and delivery of electricity from connected generators; (vii) content of the contract of exploitation of the facility; (viii) use and maintenance of network facilities and objects connected; (ix) measurement procedures and criteria for selecting the accuracy class of measuring devices; etc.</td>
<td>The Rules do not recognize the connection to the network and metering of prosumers.</td>
<td>The Rules need to be fully reviewed to ensure they adequately cover aspects related to prosumers and prosumption.</td>
</tr>
<tr>
<td>Decree on the Establishment of the List of Projects for which the Impact Assessment is Mandatory and the List of Projects for which an Environmental Impact Assessment can be required.</td>
<td>Potentially applies to facilities installed by prosumers.</td>
<td>Make an exemption for solar photovoltaic facilities used by prosumers.</td>
</tr>
<tr>
<td>The VAT Law introduces a value added tax (VAT) in Serbia. VAT is a general consumption tax that is calculated and paid for the delivery of goods and provision of services, at all stages of production and trade of goods and services, unless otherwise provided. The Law defines a taxpayer as a person who independently carries out the sale of goods and services within the scope of performing a commercial activity.</td>
<td>This Law implies that a prosumer would be performing a commercial activity (energy activity – generation of electricity) if it expects to receive money for excess electricity.</td>
<td>Clarify that the VAT Law does apply to prosumers. If so, consider amended the Law so that excess electricity is not subject to VAT.</td>
</tr>
<tr>
<td>Rules on the Determination of Cases in which there is no liability for Issuing Accounts and on Accounts which can be Expected Dedicated Data regulate cases in which there are no obligations to issue bills and simplify certain receipts.</td>
<td>The Rules potentially apply to prosumers, which would add unnecessary complexity to the activity.</td>
<td>Consider amending.</td>
</tr>
<tr>
<td>Excise Law regulates excise taxation in relation to certain products such as electricity for final consumption. The excise duty obligation arises when electricity for final consumption is produced in Serbia.</td>
<td>The Law potentially applies to electricity produced by a prosumer. There are exemptions – electricity used for providing system services, balancing the system, ensuring safe operation of the network and for losses – none of which apply to prosumers.</td>
<td>Consider amending.</td>
</tr>
</tbody>
</table>
ANNEX 1. RELEVANT LEGISLATION

This annex lists all primary laws, secondary legislation, and policy documents that have some bearing on Serbia’s energy sector, in order of superiority.

1. Ratified international legislation
   a. Law on Ratification of the Treaty establishing the Energy Community between the European Community and the Republic of Albania, the Republic of Bulgaria, Bosnia and Herzegovina, the Republic of Croatia, the Former Yugoslav Republic of Macedonia, the Republic of Montenegro, Romania, the Republic of Serbia and the United Nations Mission in Kosovo pursuant to Resolution 1244 The United Nations Security Council ("Official Gazette of RS" No. 62/06)
   b. Law on the Confirmation of the Stabilization and Association Agreement between the European Communities and their Member States, on the one hand, and the Republic of Serbia, on the other hand ("Official Gazette of RS – International Agreements" No. 83/08)

2. Strategic documents related to renewable energy
   b. Regulation on the Establishment of the Program for the Implementation of the Energy Development Strategy of the Republic of Serbia until 2015 for the period from 2007 to 2012 ("Official Gazette of the Republic of Serbia" No. 17/07, 73/07, 99/09 and 27/10)—the process of adoption of a new Regulation is in progress
   d. Government Conclusion on the Adoption of the National Action Plan for the Use of Renewable Energy Sources of the Republic of Serbia ("Official Gazette of the Republic of Serbia" No. 53/13)

3. Energy Legislation
   a. Energy Law ("Official Gazette of RS" No. 145/14)
   b. Law on Efficient Use of Energy ("Official Gazette of RS" No. 25/13)
   c. Regulation on Conditions of Delivery and Supply of Electricity ("Official Gazette of RS" No. 25/13)
   d. Rulebook on the License for Performing Energy Activities and Certification ("Official Gazette of RS" No. 87/15)
   e. Rulebook on the Energy Permits ("Official Gazette of RS" No. 87/15)

4. Energy legislation regarding promotion of use of renewable energy sources
a. Regulation on Minimum Requirements for Energy Efficiency which Must Specify New and Revitalized Plants ("Official Gazette of RS" No. 112/17)

5. AERS legal documents

a. Decision on determining the methodology for determining the price of access to the electricity distribution system ("Official Gazette of RS" Nos. 105/12, 84/13, 87/13, 143/14, 65/15, 109/15, 98/16)

b. Decision on determining the methodology for determining the price of electricity for guaranteed supply ("Official Gazette of RS" Nos. 105/12, 84/13, 87/13, 143/14, 65/15, 109/15, 98/16)

c. Decision on determining the methodology for determining the costs of connection to the system for transmission and distribution of electricity ("Official Gazette of RS" No. 109/15)


b. Plan for the takeover of measuring devices measuring cubicles, i.e. connecting lines, installations, and equipment in the measuring cubicle and other devices in the facilities of existing customers, i.e., producers, issued by “EPS Distribucija” d.o.o. (ODS), 2017, https://www.aers.rs/Index.asp?l=1&a=94

7. Construction and planning legislation

a. Law on Planning and Construction ("Official Gazette of RS" Nos. 72/2009, 81/2009, 24/2011, 121/2012, 132/14, and 145/14) and related secondary legislation for enforcement of this Law, such as:
   i. Regulation on Location Conditions ("Official Gazette of RS" Nos. 35/15 and 114/15)
   iii. Rulebook on the Content and Method of Carrying Out a Technical Inspection of the Building, the Composition of the Commission, the Content of the Proposal of the Commission on Determining the Similarity of the Facility for Use, Observing the Soil and the Building During Construction and Use and the Minimum Guarantee Periods for Certain Types of Facilities ("Official Gazette of RS" Nos. 27 / 15 and 29/16)
   iv. Rulebook on the Content and Manner of Keeping the Inspection Book, Construction Logbook and Construction Book ("Official Gazette of RS" No. 22/15)
   v. Rulebook on Classification of Buildings ("Official Gazette of RS" No. 22/15)

8. VAT legislation

b. The Rulebook on the Determination of Cases in Which There Are No Obligations for Issuing Receipts and on Receipts in Which Some Data May Be Omitted ("Official Gazette of RS", Nos. 123/12 and 86/15)

9. Environmental legislation

a. Law on Environmental Protection ("Official Gazette of RS" Nos. 135/04, 36/09, and 14/16)

b. Law on Environmental Impact Assessment ("Official Gazette of RS" Nos. 135/04 and 36/09)

c. Law on Nature Protection ("Official Gazette of RS" No. 36/09, 88/10, 91/10, and 14/16)


e. Regulation on Protection Regimes ("Official Gazette of RS" No. 31/2012)

10. Various Energy Community legal documents
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