Regulatory framework on Prosumers in Contracting Parties

Petrit Haziri,
Kosovo Energy Regulatory Office
The main purpose of the study was to assess legislative and regulatory framework related to small scale solar PV systems installed for generation of electricity (self consumption) also known as prosumers, mainly for households and small commercial customers.
Overview of the process

• Preparing a questionnaire in the working group
• Filling in the questionnaire by NRA’s and sending it to the task force leader;
• Preparing draft report by task force leader;
• Commenting draft report in the working group;
• Adoption of the final version of the report by the working group;
• ECRB approves the report.
• Definition on Prosumers /Self consumption Generators
• Procedures that deals with prosumers
• Criteria for prosumer classification and Capacity limitation of generators
• Application procedure for prosumer status
• Support schemes in Contracting Parties
• Voltage Level of connection
• Information's on the benefit of changing status from regular consumer to producer
Legal definition

• Most of the CP have the definition established in primary and secondary legislation for **Self Consumption Generator** and for **prosumer**.

• **Self Consumption Generator** - Final customer that generates electricity from renewable energy sources and shall have a right to exchange electricity that it delivers to the system and takes from the distribution system.

• **Prosumer** - are generally defined as electricity consumers that produce part of their electricity needs from their own power plant and use the distribution network to inject excess production and to withdraw electricity when self-production is not sufficient to meet own needs.

• In some of the CP introduces the definition of **Autonomous Generators** instead of prosumers or self- consumption generators.

• None of the CP has separate procedure that deals exclusively with prosumers- incorporated in other procedures. For example, by Rules of Electricity (Capacity) Supply and Consumption in Georgia and the Rule on Support Scheme for Renewable Energy Sources Generators and Rule on Authorization Procedure for Construction of new Generation Capacities from Renewable Energy Sources in Kosovo.
Criteria for prosumer classification and Capacity limitation of generators

• Several Contracting Parties (CP) define residential and small commercial prosumers in relation to the size or the power capacity of the installation, even though capacity ranges vary.

• Lower and Upper limit of capacity for RES generating facility allowed for household and small commercial consumer-Prosumers

<table>
<thead>
<tr>
<th>STATES</th>
<th>ALB</th>
<th>ARM</th>
<th>BIH</th>
<th>GEO</th>
<th>KOS</th>
<th>MNE</th>
<th>MKD</th>
<th>UKR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper limit</td>
<td>500</td>
<td>150</td>
<td>50</td>
<td>100/500</td>
<td>100</td>
<td>50/DSO Capacity</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Households</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>Small commercial</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>DSO Capacity</td>
<td>20</td>
<td>Not defined</td>
</tr>
</tbody>
</table>
Application for Prosumer status

• In all CP and observer countries except Kosovo and BIH customers have to apply in DSO;

• No licensing requirements;

• Connection agreement - DSO and customer;

• Supply agreement - Supplier and customer;
Support schemes in Contracting Parties

**Net metering**

**Net billing**

**Net-metering** is a simple arrangement that ensures consumers that who install a generator (usually photovoltaic (PV) systems) receive a one-for-one credit for any electricity their systems generate and export to the grid within a billing period. In this case, production and consumption are compensated over a longer period (up to one year). Under Net-metering, all kWh of the generator are equally valorized.

**Net-billing** is an arrangement by which the consumer receives one-for-one monetary credits for every kWh of exported to the grid. Every kWh is valorized either at a single price or at a price which corresponds to the time of production. Credits are awarded over a determined time-frame, typically one year. It is equivalent to a net-metering scheme, but with monetary compensation instead of energy compensation.
Net-Metering

Suppliers off-take all electricity produced and deliver all electricity consumed by Prosumers within a Billing Period;

Suppliers account for the Prosumer Balance of the Billing Period, based on which the monthly invoice is prepared;

If the Prosumer Balance is positive then the Prosumer is credited in energy (kWh) in the next Billing Period;

Any outstanding positive Balance on the last Billing Period of a Calendar Year is reset to zero (0 kWh) without compensation from the Supplier;

If the Prosumer Balance is negative, then the Supplier invoices the Prosumer for the value of the Prosumer Balance
Net-Billing

**Georgia** - Both support schemes are combined: for cases where the prosumer balance is positive at the end of the year, the price for settlement is the average weighted price of purchased electricity as foreseen in the tariff of the relevant distribution licensee, set by GNERC.

**Montenegro** - When the quantity of generated electricity is higher than overtaken, the supplier shall determine, bill and pay the difference in quantity of electricity to the customer at a price equal to the price of electricity delivered to that customer - producer in the accounting period, excluding payment of network services and charges.

**Ukraine** - Customers with RES generating facilities get paid for net electricity they injected into the network with feed in tariffs.
## Voltage Level of connection

<table>
<thead>
<tr>
<th>STATES</th>
<th>ALB</th>
<th>ARM</th>
<th>BIH</th>
<th>GEO</th>
<th>KOS</th>
<th>MD</th>
<th>MNE</th>
<th>MKD</th>
<th>SRB</th>
<th>UKR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low voltage</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Medium voltage</td>
<td>X + High voltage</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Number of Self-consumption Generators in operation

![Number of Self-consumption Generators in operation chart](chart.png)

- **ARM**: 779
- **BIH**: 4
- **GEO**: 5
- **GR**: 28,671,524
- **KS**: 3,107,110
- **MON**: 3,010
- **UKR**: 29,914
- **MLD**: 56
Total installed capacity in kW

<table>
<thead>
<tr>
<th>Country</th>
<th>ARM</th>
<th>GEO</th>
<th>GR</th>
<th>KS</th>
<th>UKR</th>
<th>MLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installed capacity at LV</td>
<td>9000</td>
<td>6806.12</td>
<td>14340</td>
<td>5260</td>
<td>1491400</td>
<td>362.2</td>
</tr>
<tr>
<td>Installed capacity at MV</td>
<td>6806.12</td>
<td>14340</td>
<td>5260</td>
<td>1802.73</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- Installed capacity at LV
- Installed capacity at MV
Information's on the benefit of changing status from regular consumer to producer

• Most NRA have all information's available on their web site and are *publicly accessible*

• *There was no campaign on informing customers for the possibility of switching from regular consumers to producer consumers*
Recommendations

• All CPs establish comprehensive and harmonized legislation to promote self-consumption and provide a definition of residential and commercial prosumers.

• Taking into the consideration the recommendations set by the Policy Guideline issued by Energy Community Secretariat on grid connection of prosumers and Directive 2018/2001 on the promotion of the use of energy from renewable sources Contracting Parties should gradually harmonize the legal framework and introduce net billing as financial incentive for prosumers and gradually also remove capacity cap for prosumers.

• Information on different financial advantages and the possibility of transitioning from a regular customer to an active prosumer should continuously be publically available, understandable and simple as possible for all customers.
Thank you for your attention