RE Development in Kyrgyzstan: Lessons Learned

C5+1 REGIONAL LEGAL REGULATORY WORKSHOP

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Renewable Energy Policy in the Kyrgyz Republic

To establish a framework for development of renewable energy (RE) the Kyrgyz Republic adopted Law on Renewable Energy \(^1\) in 2008.

Even though the legal definition of renewables includes various sources of renewable energy, government policies in the area of renewable energy have been focusing primarily on development of small hydropower plants (SHPPs).

In September 2017, the Kyrgyz Government adopted a national program “Forty Steps to a New Epoch” that calls for construction of 11 SHPPs with total capacity of 161 MW by 2021 and increasing the share of renewable energy up to 10% in the total electricity generation in Kyrgyzstan.

\(^1\) Adopted on December 31, 2008 (last amended on October 10, 2012)
SHPPs in Operation

The State Agency for Regulation of the Energy Sector (the Energy Regulator) issues licenses for sale of electricity and all SHPPs (regardless of their size) willing to sell their output must obtain a sale license. The table below summarizes data available at the Energy Regulator.

<table>
<thead>
<tr>
<th>Name of the SHPP</th>
<th>Capacity (MW)</th>
<th>Buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSC Chakan GES, including Lebedinovkaya SHPP</td>
<td>38.5</td>
<td>JSC Severelectro</td>
</tr>
<tr>
<td>Alamedin SHPP -1</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Alamedin SHPP -2</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Alamedin SHPP -3</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Alamedin SHPP -4</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Alamedin SHPP -5</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>Alamedin SHPP -6</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>Small Alamedin HPP</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Bystrovskaya SHPP</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>Kalininskaya SHPP</td>
<td>1.4</td>
<td>JSC Severelectro</td>
</tr>
<tr>
<td>Issyk-Atinskaya SHPP</td>
<td>1.4</td>
<td>Own needs</td>
</tr>
<tr>
<td>Naiman SHPP</td>
<td>0.6</td>
<td>JSC Oshelectro</td>
</tr>
<tr>
<td>Ak-Suyu SHPP</td>
<td>0.5</td>
<td>Own needs</td>
</tr>
<tr>
<td>Kyrgyz-Ata SHPP</td>
<td>0.2</td>
<td>JSC Oshelectro</td>
</tr>
<tr>
<td>Tegermentinskie GES</td>
<td>3.0</td>
<td>JSC Severelectro</td>
</tr>
</tbody>
</table>

Source: Data of the State Agency for Regulation of the Energy Sector, 2017
Micro hydropower plants that do not sell their output are not registered by the Energy Regulator due to their small size and isolated mode of operation.
Law on Renewable Energy

The Law on Renewable Energy\textsuperscript{2} establishes an incentive framework for the development of renewable energy, including SHPPs. However, most provisions listed below are not yet implemented in practice:

I. Incentives for design, construction and operation of installations using renewable energy sources, such as:
   a. exemption from customs duties on import and export of equipment, installations and spare parts;
   b. relief from licensing of generation;
   c. guaranteed project payback period (no more than eight year);
   d. right to sell the output to consumers under commercial agreements or use the generated electricity for own needs;
   e. guaranteed purchase of the RE output by the largest distribution company in the region where the RE installation is located – if this output has not been consumed by the RE owner or supplied under commercial agreement;
   f. during the project payback period, a preferential feed-in tariff;

\textsuperscript{2} Adopted on December 31, 2008 (last amended on July 25, 2016)
g. after the project payback period, the tariff shall be set by the Kyrgyz Government for each SHPP individually based on a calculation of justified generation costs plus fair profit;

h. tariffs shall be subject to indexation on an annual basis. The law does not specify the characteristics of indexation.

2. **Least cost connection point** for the RE installation to the grid.

3. Obligation on the RE owner to bear all costs related to construction of transmission lines to the grid interconnection point.

4. **Guaranteed nondiscriminatory access** of RE output to the grid and obligation on the national transmission and distribution companies to ensure unobstructed transit of RE power to consumers.

5. **Compensation of additional cost** of the distribution companies for purchase of RE output by including this cost into the distribution company’s tariff.
Feed-in Tariffs

Pursuant to the Law on Renewable Energy, the Energy Regulator developed and approved for RE Tariff Methodology (the feed-in tariff).

The feed-in tariff for SHPPs is determined by a formula established in an order by the Energy Regulator. The order “On approval of the Methodology of calculation of tariffs for electricity supplied by renewable energy sources” (August 6, 2015 NC № 1) establishes preferential tariffs for different RE technologies, including SHPPs. It has been revised by the regulator in 2016 (Order № 3 on April 11, 2016), resulting in higher feed-in tariffs for SHPPs. The methodology calculates tariffs for newly commissioned facilities that generate electricity from renewable sources. The formula for determining the tariffs is linked to end-user tariffs as follows:

\[ T = T_1 k_0 \]

where:

- \( T \) is the calculated tariff, in som/kWh (equal to 4.70 Som/kWh for 2017);
- \( T_1 \) is the maximum end-user tariff currently in effect (2.24 som/kWh);
- \( k_0 \) is a coefficient that differs depending on the renewable source being used to generate energy; for hydropower, the coefficient is equal to 2.1.

3 Order was issued on August 6, 2015
4 For hydropower, the coefficient is 2.1; for biomass, 2.75; for wind, 2.5; for solar, 6.0; and for geothermal, 3.35.
Grid Access

In 2009 the Kyrgyz Government made an important step to clarify the administrative and regulatory procedures by approving Regulations on Procedure for Construction, Acceptance and Connection of Small Hydro Power Plants to Electric Networks (the Regulations).

Provided there is full compliance with the project documentation as specified in the Regulations, the grid owner shall physically connect the SHP to the grid within 3 days from the application date.

The Law on Renewable Energy obligates the RE developer to bear all costs related to construction of transmission lines to the grid interconnection point and currently the RE developer covers only operating cost of the grid owner associated with the grid connection.

5 Regulation on Procedure for Construction, Acceptance and Connection of Small Hydro Power Plants to Electric Networks approved by Resolution No. 478 of the Government of the Kyrgyz Republic dated July 28, 2009
Existing barriers:

- Underdeveloped inconsistent legal and regulatory framework and prevalent legal collisions and omissions.
- Unclear and complicated land allocation regulations
- Problematic enforceability of commercial contracts
- No standard/model grid connection agreement
- No standard/model power purchase agreement
- Insufficient grid connection regulations
- No clear and enforceable regulatory mechanism to compensate additional costs incurred by a distribution company to purchase of RE output.
- Insufficient local technical capacity to design and implement RE projects
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