Renewable Energy Insights on Uzbekistan
Central Asia has great potential in renewable energy sources (hereinafter the “RES”) sector. According to the global environmental mission, Central Asian countries, including Uzbekistan, are rapidly developing the sector. Therefore, as part of RES development in Uzbekistan, the country is also developing legislation, RES project implementation processes and infrastructure. In the process, however, Uzbekistan faces certain challenges that may affect the future of RES sector in the country.

Potential investors are increasingly interested in RES projects in Uzbekistan. At the same time, they want to be informed about current projects, the problems investors face, and the regulation of RES sector in the country.

In this regard, Unicase below presents the most essential legislative amendments concerning RES sector, a list of the largest RES projects as well as force majeure in RES sector in Uzbekistan.

1. General overview

Uzbekistan pays special attention to the environmental situation in the country. Uzbekistan takes concrete measures for the transition to a green economy in the near future, including the development of RES.¹

Thus, since 2017, Uzbekistan has accelerated relevant policy reforms and approved key acts for the transition to a green economy:²

1) In accordance with the Order of the President of Uzbekistan No. UP-5646 dated 1 February 2019, the Ministry of Energy was established.

2) The Law on the Use of Renewable Energy Sources (hereinafter the “RES Law”) and the Law on Public-Private Partnership (hereinafter the “PPP Law”) were adopted.

   The above laws provide the legal and regulatory framework to accelerate the implementation of RES projects in Uzbekistan.

3) The Concept of Fuel and Energy Supply of the Country for 2020-2030 was adopted.³

   This Concept describes that during the period 2020-2030 special attention will be given to the development of RES based generation (solar energy is a priority).

   The Concept was developed by the Ministry of Energy with technical assistance from the World Bank and the Asian Bank.

4) The Master plan for the long-term development of the electricity sector in Uzbekistan was adopted.⁴

   This Plan describes the development of the electricity sector, including RES.

   The Plan was developed by international consultant Mott MacDonald.

5) The Strategy for the Transition to a Green Economy 2019-2030 (hereinafter the “Strategy 2019-2030”) was adopted.⁵

² Ibid
⁵ Ibid
According to the Decree of the President of Uzbekistan No. PP-4477 dated 4 October 2019, the Strategy 2019-2030 was approved. The Strategy 2019-2030 is one of the main key acts for the development of RES in Uzbekistan.\(^6\)

The Strategy 2019-2030, \textit{inter alia}, provides the development of the use of RES. In particular, the strategy provides bringing the share of RES to more than 25\% of total electricity generation in Uzbekistan.\(^7\)

The Strategy 2019-2030 provides two main measures to achieve the goals in RES sector:\(^8\)

- Transparent methods for selecting potential investors;
- Localisation of production of renewable energy equipment.

In order to implement the planned activities, the following are attracted:\(^9\)

- Foreign investments;
- Loans and grants from international financial institutions;
- Loans and grants from foreign governmental financial organisations;
- Loans and grants from other foreign grantors.

2. Investment projects

Today, since the establishment of the Ministry of Energy and the adoption of the above-mentioned acts, approximately 18 investment agreements have been signed.

The table below shows current projects for the construction and operation of power plants in Uzbekistan.\(^10\)

<table>
<thead>
<tr>
<th>No</th>
<th>Renewable type, project name</th>
<th>Winner company, Supporting IFI</th>
<th>Capacity (MW), Energy charge (US cents/kWh)</th>
<th>Region or city</th>
<th>PPA date</th>
<th>Launch date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Solar</td>
<td>Total Eren (France)</td>
<td>100</td>
<td>Samarkand</td>
<td>September 2019</td>
<td>December 2021</td>
</tr>
<tr>
<td>2</td>
<td>Solar, Uzbek Solar 1</td>
<td>Masdar (UAE), IFC and WBG</td>
<td>100, 2,679</td>
<td>Navoi</td>
<td>November 2019</td>
<td>August 2021</td>
</tr>
<tr>
<td>3</td>
<td>CHPP</td>
<td>ACWA Power</td>
<td>1,500</td>
<td>Syrdarya</td>
<td>March 2020</td>
<td>4th quarter of 2023</td>
</tr>
</tbody>
</table>


\(^7\) Ibid

\(^8\) Ibid

\(^9\) Ibid

<table>
<thead>
<tr>
<th>No.</th>
<th>Renewable type, project name</th>
<th>Capacity (MW)</th>
<th>Region or city</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CHPP</td>
<td>1,500</td>
<td>Syrdarya</td>
</tr>
<tr>
<td>2</td>
<td>Solar, Uzbek Solar 3</td>
<td>500</td>
<td>Bukhara (250 MW)</td>
</tr>
<tr>
<td>3</td>
<td>Solar</td>
<td>400</td>
<td>Kashkadarya</td>
</tr>
<tr>
<td>4</td>
<td>Wind</td>
<td>200</td>
<td>Karakalpakstan</td>
</tr>
</tbody>
</table>

The total capacity of the above-listed projects will be approximately 7,331 MW. Also, the following projects are in the tendering phase:\footnote{Ibid}

\[
\begin{array}{|c|c|c|}
\hline
\text{No.} & \text{Renewable type, project name} & \text{Capacity (MW)} & \text{Region or city} \\
\hline
4 & CHPP & Aksa Enerji (Turkey) & 240 & Tashkent & May 2020 & 4\textsuperscript{th} quarter of 2021 \\
5 & Wind & Masdar (UAE) & 500 & Navoi & June 2020 & 4\textsuperscript{th} quarter of 2025 \\
6 & CHPP & Cengiz Energy (Turkey) & 240 & Tashkent & September 2020 & 1\textsuperscript{st} quarter of 2022 \\
7 & Wind & ACWA Power (Saudi Arabia) & 1,000 & Bukhara & January 2021 & December 2023 \\
8 & CHPP & Aksa Enerji (Turkey) & 230 & Tashkent & January 2021 & December 2021 \\
9 & CHPP & Aksa Enerji (Turkey) & 270 & Bukhara & January 2021 & December 2021 \\
10 & CHPP & Odas Enerji (Turkey) & 174 & Bukhara & February 2021 & December 2021 \\
11 & Solar & Phanes Group (UAE) & 200 & Navoi & April 2021 & July 2023 \\
12 & CHPP & Stone City Energy (Netherlands) & 1,560 & Surkhandarya & April 2021 & December 2024 \\
13 & 2 Solar plants, Uzbek Solar 2 & Masdar (UAE), IFC and WBG & 220 & Samarkand & July 2021 & May 2023 \\
14 & Solar, Sherabad & Masdar (UAE), ADB & 457 & Surkhandarya & August 2021 & July 2023 \\
15 & CHPP & Cengiz Energy (Turkey) & 220 & Syrdarya & June 2021 & September 2022 \\
16 & Wind, Wind Power & ACWA Power, EBRD & 100 & Karauzyak (Karakalpakstan) & – & 2024 \\
\hline
\end{array}
\]
3. Stimulating the renewable energy sector

In order to stimulate the development of the renewable energy sector, Uzbek legislation provides the following support for renewable energy players:

1) Government support:\(^{12}\)
   - Tax, customs and other benefits and preferences.
   - Support for the creation and implementation of innovative technologies.
   - Provision of guaranteed connection to the unified electric power system of installations.
   - Provision of the right to conclude a power purchase agreement.

2) Benefits and preferences:\(^{13}\)
   - Energy producers are exempt from paying property tax and land tax for 10 years from the date of commissioning of renewable energy installations.
   - Individuals who make full use of RES in their living quarters are exempt from paying property tax and land tax for 3 years starting from the month of use of RES.
   - Producers of renewable energy installations are exempt from all taxes (income tax, property tax, VAT, land tax, excise tax, water use tax, taxes and special payments for subsoil users) for 5 years from the date of their government registration.

In each individual case, the government may establish additional guarantees, benefits and preferences for investors.

\(^{12}\) Article 13 of the Law of the Republic of Uzbekistan No. 539 dated 21 May 2019 on the Use of Renewable Energy Sources (hereinafter the “RES Law”)

\(^{13}\) Article 14 of the RES Law
4. **Investor selection procedure**

Uzbekistan legislation provides 2 options for investor selection:

1) Connection to the unified power system on a block-station basis;

2) Competitive basis (Auction).

Within the framework of the RES law, the Regulation of the auction in the field of energy projects was adopted. According to the current Regulation, the auction shall be conducted in the following order:

- Announcement of the auction;
- Acceptance of applications from participants;
- Qualified selection and formation of the list of participants;
- Provision of access to the results of the technical studies (geological, geotechnical, topographical, power distribution schemes, environmental and social impact assessment) and the meteorological database to participants to prepare for the auction session;
- Opening of the auction session and announcement of the winner and the reserve winner;
- Signing of project and agreement.

5. **Power Purchase Agreement**

In accordance with the Decree of the President of Uzbekistan No. PP-4249 dated 27 March 2019, 3 Joint-Stock Companies were established on the basis of Uzbekenergo JSC:

- National Electric Grids of Uzbekistan;
  
  National Electric Grids of Uzbekistan JSC operates and develops the country’s main power grids, transports electricity through the main power grids and international transit, exports and imports electricity, provides unified operational control of electricity generation facilities and main and regional power grids, acts as a unified purchaser of electricity from its producers and sells electricity to regional power grid companies.

- Thermal Power Plants;
  
  Thermal Power Plants JSC manages thermal power plants and power plants that generate electricity and heat.

- Regional Electric Grids;
  
  Regional Electric Grids JSC manages the territorial electricity grid companies that distribute and sell electricity to end consumers.

As indicated above, National Electric Grids of Uzbekistan JSC acts as a unified purchaser of electricity from its producers. Therefore, National Electric Grids of Uzbekistan JSC enters into PPA with investors.
Under the PPA, the investor undertakes to guarantee the sale of generated electricity to National Power Grids of Uzbekistan JSC. In turn, National Power Grids of Uzbekistan JSC undertakes to guarantee the purchase of electricity and to pay for the electricity in the national currency.

**Form of PPA**

Currently, the government of Uzbekistan has not yet approved and adopted a standard and unified form of PPA. Therefore, existing PPA have been drafted and developed on a case-by-case basis taking into account the provisions of current legislation.

**Conditions of PPA**

The required conditions to make PPA effective:

- Comprehensible text (concept, terminology);
- Fair allocation of risks between the Parties;
- Predictability of key elements (fees, liability of the parties, etc.);
- Procedures and instruments to address problems (non-performance of obligations, compensations, force majeure, etc.).

However, it is expected that PPA is to be drafted and approved by the Ministry of Energy in the near future.

**Tariffs**

Electricity tariffs are determined on the basis of an auction. The system selects two proposals at the lowest price from the submitted applications. The lowest price becomes the potential winner and the second lowest price becomes the reserve winner.\(^\text{14}\)

**Terms**

According to Uzbekistan legislation, PPAs are concluded for a period of 5 to 25 years.

**6. Land plot**

According to the current Uzbekistan legislation, the general procedure for granting land plots for entrepreneurial and urban development activities is through an auction. However, such regulations do not apply in cases where land plots are granted for RES projects in the framework of PPPs.

According to the current PPP law, land plots are granted to the private partner without an auction. Also, in accordance with the Appendix No. 1 to the Decree of the Cabinet of Ministers No. 543 dated 27 August 2021 (hereinafter the “Appendix”), stipulates the provision of land for government needs to fulfil obligations on the part of Uzbekistan under international treaties on projects for the construction of energy system facilities and electricity transmission lines.

Under the Appendix, when government and public needs are to be met by legal entities or individuals, a land plot is assigned to the relevant government agency, institution and enterprise and allocated to the Agency for Government Assets Management for permanent

\(^{14}\) Article 20 of the RES Law
use and subsequently leased by it to legal entities and individuals. The decision to grant a land plot is made in accordance with a decision of the Council of Ministers of Karakalpakstan, the regional khokims and the city of Tashkent.

In accordance with the PPP law, the procedure for granting land plots, as well as other conditions, must be specified in a PPP agreement.

**Registration of rights to land plot**

According to land legislation, the rights of legal and individuals to land plots are subject to government registration. Government registration of rights to land plots shall be conducted at the location of the land plots.

Registration of rights to land plots shall be conducted in the following steps:\(^{15}\)

- Acceptance of the application;
- Checking the application, attached documents and materials;
- Registration of the application;
- Registration of rights to a land plot;
- Issuance of a certificate of registration.

**Termination of PPP agreement**

The termination of a PPP agreement is grounds for terminating the contractual relationship with respect to a land plot too.\(^{16}\)

7. **Construction**

The construction and operation of RES facilities is implemented in accordance with the legislation of Uzbekistan in the field of architectural, urban planning and construction activities and the electricity sector, as well as in accordance with the construction regulations of Uzbekistan.

Main implementation stages of construction projects:

- Obtaining source materials to develop project;
- Schematic design coordination;
- Design and construction project expert examination;
- Preforming construction and installation works;
- Acceptance and commissioning of the facility.

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\(^{15}\) Article 4.4 of the Land Code  
\(^{16}\) Article 31 of the PPP Law
8. Scheme of connection to the unified electricity system of business entities producing electricity

Uzbekistan legislation provides for a specific procedure for connecting electricity producers to the unified electricity system. This procedure is outlined below in the form of a scheme.  

<table>
<thead>
<tr>
<th>Stages</th>
<th>Subjects</th>
<th>Actions</th>
<th>Time frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 stage</td>
<td>Electricity producer</td>
<td>Applying for technical specifications</td>
<td>As required</td>
</tr>
<tr>
<td>2 stage</td>
<td>JSC Regional Electric Grids (REG JSC) – from 20 to 500 kW</td>
<td>Sending a copy of the connection application to the system operator (National Electric Grids of Uzbekistan JSC) for notification</td>
<td>3 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identification of a certified organisation to conduct a network connection assessment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>REG JSC – more than 500 kW</td>
<td>Sending a copy of the connection application to the system operator for approval</td>
<td>5 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identification of a certified organisation to conduct a network connection study</td>
<td></td>
</tr>
<tr>
<td>3 stage</td>
<td>System operator</td>
<td>Consideration of the application</td>
<td>10 days</td>
</tr>
<tr>
<td>4 stage</td>
<td>Certified organisation</td>
<td>Conducting a study or assessment of the network connection and submitting a report to REG JSC</td>
<td>120 days</td>
</tr>
<tr>
<td>5 stage</td>
<td>REG JSC</td>
<td>Agreeing with the producer on a connection option from those proposed in the report issued</td>
<td>15 days</td>
</tr>
</tbody>
</table>

17 Decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 610 dated 22 July 2019
<table>
<thead>
<tr>
<th>Stage</th>
<th>Role</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 stage</td>
<td>Certified organisation</td>
<td>Development of a project for connecting the electrical installation to the power grid under contract with the producer. Submission of the connection project for approval to the organisation that issued the technical conditions and to the Uzenergo Inspectorate.*</td>
</tr>
<tr>
<td>7 stage</td>
<td>Organisation that issued the technical conditions, Uzenergo Inspectorate</td>
<td>Approval of the connection project</td>
</tr>
<tr>
<td>8 stage</td>
<td>Producer or organisation that will operate the producer’s electrical installations to be connected</td>
<td>Drafting of the commissioning scheme. Approval of the commissioning scheme by the grid owner and system operator. Conducting construction and installation and commissioning works. Submission of an application to the Uzenergo Inspectorate and the owner of the grids.</td>
</tr>
</tbody>
</table>
for verification of compliance with the requirements of technical specifications and compliance with the established rules and regulations during installation and commissioning of the electrical installations to be connected

<table>
<thead>
<tr>
<th>Stage</th>
<th>Organization</th>
<th>Activities</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Uzenergo Inspectorate, grid owner</td>
<td>Conducting an inspection, Preparing an inspection report in the required form</td>
<td>10 days</td>
</tr>
<tr>
<td>10</td>
<td>Uzenergo Inspectorate</td>
<td>Issuance of a permit to operate an electrical installation to the producer on the basis of the inspection report</td>
<td>3 days</td>
</tr>
<tr>
<td>11</td>
<td>Producer, certified organization, grid owner, Uzenergo Inspectorate</td>
<td>Conducting tests and commissioning, Preparing a report in the required form</td>
<td>As agreed by the parties</td>
</tr>
<tr>
<td>12</td>
<td>Producer, grid owner, Bureau of Enforcement**</td>
<td>Checking the connection scheme at the producer's request, sealing the electricity meters and concluding an electricity supply contract</td>
<td>5 days</td>
</tr>
</tbody>
</table>

*Inspectorate for Control of Electricity under the Ministry of Energy of the Republic of Uzbekistan.

**Bureau of Enforcement under the Office of the Procurator-General of the Republic of Uzbekistan.
9. **Force majeure**

Despite the rapid development of RES in the country, current projects face certain challenges. These challenges are caused by the following key factors:

- According to published reports by energy consultancy Rystad Energy, the price of photovoltaic modules has risen by almost 50%, from USD0.20 per watt-peak (WP) in 2020 to USD0.26-0.28 per WP in the second half of 2021.

- Also, the price of polysilicon (a key component of solar systems) has risen by 300% since July 2020. The price of other solar system components, including silver, copper, aluminium and glass, are also rising.

- At the same time, higher delivery prices and shipping delays are also having a significant impact: from September 2019 to today, these prices have risen by almost 500%.

We assume that abovementioned factors were not foreseen in the contracts and agreements of current projects. Therefore, long-term project delays may be expected.

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We hope that the above information will be helpful to you and your business.

If you have any questions, please feel free to contact us.

We keep in touch.

Best regards,
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