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Azerbaijan's renewable potential

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Azerbaijan might not be the first place that springs to mind when thinking about renewable energy; the republic is better known for its vast hydrocarbon reserves in the Caspian sea. By Alistair Wishart, Nabil Khodadad and Afzaal Abidi, Vinson & Elkins RLLP.¹

The world's first oil tanker shipment sailed from the capital, Baku, in 1878 – incidentally the year that Azerbaijan's first oil transportation pipeline was built – and today its extensive network of pipelines delivers oil and gas to Russia, Turkey and Europe.

Azerbaijan is currently a net exporter of electricity – with installed capacity equivalent to nearly double the domestic demand, Azerbaijan exports to Russia, Georgia, Iran and Turkey, and recently started exports to countries across Europe through Georgia and Turkey.²

However, Azerbaijan's commitment to reducing its reliance on fossil fuels and diversifying its energy sector was recently thrown into the spotlight, as Middle Eastern energy giants ACWA Power and Masdar Energy signed agreements to develop two wind and solar power plants with a combined energy generation capacity of 440MW.

Sector reforms

These announcements came less than a year after Presidential Decree No 1209 of May 29 2019 “On the acceleration of reforms in the energy sector of Azerbaijan”, which tasked the Ministry of Energy and the Cabinet of Ministers with facilitating the adoption of a new law on renewable energy sources, and the creation of an investment climate conducive to the development of Azerbaijan's renewable energy portfolio.³

This is the first major step taken towards the adoption of renewable energy sources since the 2016 approval of the “Strategic Roadmap for the Development of Utilities Services”. This strategic roadmap envisaged the diversification of Azerbaijan's energy portfolio through capital investments in wind, solar, and bioenergy projects with a combined output of 420MW by 2020,⁴ although the actual installed capacity of new renewable energy plants has been slower, with projects in 2016–2018 adding 59MW of wind plants, 30MW of solar plants and 7MW of biomass energy plants.⁵

The development of renewable energy projects will play a critical role in helping Azerbaijan meet its climate objectives. Under the Paris Agreement, Azerbaijan has committed to reducing its greenhouse gas emissions from 1990 levels by 35% by 2030.⁶

Azerbaijan currently has very limited installed renewable energy generation capacity, outside of hydro, but the country has significant wind and solar potential. The coastal areas along the Caspian Sea, the Caspian Basin, the Nakhchivan Autonomous Republic and the Absheron Peninsula are ideally placed for wind energy projects, while the Absheron peninsula, the Nakhchivan Autonomous Republic and the Kur-Araz lowland boast excellent potential for solar energy.⁷

Capitalising on these resources will not only aid Azerbaijan in achieving its strategic objectives, but will also improve the resilience of its electricity supply. In July 2018, Azerbaijan experienced a massive blackout that left 39 cities without electricity and, in some cases, water supply,⁸ and on February 27 2020, a power cut in Baku affected the Baku Metro.⁹

In April 2020, the Ministry announced that it was preparing a roadmap for the development of offshore wind energy in Azerbaijan. The development of the roadmap is supported by the International Finance Corporation and is aimed at contributing to expanding the use of renewable energy sources in Azerbaijan, by identifying the areas most suited to the development of wind energy projects, as well as assessing their commercial viability, connectivity, and environmental impact.¹⁰

Project pipeline

Azerbaijan has several promising projects in the pipeline. In January 2018, the Ministry of Energy announced that it was teaming up with the Asian Development Bank to develop a pilot floating photovoltaic (PV) power generation plant on Lake Boyukshor, with an expected output of 100kW.¹¹

The Asian Development Bank is providing technical and financial support on the project, with Spanish company EQO-NIXUS having tendered successfully for its construction. This pilot project is due to complete in 2021. Although 100kW does not move the needle very far, Azerbaijan's partnership with the Asian Development Bank is another positive step in the republic's drive towards a greener future.

On January 9 2020, Saudi Arabia's ACWA Power signed an implementation agreement for the development, construction and operation of a 240MW wind project in Azerbaijan on a Build Own Operate basis. The power purchase agreement is set to span a 20-year period. A memorandum of understanding for the project was signed by the Ministry of Energy and ACWA Power in March 2019.¹²

Also on January 9 2020, Abu Dhabi's Masdar Energy signed an agreement with the Ministry to develop, finance, build, and operate a 200MW solar PV project situated 75km southwest of Baku. At the time of the announcement, financial close was targeted for the end of 2020, with operation to commence in 2022.¹³

Both of these projects represent a significant step forward for the republic as it pursues its strategy to diversify Azerbaijan's energy sector, improve energy resilience and reduce reliance on fossil fuels by leveraging the country's renewable energy resources.

These projects are noteworthy as they provide another example of investment in renewables in the region by Masdar Energy and ACWA Power, both energy companies from other hydrocarbon-rich countries.

For example, just weeks before its agreement with Azerbaijan, Masdar Energy agreed to develop 400MW of solar PV capacity in neighbouring Armenia.¹⁴ As we recently highlighted, Masdar Energy has also committed to developing three renewable energy projects in Uzbekistan,¹⁵ and ACWA Power recently inked agreements with the Ministry of Energy of Uzbekistan for the development of both 1.5GW of conventional power generation and 500MW–1GW of wind power plants.¹⁶

The trend is set to continue. The State Agency on Alternative and Renewable Energy Sources has plans to implement 23 renewable energy projects ranging from wind, solar, hydro and biofuel by 2023, with an expected power generation capacity of 4.2GW.

Growing interest in clean energy

A number of other international players have expressed interest in Azerbaijan's renewable energy space. On February 20 this year, Italian turbine manufacturer Ansaldo Energia signed a memorandum of understanding with the Ministry of Energy to analyse the potential for the development of renewable energy projects, and to create suitable conditions for investments in sustainable and renewable energy projects.¹⁷

On the same day, it was announced that energy infrastructure company Snam had signed a cooperation agreement with Socar, the state-owned integrated oil and gas company of Azerbaijan, to research and promote the use of biogas and biomethane, to assess the potential for anaerobic digestion plants in Azerbaijan, and to promote sustainable mobility using liquefied natural gas, compressed natural gas and hydrogen.¹⁸ Socar's interest in cleaner sources of energy has the potential to drive forward Azerbaijan's energy transition.

In February 2019, French independent power producer Total Eren signed a memorandum of understanding with the Ministry with a view to bolstering Azerbaijan's renewable energy capacity.¹⁹

By January 2020, the Ministry had signed similar preliminary agreements with, among others, Equinor (Norway), BP (United Kingdom), Mitsui (Japan), Tekfen (Turkey), Avelar Solar (Russia), and Quadran International (France).²⁰

Although it remains to be seen how many of these preliminary agreements turn into investments, they are evidence of a growing interest in the Azeri renewables sector from reputable industry players.

Legal and regulatory framework

On September 8 2017, the European Bank for Reconstruction and Development (EBRD) signed a letter of intent with the Ministry that contemplated the establishment of an independent regulatory agency and enshrined a framework of cooperation between the EBRD and the Ministry to foster the development of renewable energy projects in Azerbaijan.

The Azerbaijani energy sector regulator was established off the back of this, initially functioning under the remit of the Ministry, albeit with the expectation that it would become independent at a later stage.²¹

The regulator continues to operate under the remit of the Ministry of Energy. The Ministry, the regulator and the EBRD are currently working on a draft of a law entitled "On regulation in the fields of energy and utilities".

The draft law is currently not publicly available, but it is expected that the regulator will start playing a more active role in incentivising investment in the renewable energy sector once the law on its status is approved.

Azerbaijan is starting to make further progress from a legislative perspective. For a long time the energy sector has been regulated by legislation dating back to the late 1990s, but in accordance with Presidential Decree No 1209 of May 29 2019 on the acceleration of reforms in the energy sector of Azerbaijan, the Ministry has begun developing a new legislative framework for renewable energy projects in Azerbaijan, including a draft law “On use of renewable energy sources in power generation”.

We understand that the new legal framework will provide, among other things, for an auction-based system and the new law is expected to provide for additional tax concessions, feed-in-tariffs, off-taker obligations and other support mechanisms for foreign direct investment and scientific research.

Alongside legislative reform, the Ministry has developed a standard form power purchase agreement (PPA) for renewable energy that should help provide consistency and greater transparency for investors.

Cautious optimism

Azerbaijan has faced challenges over the last few years, with low oil prices and currency devaluation in particular hurting this oil-dependent economy. However, the structural and regulatory environment is improving for renewable energy projects. As we see the government pressing forward with reforms and strategic investors stepping up to the plate, renewable energy has the momentum and improving investment climate required for cautious optimism in Azerbaijan.

Footnotes

1 – We gratefully acknowledge the input of Omni Law Firm in preparing this article.

2 – <https://report.az/en/energy/azerbaijan-starts-exporting-electricity-to-europe/> (URL=<https://report.az/en/energy/azerbaijan-starts-exporting-electricity-to-europe/>)

3 – IRENA Renewables Readiness Assessment: Republic of Azerbaijan dated December 2019

4 – Strategic Roadmap for Development of Utilities Services (electric energy, heating, water and gas) in the Republic of Azerbaijan, approved by Decree of the President of the Republic of Azerbaijan dated December 6 2016

5 – Source: Energy of Azerbaijan, Statistical yearbook 2019, at p. 132. Available at: https://www.stat.gov.az/source/balance_fuel/?lang=en (URL=https://www.stat.gov.az/source/balance_fuel/?lang=en)

6 – IRENA Renewables Readiness Assessment: Republic of Azerbaijan dated December 2019

7 – <https://www.ebrd.com/work-with-us/projects/tcpsd/support-for-the-implementation-of-renewable-energy-auctions-in-azerbaijan.html> (URL=<https://www.ebrd.com/work-with-us/projects/tcpsd/support-for-the-implementation-of-renewable-energy-auctions-in-azerbaijan.html>)

8 – IRENA Renewables Readiness Assessment: Republic of Azerbaijan dated December 2019

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10 – https://www.azernews.az/oil_and_gas/164624.html (URL=https://www.azernews.az/oil_and_gas/164624.html)

11 – <https://en.trend.az/business/energy/3173483.html>; (URL=<https://en.trend.az/business/energy/3173483.html>);
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13 – <https://news.masdar.ae/en/news/2020/01/09/14/39/masdar-signs-agreement-to-develop-landmark-solar-project-in-azerbaijan> (URL=<https://news.masdar.ae/en/news/2020/01/09/14/39/masdar-signs-agreement-to-develop-landmark-solar-project-in-azerbaijan>)

14 – <https://www.pv-magazine.com/2019/12/03/masdar-seals-agreement-to-develop-400-mw-of-solar-in-armenia/>
(URL=<https://www.pv-magazine.com/2019/12/03/masdar-seals-agreement-to-develop-400-mw-of-solar-in-armenia/>)

15 – <http://www.pfie.com/uzbekistan-open-for-renewables/21426168.article?sm=21426168> (URL=<http://www.pfie.com/uzbekistan-open-for-renewables/21426168.article?sm=21426168>)

16 – <https://www.acwapower.com/news/acwa-power-signs-milestone-agreements-with-ministry-of-energy-of-uzbekistan/>
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17 – <https://www.power-eng.com/2020/02/20/ansaldo-signs-ccgt-om-and-renewable-mous-with-azerbaijani-republic/#gref>
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18 – https://www.snam.it/en/Media/Press-releases/2020/Snam_and_Socar_sign_an_agreement_to_promote_sustainable_energy.html
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21 – <https://www.ebrd.com/work-with-us/projects/tcpsd/support-for-the-implementation-of-renewable-energy-auctions-in-azerbaijan.html> (URL=<https://www.ebrd.com/work-with-us/projects/tcpsd/support-for-the-implementation-of-renewable-energy-auctions-in-azerbaijan.html>)