

# Wholesale Electricity Price Projections for Uzbekistan

## **Uzbekistan is becoming one of several highly interesting under-the-radar investment countries in Central Asia**

The country's rapidly developing economy calls for the restructuring of Uzbekistan's energy industry. The old and inefficient energy infrastructure has been striving to satisfy rapidly growing demand (which did not drop despite the Covid-19 worldwide contraction in 2020); however, gas pipelines as well as power lines have already exceeded their service life. This has been reflected in the country's power sector, where the government and policymakers are now undertaking actions and reforms to upgrade the existing electricity generation capacities, while also adding new generation sources.

The State Program of Uzbekistan for 2022 envisages, among other topics, the establishment of an independent electricity and gas market regulator as well as new draft laws for the electricity and natural gas markets in autumn 2022. The main aim of the drafts is to form a competitive wholesale energy market, where

not only bilateral agreements, but also day-ahead and intraday trading is possible.

Uzbekistan's generation capacity is dominated by gas-fired power plants, supplied with vast domestic reserves, but also some hydro capacities, which contributes further to the power mix. Furthermore, in March 2020, Uzbekistan signed an agreement on the construction of a 1.5GW CCGT in Sirdarya region, which would supplement the older gas-fired unit, as well as will ensure lower CO<sub>2</sub> emissions by using the modern technology when building the plant. The Ministry of Energy of Uzbekistan has set a target of achieving a 25% share of electricity consumption coming from renewable sources of energy (including hydro) by 2026. The government is targeting a total of 8GW of solar and wind capacity by 2026. To achieve these goals, the Law on the Use of Renewable Energy Sources was introduced, giving tax exemptions to RES use. Together with the funding support of key financial institutions and international banks, collaboration on and implementation of large-scale RES-E projects is taking place.

[aim.afry.com](http://aim.afry.com)



# Our Offering

## AFRY Independent Market Report

- Presents our annual projections for wholesale electricity prices out to 2060 for our three internally consistent scenarios (High, Central and Low). These scenarios incorporate total energy system decarbonisation trajectories across the European electricity, heat and transport sectors.
- Considers the main drivers of electricity prices in each scenario, including:
  - the evolution of generation capacity mix;
  - carbon and commodity prices; and
  - developments in technology costs and electrification.
- Delivers in-depth market intelligence, including insights into:
  - government policy and regulation;
  - renewable subsidy support schemes; and
  - the EU Emissions Trading Scheme (with carbon pass-through assumptions for the Uzbekistan market).
- Based on highly detailed modelling from our suite of worldwide commodity models, including coverage of the heat and transport sectors.

## Quarterly updates

- Projections updated on a quarterly basis, ensuring all the latest regulatory and market developments are reflected.
- Quarterly projections are accompanied by a Quarterly Update Note, which summarises the major changes and drivers in prices.

Key data for AFRY projections is provided in a usable Excel format annually, with quarterly updates available.

## Half-day workshop

- Provides the opportunity to discuss the market, our modelling and price developments.

## Webinar

- Access to webinars held on a quarterly basis presenting the latest results of our modelling.

## Subscriber support

- Prompt access to our experts who have a wealth of experience and constantly follow market developments.

## Our reports and projections are:

- **Independent.** Our reputation is built on providing an impartial view.
- **Trusted.** The 'AFRY curves' are the definitive benchmark for the power sector.
- **Bankable.** Relied on by the financing community for over 25 years.



## Our Uzbek market experts



Philip Gueorguiev  
 philip.gueorguiev@afry.com  
 +43 (0)664 828 5761



Yana Andrushko  
 yana.andrushko@afry.com  
 +43 (0)664 881 40375

# Table of Contents



|  |           |  |            |
|--|-----------|--|------------|
| <b>1. Executive Summary</b>              | <b>7</b>  | <b>5. Modelling results</b>  | <b>67</b>  |
| <b>2. Introduction</b>                   | <b>11</b> | 5.1 Wholesale electricity price projections                        |            |
| <b>3. Market background</b>              | <b>13</b> | 5.2 Peak and off-peak wholesale price projections                  |            |
| 3.1 Overview                             |           | 5.3 Key drivers for our projections                                |            |
| 3.2 Market structure and players         |           | 5.4 Generation by technology                                       |            |
| 3.3 Consumption and generation           |           | 5.5 Hourly price distribution                                      |            |
| 3.4 Transmission and interconnection     |           | 5.6 Marginal plants  |            |
| 3.5 Distribution and supply              |           | 5.7 Supply curves  |            |
| 3.6 Wholesale market and trading         |           | <b>Annex A – Economic assumptions</b>                              | <b>82</b>  |
| 3.7 Regulatory arrangements              |           | <b>Annex B – Developments in EU legislation &amp; market rules</b> | <b>85</b>  |
| 3.8 Environmental policies               |           | <b>Annex C – Oil price projections</b>                             | <b>103</b> |
| 3.9 Gas market                           |           | <b>Annex D – Gas price projections</b>                             | <b>108</b> |
| <b>4. Modelling scenarios and inputs</b> | <b>49</b> | <b>Annex E – Coal price projections</b>                            | <b>115</b> |
| 4.1 Scenario framework                   |           | <b>Annex F – Carbon price projections</b>                          | <b>123</b> |
| 4.2 Modelling approach                   |           | <b>Annex G – Technology costs</b>                                  | <b>137</b> |
| 4.3 Market design assumptions            |           | <b>Annex H – AFRY market models</b>                                | <b>153</b> |
| 4.4 Coal price projections               |           | <b>Annex I – Additional AFRY services available</b>                | <b>175</b> |
| 4.5 Oil price projections                |           |  |            |
| 4.6 Gas price projections                |           |  |            |
| 4.7 Carbon price projections             |           |  |            |
| 4.9 Electricity demand                   |           |  |            |
| 4.10 Generation capacities               |           |  |            |
| 4.11 Interconnection                     |           |  |            |
| 4.12 Technical parameters of generation  |           |  |            |
|  |           | <b><i>Exemplary - for reference only</i></b>                       |            |

# Additional Services

## Transaction support services

*M&A advisory including commercial, market, regulatory and technical due diligence*

## Bespoke scenarios and sensitivities

*Customisation for client-led assumptions e.g. fuel prices, decarbonisation goals,...*

## Climate change modelling

*Bespoke simulations of physical and transitional risk for assets and/or portfolios for 2, 4 and 6 degree pathways*

## Model offerings

*BID3 and Pegasus models and datasets are available for purchase*

## Other AFRY Independent Market Reports available

*Our expansion is client-led: if you're interested in any other market, please contact us for options*

## Capture prices

*Available for all markets and technologies*

## AFRY Analytics Capture

*A cloud-based digital tool to calculate asset-specific capture price projections*

## Imbalance projections

*Projections of the costs of imbalance for wind and solar farms*

## Ancillary service projections

*Reserve product value projections for flexible generation and storage*

