

# Wholesale Electricity Price Projections for Moldova

## **Moldova's energy self-sufficiency is among the lowest in the world as it depends on imports from its neighbours**

Moldova is located between two resource-rich countries: Ukraine and Romania. It produces around 20% of its energy consumption domestically, almost entirely with solid biomass, while relying on electricity imports from Ukraine and gas imports from Russia. The construction of the new gas interconnector to Romania was completed in October 2020, decreasing the reliance on Russian imports.

The vast majority of the total installed capacity is based on fossil fuels (around 3GW), while renewable capacity is rather limited, amounting to 106MW in 2021. The EBRD-backed interconnection with Romania, coming online in 2024, will provide increased security of electricity supply.

There is a lack of transparency in the Moldavian electricity market and an effective market mechanism is missing which has led to higher prices. Urged by the Energy Community, Moldova has put in effort to harmonise with the EU's

Third Energy Package and thus new energy market rules will enter into effect on 2<sup>nd</sup> October 2021.

The Moldavian electricity system operates synchronously with Ukraine, Russia, and Belarus. However, the Ukrainian and Moldavian power system is in the process of being integrated into the European Network of Transmission System Operators for Electricity (ENTSO-E), which will facilitate full synchronisation with European electricity systems and cross-border trade of electricity, boosting competition and energy security. Synchronisation is expected in the mid-2020s.

As part of the synchronisation process, Ukraine and Moldova agreed to introduce new electricity market rules in Moldova as well as cross-border exchanges between the two countries. Both are to be implemented by Q3 2021. This, along with discussions of Ukraine providing cross-border capacity allocation services for Moldova, could lead to market coupling of the two countries in the long-term.

[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 Moldova).
- 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 Moldavian market experts



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



Yana Andrushko  
yana.andrushko@afry.com  
+43 (0)664 881 403 75

# Table of Contents

<b>1. Executive Summary</b>		
<b>2. Introduction</b>		
2.1 Introduction		
2.2 Appropriate use of AFRY price projections		
2.3 Report reference date		
2.4 Conventions		
<b>3. Market background</b>		
3.1 Overview		
3.2 Market structure and players		
3.3 Consumption and generation		
3.4 Transmission and interconnection		
3.5 Regulation and policy		
3.6 Wholesale market and trading		
3.7 Environmental policies		
3.8 Gas market		
<b>4. Modelling scenarios and inputs</b>		
4.1 Scenario framework		
4.2 Modelling approach		
4.3 Market design assumptions		
4.4 Coal price projections		
4.5 Oil price projections		
4.6 Gas price projections		
4.7 Carbon price projections		
4.8 Electricity demand		
4.9 Generation capacities		
4.10 Interconnection		
<b>6</b>	4.11 Technical parameters of generation	
<b>11</b>	<b>5. Modelling results</b>	<b>59</b>
	5.1 Wholesale electricity price projections	
	5.2 Peak and Off-Peak wholesale price projections	
	5.3 Generation by technology	
	5.4 Hourly price distribution	
<b>13</b>	5.5 Marginal Plants	
	5.6 Supply curves	
	<b>Annex A – Economic assumptions</b>	<b>72</b>
	<b>Annex B – Developments in EU legislation &amp; market rules</b>	<b>75</b>
	<b>Annex C – Oil price projections</b>	<b>93</b>
	<b>Annex D – Gas price projections</b>	<b>98</b>
	<b>Annex E – Coal price projections</b>	<b>107</b>
	<b>Annex F – Carbon price projections</b>	<b>115</b>
<b>37</b>	<b>Annex G – Technology costs</b>	<b>127</b>
	<b>Annex H – AFRY market models</b>	<b>142</b>
	<b>Annex I – Additional AFRY services available</b>	<b>162</b>
	<b><i>Exemplary - For Reference Only</i></b>	



# Additional Services

## Bespoke scenarios

*Define specific sensitivities or scenarios*

- Customisation for bespoke assumptions, e.g. fuel prices or decarbonisation goals.
- Sensitivities to examine impact on power price of changing gas or carbon prices.

## Transaction support services

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

- Buy and sell-side support for the investment in, or disposal of, generation assets.
- Lenders' Market Advisor services to support debt financings.

## BID3, Pegasus and BID3live

*Models and datasets available for purchase*

- For clients needing full flexibility to do own model runs.
- Live short-term forecasts available with BID3live.

## 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*

- Pre- and post- economic curtailment.
- Market-wide, asset-specific or for portfolio of assets.

## Imbalance projections

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

- Accounts for future growth of renewables, different trading strategies and improvements in forecasting.

## Ancillary service projections

*Reserve product value projections for flexible generation and storage*

- Fundamental projections using BID3 to account for changing capacity mix.
- Covers both holding and activation fees for FCR, aFRR, mFRR, RR, and equivalent.



- AFRY Independent Market Reports available
- AFRY Management Consulting offices