

# ENERGY (IN) SECURITY AND GOOD GOVERNANCE IN MOLDOVA: MAKING THE ENERGY TRANSITION POSSIBLE

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The Russian invasion of Ukraine and its **weaponization of energy supply**, which precipitated the global energy crisis, has impacted Eastern European countries the worst. Their energy and climate security position has significantly worsened on the back of skyrocketing energy prices and the growing threat of supply interruptions. **Moldova has been among the most vulnerable and worst affected states** as it lacks sufficient local energy resources and depends on the import of fossil fuels and electricity.

Moldova covers only around 20% of its electricity consumption through local generation, i.e. from the territory controlled by the Moldovan Government on the West bank of the river Dniester. **The Russia-controlled separatist region of Transnistria** (on the East bank of the river Dniester) holds a large chunk of the country's industrial base, and most importantly is a major source of the power supply for the Moldovan electricity system. The natural gas-fired MGRES thermal power plant<sup>1</sup> with an installed capacity of 2 520 MW, located in Transnistria and owned by the Russian state, covers around 60% of Moldova's electricity needs. The rest comes via imports from Ukraine.

Moldova's **energy dependence** is exacerbated by the country's complete reliance on natural gas imports. Until 2022, Russia's state-owned company, Gazprom, was the sole gas exporter to Moldova under a long-term contract and as a controlling shareholder of the national public gas supplier Moldovagaz. The de-facto only consumer of Russian gas is Transnistria as the small volumes of gas used on the Western bank of the Dniester are now imported from Romania and the rest of Southeast Europe. Yet, since the MGRES power plant depends entirely on the Russian gas supply, Moldova cannot easily phase out its reliance on Gazprom.

<sup>1</sup> Moldovan State Regional Electricity Station (MGRES is the transliteration of the abbreviation in Russian), owned and operated by Inter RAO EES Corporation of the Russian Federation.

## KEY POINTS

- The resilience of the Ukrainian energy system in the face of the Russian invasion has demonstrated that close **energy market integration** with the European Union is the most powerful tool for protection against Moscow's energy and economic blackmail.
- Due to structural energy and climate security risks, Moldova has been among the most vulnerable countries to Russia's weaponization of energy.
- The low levels of energy security have resulted in extreme **price volatility**, insufficient supply, and **widespread energy poverty**.
- Moldova has actively pursued the diversification of electricity and natural gas supply by bringing in **alternative deliveries from Romania, Ukraine** and the LNG terminals on the Aegean coast.
- There is still much to be done by improving **energy efficiency** in the residential sector.
- Gradually removing subsidised energy prices while providing targeted financial assistance to vulnerable groups can strike a fine balance between **market liberalisation and affordability**.
- The country's energy strategy should prioritise the **scaling-up of renewable energy projects**, focusing on wind energy and small-scale photovoltaic plants..
- Moldova should accelerate the EU integration process by focusing on **key anticorruption measures** for limiting the political interference in the management of state-owned energy companies and increasing the financial transparency of regulatory decisions.

Moldova's difficult energy security position has led over the years to **price shocks, supply shortages and widespread energy poverty** – a situation aggravated by the war in Ukraine. As the gas energy crisis gripped Europe, in October 2021, the Moldovan Government was forced to declare a **state of emergency**, subsequently extended into 2023.<sup>2</sup> The country has become dependent on international financial institutions such as the EU, EBRD, EIB, World Bank, USAID for the provision of **emergency financial support** aimed at covering the costs of alternative energy supplies, mitigating the impact of price shocks on consumers and advancing structural reforms.

Yet, the Russian war in Ukraine has accelerated Moldova's EU accession process. The country was granted **EU candidate status** on June 23, 2022. The accession negotiations began officially in early December, 2023. One of the key elements of this process will be the implementation of the **EU energy and climate acquis**. In fact, the energy policy alignment between the EU and Moldova started back in 2010 when Moldova became a Contracting Party to the Energy Community. However, due to the political instability and Russian energy blackmail, many of the most important **governance reforms have stalled** through the years, including in terms of market liberalization, the unbundling of energy supply and transmission/distribution, as well as the uptake of decarbonization measures.<sup>3</sup>

It is crucial to recognize that EU accession is not a formality, but a process of **aligning Moldova's policies and governance with common EU principles and goals**. The approximation of national legislation and adherence to the acquis will play a vital role in moving the accession talks forward, which would be critical in reforming the country's energy and climate prospects. While the EU accession is not guaranteed, given EU's own internal reform and political issues, the process itself could greatly aid the country in its transformation efforts. Moldova, similar to Ukraine, has initiated an **ambitious diversification plan** since the war began but faces challenges from Russian pressure both internally and externally. The Government of Moldova, the European Commission and member states need to put in significant efforts in **developing robust energy and climate policies** to keep the integration process going, denying the Kremlin opportunities to disrupt EU enlargement.

## Energy and Climate Security Risks

### Goeconomic risks to energy security

In the past decade Moldova has been able to reduce its **economic exposure to Russia**. Yet, Chisinau has become more dependent on Russian supply chains despite two trade embargoes in 2006 and 2015, which Moscow has used to pressure Moldova by prohibiting the export of wines, fruits and vegetables. Moldova's lack of economic diversity has allowed Russia to exert economic pain through limited measures it can easily absorb. In addition to direct embargoes, Russia has also selectively used the arbitrary enforcement of stricter "sanitary standards" on the import of Moldovan products, which has become a more favored and subtler method of economic pressure.

Moldova is **excessively dependent on Russia for meeting its energy needs**. The country covers 53%<sup>4</sup> of its energy needs, including for the production of heating and electricity, with natural gas. The potential for supply diversification through the gas interconnector to Romania, launched in October, 2020 has hardly been utilized. Until after the war in Ukraine, the pipeline had been mostly empty despite requests for capacity bookings from suppliers, alternative to Gazprom.<sup>5</sup> One of the main reasons has been that MoldovaGaz, majority-owned by Gazprom, has been refusing to seek alternative imports by claiming that Russian gas is cheaper. MoldovaGaz holds a **monopoly position on the Moldovan wholesale market** and has a long-term supply contract with Gazprom.<sup>6</sup>

At the end of 2019 **Moldovagaz owed Gazprom USD 7.55 billion**.<sup>7</sup> Less than 10% of the debt belonged and was recognized by the government in Chisinau. The rest had been **accrued by the breakaway Russia-controlled enclave of Tiraspol**, which had failed to pay for the consumed gas over the past decade. Russia has been able to leverage the gas debt to put political pressure on Chisinau and to support the Transnistrian government with cheap energy.

The biggest consumer of natural gas in Moldova is **the thermoelectric power plant MGRES**, which is also under Russian state control. The produced electricity is sold to Chisinau,<sup>8</sup> and the payments for the consumed

<sup>2</sup> [Annex](#) to Commission Implementing Decision amending the Commission Implementing Decision C(2021) 9348 as regards the financing of the individual measure in favour of the Republic of Moldova for 2021.

<sup>3</sup> As of June 2022, Moldova's progress varied between "early stage" and "moderately prepared".

<sup>4</sup> International Energy Agency, (2020). [Moldova Energy Profile](#) Country report April 2020.

<sup>5</sup> Elliott, Stuart. (2020). [New Moldovan gas link complete, but doubts remain over use](#). S&P Global.

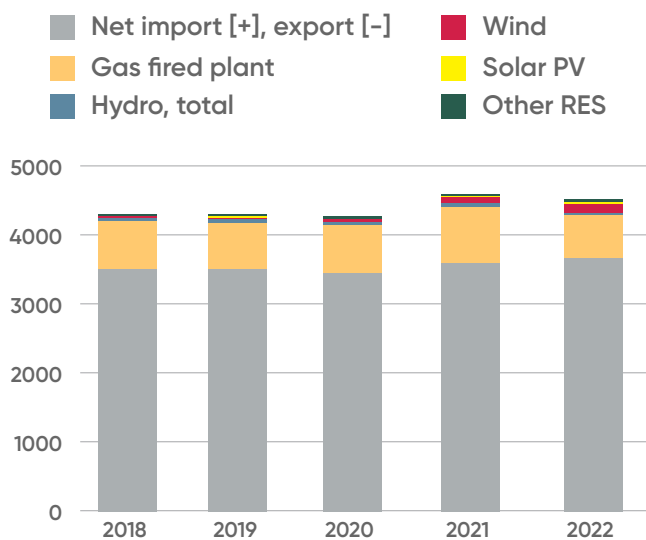
<sup>6</sup> Ibid.

<sup>7</sup> Mold Street, (2020). [The debts of the Transnistrian region will not be placed on the shoulders of Moldovan consumers. CEO of MoldovaGaz, Vadim Ceban, regarding the debt to GazProm.](#)

<sup>8</sup> EU Energy Community. (2019). [Moldova's Electricity Market Reform](#) Policy Brief July 2019.

energy are transferred to a special account in Tiraspol. Yet, instead of paying for the consumed gas, Tiraspol is using this money to finance its activities, a practice that essentially amounts to an **indirect financing of the separatist region** by Gazprom.<sup>9</sup> In the past, the Kremlin also used gas supply cut-offs to pressure Moldova; yet since the major gas pipeline to customers in the Balkans used to run through Moldova, Moscow had generally been reluctant to resort to this measure. After the start of operations of the TurkStream pipeline, the Ukrainian-Moldovan-Romanian route is no longer key for the Gazprom business operations in Southeastern Europe, and there is likely to be **even more appetite for Russia to use the gas weapon**. However, despite any potential short-term political gains of such a move, it also risks alienating the population of Transnistria, undermining the Russian control over the breakaway province.

**Figure 1. Electricity Supply Mix (in GWh)**



*Source: Ministry of Energy; 2023 Energy Community Annual Report.*

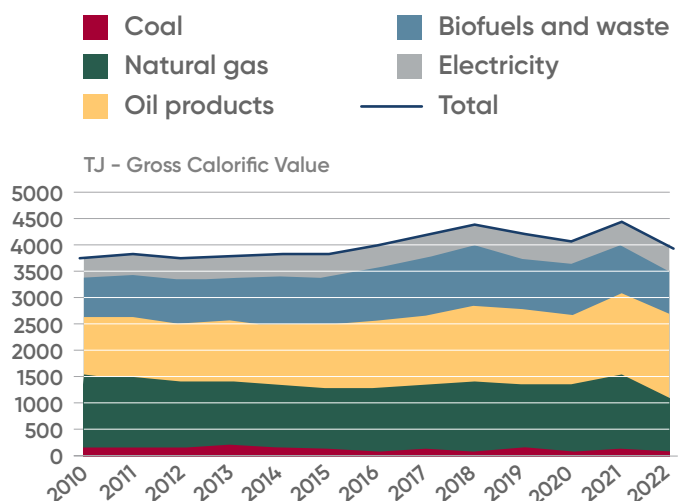
Moldova's heavy dependence on gas supply exclusively through Moldovagaz and electricity supply from Transnistria has been purposefully maintained by Moscow and its proxies in Moldova. This has been a key instrument of Russian economic influence for **entrenching state capture networks** feeding on the free gas disbursements from Gazprom. The cheap supply has maintained the heavy industry in Transnistria afloat, with the owners of the main businesses, tightly controlled by the masters of the gas supply, generating huge **profits out of the energy pricing arbitrage**.

The proceeds from the sale of natural gas to industrial consumers are used to prop up the regime in Transnistria, making up 2/3 of the province's budget. A potential cut of the Russian gas supply would thus likely lead to the bankruptcy of the Transnistrian government and to a humanitarian crisis, which the central

government in Chisinau would have to deal with. The Government of Moldova needs to prepare for such a scenario as currently it neither has enough public financial resources nor the necessary gas volumes to stabilize the situation in Transnistria.

Russia has much more **limited sway over the oil sector** in Moldova because the market is competitive, and there are alternative sources of supply. However, the Russian company, Lukoil is **still the largest fuel supplier** on the wholesale and retail markets in the country. Lukoil controls around 40% of Moldova's diesel and more than a third of its gasoline imports.<sup>10</sup> To strengthen the country's energy security, the Moldovan government should take steps to **lower its dependence on imported Russian oil products**. The first step would be to develop and maintain emergency oil stocks in line with the EU Oil Stocks Directive.

**Figure 2. Total Gross Energy Consumption – Per Sector**



*Source: National Bureau of Statistics of the Republic of Moldova, 2023.*

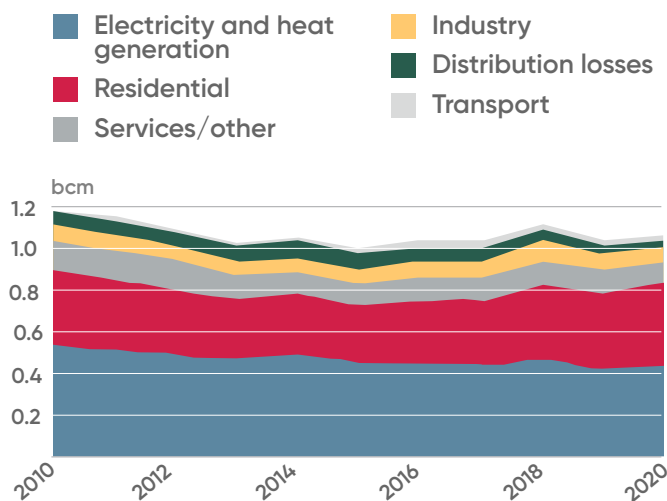
Overall, Moldova depends on external energy supply for 75.6% of its needs,<sup>11</sup> making it vulnerable to supply shocks. Gas has been the source for around 90% of electricity and heat generation in the Moldovan energy system (i.e. electricity produced in the territory controlled by the Moldovan government on the West bank of the Dniester River). Electricity generation has been concentrated in two major gas-based CHPs (Termoelectrica and CET Nord), which account for more than 70% of electricity produced in the country.<sup>12</sup> Gas is predominantly consumed as a primary fuel in electricity and heat generation and in the residential sector.

<sup>10</sup> Necsutu, Madalin. "Russia's Lukoil Mulls Selling Assets in Romania, Moldova", BalkanInsight, January 5, 2023.

<sup>11</sup> *Security of Supply Statement*. Ministry of Infrastructure and Regional Development of the Republic of Moldova for the Period 2020-21, Chisinau 2022.

<sup>12</sup> *Security of Supply Statement*. Ministry of Infrastructure and Regional Development of the Republic of Moldova for the Period 2020-21, Chisinau 2022.

<sup>9</sup> Parlicov, Șoitu and Tofilat (2017). *Annuitiy agreements in energetic sector*, IDIS Viitorul.

**Figure 3. Gas Consumption by Sector in Moldova**

Source: IEA 2022, *World Energy Statistics and Balances*.

The Moldovan government has already taken **measures to mitigate the country's natural gas dependence**. In December 2019, it made operational the physical reverse flow on one of the lines of the Trans Balkan gas pipeline allowing for imports of alternative volumes from Greece and Bulgaria. In addition, in October 2021, Moldova opened the interconnector with Romania (Iasi - Ungheni), which significantly improved the country's ability to quickly diversify gas supply.

As a result, in December 2022, Moldova was able to **temporarily cease Russian gas imports**, redirecting the entire volume of 5.7 million cubic meters per day to Transnistria. Continuing the diversification efforts, in November 2022, Moldova started buying natural gas from Ukraine leveraging the reverse flow connection with Slovakia. As of March 2023, only the Transnistria region remained directly reliant on Russian gas. In November 2023, Romania agreed to transit Azeri gas during the winter season to Moldova, which would provide an additional supply source during peak demand. In December 2023, Moldova passed key amendments to the *Law on Natural Gas*, which reinforce the country's strategic natural gas reserves, equivalent to a minimum of 15% of annual consumption. These reserves will be stored in storage facilities situated in other member countries of the Energy Community, contributing to Moldova's efforts in boosting its security of supply.<sup>13</sup>

Moldova has also actively pursued the diversification of its electricity supply aligning its policies with EU regulations mandating that a country should have at least two different sources of electricity imports. To achieve this, Moldova synchronized its electricity system with the Continental European Network in March 2022 and opened an interconnection with

Romania. Emergency supply agreements were signed in 2022 with the transmission system operators of Romania and Ukraine.

However, an important security of supply chokepoint remains, as the purchased power from Romania has to pass through Southern Ukraine and the Transnistria region before reaching the rest of the country. To reduce the reliability risks related to the transit of electricity through the breakaway territory, the Moldovan authorities are planning a 400 kV transmission interconnection between Vulcănești (Moldova) and Isaccea (Romania), alongside an extension of the 400 kV line between Vulcănești and Chisinau. Construction has started in the spring of 2023, signaling Moldova's commitment to streamlining electricity transmission routes severing the country's excessive dependence on imports from Transnistria and Ukraine.

### The Energy Poverty/Energy Efficiency Conundrum

The sharp increases of gas and electricity prices as a result of the war in Ukraine and the global energy crisis has led to a **sharp increase in the share of energy poverty** in Moldova. Around 35% of households have been classified as energy vulnerable, out of which 950,000 - as highly affected.<sup>14</sup> The increased costs of gas and electricity supply, which represented 8% of the country's 2021 GDP posed a threat to macro-economic stability, dealt a blow to public finances, and fueled inflation exacerbating poverty and inequality. The Moldovan state has tried to alleviate energy poverty by **allocating subsidies to vulnerable households**. Yet, the subsidies covered only up to 35% of the power tariffs, which is **insufficient for the most vulnerable**.

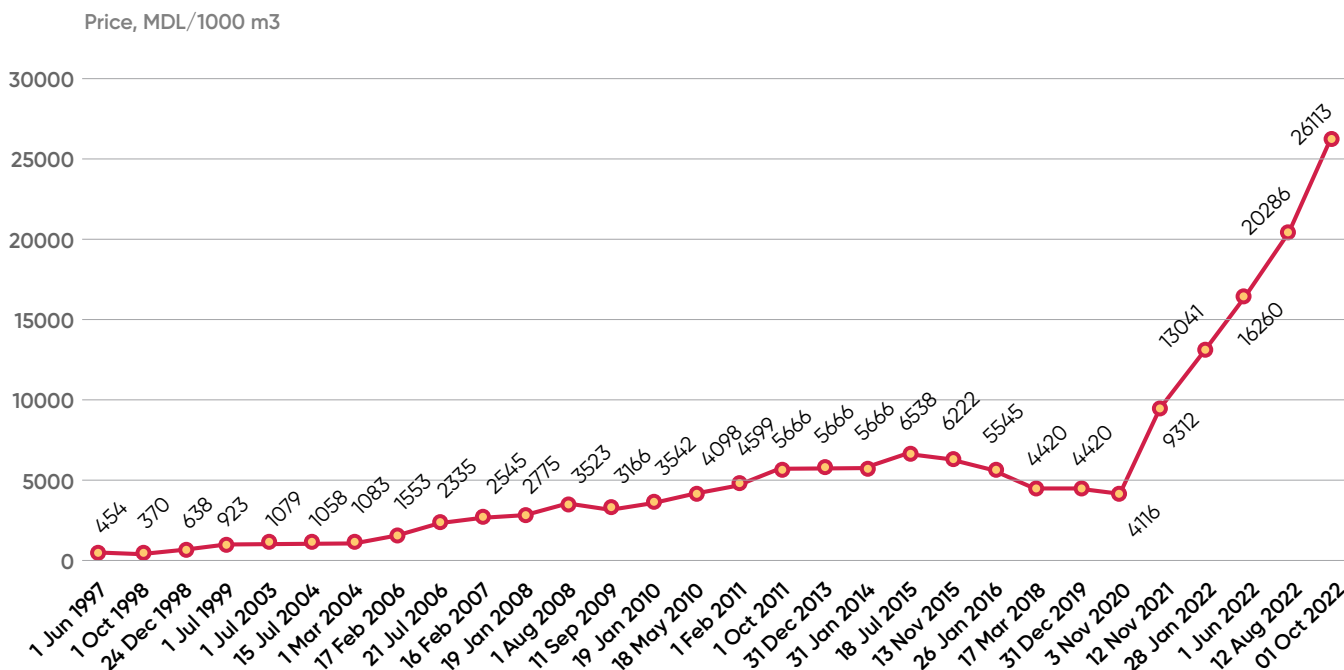
The affordability of natural gas consumption deteriorated on the back of the European gas supply squeeze starting in 2021. Moldovan gas prices rose by 220% in one year leading to a corresponding increase in heating costs, which had to be covered by public transfers and ultimately **international borrowing**. Similarly, retail electricity prices tripled by the end of 2022.<sup>15</sup> This happened despite the fact that gas and power consumers do not pay excise duties, and the VAT on electricity and heating for households is 0% (the standard VAT rate is 20%).

<sup>13</sup> Moldova adopts amendments to the Law on Natural Gas. Energy Community Secretariat 2023.

<sup>14</sup> Annex to Commission Implementing Decision amending the Commission Implementing Decision C(2021) 9348 final as regards the financing of the individual measure in favour of the Republic of Moldova for 2021.

<sup>15</sup> Ibid.



**Figure 4. Evolution of Average Natural Gas Prices in Moldova: 1997-2022**

Source: Raport privind activitatea Agenției Naționale pentru Reglementare în Energetică în anul 2022, ANRE, Chisinau 2023.

One of the ways to ease the energy poverty lock-in is to significantly **improve energy efficiency**. There is still much to be done at legislative/regulatory level to improve efficiency standards in buildings and in the residential sector.<sup>16</sup> Moldova's main challenges in this domain include the lack of financing for energy efficiency measures including in multi-apartment residential buildings, delays in the introduction of **energy auditing obligations** for big companies, the approval of a long-term buildings stock financing strategy and its implementation. Individual heating meters are still lacking in Moldova meaning that most citizens pay for utilities according to a fixed fee based on the number of people living in a flat. This does not **stimulate energy savings and individual investments** in efficiency measures.

There is a lack of support of vulnerable citizens through **integrated home renovation services** and **energy advice**, boosting energy-efficient buildings, ensuring residents' participation in renovation projects and switching to more sustainable energy systems. This is despite the fact that the housing sector accounts for the biggest share (48%) of final energy consumption.

The Moldovan government has started efforts to strengthen its energy efficiency legislation to **accelerate investments in buildings' renovation**. The government

has included concrete energy efficiency targets in its 2030 National Development Strategy and has pushed through amendments to the *Law on Energy Efficiency* that includes now an energy efficiency obligation scheme as required by Article 7 of the EU Energy Efficiency Directive. To help achieve its energy efficiency targets, Moldova is developing a special funding instrument to **mobilize public and private funding**.

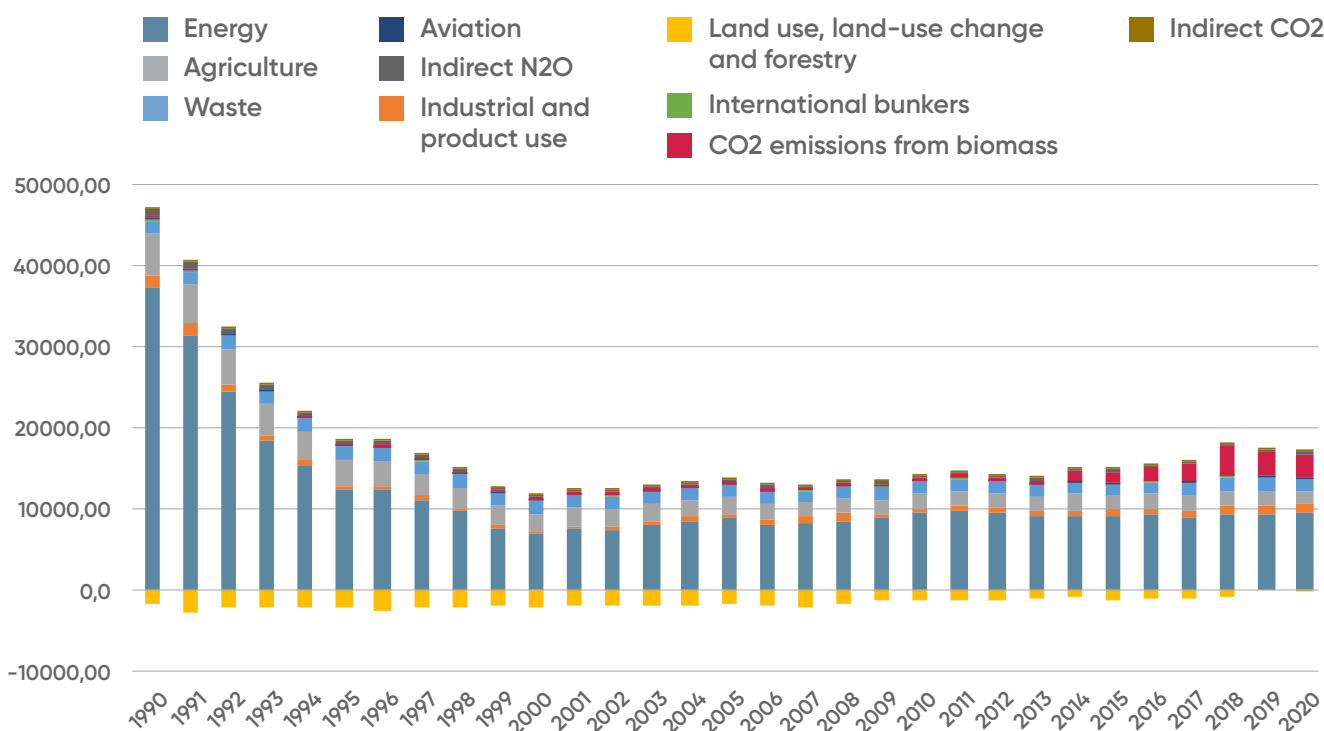
### Paving the Way for a Just Energy Transition

Over 68% of Moldova's greenhouse gas emissions are linked with the production or consumption of energy.<sup>17</sup> Enabling the transition of Moldova's energy system is, hence, pivotal for meeting its climate goals. The EU's example and consistent financial and technical support will aid the nation's path to climate neutrality, and could catalyze the additional private-sector investments in renewable energy. The government should prioritize the funding of energy efficiency measuring and competitive schemes for the rapid deployment of cost-effective renewables such as wind, solar, biomass and small-hydro plants.

The rapid decarbonization of Moldova's electricity supply is pivotal for enhancing supply security and mitigating the impact of price shocks on vulnerable consumers. Addressing the nation's excessive dependence on fossil fuel-based electricity is imperative, as it adversely

<sup>16</sup> Implementation of the Energy Efficiency Directive 2018/2002 and measures supporting buildings renovation/retrofitting has been deemed not complete by the Energy Community Secretariat (Moldova Annual Implementation Report, Energy Community Secretariat 2022).

<sup>17</sup> EU Green Deal 4 Moldova (<https://eu4moldova.eu/eugreendeal/>), EU support towards reducing the environmental footprint of human and economic activities.

**Figure 5. Sources of greenhouse gas emissions and sinks**

**Source:** Time series data on the indicators for 1990-2020, Table B-3: Greenhouse gas emissions (GHG): Republic of Moldova: Climate Change, Chisinau 2022.

affects security, reliability, and climate sustainability in the energy sector. The potential for local electricity generation from renewable energy sources (RES) **remains largely untapped**. Technical challenges in the transmission and distribution electricity system, a shortage of efficient balancing units, and significant regulatory and financial barriers have **hindered the growth of renewables**. Consequently, their share in electricity generation remains low at 28%, spread between the use of hydro, solar, biogas and onshore wind.

To expand the penetration of renewables, Moldova should reinforce existing incentives for low-carbon investments, including the introduction of net metering for small-scale plants, feed-in tariffs for units up to 1 MW, and fixed power purchase tariffs for tenders for larger units exceeding 4 MW.<sup>18</sup> Additionally, there is a need to expand the capacity cap for RES introduction into the electricity system, currently set at 410 MW until 2025.<sup>19</sup> The absence of auction schemes further impedes the efficient and transparent utilization of Moldova's renewable power capacity. The government is currently working on amendments of the 2016 *Renewable Energy Law* in order to set up auction schemes which are expected to be launched in the first quarter of 2024.

<sup>18</sup> *Moldova 2022 Energy Policy Review*, Inter Moldova 2022 Energy Policy Review, International Energy Agency 2022.

<sup>19</sup> *Security of Supply Statement*. Ministry of Infrastructure and Regional Development of the Republic of Moldova for the Period 2020-21, Chisinau 2022.

Moldova should explore feasible approaches for balancing intermittent RES, such as **enhanced interconnections** with neighboring electricity systems (especially Romania),<sup>20</sup> **energy storage**, and demand-side measures like **time-of-use tariffs**. Further reforms towards electricity market opening under the provisions of the EU acquis and investments in increased cross-border interconnection physical capacity will be necessary for enabling the growth of renewables.

## Persistent Governance Deficits

The meaningful mitigation of energy and climate security risks would not happen without a comprehensive **overhaul of the governance** of Moldova's key institutions. This requires the implementation of the EU energy and climate acquis, which means - **deep reforms of all relevant energy policies** of Moldova. The progress towards policy and regulatory alignment with the EU goes beyond passing laws that transpose EU rules and includes the improvement of administrative capacity and the provision of the necessary **policy and financial resources** for the implementation of necessary measures. The key prerequisites for Moldova's successful integration in the EU energy market and for countering the Kremlin's malign influence include the completion of the market liberalization, the **strengthening of corporate governance of energy**

<sup>20</sup> European Network of Electricity Transmission System Operators.

**SOEs and regulators**, and achieving progress towards ambitious decarbonization strategies.

In spite of its accession to the Energy Community in 2010, the process of Moldova's energy market opening, liberalization and integration into the EU Internal Market has developed at a **slow pace**. It accelerated after 2021 mainly due to a change of the domestic political priorities and was turbocharged by the energy crisis. Still a number of factors determine the slow pace of market liberalization and EU integration. The most important ones are **weak sector regulation and heavy involvement of the state** in the functioning of the energy market sapping the air out of market competition. There has also been a **lack of well targeted investment policies** favoring gas and electricity interconnections with the EU, and the expansion of the low-carbon sector.

## Market Liberalization

In terms of market liberalization, Moldova has not been sufficiently effective in implementing **key regulatory steps** under the 2009 EU Third Energy Package acquis.<sup>21</sup> These include the introduction of market rules for cross-border trade in electricity and gas, equal access to network services, non-discriminatory access to the local wholesale electricity and gas market for both Moldovan and non-Moldovan traders, and the introduction of cost reflective and transparent energy tariffs. Moldova is still subject to an **open infringement case** under the Energy Community Treaty art. 91 related to political interference in the activities of the energy regulator ANRE, particularly in setting tariffs on the electricity market.<sup>22</sup>

Up to 2022, Gazprom and **the Russian state practically had a full grip over the gas sector of Moldova** through exclusive import contracts with Moldovagaz, running nominally up to 2026, through Moldovagaz's role as sole public service supplier, and through its affiliated distribution companies, which dominate the retail market segment. As a result, the Moldovan wholesale gas market has remained illiquid, closed and still dominated by Gazprom.<sup>23</sup>

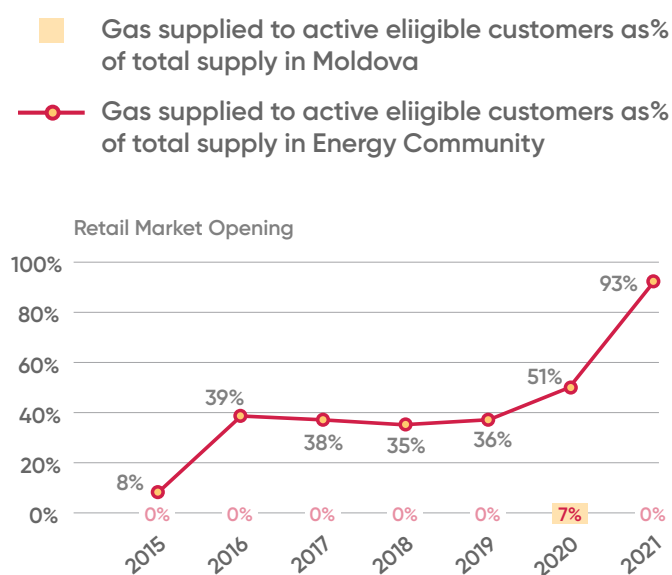
The regulatory authority ANRE has facilitated this market domination by extending **exclusive public service obligation rights** to Moldovagaz at both the

wholesale and retail level. The declared aim of this policy has been the mitigation of price surges for end-consumers. However, the actual result has been a closed market also at the retail level, ensuring more control and influence from the Kremlin.

In addition, a third of the distribution networks belong to Moldovagaz, and two thirds are only managed by them, but belong either to local authorities or consumer associations. There are also about 1000 km of **ownerless networks** (the owner is unknown or liquidated, such as collective farms). The costs of service of these networks are not included in the tariffs.

It has taken 5 years for the Moldovan energy regulatory authority ANRE to issue a certification decision confirming the effective unbundling and independence of the state-owned electricity TSO Moldelectrica under the model of Independent System Operator (July 2023).<sup>24</sup> The dominant gas transmission operator Moldovatransgaz was never able or willing to meet the certification requirements of the Third Energy Package. In July 2023, ANRE was therefore forced to **certify the second TSO** in the local market for transmission services Vestmoldtransgaz, as sole operator of the whole transmission system in the country.

**Figure 6. Gas Supplies to Active Eligible Consumers: Moldova and the Energy Community**



*Source: Energy Community Secretariat 2022, Moldova Annual Implementation Report.*

Vestmoldtransgaz is owned by the Romanian national TSO Transgaz and operates the Moldovan side of the

<sup>21</sup> Gas market Directive 2009/73; Electricity market Directive 2009/72, replaced by Directive 2019/944; Regulation 715/2009 on access to gas transmission networks; Regulation 714/2009 on network access for cross border exchanges in electricity, replaced by Regulation 2019/943.

<sup>22</sup> <https://www.energy-community.org/legal/cases/2017/case0917ML.html>.

<sup>23</sup> Moldova Annual Implementation Report, Energy Community Secretariat 2022.

<sup>24</sup> The Secretariat welcomes decisive moment for the Moldovan energy sector. Energy Community. Vienna 2023 <https://www.energy-community.org/news/Energy-Community-News/2023/07/21.html>.

interconnector Iasi - Ungheni-Chisinau (2.2 billion cubic meters per year), completed in 2021 and designed to bring natural gas from Romania. The company has acted in full accordance with the EU regulatory requirements by obtaining TSO certification in 2021 following its establishment. It has also allocated capacity products along with Transgaz in Romania in a transparent manner, through auctions at the Regional Booking Platform (RBP). The Iasi-Ungheni-Chisinau interconnector therefore plays a vital role in strengthening Moldova's ability to bring alternative gas in the country and to utilize the available Romanian gas storage facilities.<sup>25</sup>

The behavior of Vestmoldtransgaz and Moldovatrangaz on the gas transmission market has been markedly different as a direct result from Moldovagaz' ownership of Gazprom. This has had direct influence on the security of gas supply. In spite of controlling the bulk of the Moldovan transmission system and existing interconnections with Ukraine (including those on the Trans-Balkan route in reverse mode, enabling gas sourcing from the EU market from 2020 at the level of ~12 mcm/d),<sup>26</sup> **Moldovatrangaz has not created transparent conditions for capacity allocation** to willing shippers at the interconnection points under its management. This has precluded the ability of potential suppliers in the Moldovan market to access gas storage in Ukraine or Romania. Being a subsidiary of the public gas supplier Moldovagaz, Moldovatrangaz is also directly influenced by Gazprom in terms of its behavior as a TSO, which has resulted in **the actual closing of the Moldovan market to competition**. Moldovagaz' policy of limiting the entry of new gas traders has resulted in lower levels of security of supply.

### Box 1. Governance Structure of Moldovagaz

In the shareholding structure of JSC Moldovagaz, 50% plus 1 share belongs to Gazprom, 35.33% - to the Government of Moldova represented by the Public Property Agency, 13.44% - the Property Management Committee of Transnistria, and only 1.23% is controlled by individuals/minority shareholders. The supervisory board of Moldovagaz is appointed by the shareholders and consists of 6 members: 2 members represent the Moldovan side (appointed by the Government through the Public Property Agency),

4 members represent Gazprom. Decisions are made by a majority of 5 members but the Moldovan state has the right of veto. There is the Administrative Council that consists of 9 persons: 4 from the Moldovan side, 5 from Gazprom, elected by the Supervisory board. The Chairman of the Council is proposed by the Moldovan side. This structure means that each party could block any decision of the company. The result has often been a gridlock and lack of reform, which has in turn prevented gas market liberalization and diversification.

The recent changes to the *Law on Natural Gas*, enacted in December 2023 represent a strong step to full gas market liberalization. The changes eliminate the ban on new trade and supply licenses, allowing new gas operators and traders to enter the market. They also include the finalization of the process of unbundling of the TSO.

### Environment and Climate Change Acquis: Degree of Transposition

For Moldova, navigating the path toward the implementation of the EU energy and climate obligations is neither short nor simple, given the **approximately 200 normative legal acts** that need to be transposed into national law. These acts span various domains such as air quality, waste management, water management, nature protection, industrial pollution control and risk management, chemicals, noise, civil protection, and climate change. A number of **challenges prevent the effective implementation** of the EU energy and climate acquis: lack of administrative capacity, widespread corruption practices and Russian interference in strategic decision-making.

Moldova has made **limited progress**<sup>27</sup> in implementing most of the energy and climate acquis provisions. As a contracting party to the Energy Community, Moldova has legal responsibility to adopt the legislative, regulatory, and investment provisions outlined in the 2019 EU Clean Energy for All Europeans package. This commitment extends to achieving specific 2030 targets including on reducing energy consumption, boosting the share of renewables and lowering greenhouse gas (GHG) emissions, which would form the foundation of the energy sector decarbonization process. GHG emissions should fall by 68.6% below the 1990 levels, a 27% share of renewable energy sources in gross final energy consumption, and a maximum final energy consumption of 2.8 mtoe. Moldova does not have an Emission Trading Scheme (ETS) regulation in place, but there is an ongoing impact assessment on the

<sup>25</sup> Moldova lacks any local gas storage capacity for emergency and/or peak demand purposes.

<sup>26</sup> Following the rerouting of Russian supplies to SEE-Central Europe through TurkStream in 2020, in reverse mode the Trans-Balkan route can provide access for Moldova to gas sourced in the Romanian, Bulgarian systems and in Greece, where gas from different sources is traded daily, e.g. gas supplied from the Southern Corridor and from the LNG market through the existing Revithousa LNG terminal (after its expected commissioning in 2024, also through the LNG FSRU in Alexandroupolis).

<sup>27</sup> Moldova Annual Implementation Report, Energy Community Secretariat 2023.



introduction of the respective law, and it is expected that an ETS will be launched by 2030.

Moldova has published various long-term policy and strategy documents, such as the 2022 National Development Strategy “European Moldova 2030,” the 2016 Low Emissions Development Strategy for 2030, and the 2022 Concept of Moldova’s Energy Strategy until 2050. However, Moldova faces a fundamental gap in its long-term climate strategy, namely committing to a binding date for achieving climate neutrality. Public consultations will begin soon on the draft of the National Energy and Climate Plan (NECP), which is under development, and which would have to be approved by the Energy Community before passed into law. The Ministry of Environment is also working on a draft of the Climate Law, which is expected to come into force in the second quarter of 2024.

Moldova has not fully aligned with the EU’s Effort-Sharing Regulation or the Regulation on Land Use, Land Use Change, and Forestry. On waste management, Moldova has progressed in aligning its laws with the EU Waste Framework Directive, incorporating secondary legislation on the European List of Waste and Extended Producer Responsibility principles. Yet, the government has done little to bridge the still large implementation gap, which is also the result of limited investment, particularly in the development of recycling facilities.

## What’s Next?

Moldova’s energy and climate security is going through its most difficult test following Russia’s invasion in Ukraine. The Kremlin has managed to create and exploit a number of critical vulnerabilities in the hope of weakening the central government and undermining Europe’s unity on responding to the Russian aggression in Eastern Europe. Despite its recent strides in aligning with EU energy and climate policies, Moldova faces **multifaceted energy and climate security vulnerabilities**. These stem from limited availability of reliable energy supply, outdated infrastructure, lack of resources for new investments, and widespread governance deficits hampering the country’s long-term sustainable development.

Crucially, Moldova’s slow progress in **governance reforms**, particularly in market liberalization and unbundling, raises concerns about its ability to adapt to the evolving energy landscape. These persistent deficits hinder the country’s capacity to respond to external energy shocks, leading to prolonged states of emergency and inefficient use of external financial aid. While Moldova has taken steps to diversify its energy sources, including gas imports from Romania

and Greece, and electricity from Ukraine, the **energy poverty crisis** remains acute. Approximately 35% of households are classified as energy vulnerable, necessitating comprehensive strategies to improve energy efficiency and address legislative gaps that enable the uptake of decentralized renewable energy-based supply solutions.

Moldova’s approach to **energy and climate security should be modelled on the key dimensions of the European Energy Union**: supply security and diversification, full integration into the EU energy market, energy efficiency and energy sector decarbonization, access to research and innovation targeted to the energy transition and sustainable economic development. These dimensions are all affected by the quality of energy sector governance.

## Enable the Energy Transition

Moldova’s energy strategy should **prioritize the scale-up of renewable energy sources**, focusing on wind energy and small-scale PV projects. Additionally, embracing energy efficiency measures in buildings and industries, modernizing industry with innovative technologies, and **supporting regional innovation hubs** are crucial for achieving decarbonization goals.

Moldova should accelerate the development of its NECP, outlining **comprehensive measures for energy transition**. Building upon the NECP, the government should also adopt a long-term low emission development strategy and align the national legislation with the Directive on greenhouse gas emission allowance trading. At the same time, swift adoption of the Climate Law will provide **a binding date for achieving climate neutrality**, reinforcing Moldova’s commitment to global climate targets.

Moldova should prepare a plan according to Chapter 27 of the EU acquis for the passing of around 200 legal acts covering both cross-cutting and sectoral legislation in the environmental and climate change dimensions. The government should also take advantage of the ample **technical assistance and support from the EU** and other international institutions for the country’s improving administrative and institutional capacity. Public engagement in decision-making and public participation processes in the development of national climate plans needs also be enhanced.

The process of accelerated reforms post-2021 should **turn commitments into outcomes in practice** – notably energy sector decarbonization through growth of RES as source for electricity generation, heating and cooling, coupled with targeted energy efficiency measures within Moldova’s economy and especially

the residential sector. The development of **energy and climate plans at the local level** will be a crucial factor here. The “net metering” support scheme for small scale RES electricity generation introduced through the *2016 Law on Renewable Energy Law* should be made available as widely as possible, and administratively eased, as it can strongly reduce the level of energy poverty.

### Ensure Security of Supply

The Russian invasion in Ukraine has clearly demonstrated that close energy **market integration with Europe** is the most powerful tool to improve the resilience of the energy system against Russian energy and economic blackmail. The integration of electricity markets and the securing of alternative fuel deliveries have already provided a lifeline for Moldova during the energy crisis. Yet, **Europe needs to step up its support** by helping Moldova secure natural gas and electricity imports from the LNG terminals on the Aegean coast using the extensive gas transmission network in the SEE region. Related to this, the EU and Moldova should cooperate on the regional gas and power market integration. Although there is sufficient physical interconnection capacity, more coordination is important on the development of efficient contractual arrangements.

The energy supply and price crisis that shook Moldova in 2021-2022 was overcome in large part by better management of the existing electricity and gas **cross-border interconnection capacities**. The already certified Moldovan electricity and gas transmission system operators must create commercial conditions for the full utilization of interconnection capacities on a transparent basis and continue investing in technical capacities optimization with financial support from the EU and IFIs. The transposition of Regulation (EU) 2019/941 on Risk-Preparedness in the Electricity Sector and the Security of Gas Supply Regulation need to be priorities for the government. Key **electricity infrastructure projects** for cross border exchanges with the ENTSO-E area, such as the high voltage lines Vulcanesti-Chisinau and Balti-Suceava, along with the necessary reinforcements and technical upgrades in the Moldovan internal network, must be completed without delays. They will be one of the substantial preconditions for breaking the heavy dependence on the Russia controlled MGRES power station.

Moldova should begin the difficult process of **strategic energy decoupling from Russia**, which includes the complete phaseout of oil product imports from Russia, replacing them with supply from Romania, **green alternatives**, and the cancellation of the long-term natural gas contract with Gazprom. As a first step,

Moldova could renegotiate the agreement to **abolish destination and take-or-pay clauses**, which would allow for more alternative supply to reach Transnistria. Decoupling from the Russian influence in the energy sector would not be possible without discontinuing Gazprom’s grip over Moldovagaz.

Collaboration with Western partners and **mobilizing private sector involvement** are essential to bringing constructive capital in the natural gas sector that will enable a more liquid and competitive market based on alternative supply and the transition to green options. As the costs of replacing the Russian gas to Transnistria would be prohibitively high for Moldova’s central government, the EU in partnership with IFIs should work in a trilateral format with the government of the breakaway province to **restructure the large-scale accumulated debt** to Gazprom and bring in alternative supply.

### Reducing Energy Poverty without Compromising Market Liberalization

Moldova needs to tackle the deep energy poverty crisis in the country. Developing and implementing a **dedicated energy poverty policy** is the most critical step in this direction, as it will allow the protection of the most vulnerable groups in the most efficient way. Artificially low prices and subsidy schemes are contributing to market distortions, and are a major disincentive for the middle-class, which does not invest in energy efficiency improvements or in switching to less energy-intensive consumption patterns.

Gradually removing subsidized energy prices while simultaneously providing targeted financial assistance to vulnerable groups can strike a **fine balance between energy market liberalization and affordability**. Close cooperation with many European countries, which face similar challenges due to the energy crisis, is necessary for sharing best practices and designing common policy instruments. The EU can support Moldova **in creating efficient protection mechanisms for the most vulnerable groups**. Implementing energy efficiency measures in buildings and industries can further reduce energy consumption, lower energy bills, and alleviate the burden on households and businesses.

**Targeted energy efficiency measures** must be prioritized, leveraging in full the available funding support from the EU and IFIs. Energy efficiency action plans at the local level need to be improved to attract investments for energy efficiency measures in the residential sector (including in multi-apartment residential buildings). Cities are best placed to identify which projects to prioritize and support, and the financial effort must be shared across all levels of government. More energy

efficiency can lead to reduced gas and electricity imports.

In addition, the process of market liberalization needs to accelerate and foster the emergence of effective competition to the benefit of consumers. Completing the **unbundling of state-owned utilities** and breaking regional monopolies, especially when it comes to gas DSOs, is crucial for facilitating the **entry of new market players** with more competitive price offers. It could also break the vicious cycle of political meddling in the day-to-day activities of state-owned energy companies, where low energy prices are used for gaining political capital, while at the same time fostering financial mismanagement practices.

### Towards a New Energy Governance Framework

Moldova's candidate status for EU integration and support from international financial institutions, presents **strategic opportunities for reform**. Moldova must focus on reducing Russia's influence on energy policy and regulation, ensuring politically independent regulation for improved energy security and market functionality, leading to enhanced socio-economic welfare.

From the perspective of energy security, it is of utmost importance for Moldova to fully leverage the ongoing process of EU integration. It will be fundamental for Moldova to maintain and **accelerate the pace of the ongoing process of implementation of EU energy and climate policy legislation** (acquis communautaire), associated energy market opening and institutional reforms. This process will be crucial for the ability of the country to invest in diversification of local and external energy supply, energy sector climate and economic sustainability, and in the mitigation of energy poverty. The EU and other international financial backers involved in the Moldovan energy sector have clearly declared that the process of implementation of the EU energy acquis will be a **precondition for their ongoing structural support**.

The political changes in Moldova after 2021 and its course for accelerated EU integration, coupled with the hard lessons learned in the height of the energy supply and price crisis in 2022, must provide an impetus for the

institutions governing the energy sector (in particular Ministry of Energy, ANRE, Energy Efficiency Agency) towards implementation in practice of the EU acquis by applying measures which directly benefit commercial stakeholders and consumers. The **regulatory authority** ANRE has a crucial role to play as the entity tasked with balancing energy affordability for consumers with the investment needs and financial sustainability requirements of commercial stakeholders.

The existing *Law on Natural Gas* and *Law on Electricity* introduced in 2016, and modelled on the acquis, must be bolstered by secondary measures, notably by the effective implementation of the provisions of the existing EU electricity and gas network codes on **access/capacity allocation, grid connection, cost reflective and investment-oriented tariffs**, TSO to TSO interoperability, and network balancing favoring equal market access for trading. Moldova must effectively integrate its energy market into the EU, by easing the access of non-Moldovan gas and electricity traders, which in the long-run will support both supply security and keeping a lid on price surges through competition between suppliers on the local energy market. The introduction of functioning digitalized platforms for energy trading and balancing along the models applied in EU countries (notably neighboring Romania) will further bolster energy market liberalization.

The energy crisis, the new impetus for EU integration gained with Moldova's candidate status and the ongoing support measures of the IFIs, must be seen as a **strategic opportunity for deep energy sector governance reform**. Among the **most important anti-corruption measures** to accelerate the EU integration process include:

- Limiting political interference in the management of state-owned energy companies;
- Increasing the financial transparency of regulatory decisions;
- Conducting detailed impact assessments of strategic decisions for infrastructure projects;
- Strengthening the professional capacity, the integrity and independence of the management boards of state-owned energy companies and the energy regulator;