

**Republic of Moldova**

**Fifth Progress Report  
under**

**Renewable Energy Directive 2009/28/EC  
as adapted by the**

**Ministerial Council Decision 2012/04/MC-EnC**

## 1. Sectorial and overall shares and actual consumption of energy from renewable sources in the preceding 2 years (Article 22 (1) a of Directive 2009/28/EC).

**Table 1:** The sectorial (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources<sup>1\*</sup>

	2021	2020
RES-H&C <sup>2</sup> (%)	37,01%	39,19%
RES-E <sup>3</sup> (%)	3,58%	3,14%
RES-T <sup>4</sup> (%)	0,02%	0,01%
Overall RES share <sup>5</sup> (%)	22,28%	23,57%
Of which from cooperation mechanism <sup>6</sup> (%)	0 %	0 %
Surplus for cooperation mechanism <sup>7</sup> (%)	0 %	0 %

Note: The National Bureau of Statistics of the Republic of Moldova has completed the new survey on energy consumption in households in 2022. Following the completion of the survey, the energy balance for the previous three years was revised. As a result, the renewable energy target has been reduced taking into account the updated energy balances. In 2020, the revised share of energy from renewable sources in gross final energy consumption is 23.57%, compared to the previous 25.06%, and we expect it to decrease further if the current trend continues..

**Table 1a:** Calculation table for the renewable energy contribution of each sector to final energy consumption (ktoe)<sup>8</sup>

	2021	2020
(A) Gross final consumption of RES for heating and cooling	628,97	596,75
(B) Gross final consumption of electricity from RES	14,58	11,89
(C) Gross final consumption of energy from RES in transport	0,12	0,09
(D) Gross total RES consumption <sup>9</sup>	643,67	608,73
(E) Transfer of RES to other Contracting Parties or Member States	-	-
(F) Transfer of RES from other Contracting Parties and 3rd countries	-	-
(G) RES consumption adjusted for target (D)-(E)+(F)	-	-

Note: Table 1 and 1a refer to the renewable energy consumption registered on the left bank of Dniester river which is reflected by National Bureau of Statistics

<sup>1</sup> Facilitates comparison with Table 3 and Table 4a of the NREAPs.

<sup>2</sup> Share of renewable energy in heating and cooling: gross final consumption of energy from renewable sources for heating and cooling (as defined in Articles 5(1)b) and 5(4) of Directive 2009/28/EC divided by gross final consumption of energy for heating and cooling. The same methodology as in Table 3 of NREAPs applies.

<sup>3</sup> Share of renewable energy in electricity: gross final consumption of electricity from renewable sources for electricity (as defined in Articles 5(1)a) and 5(3) of Directive 2009/28/EC divided by total gross final consumption of electricity. The same methodology as in Table 3 of NREAPs applies.

<sup>4</sup> Share of renewable energy in transport: final energy from renewable sources consumed in transport (cf. Article 5(1)c) and 5(5) of Directive 2009/28/EC divided by the consumption in transport of 1) petrol; 2) diesel; 3) biofuels used in road and rail transport and 4) electricity in land transport (as reflected in row 3 of Table 1). The same methodology as in Table 3 of NREAPs applies.

<sup>5</sup> Share of renewable energy in gross final energy consumption. The same methodology as in Table 3 of NREAPs applies.

<sup>6</sup> In percentage point of overall RES share.

<sup>7</sup> In percentage point of overall RES share.

<sup>8</sup> Facilitates comparison with Table 4a of the NREAPs

<sup>9</sup>According to Art.5(1)of Directive 2009/28/EC gas, electricity and hydrogen from renewable energy sources shall only be considered once. No double counting is allowed.

**Table 1.b:** Total actual contribution (installed capacity, gross electricity generation) from each renewable energy technology in the Republic of Moldova to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity<sup>10</sup>

	2021		2020	
	MW	GWh	MW	GWh
Hydro <sup>11</sup> :	<b>16,3</b>	<b>67,8</b>	<b>16,0</b>	<b>46,9</b>
non pumped	16,3	67,8	16,0	46,9
<1MW	0,3	0,04	-	-
1MW–10 MW			-	-
>10MW	16	67,8	16,0	46,9
pumped	0	-	-	-
mixed <sup>12</sup>	0	-	-	-
Geothermal	<b>0</b>	-	-	-
Solar:	<b>14,5</b>	<b>5,8</b>	<b>5,2</b>	<b>1,4</b>
photovoltaic	14,5	5,8	5,2	1,4
concentrated solar power	0	-	-	-
Tide, wave, ocean	0	-	-	-
Wind:	<b>73,4</b>	<b>73,1</b>	<b>45,1</b>	<b>50,1</b>
onshore	73,4	73,1	45,1	50,1
offshore	0	-	-	-
Biomass <sup>13</sup> :	<b>6,35</b>	<b>32,2</b>	<b>6,3</b>	<b>27,8</b>
solid biomass			-	-
biogas	6,3	32,2	6,3	27,8
bioliquids	0	-	-	-
<b>TOTAL</b>	<b>110,5</b>	<b>178,9</b>	<b>72,7</b>	<b>126,2</b>
of which in CHP	6,3	32,2	6,3	27,8

**Table 1c:** Total actual contribution (final energy consumption<sup>14</sup>) from each renewable energy technology in the Republic of Moldova to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling (ktoe)<sup>15</sup>

	2021	2020
Geothermal (excluding low temperature geothermal heat in heat pump applications)	-	-
Solar	-	-
Biomass <sup>16</sup> :	-	-
solid biomass	628,97	596,75

<sup>10</sup> Facilitates comparison with Table 10a of the NREAPs.

<sup>11</sup> Normalised in accordance with Directive 2009/28/EC and Eurostat methodology.

<sup>12</sup> In accordance with new Eurostat methodology.

<sup>13</sup> Take into account only those complying with applicable sustainability criteria, cf. Article 5(1) of Directive 2009/28/EC last subparagraph.

<sup>14</sup> Direct use and district heat as defined in Article 5.4 of Directive 2009/28/EC.

<sup>15</sup> Facilitates comparison with Table 11 of the NREAPs.

<sup>16</sup> Take into account only those complying with applicable sustainability criteria, cf. Article 5(1) last subparagraph of Directive 2009/28/EC.

biogas	-	-
bioliquids	-	-
Renewable energy from heat pumps: - of which aerothermal - of which geothermal - of which hydrothermal	-	-
<b>TOTAL</b>	<b>628,97</b>	<b>596,75</b>
Of which DH <sup>17</sup>	-	-
Of which biomass in households <sup>18</sup>	-	-

**Table 1d:** Total actual contribution from each renewable energy technology in the Republic of Moldova to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport sector (ktoe)<sup>19, 20</sup>

	2021	2020
Bioethanol/ bio-ETBE	-	-
Of which Biofuels <sup>21</sup> Article 21.2	-	-
Of which imported <sup>22</sup>	-	-
Biodiesel	-	-
Of which Biofuels <sup>23</sup> Article 21.2	-	-
Of which imported <sup>24</sup>	-	-
Hydrogen from renewables	-	-
Renewable electricity	-	-
Of which road transport	-	-
Of which non-road transport	-	-
Others (as biogas, vegetable oils, etc.) – please specify	-	-
Of which Biofuels <sup>25</sup> Article 21.2	-	-
<b>TOTAL</b>	<b>-</b>	<b>-</b>

**2. Measures taken in the preceding 2 years and/or planned at national level to promote the growth of energy from renewable sources taking into account the indicative trajectory for achieving the national RES targets as outlined in your National Renewable Energy Action Plan. (Article 22(1)a) of Directive 2009/28/EC)**

**Table 2:** Overview of all policies and measures

Name and reference of the measure	Type of measure	Expected result	Targeted group and or activity	Existing or planned	Start and end dates of the measure
<i>Laws, strategies, plans and programs</i>					
1. Revision of the Energy Strategy of the Republic of Moldova until 2030 (GD no. 102 of 05.02.2013)	Regulatory /strategic planning/	Creation of framework and stable conditions for RES development	Energy stakeholders	Existing (planned)	2013-2030 (2022)

<sup>17</sup> District heating and / or cooling from total renewable heating and cooling consumption (RES- DH).

<sup>18</sup> From the total renewable heating and cooling consumption.

<sup>19</sup> For biofuels take into account only those compliant with the sustainability criteria, cf. Article 5(1) last subparagraph.

<sup>20</sup> Facilitates comparison with Table 12 of the NREAPs.

<sup>21</sup> Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

<sup>22</sup> From the whole amount of bioethanol / bio-ETBE.

<sup>23</sup> Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

<sup>24</sup> From the whole amount of biodiesel.

<sup>25</sup> Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

2. Elaboration of the 2030 National Energy and Climate Plan	Regulatory /strategic planning/	Planning of activities	Government RES producers Energy stakeholders	Planned	2023-2030
3. Revision of the Law on the promotion of the use of energy from renewable sources	Regulatory	Creation of framework for RES development to achieve the national target	RES Producers TSO DSO Electricity/ Heating/fuel suppliers	Planned	2021-2022
4. Revision of the Regulation on tendering procedures for RES producers (Government Decision no. 690 of 11.07.2018)	Regulatory	Creation the legal framework and tendering criteria for RES producers	RES Producers Government NARE	Planned	2023
5. Revision of the Regulation on confirmation of the status of eligible produces National Energy Regulatory Agency Decision no. 251 of 05.07.2019	Regulatory	Creation of the legal framework and criteria for small RES producers	RES Producers Government NARE	Planned	2023
6. Regulation on sustainability criteria for biofuels, and the procedure for verifying compliance with sustainability criteria of biofuels	Regulatory	Creation the legal framework, sustainability criteria for the promotion and development the biofuels market	Biofuels producers Government End users	Planned	2023-2024
7. Revision of the Law on electricity (law no. 107 of 27.05.2016)	Regulatory	Creation of framework for RES promotion and priority dispatch	RES producers TSO DSO Electricity suppliers	Planned	2023
8. Revision of Regulation on construction and reconstruction of power plants (Government Decision no. 436 of 26.04.2004)	Regulatory	Creation of framework for deployment of power plants including RES,	RES producers Electricity Producers	Planned	2023
9. National Program on development of biomass sector	Policy	Program	Biomass and CHP investors Local authorities Government End users	Planned	2022>
<i>RES development and support schemes</i>					
10. Policy and support schemes for promoting use	Regulatory Financial	Ensuring the increase of	RES producers	Existing	March 2018 ->

of RES in electricity production (green tariffs, tendering of the RES capacities, net metering concept)		share of annual generation of power from RES	TSO DSO Electricity suppliers		
11. Fiscal and customs supporting measures	Financial	Fiscal and customs exempts	RES producers Equipment installers	Existing and planned	2018->
12. Decision on approving the limits of capacity, maximum quotas and category capacities in the field of electrical energy (Government Decision no. 401 of 08.12.2021)	Regulatory	Creation of framework for RES Development to achieve the sectorial target Ensuring the increase of share of annual generation of power from RES	RES producers Electricity Producers	Existing	2021->
13. Decision regarding fixed tariffs and ceiling prices for electricity produced from renewable energy sources by producers who will obtain eligible producer status in 2023. (National Energy Regulatory Agency Decision no. 84/2023)	Regulatory Financial	Ensuring the increase of share of annual generation of power from RES	RES producers Electricity Producers	Existing and planned	2023->
<i>Information dissemination</i>					
14. Dissemination of information, Informational support	Soft	Dissemination of information Informational support	RES producers Biofuels producers Local public authorities RES investors End users	Existing and planned	2023- >
15. Development and implementation of a communication Program	Soft	Efficient tools for information dissemination for target groups Message adjustment for each target group Budget planning for suggested measures Behavioural change	RES producers Biofuels producers Local public authorities RES investors End users	planned	2023- >

16. Communication platforms (EEA website, social networks, etc.)	Soft	Dissemination of information Behavioural change	RES producers Biofuels producers Local public authorities RES investors End users	Existing and planned	2023- >
17. Organization of events/ conferences	Soft	Dissemination of information Behavioural change	RES producers Biofuels producers Local public authorities RES investors End users	Existing and planned	2023- >
18. Public awareness campaigns on use of RES organized by EEA	Soft	Information of target groups Behavioural change	RES producers Biofuels producers Local public authorities RES investors End users	Existing and planned	2023- >
19. Training courses for local public authorities, regional development agencies and energy managers	Soft	Institutional capacities development	Local public authorities Regional development agencies Energy managers	Existing and planned	2021- >

**2.a Description of the progress made in evaluating and improving administrative procedures to remove regulatory and non-regulatory barriers to the development of renewable energy. (Article 22(1)e) of Directive 2009/28/EC).**

In order to reach the national target on renewable energy, the Government of the Republic of Moldova relies on the support schemes provided by the Law No. 10/ 2016 on the promotion of the use of energy from renewable sources.

The investor's society is encouraged to develop renewable energy sources projects through a set of support mechanism, established by the above-mentioned Law.

Small-scale projects are supported by fixed tariffs (classical feed-in tariffs) while big-scale projects have to compete for the state support through tenders/ auctions. In this sense, the Government has approved the necessary sub-laws, as follows:

1. GD no. 690/2018 on approving the regulation on auctions organization for providing the status of eligible producer;
2. GD no. 689/2018 on approving the capacity limits, maximum quotas and capacity categories in the field of power generation from renewable energy sources till 2020 (a new regulation on RE capacities allocation shall be approved by the Government, which will target a new horizon of time);
3. New GD no. 401/2021 on approving the capacity limits, maximum quotas and capacity categories in the field of power generation from renewable energy sources till 2025 (a new regulation on RE capacities allocation shall be approved by the Government, which will target a new horizon of time);
4. GD no. 885/2017 on assignment of the electricity central supplier, reassigned in 2020, amended by HG no. 986 of 22.12.20, MO359/24.12.20 art.1104; in force 24.12.20;

5. HANRE 251/2019 on approving the regulation confirmation of the eligible producer status;
6. Decision regarding fixed tariffs and ceiling prices for electricity produced from renewable energy sources by producers who will obtain eligible producer status in 2023.

Also, in order to create the whole framework needed for the renewable energy sector deployment, or prolong its application/ validity, a number of regulations shall be drafted and/ or approved:

1. Regulation on sustainability criteria for biofuels, and the procedure for verifying compliance with sustainability criteria of biofuels;

However, the major concern of the investors' community is the timeline for the organisations of auctions for providing the status of eligible producer, which is strictly dependent on the progress made on adopting the draft law on amending the Law no. 10/2016, and approval of the tender documentation.

Announcement of tenders is planned in the middle of the year 2023 (as very preliminary plans), while auctioning is scheduled for the end of the year 2023.

In order to avoid the Investors confusion because of too many interrelated laws:

- on establishing the business – at least 5 important pieces of legislation,
- on registration of the property rights – at least 4 important laws,
- on urban planning and design documentation – more than 10 interrelated laws and decisions, including those approved by the Regulator,
- on construction – at least 7 laws and sub-laws,

the Government decided on appointing the Energy Efficiency Agency (under the Ministry of Energy, responsible for EE and RES policies implementation) with the attribution of informing the investors on EE and RES related issues, in order to provide informational support to local or international investors community. A matrix of the main acts the investor's community has to deal with is presented below.

<b>Business establishment</b>	<ol style="list-style-type: none"> <li>1. Law No. 845 as of 03.01.1992 on entrepreneurship and enterprises (Journal of the Parliament No. 2 as of 28.02.1994);</li> <li>2. Civil Code of the Republic of Moldova No. 1107 as of 06.06.2002 (Official Journal of RM No. 82-86 as of 22.06.2002);</li> <li>3. Law No. 220 as of 19.10.2007 on state registration of legal entities and private entrepreneurs (Official Journal of RM No. 184-187 as of 30.11.2007, in force since 30.05.2008);</li> <li>4. Law No. 1134 as of 02.04.1997 on joint-stock companies (Official Journal of RM No. 38-39 as of 12.06.1997, in force since 12.06.1997);</li> <li>5. Law No. 135 as of 14.06.2007 on limited liability companies (Official Journal of RM No. 127-130 as of 17.08.2007, in force since 17.11.2007).</li> </ol>
<b>Registration of the property rights</b>	<ol style="list-style-type: none"> <li>1. Civil Code of the Republic of Moldova No. 1107 as of 06.06.2002 (Official Journal of RM No. 82-86 as of 22.06.2002);</li> <li>2. Land Code of the Republic of Moldova No. 828 as of 25.12.1991 (Official Journal of RM No. 107 as of 04.09.2001);</li> <li>3. Law No. 1308 as of 25.07.1997 on land regulated price and sale mode (Official Journal of RM No. 147-149 as of 06.12.2001);</li> <li>4. Law No. 1543 as of 25.02.1998 on immovable assets cadaster (Official Journal of RM No. 44-46 as of 21.05.1998)</li> <li>5. Law No. 1515 as of 16.06.1993 on environment protection (Journal of the Parliament No. 10 as of 01.10.1993);</li> </ol>



	<ol style="list-style-type: none"> <li>6. Government Decision No. 1170 as of 25.10.2016 on approval of the Regulation on transmission, change of destination and exchange of land (Official Journal of the RM No. 369-378 as of 28.10.2016).</li> </ol>
<b>Urban planning and design documentation</b>	<ol style="list-style-type: none"> <li>1. Law No. 163 as of 09.07.2010 on authorization for execution of construction works (Official Journal of the RM No. 155-158 as of 03.09.2010);</li> <li>2. Law No. 1513 as of 16.06.1993 on sanitary and epidemiological protection of population (Official Journal of the RM No. 009 as of 30.10.1993);</li> <li>3. Law No. 1515 as of 16.06.1993 on environment protection (Journal of the Parliament No. 10 as of 01.10.1993);</li> <li>4. Law No. 93 as of 05.04.2007 on Civil Protection and Emergency Situations Service (Official Journal of the RM No. 78-81 as of 08.06.2007, in force since 08.09.2007);</li> <li>5. Law No. 851 as of 29.05.1996 on environmental expertise and environmental impact assessment (Journal of the Parliament No. 52-53 as of 08.08.1996</li> <li>6. Law No. 86 as of 29-05-2014 on the environmental impact assessment (Official Journal of the RM no. 174-177 as of 04-07-2014)</li> <li>7. Law No. 778 as of 27.12.2001 on geodesy, cartography and geoinformatics (Official Journal of the RM No. 29-31 as of 28.02.2002);</li> <li>8. ANRE Decision No. 266 as of 20.11.2007 on approval of Electrical Transmission Networks Technical Regulations (Official Journal of the RM No. 188-191 as of 07.12.2007);</li> <li>9. ANRE Decision No. Nr. 267 as of 20.11.2007 on approval of Electrical Distribution Networks Technical Regulations (Official Journal of the RM No. 188-191 as of 07.12.2007);</li> <li>10. ANRE Decision No. 423 as of 22.11.2019 on approval of the power network Code (Official Journal of the RM No. 14-23 as of 24.01.2020);</li> <li>11. ANRE Decision No. 420 as of 22.11.2019 on approval of the Code of natural gas networks (Official Journal of the RM No. 14-23 as of 24.01.2020).</li> </ol>
<b>Construction and Commissioning</b>	<ol style="list-style-type: none"> <li>1. Law No. 107 as of 27.05.2016 on electricity (Official Journal of the RM No. 193-203 as of 08.07.2016);</li> <li>2. Law No. 721 as of 02.02.1996 on quality of constructions (Official Journal of the RM No. 25 as of 25.04.1996</li> <li>3. Law No. 93 as of 05.04.2007 on Civil Protection and Emergency Situations Service (Official Journal of the RM No. 78-81 as of 08.06.2007, in force since 08.09.2007);</li> <li>4. Law No. 116 as of 18.05.2012 on industrial security of industrial hazardous facilities (Official Journal of the RM No. 135-141 as of 06.07.2012, to enter in force on 06.01.2013);</li> <li>5. Government Decision No. 436 as of 26.04.2004 on approval of the Regulation on construction/reconstruction of power plants (Official Journal of the RM No. 073 as of 07.05.2004).</li> <li>6. Government Decision No. 361 as of 25.06.1996 on ensuring the quality of constructions (Official Journal of the RM No. 52-53 as of 08.08.1996).</li> <li>7. Government Decision No. 285 as of 23.05.1996 on approval of the Regulation for acceptance of constructions and related facilities (Official Journal of the RM No. 42 as of 28.06.1996);</li> <li>8. ANRE Decision No. 266 as of 20.11.2007 on approval of Electrical Transmission Networks Technical Regulations (Official Journal of the RM No. 188-191 as of 07.12.2007);</li> <li>9. ANRE Decision No. 267 as of 20.11.2007 on approval of Electrical Distribution Networks Technical Regulations (Official Journal of the RM No. 188-191 as of 07.12.2007).</li> <li>10. ANRE Decision No. 423 as of 22.11.2019 on approval of the power network Code (Official Journal of the RM No. 14-23 as of 24.01.2020);</li> </ol>

In respect to the Authorization process, the Law 107/2016 stipulates that the Investors willing to invest in a PP with a capacity bigger than 20 MW shall obtain the Government decision/ approval on that. Therefore, the Ministry of energy (the activity was postpone until 2023) to revise of the regulation on construction and reconstruction of power plants,

by introducing a set of more comprehensive and transparent criteria's for the investors interested in the construction and reconstruction of power plants.

Referring to the Construction side, some of the existing legal and, especially, administrative bottlenecks are to be overcome by the new sub-laws or those to be revised. Also, a new Urban Planning and Construction Code is to be adopted in order to simplify the construction procedures<sup>26</sup>.

The promotion of the regulations for the promotion of biofuels domain is delayed due to the need of transposition of the revised renewable energy directive 2018/2001/EU (RED II) which will also update the sustainability criteria for biofuels. Moreover, the criteria for second generation biofuels should also be considered when preparing the required sub-laws.

**2.b Description of the measures in ensuring the transmission and distribution of electricity produced from renewable energy sources and in improving the framework or rules for bearing and sharing of costs related to grid connections and grid reinforcements. (Article 22(1)f) of Directive 2009/28/EC).**

The Law no. 10 on promotion the use of renewable energy, dated with year 2016 in force from March 2018, which transposes the EU 28/2009/CE Directive, promotes as principles:

- the non-discriminatory connection to the electricity grids and district heating networks, as well as of the renewable fuel through access to the transportation and distribution networks;
- obligatory acquisition by the suppliers of a pre-determined share (depending on their position on the market) of electricity produced from those sources.

Moreover, the law on promoting the use of RE (law 10/2016), the law on electricity (107/2016), clearly stipulate on the topic of access to the transport and/ or distribution networks „The system operator is obliged to provide access to electricity transmission networks and distribution to all system users, actual or potential, transparently, objectively and without discrimination, taking into account the priority of dispatching the renewable sources/ power plants and urban CHPs.”.

According to the provisions of Law on electricity and ANRE Decision on approval of Technical norms for electric transmission networks (Chapter IV), the transmission network and system operator is responsible for the extension and development of the electricity transmission network. The TSO must develop prospective plans for power transmission network, taking into consideration the current and future demand and production of electricity. According to this plan, the transmission network and system operator must ensure the development (extension, capacity strengthening) of the transmission network in order to be able to transport all the electricity that was imported, exported or locally produced.

All expenses related to network extension should be fully covered by the transmission network and system operator. These expenses will be taken into account when

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<sup>26</sup> The 2020 edition of the World Bank Doing Business covers the construction sector by „Dealing with Construction Permits” component and offers, in this sense, a detailed summary of the procedures, time and costs to build a specific object (a warehouse) for 190 economies, including for the Republic of Moldova. This analysis provides info about obtaining necessary licenses and permits, completing required notifications and inspections and obtaining utility connections, and ranks Moldova on the 156<sup>th</sup> position out of 190

establishing tariffs for transmission of electricity if undertaken in compliance with license conditions, tariff methodologies and the *Regulation on planning, approval and investments in power sector*, developed and approved by ANRE (Article 34, para (1) of the Law No. 107 din 27.05.2016 on electricity).

The procedures for the development of the distribution network in terms of connection and planning are described in the Technical norms for electric distribution networks, approved by ANRE Decision and are similar to the network development procedure for transmission networks. The development plan for the distribution network, developed by the distribution network operator, must be strongly linked to the plans developed by transmission network and system operator. All expenses related to network extension should be fully covered by the distribution network operator. These expenses will be taken into account when establishing tariffs for distribution of electricity if undertaken in compliance with license conditions, tariff methodologies and the regulation developed and approved by ANRE.

Regarding to the physical connections to the grid, related costs to the connection are born by the applicant for the technical conditions. To be mentioned that according to the new Law on electricity a new *Regulation on connection to the grid and transport and distribution services* was elaborated and approved by ANRE (HANRE 168/2019) which stipulate the terms and conditions for connection, disconnection, re-connection to the grid, including for power plants.

Worth mentioning that the investor that requires from the market operator the grid connection permit for a power plant with a capacity equal or bigger than 1 MW, according to the Regulation 168/2019, art. 15<sup>1</sup>-15<sup>4</sup>, shall present to the system operator a „study of solutions” (i.e. solutions for the connection of the renewable energy power plant to the existing network).

Referring to the cost of connection, according to the provision under art. 47 of the Law 107/2016, the TSO is in charge of assessing the cost for the most proper and convenient connection providing it to the applicant for technical conditions.

### **3. Description of the support schemes and other measures currently in place that are applied to promote energy from renewable sources and report on any developments in the measures used with respect to those set out in your National Renewable Energy Action Plan. (Article 22(1)b) of Directive 2009/28/EC).**

The Law on the promotion of the use from renewable sources establishes many supporting mechanisms, for different type of beneficiaries/ projects, as follows:

- |              |   |
|--------------|---|
| fixed prices | <ul style="list-style-type: none"><li>• for producers who holds or will hold power plants with a power greater than the cumulative capacity limit set by government;</li><li>• refers to the eligible producers determined/ identified in frame of a tendering procedure, according to art. 35 of the Law 10/2016 and Regulation on tendering procedures for RES producers;</li></ul> |
|--------------|---|

fixed tariffs	<ul style="list-style-type: none"> <li>for producers who holds or will hold power plants with cumulative power capacity not exceeding the limit set by the government, but not less than 10 kW;</li> <li>refers to the producers with the status of eligible producer confirmed according to art. 36 of the Law 10/2016 and Regulation on confirmation of the status of eligible producer;</li> </ul>
net metering	<ul style="list-style-type: none"> <li>for small RES investors oriented on covering the own electricity consumption;</li> <li>a number of eligibility criteria are established, according to the art. 39 of the Law 10/2016;</li> </ul>
/unregulated market/	<ul style="list-style-type: none"> <li>any other kind of legal relationships between a project developer and Electricity Supplier is allowed, (besides above mentioned) to be ruled in accordance with the principles and conditions negotiated directly by the those two parties (protection facilities should be installed obligatory).</li> </ul>

**Table 3:** Support schemes for renewable energy

RES support schemes - year 2021		Per unit support	Total (M€)	Per unit support	Total (M€)	Per unit support	Total (M€)	Per unit support	Total (M€)	
		wind		solar		hydro		other		
Instrument	Obligation/quota (%)	-	-	-	-	-	-	-	-	
	Penalty/Buy out option/ Buy out price (€/unit)	-	-	-	-	-	-	-	-	
	Average certificate price	-	-	-	-	-	-	-	-	
	Tax exemption/ refund	Customs duties	8%	-	0%	-	-	-	-	-
		VAT for installations	0%	-	0%	-	20% <sup>1</sup>	-	-	-
		VAT for constr. works	0% <sup>2</sup>	-	0	-	20%	-	-	-
	Investment subsidies (capital grants or loans) (€/unit)		-	-	-	-	-	-	-	-
	Production incentives	Feed-in tariff	√ <sup>3</sup>	5,9	√ <sup>3</sup>	0,7	√ <sup>3</sup>	0,03	√ <sup>3</sup>	6,63
		Feed-in premiums	-	-	-	-	-	-	-	-
		Tendering	-	-	-	-	-	-	-	-
Total annual estimated support in the electricity sector		-	5,9	-	0,7	-	0,03	-	6,63	
Total annual estimated support in the heating sector		-	-	-	-	-	-	-	-	
Total annual estimated support in the transport sector		-	-	-	-	-	-	-	-	

Note: 1 – Hydraulic turbines (Ro: turbine hidraulice) with a maximum capacity of 1.000 kW are exempted of VAT (Fiscal Code of the Republic of Moldova No.1163 as of 24.04.1997, art. 103 Exemption of VAT; approved in 2016)

2 – Wind turbines (Ro: părțile pentru grupurile electrogene) are exempted of VAT (Fiscal Code of the Republic of Moldova No.1163 as of 24.04.1997, art. 103 Exemption of VAT; approved in 2016))

3 – Available for producers who holds or will hold power plants with cumulative power capacity not exceeding the limit set by the government, but not less than 10 kW (applied since March, 2018). Table 3 shows the amount transferred to RES-E producers as state support based on the Law 160/2007 on renewable energy

4 – Available for producers who holds or will hold power plants with a power greater than the cumulative capacity limit set by government (to be applies since March, 2018)

### 3.1. Information on how supported electricity is allocated to final customers for purposes of Article 3 (6) of Directive 2003/54/EC. (Article 22(1)b) of Directive 2009/28/EC).

According to the existing Law on the promotion of the use of energy from renewable sources (no. 10 as of 26.02.2016) and Law on electricity (no. 107 as of 27.05.2016) the Central Supplier is obliged to buy the whole amount of electricity generated by eligible producers from renewable sources and from producers of electricity from renewable sources for which tariffs have been approved until the entry into force of law 10/2016 (until the end of the period for 15 years from the date of approval of the tariff), and sell it to the electricity suppliers, in volumes and at regulated tariffs established by the Regulator according to the provisions of the Law 107/2016 and Electricity market rules, approved by ANRE (HANRE no. 283 of 07.08.2020).

**4. Information on how, where applicable, the support schemes have been structured to take into account RES applications that give additional benefits, but may also have higher costs, including biofuels made from wastes, residues, non-food cellulosic material, and ligno-cellulosic material?) (Article 22 (1)c of Directive 2009/28/EC).**

According to the Law on the promotion the use of energy from renewable sources (no. 10 as of 26.02.2016), no specific support is to be provided to RES technologies which generate additional benefits. The only way to promote those technologies (less- or non-intermittent installations, for instance) is the tariffs/ costs policy to be promoted by ANRE and Government and levels of the approved tariffs. According to art. 14, (2), when establishing the tariff for renewable energy, ANRE takes into consideration the lifetime of the power plant, investment related to its construction, operational and maintenance costs, investments rate of return and the amount of energy to be produced over the time – approach which allows supporting any kind of project/ field.

It is worth mentioning that the Law 10/2016 envisages a special treatment for biofuels made from wastes, residues, non-food cellulosic material, and ligno-cellulosic material and „green” electricity used by road vehicles, when calculating the shares of renewable energy in gross final energy consumption. In this sense, volumes of energy made from waste and electricity used by electric cars are multiplied with 2 and 2,5, respectively, when determining the shares of renewable energy in the electrical and transport fields.

**5. Information on the functioning of the system of guarantees of origin for electricity and heating and cooling from RES, and the measures taken to ensure reliability and protection against fraud of the system. (Article 22(1)d of Directive 2009/28/EC).**

The existing Law on the promotion the use of energy from renewable sources (no. 10 as of 26.02.2016) provides the primary legal framework for the Guarantee of Origin /GoO/ system. According to the law, electricity produced from RES is commercialized on a contractual basis at tariffs approved/ established by ANRE and on the basis of the guarantee of origin, issued by the Central Electricity Supplier. The procedures related to GoO issuance and use, as well as the structure of a GoO is established in the Regulation approved by ANRE. The GoOs are issued and used in accordance with the Regulation on guarantees of origin for electricity produced from renewable energy sources, approved by ANRE in 2017 (ANRE Resolution No 376 of 28.09.2017).

According to the provisions of the Law and Regulation mentioned above, the guarantees of origin for the electricity produced from renewable energy sources are issued by the central electricity supplier at the request of eligible RES-E producer. The guarantee of origin for each MWh produced issued by the CES contains at least the following information:

- date and country of issue, issuer and unique identification number;

- the renewable energy source from which the electricity was produced and the time it was produced (start and end date of production);
- the name / name of the E-RES producer to which the guarantee of origin has been issued;
- location, type and installed capacity of the power plant that produced the respective electricity amount;
- whether and to what extent the E-RES producer has benefited from a support scheme or other support measure for the production of a particular electricity unit and the type of support scheme or support measure concerned;
- the date on which the respective power plant was put into operation;
- share of E-RES for hybrid power plants.

ANRE keeps records and supervises the issuance, transfer, withdrawal and usage of electronic guarantees of origin, according to the Regulation approved in this regard.

The draft law amending the Law Law 10/2016 provides that ANRE will replace the CES on issuing the GoOs.

## 6. Description of the developments in the preceding 2 years in the availability and use of biomass resources for energy purposes. (Article 22(1)g of Directive 2009/28/EC).

**Table 4:** Biomass supply for energy use

	Amount of domestic raw material (*)		Primary energy in domestic raw material (ktoe)		Amount of imported raw material from EU (*)		Primary energy in amount of imported raw material from EU (ktoe)		Amount of imported raw material from non EU(*)		Primary energy in amount of imported raw material from non EU (ktoe)	
	2021	2020	2021	2020	2019	2018	2019	2018	2019	2018	2019	2018
<b>Biomass supply for heating and electricity:</b>												
Direct supply of wood biomass from forests and other wooded land energy generation (fellings etc.)** [thous.m <sup>3</sup> ]	2 658	3 214	502	607			-	-	-	-	-	-
Indirect supply of wood biomass (residues and co-products from wood industry etc.)** [thous.tonnes]	324	90	58	16	-	-	-	-	-	-	-	-
Energy crops (willows) [thous.m <sup>3</sup> ]	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural by-products / processed residues and fishery by-products ** [thous.tonnes]	3	82	1	28	-	-	-	-	-	-	-	-
Biomass from waste (municipal, industrial etc.) **	-	-	-	-	-	-	-	-	-	-	-	-
Others (biogas) Ml. m <sup>3</sup>	2	19	1	8	-	-	-	-	-	-	-	-
<b>Biomass supply for transport:</b>												
Common arable crops for	-	-	-	-	-	-	-	-	-	-	-	-

biofuels (please specify main types)												
Energy crops (grasses, etc.) and short rotation trees for biofuels (please specify main types)	-	-	-	-	-	-	-	-	-	-	-	-
Others (please specify)	-	-	-	-	-	-	-	-	-	-	-	-

\* Amount of raw material if possible in **m<sup>3</sup>** for biomass from forestry and in **tonnes** for biomass from agriculture and fishery and biomass from waste

\*\* The definition of this biomass category should be understood in line with table 7 of part 4.6.1 of Commission Decision C (2009) 5174 final establishing a template for National Renewable Energy Action Plans under Directive 2009/28/EC

**Table 4a.** Current domestic agricultural land use for production of crops dedicated to energy production (ha)

Land use		Surface (ha)		
		2021	2020	2019
1. Land used for common arable crops (wheat, sugar beet etc.) and oil seeds (rapeseed, sunflower etc.)		1512,7 kha	1488,6 kha	1457 kha
2. Land used for short rotation trees ( <u>willows</u> , poplars).	willows	cca. 52 ha	cca. 52 ha	52 ha
3. Land used for other energy crops such as grasses (reed canary grass, switch grass, * <u>Miscanthus</u> ), sorghum.			cca. 2 haa*	cca. 2 ha

\* Testing plots of the Institute of Genetics, Physiology and Plant Protection

Note: Above mentioned information is being assessed by Energy Efficiency Agency and isn't included in the official country's statistics yet

\* Testing plots of the Institute of Genetics, Physiology and Plant Protection

**7. Information on any changes in commodity prices and land use within Republic of Moldova in the preceding 2 years associated with increased use of biomass and other forms of energy from renewable sources. References to relevant documentation on these impacts. (Article 22(1) h) of Directive 2009/28/EC).**

Raw material	m.u.	2020	2021	2020	2021
		EUR			
Straw (baled)	t.	1050	1050	55	50
Straw	t.	800	800	40	40
Sunflower husks	t.	1750-2250	1750-2250	90-110	90-110
Sawdust (wood dust)	t.	1000-1500	1000-1500	50 -75	50 -75
Wood fuel	m <sup>3</sup>	850-1000	600-700	30-50	30-50

Source: (market survey)

**8. Description of the development and share of biofuels made from wastes, residues, non-food cellulosic material, and lingo cellulosic material. (Article 22(1) i) of Directive 2009/28/EC).**

Because of missing secondary legislation on biofuels, including the related provision with fiscal connotations, the sector did not develop at all. To be mentioned that all missing elements – sub-laws, standards, changes to the fiscal treatment of biofuels, are to be approached after the promotion of the regulation on sustainability criteria for biofuels.

To be mentioned that, the first version of the regulation was drafted by the Ministry of Economy and Infrastructure with the support of the Technical Assistance project „STARS”, funded by EU. However, the promotion of the regulations is delayed due to the need of transposition of the revised renewable energy directive 2018/2001/EU, which will also update the sustainability criteria for biofuels, and should also consider the second-generation biofuels criteria.

**Table 5:** Production and consumption of Art.21(2) biofuels (ktoe)

Article 21(2) biofuels <sup>27</sup>	2019	2018
Production	0	0
Consumption	0	0
Total production Art.21.2.biofuels	0	0
Total consumption Art.21.2. biofuels	0	0
% share of 21.2. fuels from total RES-T	0	0

**9. Information on the estimated impacts of the production of biofuels and bioliquids on biodiversity, water resources, water quality and soil quality within the Republic of Moldova in the preceding 2 years.**

Taking into account the actual development of the biofuels sector, the impacts of the production of those on biodiversity, water resources, water quality and soil quality were not monitored and registered.

**10. Please estimate the net greenhouse gas emission savings due to the use of energy from renewable sources (Article 22 (1) k) of Directive 2009/28/EC).**

**Table 6:** Estimated GHG emission savings from the use of renewable energy (t CO<sub>2</sub>eq)

Environmental aspects	2021	2020
<b>Total estimated net GHG emission saving from using renewable energy<sup>28</sup></b>	<b>2.214.123</b>	<b>2.089.778</b>
- Estimated net GHG saving from the use of renewable electricity	64.194	52.367
- Estimated net GHG saving from the use of renewable energy in heating and cooling	2.134.955	2.025.590
- Estimated net GHG saving from the use of renewable energy in transport (road electric transport)	14.973	11.821

**11. Report on (for the preceding 2 years) and estimate the excess/deficit production of energy from renewable sources compared to the indicative trajectory which could be transferred to/imported from other Contracting Parties, Member States and/or third countries, as well as estimated potential for joint projects until 2020. (Article 22 (1) l, m) of Directive 2009/28/EC).**

According to the Government vision expressed via NREAP 2013-2020 provisions, the state authorities expect that the whole amount of biofuels needed to reach the national target in transport sector is going to be covered by imported fuels.

<sup>27</sup> Biofuels made from wastes, residues, non-food cellulosic material, and lignocellulosic material.

<sup>28</sup> The contribution of gas, electricity and hydrogen from renewable energy sources should be reported depending on the final use (electricity, heating and cooling or transport) and only be counted once towards the total estimated net GHG savings.



The needed legal framework for ensuring the market deployment will be created but, reliance on locally produced biofuels will depend on the costs of the production, on its competitiveness against imported resources.

**Table 7:** Actual and estimated excess and/or deficit (-) production of renewable energy compared to the indicative trajectory which could be transferred to/from other Contracting Parties, Member States and/or third countries in the Republic of Moldova (ktoe)

	2014	2015	2016	2017	2018	2019	2020
Estimated <u>excess</u> production /BaU scenario/	274	258	297	326	340	196	363
Estimated <u>excess</u> production /energy efficiency scenario/	283	270	311	343	360	218	399

All the figures above (including those presented in the IV<sup>rd</sup> report) were recalculated according to the last available forecasts of the primary and final energy consumption until 2020 (provided by the Law 139/2018 on energy efficiency).

#### 11.1. Details of statistical transfers, joint projects and joint support scheme decision rules.

*Not applicable yet.*

#### 12. Information on how the share for biodegradable waste in waste used for producing energy has been estimated, and what steps have been taken to improve and verify such estimates. (Article 22(1)(n) of Directive 2009/28/EC).

*Not applicable in the case of the Republic of Moldova.*