

Republic of Moldova

Third 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 sources¹

	2017	2016
RES-H&C ² (%)	46,09%	45,48%
RES-E ³ (%)	2,16%	2,04%
RES-T ⁴ (%)	0,31%	0,23%
Overall RES share ⁵ (%)	27,83 %	26,85%
Of which from cooperation mechanism ⁶ (%)	0 %	0 %
Surplus for cooperation mechanism ⁷ (%)	0 %	0 %

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

	2017	2016
(A) Gross final consumption of RES for heating and cooling	751,5	686,2
(B) Gross final consumption of electricity from RES	7,9	7,1
(C) Gross final consumption of energy from RES in transport	2,0	1,5
(D) Gross total RES consumption ⁹	759,5	693,3
(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

¹ Facilitates comparison with Table 3 and Table 4a of the NREAPs.

² 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.

³ 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.

⁴ 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.

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

⁶ In percentage point of overall RES share.

⁷ In percentage point of overall RES share.

⁸ Facilitates comparison with Table 4a of the NREAPs

⁹ 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 electricity¹⁰

	2017		2016	
	MW	GWh	MW	GWh
Hydro ¹¹ :	16,254	46,94	16	45,29
non pumped			16	45,29
<1MW	0,254	0,04	0	0
1MW–10 MW			0	0
>10MW	16	46,90	16	45,29
pumped	0	0	0	0
mixed ¹²	0	0	0	0
Geothermal	0	0	0	0
Solar:	2,82	1,56	2,52	1,30
photovoltaic	2,82	1,65	2,52	1,30
concentrated solar power	0	0	0	0
Tide, wave, ocean	0	0	0	0
Wind:	9,20	6,92	2,34	2,21
onshore	9,20	6,92	2,33	2,21
offshore	0	0	0	0
Biomass ¹³ :	5,709	21,57	2,805	11,95
solid biomass			0	0
biogas	5,709	21,57	2,805	11,95
bioliquids	0	0	0	0
TOTAL	33,983	76,99	23,515	60,75
of which in CHP	5,709	21,57	2,805	11,95

Table 1c: Total actual contribution (final energy consumption¹⁴) 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)¹⁵

	2017	2016
Geothermal (excluding low temperature geothermal heat in heat pump applications)	-	-
Solar	-	-
Biomass ¹⁶ :	-	-
solid biomass	751,5	686,2
biogas	-	-
bioliquids	-	-
Renewable energy from heat pumps: - of which aerothermal - of which geothermal - of which hydrothermal	-	-
TOTAL	751,5	686,2
Of which DH ¹⁷	-	-
Of which biomass in households ¹⁸	-	-

¹⁰ Facilitates comparison with Table 10a of the NREAPs.

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

¹² In accordance with new Eurostat methodology.

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

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

¹⁵ Facilitates comparison with Table 11 of the NREAPs.

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

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

¹⁸ From the total renewable heating and cooling consumption.

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)^{19, 20}

	2017	2016
Bioethanol/ bio-ETBE	-	-
Of which Biofuels ²¹ Article 21.2	-	-
Of which imported ²²	-	-
Biodiesel	-	-
Of which Biofuels ²³ Article 21.2	-	-
Of which imported ²⁴	-	-
Hydrogen from renewables	-	-
Renewable electricity	2,0	2,0
Of which road transport	2,0	2,0
Of which non-road transport	-	-
Others (as biogas, vegetable oils, etc.) – please specify	-	-
Of which Biofuels ²⁵ Article 21.2	-	-
TOTAL	2,0	2,0

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	Creation of framework and stable conditions for RES development	Energy stakeholders	Existing (planned)	2013-2030 (2019)
2. 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	Existing	2016->
3. Revision of the National Renewable Energy Action Plan 2013-2020	Regulatory	Planning of activities related to promotion of RE and sector development	Investors Companies End users Governmental institutions	Planned	2019

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

²⁰ Facilitates comparison with Table 12 of the NREAPs.

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

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

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

²⁴ From the whole amount of biodiesel.

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

4. National Action Plan for Energy Efficiency 2019-2021	Regulatory	Planning of activities related to the energy efficiency and promotion of RES development	Investors Companies End users Energy efficiency Agency (EEA)	Planned	2019-2021
5. Law on Energy efficiency (Law no. 139 of 19.07.2018)	Regulatory	Creation of framework for energy efficiency and promotion of RES development	Investors Companies End users Governmental institutions Energy efficiency Agency (EEA)	Existing	2018->
6. 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	Existing	2018->
7. Regulation on guarantees of origins for the electricity produced from renewable energy sources (National Energy Regulatory Agency Decision no. 376 of 28.09.2017)	Regulatory	Establishment of the organizational and functional framework of the guarantees of origins for the electricity produced from renewable energy sources system.	RES Producers Government NARE	Existing	2017-->
8. Regulation on confirmation of the status of eligible produces	Regulatory	Creation of the legal framework and criteria for small RES producers	RES Producers Government NARE	Planned	2019
9. Regulation on certifying the RES equipment installers (Government Decision no. 1051 16.11.2018)	Regulatory	Creation of the legal framework for certifying the installers in RES field and rules for their activity	RES equipment installers Beneficiaries End users	Existing	2018->
10. Regulation on sustainability criteria for biofuels, and the procedure for verifying compliance with sustainability criteria to biofuels	Regulatory	Creation the legal framework, sustainability criteria for the promotion and development the biofuels market	Biofuels producers Government End users	Planned	2019
11. Methodology on the calculation of the impact of biofuels and	Regulatory	Establishment of the methodology for the calculation of the impact of	Biofuels and bioliquids producers and importers Government	Planned	2019

bioliquids in GHG emissions		biofuels and bioliquids on GHG emission reduction	End users		
12. 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	Existing	2016->
13. 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	2019
14. Code of construction and urban development	Regulatory	New code of construction and urban development, including improvements related to construction permits issuing, commissioning process, etc.	Ministry of Regional Development and Constructions Ministry of Economy EEA RES investors Local public authorities	Planned	2019 ->
<i>RES development and support schemes</i>					
15. Policy and support schemes for promoting use of RES in electricity production (green tariffs, tendering of the RES capacities, net metering concept)	Regulatory Financial	Ensuring the increase of share of annual generation of power from RES	RES producers TSO DSO Electricity suppliers	Existing	March 2018 ->
16. Fiscal and customs supporting measures	Financial	Fiscal and customs exempts	RES producers Equipment installers	Existing and planned	2018->
17. Policy and support schemes for promoting use of RES in transport	Regulatory Financial	Ensuring the increase of biofuel share in the total used fuel	Biofuel producers, importers and distributors	Existing	2018->
<i>Information dissemination</i>					
18. 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	2018- >

19. 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	2018->
20. 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	2018-2020
21. Organization of events/conferences	Soft	Dissemination of information Behavioural change	RES producers Biofuels producers Local public authorities RES investors End users	Existing and planned	2018-2020
22. 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	2018-2020
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	2018-2020
<i>Studies and research</i>					
23. Interactive Wind Energy Resources Map Wind atlas	Research	Interactive Map of Wind Potential	RES investors Local authorities Government End users	Existing	2016
24. Interactive Solar Energy Resources Map	Research	Interactive Map of Solar Potential	RES investors Local authorities Government End users	Existing	2016
25. Renewable Energy Readiness Assessment 2018	Research	Assessment of all the factors that have an impact on the development of renewable energy sector	RES investors Local authorities Government End users	Existing	2018

26. Country's Solar PV rooftop potential	Research	Study	RES investors Local authorities Government End users	Planned	2019
27. Comprehensive assessment of cogeneration potential	Research	Study Online platform	RES and CHP investors Local authorities Government End users	Planned	2019
28. National Program on development of biomass sector	Policy	Program	Biomass and CHP investors Local authorities Government End users	Planned	2019
29. Renewables Readiness Report (jointly prepares with IRENA)	Research	Study	RES investors Local authorities Government End users	Existing	2019
30. Cost-competitive renewable power generation: Potential across South East Europe	Research	Study	RES investors Local authorities Government End users	Existing	2017

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's goal on renewable energy, confirmed also by country's Energy Strategy until 2030²⁶, the Government of the Republic of Moldova relies on the support procedures set by the Law No. 10 on the promotion of the use of energy from renewable sources, adopted in 2016.

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

Small-scale projects are to be supported by fixed tariffs (classical feed-in tariffs) while big-scale projects will be competing for 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 regulation on approving the capacity limits, maximum allowances, and capacity categories in the field of power generation from renewable energy sources till 2020;
3. GD no. 885/2017 on assignment of the electricity central supplier.

Also, in order to create the whole framework needed for the renewable energy sector deployment, a number of regulations shall be also drafted or approved:

1. Regulation on confirmation of the eligible producer status (in the responsibility of the the National Energy Regulatory Agency);
2. Regulation on sustainability criteria for biofuels, and the procedure for verifying compliance with sustainability criteria to biofuels.

²⁶ Government Decision No. 102 as of 05.02.2013 on Energy Strategy of the Republic of Moldova until 2030

However, the major concern of the investors' community is the timetable the auctions for providing the status of eligible producer in the Republic of Moldova and the tender documentation necessary to be submitted for participation within.

The Ministry of Economy and Infrastructure, at the end of 2018 drafted and sent to the State Chancellery the auctions calendar for 2019. Also, with the support provided by the European Bank for Reconstruction and Development, the Ministry initiated the drafting of the tender documentation and general preparation for the tendering procedure.

Announcement of tenders is planned in the first quarter of 2019, while auctioning is scheduled for Q2-Q3, 2019.

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 Economy, responsible for EE and RES policies implementation) with the attribution of informing the investors on EE and RES, 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.

Business establishment	<ol style="list-style-type: none"> 1. Law No. 845 as of 03.01.1992 on entrepreneurship and enterprises (Journal of the Parliament No. 2 as of 28.02.1994); 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); 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); 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); 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).
Registration of the property rights	<ol style="list-style-type: none"> 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); 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); 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); 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) 5. Law No. 1515 as of 16.06.1993 on environment protection (Journal of the Parliament No. 10 as of 01.10.1993); 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).
Urban planning and design documentation	<ol style="list-style-type: none"> 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); 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); 3. Law No. 1515 as of 16.06.1993 on environment protection (Journal of the Parliament No. 10 as of 01.10.1993); 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);

	<ol style="list-style-type: none"> 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 6. 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); 7. ANRE Decision No. Nr. 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); 8. 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); 9. ANRE Decision No. Nr. 324 as of 27.02.2009 on approval of Natural Gas Distribution Networks Technical Regulations (Official Journal of the RM No. 86-88 as of 08.05.2009); 10. ANRE Decision No. Nr. 375 as of 13.05.2010 on approval of Natural Gas Transmission Networks Technical Regulations (Official Journal of the RM No. 227-230 as of 19.11.2010).
Construction	<ol style="list-style-type: none"> 1. Law No. 107 as of 27.05.2016 on electricity (Official Journal of the RM No. 193-203 as of 08.07.2016); 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 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); 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); 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). 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). 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); 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); 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).

In respect to the Authorization process, the new Law 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, for 2019, the MoEI plans the revision 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 procedures²⁷.

²⁷ In the 2018 edition of the World Bank Doing Business project, 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 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 172nd position out of 190

The necessary regulation for the promotion of the biofuels domain is being 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 planned for 2019, at the moment the biofuels being considered and fiscally treated as alcoholic products.

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 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* will be elaborated and approved by ANRE²⁸, which shall stipulate the terms and conditions for connection, disconnection, re-connection to the grid, including for power plants.

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"> • for producers who holds or will hold power plants with a power greater than the cumulative capacity limit set by government; • 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;
fixed tariffs	<ul style="list-style-type: none"> • 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; • 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;
net metering	<ul style="list-style-type: none"> • for small RES investors oriented on covering the own electricity consumption; • a number of eligibility criteria are established, according to the art. 39 of the Law 10/2016;
/unregulated market/	<ul style="list-style-type: none"> • 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).

²⁸ Currently, the draft Regulation on connection to the grid and transport and distribution services is publicly consulted with all interested stakeholders by ANRE and shall be approved in the Q1-Q2, 2019

Table 3: Support schemes for renewable energy

RES support schemes - year 2017		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% ¹	-	-	-
		VAT for constr. works	0% ²	-	-	-	0%	-	-	-
	Investment subsidies (capital grants or loans) (€/unit)	-	-	-	-	-	-	-	-	
	Production incentives	Feed-in tariff	√ ³	0,33	√ ³	0,15	√ ³	0,54	√ ³	2,1
		Feed-in premiums	-	-	-	-	-	-	-	-
		Tendering	√ ⁴	-	√ ⁴	-	√ ⁴	-	√ ⁴	-
Total annual estimated support in the electricity sector		-	0,33	-	0,15	-	0,54	-	2,1	
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 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 Regulation on electricity market (to be developed and approved).

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.

Referring to biofuels sector, development of the needed legal framework for triggering the market and ensure its further development is scheduled for the year 2019.

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 will contain 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.

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)	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Biomass supply for heating and electricity:												
Direct supply of wood biomass from forests and other wooded land energy generation ²⁹ (fellings etc.)** [thous.m ³]	3368		636				-	-	-	-	-	-
Indirect supply of wood biomass (residues and co-products from wood industry etc.)** [thous.tonnes]	358		64				-	-	-	-	-	-
Energy crops (willows) [thous.m ³]	-	-	-	-	-	-	-	-	-	-	-	-
Agricultural by-products / processed residues and fishery by-products ** [thous.tonnes]	161		55				-	-	-	-	-	-
Biomass from waste (municipal, industrial etc.) **	3	-	2	-	-	-	-	-	-	-	-	-
Others (biogas) Ml. m ³	17	-	7	-	-	-	-	-	-	-	-	-
Biomass supply for transport:												
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 m³ 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)
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²⁹ <http://www.moldsilva.gov.md/pageview.php?l=ro&idc=192&t=/Activitati/Valorificarea-padurii/Produce-lemnose>

		2017	2016	2015
1. Land used for common arable crops (wheat, sugar beet etc.) and oil seeds (rapeseed, sunflower etc.)		1446 kha	1460kha	1476 kha
2. Land used for short rotation trees (willows, poplars).	willows	52 ha	52 ha	31 ha
3. Land used for other energy crops such as grasses (reed canary grass, switch grass, Miscanthus), sorghum.		-	-	-

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

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.	2018	2017	2016	2018	2017	2016
		MDL			EUR		
Straw (baled)	t.	1.000			50,4		
Straw	t.	800			40,32		
Sunflower husks	t.	1.000-1500			50,4-75,6		
Sawdust (wood dust)	t.	1000-1500			50,4-75,6		
Wood fuel	m ³	600-700			30,24-35,28		

Source: Energy Efficiency Agency (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 in 2019 by Ministry of Agriculture, Regional Development and Environment, under the implementation of the Law on the promotion of the energy from renewable sources.

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

Article 21(2) biofuels ³⁰	2017	2016
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.

³⁰ Biofuels made from wastes, residues, non-food cellulosic material, and lignocellulosic material.

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 CO₂eq)

Environmental aspects	2017	2016
Total estimated net GHG emission saving from using renewable energy³¹	2 261 569	2 061 087
- Estimated net GHG saving from the use of renewable electricity	51 052	44 347
- Estimated net GHG saving from the use of renewable energy in heating and cooling	2 159 465	1 972 931
- Estimated net GHG saving from the use of renewable energy in transport (road electric transport)	10 313, 48	7 735,11

11. Report on (for the preceding 2 years) and estimate (for the following years up to 2020) 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.

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/	308	295	327	345	363*	372*	363*
Estimated <u>excess</u> production /energy efficiency scenario/	340	328	360	380	397*	407*	399*

Note: *- Estimations made by the Ministry of Economy and Infrastructure. The NREAP 2013-2020 revision will provide consumption forecasts for different sectors.

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).

³¹ 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.

Not applicable in the case of the Republic of Moldova.