THE APPROACH ON IMPLEMENTING AUCTIONS TO GRANT THE SUPPORT FOR RENEWABLE ENERGY PROJECTS IN THE REPUBLIC OF MOLDOVA

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Ministry of Economy
ENERGY SECTOR REVIEW

- The Republic of Moldova is highly dependent on energy imports, 88% of the energy consumption is covered from import;
- Very high energy intensity (roughly 3 times over EU average);
- The share of RES in final energy consumption is about 13,3% (according to the 2014 Energy Balance).

The lack of own resources and high energy intensity sets the energy efficiency and renewable energy sources as a top priority.
INSTITUTIONAL FRAMEWORK ON RES PROMOTION

Ministry of Economy –
public central authority in the energy sector

Energy Efficiency Agency –
administrative authority in the field of EE & RES

Energy Efficiency Fund –
institution focused on identification and financing of EE & RES projects

National Agency for Energy Regulation –
institution focused on energy sector regulation

Government Decision No. 690 of 13.11.2009

Government Decision No 1173 of 21.12. 2010

Law No. 160 of 12.07.2007

Government Decison No. 767 of 11.08.1997
# RES PROMOTION LEGAL FRAMEWORK

<table>
<thead>
<tr>
<th>Law on Adherence of the RM to the Treaty establishing the Energy Community</th>
<th>Law No.117 of 23.12.2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Strategy 2030</td>
<td>GD No. 102 of 05.02.2013</td>
</tr>
<tr>
<td><em>Law on renewable energy sources</em></td>
<td><em>Law No.160 of 12.07.2007</em></td>
</tr>
<tr>
<td>Law on promotion of the use of renewable energy</td>
<td>Law No.10 of 26.02.2016</td>
</tr>
<tr>
<td>Law on thermal energy and promotion of cogeneration</td>
<td>Law No.92 of 29.05.2014</td>
</tr>
<tr>
<td>Methodology for the determination, approval and application of tariffs for electricity generated from RES</td>
<td>DNERA No. 321 on 22.01.2009</td>
</tr>
</tbody>
</table>
PRINCIPLES OF STATE POLICY REGARDING PROMOTION OF RES

The principles of the state policy in the field of renewable energy are the following:

• adjusting of the national legal framework to European and international standards;

• promotion of renewable energy through supporting scheme according to existing legislation

• guarantee the commercialization of renewable energy through non-discriminatory connection to the grids;

• ensure state administration in the field of renewable energy;

• ensure the access to information on renewable energy production and use for individuals and businesses
## EXISTING RES CAPACITIES

<table>
<thead>
<tr>
<th>Source</th>
<th>Existing capacities, $MW$</th>
<th>Existing tariffs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$E$</td>
<td>$H&amp;C$</td>
</tr>
<tr>
<td>1. Hydro (non-pumping)</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>2. Solar</td>
<td>2,2</td>
<td></td>
</tr>
<tr>
<td>3. Wind</td>
<td>1,1</td>
<td></td>
</tr>
<tr>
<td>4. Biomass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- residential sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- public sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Biogas</td>
<td>2,81</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>22,11</td>
<td>112,57</td>
</tr>
</tbody>
</table>
PREVIOUS SUPPORTING SCHEME
FOR INVESTORS IN RES TECHNOLOGIES

Methodology of determining, approval and application of tariffs for electricity produced from RES. Features:

• approach "from case to case" the green tariff was determined separately for each producers of RES - E

• application of principle „cost +” the green tariff was determined after the investments were done and confirmations submitted to the Regulator

• a multiplier coefficient was applied in order to shorten the payback period

• adjustment/ annual review of the tariffs set for RES - E

• follow up of the green tariff levels on neighbor markets
RES CONSUMPTION IN THE GFEC

![Graph](image-url)
## RES SHARE IN THE GFEC
### THE BIOMASS WEIGHT

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomas, ktoe</td>
<td>166</td>
<td>210</td>
<td>220</td>
<td>260</td>
<td>273</td>
</tr>
<tr>
<td>%</td>
<td>96</td>
<td>97</td>
<td>99</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>RES-E, ktoe</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>%</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>173</td>
<td>217</td>
<td>223</td>
<td>265</td>
<td>279</td>
</tr>
<tr>
<td>%</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

RES share in the GFEC | 8,34 | 10,12 | 10,85 | 12,58 | 13,25
RES-E GENERATION BY TECHNOLOGIES
FOR THE 2013-2015 PERIOD
TOOLS FOR ATTRACTING INVESTMENTS IN EE & RES FIELDS

• Unique Centre /One stop shop/ for informing investors in energy efficiency and renewable energy sources fields /carried out by Energy Efficiency Agency/

• **Wind Energy Resources Map** /in process/ and **Solar Energy Resources Map** /in process/

• Tax and custom duties exemptions*

• ESCo and PPP legal framework in place

• Data base in field of energy efficiency and renewable energy sources /developed and updates on permanent basis by Energy Efficiency Agency/

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* Under public consultation process
SOLAR(1) AND WIND(2) INTERACTIVE MAP POTENTIAL DEVELOPED WITH INOGATE SUPPORT

Platform used
ArcGis

Types of data used for map development
- Satellite data purchased from NASA
- Data registered by local weather stations (18 units)
SOLAR ENERGY MAP POTENTIAL
FILTERS APPLIED
WIND MAP POTENTIAL
DEVELOPED ACCORDING TO INTERNATIONAL STANDARDS
PROMOTION OF EE AND RES IN THE ROM
STATE OF PLAY

1. Consultancy/ informational support
2. Mass-media campaigns
3. Mobile exhibitions
4. Radio and TV interventions, interviews
5. Audio and video spots, infographics
6. Leaflets, brochures, guidelines, instructions, etc.
7. Public events:
   • contests;
   • festivals, concerts feed by solar energy, flashmobs;
   • exhibitions;
   • national and regional Energy Days;
   • round tables, workshops, seminar, etc.
SUSTAINABLE ENERGY INFORMATION CENTER

Logo:

FB: Centru de informare pentru Energie Sutenaiba
https://www.facebook.com/CIES12/?fref=ts

Infografic:
https://drive.google.com/file/d/0B0B7D9u3HenvVE5uN2RmUUNZbXM/view?pref=2&pli=1
MOBILE CARAVANAS
PROMOTING USE OF BIOMASS /PHOTOS/
SUN DĂ-I FEST
PROMOTING USE OF RENEWABLE ENERGY
Moldova Eco Energetică
În spiritul dezvoltării durabile

Istorii
Eco Responsabile

Idei
Eco Responsabile

Tehnologii
Eco Responsabile
THE NEW LAW ON RE USE PROMOTION
KEY ELEMENTS OF THE NEW LEGAL FRAMEWORK ON RE

- establishment of the national targets for the share of energy from renewable sources in the gross final consumption of energy and an indicative trajectory
- Government is supporting the use of RE applying different supporting schemes and measures
- priority to RE sources/power plants when dispatching;
- guaranteed access of electricity from renewable sources to the transmission and/or distribution grids
- the concept of central electricity supplier is to be applied;
- introduction of certification and accreditation schemes for the specialists working in the field;
- activities in the RE field are subjects of licensing;
- public awareness on use of renewable energy,
NEW SUPPORTING SCHEME FOR RES INVESTORS
ACCORDING TO THE NEW LAW ON RES PROMOTION

In order to increase the production and use of electricity from RES the following supporting scheme will be applied:

- fixed price – application for producers who holds or will hold power plants with a power greater than the cumulative capacity limit set by government

- fixed tariffs – application 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

1. The concept of Electricity Central supplier will be applied
2. Electric system operator/TSO/ and DSOs will give priority to RES-E producers
NEW SUPPORTING SCHEME FOR RES INVESTORS
GRAPHIC PRESENTATION OF THE MECHANISM BEHIND THE SCHEME

INSTALLED CAPACITY

0 kW
10 kW
100 kW
X kW
capacity limit/ threshold
(to be set by Government for different technologies)

NET metering
feed-in tariff
tender price/ tariff
NET METERING CONCEPT

KEY FEATURES

(1) A customer/producer is a final consumer of electricity and an owner or operator of an electricity generating unit that:
   a) produces electricity only from renewable sources;
   b) has installed capacity of 100 kW at most;
   c) is interconnected and operates in parallel and synchronously with the electricity network;
   c) has installed capacity that does not exceed the electricity consumption capacity;
   d) is equipped with a protection mechanism [...].

(6) The customer/producer shall benefit from the Net Metering mechanism based on the ‘first come, first served’ principle, if the amount of electricity supplied into the network does not exceed cumulatively 1% (one per cent) of the electricity supplied by the power supplier at regulated tariffs.

(7) non-NET METERING principle can be be established, but in accordance with the principles and conditions negotiated directly by the Supplier and Producer /protection facilities shall be installed/.
TENDERING OF RENEWABLE CAPACITIES
KEY FEATURES

• The Government is organizing and conducting the tendering in accordance with a special Regulation, through Min. of Economy or a Gov. Committee.

• The tender documentation shall set forth terms and conditions including tariff-caps, production capacity limits, construction milestones and other criteria, conditions or requirements that may vary for different categories of renewable energy technologies, set by the Government for each tender.

• ANRE /Regulator/ determines the tariff-caps and suggests them to the Gov.

• A time frame of 24 months is offered to the investor for building the powerplant.

• Only new equipment is allowed, produced at most 36 months before the date of the power plant commissioning.
# TENDERING OF RENEWABLE CAPACITIES
## DRAFT EVALUATION CRITERIA

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>CRITERIA</th>
<th>EVALUATION FACTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
<td>Cost</td>
<td>Lowest offered cost</td>
</tr>
<tr>
<td>20%</td>
<td>Technical credibility</td>
<td>Compliance with technical requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Availability of feasibility study</td>
</tr>
<tr>
<td></td>
<td>Financial credibility</td>
<td>Proved financial viability (equity, credits, bank guarantee, etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Availability of a business plan</td>
</tr>
<tr>
<td></td>
<td>Eligibility of location</td>
<td>Ownership/ availability of land</td>
</tr>
<tr>
<td></td>
<td>Connection to the grid</td>
<td>Availability of the tech. conditions and complexity of the connection solutions</td>
</tr>
</tbody>
</table>
THANK YOU!