

RENEWABLE ENERGY SNAPSHOT:



Empowered lives.  
Resilient nations.

# Hungary



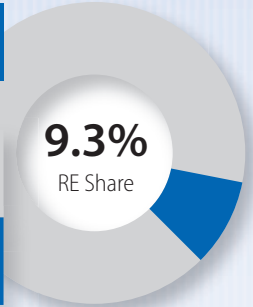
## General Country Information

Population: 9,943,755  
 Surface Area: 93,030 km<sup>2</sup>  
 Capital City: Budapest  
 GDP (2012): \$ 125.5 billion  
 GDP Per Capita (2012): \$ 12,622  
 WB Ease of Doing Business: 54

## Electricity Generating Capacity 2012

**9,996 MW**  
Total Installed Capacity

**930 MW**  
Installed RE Capacity



- Biomass
- Solar PV
- Wind
- Small Hydro

## Installed Renewable Electricity Capacity 2012 in MW

## Technical Potential for Installed Renewable Electricity Capacity in MW

<b>583</b>	<b>3.7</b>	<b>329.4</b>	<b>14<sup>1</sup></b>
<b>2,400</b>	<b>86,400</b>	<b>600</b>	<b>100</b>

Sources: ESHA (2010); World Bank (2014); EurObserv'Er (2013); WWEA (2013); EBRD (2009); EC (2013); EWEA (2013); Renewable Facts (2013); EIA (2013); Hoogwijk and Graus (2008); Hoogwijk (2004); JRC (2011); and UNDP calculations.

## Key information about renewable energy in Hungary

Hungary's share of renewable energy in the total installed electricity capacity stands at almost 10 percent. But compared to its huge renewable energy potential, only a small percentage has so far been utilized. With the inevitable closure of old fossil-fuel power plants, developing that renewable energy potential is particularly important, because additional capacity of between 6,000 MW and 8,000 MW is required to meet the increasing demand (IAEA, 2012). The major promotion instrument for renewable energy is a technology-specific feed-in tariff, which is dependent on the commissioning date, the installed capacity and the time at which electricity is

<sup>1</sup> Value is from 2010

Feed-in tariff in Hungary <sup>2</sup>					
Eligible technologies	Installed capacity	Date of approval	Feed-in tariff granted in €/MW-h		
			Peak time	Mid-peak time	Off-peak time
Wind	<20 MW 20 MW – 50 MW >50 MW	After 1 January 2008 After 30 November 2008 n/a	<b>116.19</b>	<b>103.98</b>	<b>42.42</b>
			<b>116.19</b>	<b>103.98</b>	<b>42.42</b>
			<b>72.25</b>	<b>46.24</b>	<b>46.24</b>
Solar PV (>50 KW)	<20 MW >50 MW	After 1 January 2008 n/a	<b>72.25</b>	<b>46.24</b>	<b>103.98</b>
					<b>46.24</b>
Hydro	<5 MW >5 MW	After 1 January 2008 n/a	<b>116.19</b>	<b>103.98</b>	<b>42.42</b>
			<b>72.25</b>	<b>46.24</b>	<b>46.24</b>
Biomass	<20 MW 20 MW - 50 MW >50 MW	After 1 January 2008 After 1 January 2008 n/a	<b>116.19</b>	<b>103.98</b>	<b>42.42</b>
			<b>92.92</b>	<b>83.2</b>	<b>33.93</b>
			<b>72.25</b>	<b>46.24</b>	<b>46.24</b>

Source: ResLegal (2013) (Forint/€ exchange rate as on 5 March 2014)

fed into the grid. Peak, mid-peak and off-peak times are legally defined time periods, based on season, weekdays or weekends, and the area of electricity generation (ResLegal, 2013). Renewable energy power producers enter into power purchase agreements with regional grid operators for specific periods that are set by the Hungarian Energy Office when granting the eligibility. The obligation period depends on whether other subsidies have been granted and generally shall not exceed the pay-off period of the plant (ResLegal, 2012). Wind power projects are tendered and authorized by the Energy Office. Since 2006, however, there have been no new calls for applications (ResLegal, 2013). In 2014, the country was ranked in 54<sup>th</sup> position in the World Bank’s 2014 Ease of Doing Business index (IFC & World Bank, 2014).

### Legislation and policy

In compliance with EU Directive 2009/28/EC Hungary, has set a target for the share of renewable energy in gross final energy consumption by 2020 at 14.65 percent (Republic of Hungary, 2010). Act No. LXXXVI of 2007 (On Electric Energy, last amended on 14 March 2013) and Government Decree No. 389/2007 (XII.23.) (On the Obligatory Dispatch and Purchase of Electricity Generated from Waste or from Renewable Energy Sources, last amended on 01 November 2013) establish the legislative framework for the promotion of renewable energy sources (ResLegal, 2013). Other incentives for renewable energy also exist. After applying to the grid operator for connection, the plant operator is entitled to prioritized access to the grid and the costs are either fully or partial borne by the grid operator. Hungary is a member of the European Union and investment projects, dependent on size and location, may be eligible for state subsidies of up to 50 percent of investment costs (Hungarian Investment and Trade Agency, 2013). Renewable energy developers also can benefit from European Regional Development Fund assistance in preparation and construction costs, grid connection costs or loans with reduced interest rates (ResLegal, 2013). Except for installations below 500 KW, electricity is subject to licencing, which is obtained from the Energy Office.

2. Power from biogas and geothermal electricity generation is also eligible for the feed-in tariff (ResLegal, 2013).

## Institutions

Organization	Responsibility	Website
<b>Ministry of National Development</b>	- State Secretary of Climate and Energy is responsible for renewable energy policy and strategy development	<a href="http://www.kormany.hu/en">www.kormany.hu/en</a>
<b>Hungarian Energy Office</b>	- Sets feed-in tariffs annually - Conducts and selects tenders for wind projects - Grants licences in the energy sector, e.g. electricity production, renewable energy production licences, and sets the project-specific eligibility period for the tariff	<a href="http://www.mekh.hu/en/">www.mekh.hu/en/</a>
<b>MVM Group</b>	- State-owned energy company, responsible for production, transmission and sale of electricity	<a href="http://www.mvm.hu">www.mvm.hu</a>
<b>MAVIR Rt</b>	- Is a subsidiary of MVM and functions as transmission system operator by being responsible for operation, maintenance and development of the national grid	<a href="http://www.mavir.hu/">www.mavir.hu/</a>
<b>Hungarian Trade and Investment Agency</b>	- Attracts and consults with potential investors	<a href="http://www.hita.hu">www.hita.hu</a>

## Opportunities to finance renewable energy projects in Hungary

Financing organization	Details	Website
<b>European Regional Development Fund (ERDF)</b>	Through the Operational Programme Environment and Energy, small renewable energy developers (geothermal, biogas, wind up to 50 KW, solar up to 500 KW, small hydropower plants up to 2 MW and biomass up to 20 MW) can apply to the National Development Agency to be selected for a subsidy of up to 70 percent of the total eligible costs or maximum 1,500 million forint (c.€5.07 million) or a loan of maximum 800 million forint (c. €2.6 million) at a reduced interest rate of 0.5 percent.	<a href="http://www.nfu.hu/">www.nfu.hu/</a>
<b>International Finance Corporation (IFC)</b>	Private and environmentally and technically sound projects may apply for loans of up to 35 percent of the estimated project costs, usually provided through partner intermediaries.	<a href="http://www.ifc.org/">www.ifc.org/</a>
<b>EU Means</b> - European Investment Fund (EIF)/ - European Investment Bank (EIB) - Structural Funds	Loans and guarantees through Hungarian financial intermediaries (e.g. Sberbank Europe AG, OTB Bank), and private equity/venture capital are available.	<a href="http://www.europa.eu/youreurope/business/finance-support/access-to-finance/">www.europa.eu/youreurope/business/finance-support/access-to-finance/</a>

# Hungary

## Recent projects

Company	Project	Status
<b>Iberdrola (Spain)</b>	Operates three wind farms with a total installed capacity of 108 MW.	<b>Commissioned</b>
<b>Dalkia (France)</b>	The Hungarian subsidy Dalkia Energia acquired PAN-NONPOWER in 2007, the largest biomass plant with 50 MW of installed capacity.	<b>Commissioned</b>

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