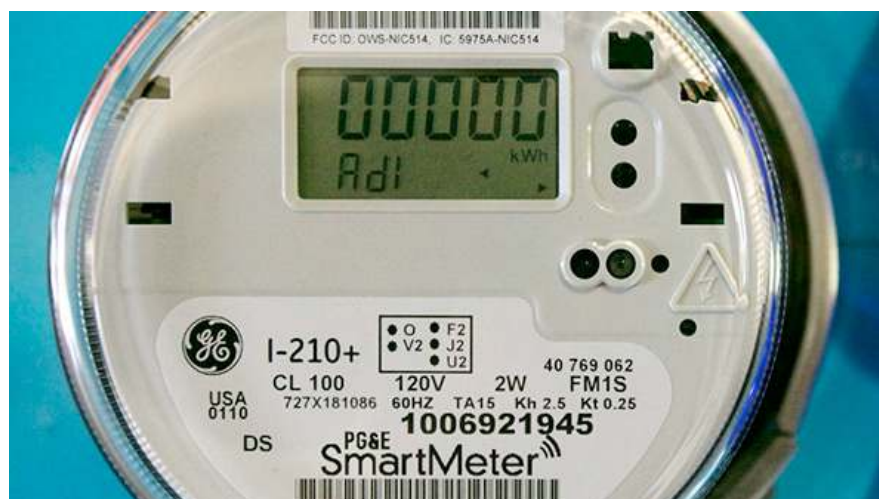


# ROMANIAN SMART GRID AND SMART METERING

DEVELOPMENTS AND POTENTIAL  
OPPORTUNITIES FOR INTERNATIONAL  
COLLABORATION

a DEMO Sector Brief and Players Analysis by  
FRD Center



**This example of a report is produced by FRD Center – [www.frdcenter.ro](http://www.frdcenter.ro) - one of the pioneer privately owned independent market entry consulting firms in Romania.**

Since 2000, FRD Center offers tailor-made market research and intelligence, B2B matchmaking and deal origination / M&A services to foreign organisations interested to enter the emerging markets in Europe as exporters, consultants, investors or joint-ventures, to relocate their operations, to acquire a local player or to source in CE, SE and Eastern Europe.

FRD Center is the trade consultant for the Irish Governmental Agency, Enterprise Ireland, Finpro (Finland) and the representative of the Murcia region Development Agency (Spain). Other clients are Commercial Sections of Embassies, Export Councils, Trade Governmental Agencies, Chambers of Commerce, private companies, corporations, SMEs from Canada, China, Denmark, Finland, Ireland, Israel, Jordan, Norway, Poland, UK, USA, Switzerland etc.

Our services include:

- market research, investment opportunities assessment, sector studies, market briefs
- B2B matchmaking: identification and qualification of distributors, importers, suppliers
- product presentation and assessment of interest from clients / partners
- deal origination, pre-M&A business support and research
- identification of market opportunities: exports, sourcing, B2B sales etc.
- trade missions, business itineraries, inward buyer missions

*Disclaimer:*

*Whilst every care is taken in compiling this report, no responsibility is taken for errors or omissions. FRD Center guarantees that this information, collected and generated, has been operated in a professional manner and best efforts were applied with a view to offering accurate and complete results. However, FRD Center will not be held liable for any damage or loss resulting from the use of the information contained herein.*

*Sources consulted for this report: business mass media, the companies, official sources*

***FRD Center endorses the Sibiu International Theatre Festival***

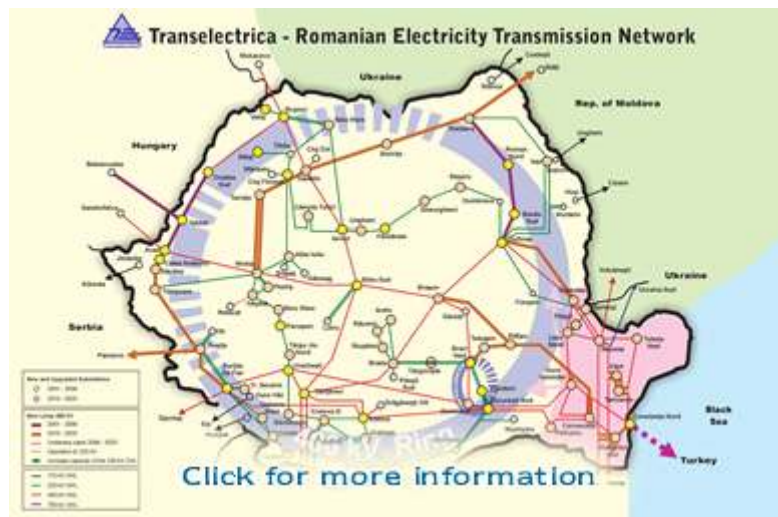
***FITS - [www.sibfest.ro](http://www.sibfest.ro)***



**Energy efficiency is a strategic priority for Romania. In the Romanian Energy Strategy, one of the new avenues for development of the Romanian energy sector is the SMART GRID DEVELOPMENT. Smart grids enable realtime communication with consumers, with better control and instant optimisation of energy generation and consumption.**

The interaction between electricity grids, the Internet and communication networks will be enhanced, leading to efficiency and flexibility gains. Smart grids facilitate the transition from consumers to prosumers, who deliver to the grid their own electricity production. Distributed electricity generation (i.e. power generated in different types of low-capacity systems) and virtual power plants can reduce grid losses, and increase flexibility and security of supply.

In the long run, prosumers will influence grid architecture, especially when equipped with an electricity storage capacity, to limit interactions with the grid. There will be fewer households without access to power in Romania, not least following the adoption of off-grid solutions, which are increasingly affordable.



In 2017, Romanian authorities continue to be pressured by EU and international regulators and donors to achieve or improve energy efficiency: optimizing the use of energy and reducing waste and losses on the value chain, together with a regulatory push for enhancement of grids to achieve efficiency gains.

They need to increase energy efficiency, by a better transparency in data measurement, by further educating and incentivizing consumers to modify their consumption habits accordingly, by decreasing costs, by reducing losses and costs of meter reading, together with better identification of needed investments.

One example of locally developed solutions for smart metering is **inteliGRID®** developed by **Flashnet**, a Romanian technology research and development company that integrates the latest hardware and software solutions, creating and implementing intelligent energy management systems for cities and electric utilities.

**inteliGRID®** is a complete hardware and software management solution for low voltage electric distribution grids, from transformer stations to the consumer meter. Reducing power loss, integration of renewable energy sources and the need for remote smart metering are just a few grid challenges that recommend Smart Grid technologies as a necessity. Furthermore, **inteliGRID®** adapts to the Clients' needs and existing infrastructure, not the other way around.

### **Romania to reduce energy consumption by 19% by 2020**

Romania has set a goal to reduce the energy consumption by 19% by 2020, according to the Law no. 121/2014.

The Law no. 121/2014 on energy efficiency transposes the European Union regulations set out under Directive 2012/27/UE regarding energy efficiency, into national legislation. The main purpose of the Law no. 121/2014 is to establish a coherent legislative framework for the development and application of the national energy efficiency policy in order to achieve the national target for increasing energy efficiency.

The Law no. 121/2014 establishes that the improvement of energy efficiency is a strategic goal of the national energy policy due to its major contribution to achieving the security of energy supply, sustainable development and competitiveness, saving primary energy resources and reducing greenhouse gas emissions.

### **LIOPP: EUR 70.83m for modern distribution networks of electric energy, monitored energy consumption at industrial level and smart meters in homes**

Within the Large Infrastructure Operational Programme (LIOP) 2014 – 2020, the Ministry of European Funds in Romania has launched in August 2016 calls for projects worth EUR 70.83m for financing investments in the following areas:

- creating the technical conditions necessary for the takeover of electricity produced from renewable energy sources: EUR 20.96m
- implementing systems to monitor the energy consumption at industrial level: EUR 11.75m
- installation of smart meters in homes: EUR 38.12m

The projects are selected and financed through the Priority Axis 6 - Promoting clean energy and energy efficiency aiming at supporting a low carbon economy.

### **EU: 80% of Romanian consumers to have smart meters by 2020**

According to the EU requirements, 80% of the electricity consumers in Romania should have smart meters installed by 2020.



### **Electrica to install over 500,000 smart meters by 2018**

Electrica plans to invest over EUR 715m during 2015 – 2018. The investments include also the installation of more than 500,000 smart meters and their integration into the telemanagement systems by 2018.

Electrica is currently running the SINGULAR project (Smart and Sustainable Insular Electricity Grids under Large-Scale Renewable Integration) within the call FP7-ENERGY-2012-1-2STAGE,

With an experience of over 120 years, Electrica is a main electricity supplier in Romania. It covers the entire country.

Electrica is controlled by the Romanian State (48.8%) and others (51.2%).

Electrica is listed on Bucharest Stock Exchange.

ENERGY.2012.7.1.1: Integration of variable distributed resources in electricity distribution networks. The project's objectives include: the possibility of expanding the smart grid networks, the use of a smart metering infrastructure for the operation of the DSM (demand-side management) programmes etc.

### **Compania Utilitati Publice Dunarea Braila**

intends using the savings from the proceeds of a loan from the EBRD for a project to procure water meters and ancillary goods and services. The proposed savings from the project, which are estimated to EUR 3m equivalent, will require the procurement of around 29,000 cold water smart meters with radio transition of various DN sizes including software, communication equipment, software and hardware for meter reading and training and the procurement of around 3,000 water manholes fully equipped with smart meters with radio transition, communication equipment software and hardware for meter reading and training.

### **EBRD supports electricity projects in Romania**

The European Bank for Reconstruction and Development (EBRD) has supported the reform of the Romanian electricity sector during the past years.

EBRD has supported the projects of **CEZ Romania** with a syndicated loan of up to RON 675m (EUR 153.7m equivalent). The projects refer to the 2015 - 2016 investment programmes in the distribution network aiming at reducing losses, improving efficiency and installing smart meters, restructuring of the company's balance sheet to optimise its capital structure and the provision of working capital. It is the first long tenor local currency (RON) EBRD syndicated loan to a corporate in Romania.

**Nova Apaserv** intends using the savings from the proceeds of a loan from the EBRD for a project to procure water meters and ancillary goods and services. The proposed savings from the project, which are estimated to EUR 1m equivalent, will require the procurement of around 8,100 cold water smart meters with radio transition of various DN sizes including software, communication equipment, software and hardware for meter reading and training.

**CEZ has installed approx. 50,000 smart meters**

CEZ Romania, owned by the Czech Group CEZ, has installed so far approximately 50,000 smart meters. CEZ has targeted mainly households and small firms. CEZ targets to install at least 436,000 smart meters during the period 2015 – 2020.

CEZ Romania provides energy to 1.4 million consumers in the Oltenia region (SW Romania).



**Enel installs 110,000 smart meters in 2016**

The National Regulatory Authority for Energy ANRE has given Enel the permission to install an additional 110,000 smart meters in 2016 as part of a pilot in Romania, out of which 53,000

smart meters in the Muntenia region, 28,000 in the Dobrogea region and 30,000 in the Banat region.

In 2015, Enel has installed smart meters for more than 30,000 clients in Romania.

The company has plans to install similar meters for all 2.7 million clients in Romania, paving the way for larger smart cities and infrastructure. Currently, Enel controls around one third of the electricity distribution market in Romania and employs over 3,100 persons.

**Goal of heat meters installed in each apartment by the end of 2016 not achieved**

According to the National Regulation Authority for Public Utilities Community Services, approximately 1.3m apartments are connected to the centralised heating system in Romania, out of which most are in Bucharest.

The mandatory installation of heat meters in each apartment connected to the centralised heating system by the end of 2016 has been introduced in August 2014 by the Law no. 121/2014 on energy efficiency.

The target of the heat meters installation in each apartment connected to the centralised heating system in Romania by the end of 2016 has not been achieved. According to the Romanian Association for Consumers' Protection, in February 2016, only 40% of the targeted blocks of flats have had installed meters.

Some of the local firms involved in SMART METERING AND ENERGY EFFICIENCY TECHNOLOGIES have been analysed by the FRD Center team.

Their profiles (samples) are:

Company name	Energobit SA
Website	www.energobit.com
Ownership	Mr. Stefan Gadola, Mr. Ioan Socea, Mr. Peter Pal
Year of set up	1990
No of employees	570 in 2015
Net turnover	EUR 66.6m in 2015
Examples of clients	Transelectrica, CEZ, CET Arad
Short profile	Energobit performs electrical works, provides energy management and control services and integrated smart grid solutions. It installs a wide range of electric and gas meters. Energobit covers the entire Romania.

Company name	Eaton Electric SRL
Website	www.eaton-electric.ro
Ownership	Eaton Group Germany
Year of set up	1997
No of employees	64 in 2015
Net turnover	EUR 29m in 2015
Short profile	Eaton Electric is the representative of the Eaton Group in Romania. The company imports and distributes electrical equipment and automation solutions manufactured by Eaton. Its range of products includes smart metering and monitoring solutions: power and energy meters, networking hardware and power monitoring systems. Eaton Electric distributes its products all over Romania.

Company name	Adrem Invest SRL
Website	www.adrem.ro; www.adreminvest.ro
Ownership	Mr. Adrian Bodea, Mr. Corneliu Bodea
Year of set up	1992
No of employees	865 in 2015
Net turnover	EUR 23.7m in 2015
Examples of projects	Installing smart meters for 250,000 household consumers of E.ON Distributie Moldova

	Automatic meter reading for Radet Bucharest
Examples of clients	E.ON Distributie Moldova, CEZ Distributie, Electrica Distributie Transilvania Sud, Radet Bucharest, SNTG Transgaz
Short profile	<p>Adrem Invest provides services for utility networks, such as meter reading, management of electricity meter groups, electric infrastructure maintenance and power distribution network operation.</p> <p>The company has national coverage.</p> <p>Adrem Invest is part of Adrem Group which includes also the companies Adrem Engineering SRL that develops and implements comprehensive energy infrastructure solutions and Adrem Link SRL that promotes solutions for energy efficiency, visibility &amp; information, operational optimisation and automation &amp; control.</p>

<b>Company name</b>	<b>Phoenix Contact SRL</b>
Website	<a href="http://www.phoenixcontact.ro">www.phoenixcontact.ro</a>
Ownership	Phoenix Contact Group Germany
Year of set up	2009
No of employees	19 in 2015
Net turnover	EUR 9.3m in 2015
Short profile	Phoenix Contact imports and distributes a wide range of products and technologies. Its range of products includes meters and energy efficiency technologies.

<b>Company name</b>	<b>ista Romania SRL</b>
Website	<a href="http://www.ista.com/ro/">www.ista.com/ro/</a>
Ownership	ista Group Germany
Year of set up	1995
No of employees	66 in 2015
Net turnover	EUR 5.4m in 2015
Examples of clients	Homeowners' associations, office buildings, construction installation companies, real estate developers, public utilities suppliers, heat and water distribution companies all over Romania
Short profile	<p>ista installs a wide range of metering products: heat cost allocators, heat meters, water meters.</p> <p>The company is ISO 9001: 2008 certified.</p>



<b>Company name</b>	<b>Techno Volt SRL</b>
Website	www.technovolt.ro
Ownership	Romanian private capital
Year of set up	1999
No of employees	11 in 2015
Net turnover	EUR 2.9m in 2015
Short profile	<p>Techno Volt imports and distributes various automation equipment and consumption optimisation products including water meters.</p> <p>Some of its foreign partners are: Nokian Capacitors, EasyPower, Kistler, Tekscan, Chroma, Gill Instruments, Sefram, Ultraflux etc.</p>

<b>Company name</b>	<b>Lisscom SRL</b>
Website	www.lisscom.ro
Ownership	Romanian private capital
Year of set up	1998
No of employees	28 in 2015
Net turnover	EUR 0.8m in 2015
Examples of clients	Romgaz, Regia de Termoficare Cluj
Short profile	<p>Lisscom is specialised in the BMS, energy management, consumption optimisation and metering services.</p> <p>Its foreign partner in the sector of energy management and metering is GFR Germany.</p> <p>Lisscom provides its services all over Romania.</p>

<b>Company name</b>	<b>Eco Therm Services SRL</b>
Website	www.etserv.ro
Ownership	Romanian private capital
Year of set up	2006
No of employees	8 in 2015
Net turnover	EUR 0.4m in 2015
Examples of clients	Dalkia Ploiesti
Short profile	<p>Eco Therm Services installs water, heat, electric and gas meters and provides integrated energy efficiency services.</p> <p>Some of its foreign suppliers are: Diehl Metering, Sondex, Grundfos, IMI Hydronic Engineering, AXIOMA, Tiemme etc.</p>

<b>Company name</b>	<b>Amavys Project SRL</b>
Website	www.amavys.ro
Ownership	Romanian private capital
Year of set up	2006
No of employees	4 in 2015
Net turnover	EUR 0.1m in 2015
Examples of clients	Victoria 46 Store in Bucharest, Auditorium Conference Center in Bucharest
Short profile	Amavys Project provides building energy efficiency services. Some of its foreign suppliers are: Zennio, Basalte, Silent Gliss, Planlicht, Lithoss etc.

<b>Company name</b>	<b>TimePal Romania SRL</b>
Website	www.energypal.ro
Ownership	Mr. Lucian Anghel
Year of set up	2013
No of employees	5 in 2015
Net turnover	EUR 0.04m in 2015
Examples of clients	Mega Image, MedLife, Onedia Distribution, Immofinanz, Fox, Cellulem Block
Short profile	The company provides energy efficiency and smart metering services. It serves the industrial, commercial, office, medical, residential sectors.



**ANRE has approved 18 pilot projects of approx. EUR 15.7m for electricity smart metering systems in 2015**

The National Regulatory Authority for Energy ANRE has launched in 2013 the process to implement intelligent metering systems for electricity with the purpose to achieve the goal of 80% of consumers connected to Smart Grid by 2020.

In 2015, ANRE has approved 18 pilot projects amounting to approximately EUR 15.7m referring to the implementation of intelligent metering systems for electricity, as shown below.

Distribution operator	No of pilot projects approved by ANRE in 2015	No of clients included in the pilot projects	Total value of the pilot projects on intelligent metering systems (EUR m)
Enel Distributie Banat	3	9,961	1.19
Enel Distributie Dobrogea	4	10,000	1.11
Enel Distributie Muntenia	1	11,392	1.50
CEZ Distributie	2	20,150	3.62
E.ON Distributie Romania	2	23,237	1.87
FDEE Transilvania Sud	2	23,047	5.15
FDEE Transilvania Nord	2	5,335	0.92
FDEE Muntenia Nord	2	2,143	0.32
<b>Total</b>	<b>18</b>	<b>105,265</b>	<b>15.67</b>

Source: ANRE, FRD Center



**Romania has approx. 13.6m electricity, gas and heat consumers**

According to ANRE data, the most important sector for smart metering in Romania is the electricity market, with a cumulated number of approximately 9m customers, followed by the gas market with some 3m customers and the heat market with around 1.6m customers.

The fastest benefits of the smart metering, including the investment amortization, are expected to be recorded by the electricity market.

<b>Sector</b>	<b>Customer group</b>	<b>Approx. no of customers</b>
<b>Electricity</b>	Large public / non-residential large customers	20,000
	Small and medium non-residential customers	600,000
	Residential customers (households)	8,380,000
	<b>Total</b>	<b>9,000,000</b>
<b>Gas</b>	Non-residential customers	176,330
	Residential customers (households)	2,855,670
	<b>Total</b>	<b>3,032,000</b>
<b>Heat</b>	<b>Total</b>	<b>1,557,000</b>

Source: ANRE, FRD Center

*For tailored market research and B2B matchmaking in Romania and the region, please feel free to contact us directly.*

**FRD Center Market Entry Services**  
**[www.market-entry.ro](http://www.market-entry.ro)**

**Contact: Jackie Bojor, Director**  
**[europa@frdcenter.ro](mailto:europa@frdcenter.ro)**  
**+4021 4111459**