

Environmental Technologies and Renewable Energies

Market opportunities in the
emerging markets in Europe

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Emerging Europe



Emerging markets in Europe include Romania, Poland, Serbia, Croatia, The Baltic States, Bulgaria, Turkey, Russia, Ukraine, Hungary, The Czech Republic, Slovakia etc.

General conditions

- Many of the former communist countries in CE and Eastern Europe are now EU members
- EU Member Candidates include Croatia and Turkey
- EU laws and regulations apply in most of the emerging markets in Europe
- Non-EU countries in Eastern Europe gradually harmonise their legislation with the EU
- Environmental technologies, Energy efficiency and Renewable energies are in great demand in the region

Specific conditions

- Energy Efficiency is an essential part of the environmental policies in the emerging markets in Europe.
- The former communist states in Central and Eastern Europe take serious measures to improve the heating generation and water distribution channels, as well as to diminish energy consumption in commercial, industrial and residential sectors.
- Waste recycling is a major opportunity sector in the region
- Wastewater and drinking water management projects are benefiting from EU and governmental funding
- Renewable energies – wind, solar, bifuel – have excellent potential and are attracting foreign investment in the area

Romania – general info



- With a population of over 21 million inhabitants, Romania is the second-largest new EU member after Poland
- It has direct access to major markets in the region such as Ukraine (45 mil), Turkey (78 mil), Russia (138 mil)
- English language is largely spoken by the working population
- Major foreign investors include Ford, Renault, OMV, Iberdrola, Nokia, Microsoft, Motorola, Mittal Steel, Colgate Palmolive, Renbaxy, Actavis, Accenture, Alcatel-Lucent
- In 2011, expected GDP y-t-y growth is of 1.8%-2%, followed by 3.5% in 2012

Romania - challenges

- The Romanian district heating system needs investments of 5 billion EUR in the next 10 years to increase its efficiency, reduce losses and comply with the EU environmental standards
- Some of the environmental current issues include: soil erosion and degradation; water pollution; air pollution in south from industrial effluents; contamination of Danube delta wetlands
- The Romanian waste management market is an emerging sector, mainly due to two factors:
 - continuous growth of the un-managed quantity of generated waste
 - the requirements of the modernisation process which sets out new rules on waste management

Romania - challenges

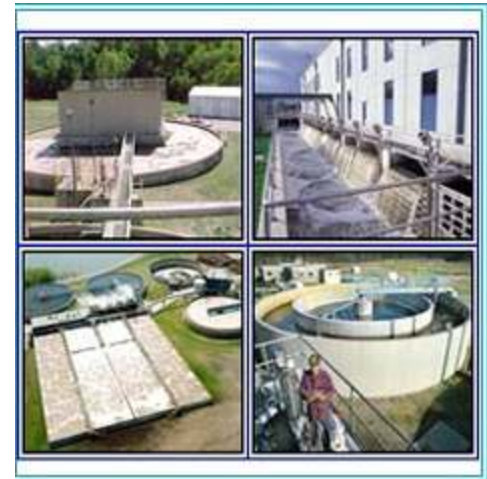
- The biggest challenges in the water and wastewater management sectors in Romania are:
 - development and reform of the water sector
 - problems related to climate changes (e.g. large fluctuations in available water amounts in rivers and lakes)
 - unbalanced access to water (many consumers without access to piped water)
 - water pollution
 - deteriorated water distribution and sewer networks
 - old and deteriorated wastewater treatment plants
 - need for new wastewater treatment facilities
- Only 21% of the rural population has access to piped drinking water
- Only 18% of the total population have access to wastewater treatment plants with sufficient treatment

Romania - opportunities

- In order to meet the EU requirements, approximately 1.17 billion EUR are estimated to be directed to waste management and recycling in Romania, during the period 2007 - 2013, out of which 930 million EUR represent EU funds.
- Romania has to be able to recycle approximately 50% of its waste by 2013
- According to the Ministry of Environment and Forests, Romania intends to implement the integrated waste management system in all its counties by 2015. The local authorities have the responsibility to implement the system.
- Waste collection and recycling is proven to be a success business in Romania as investments in equipment and technologies are encouraged by the availability of EU funds

Romania - opportunities

- According to the EU Water Framework Directive, the main objective of the water management policy in Romania is to reach by 2015 “good ecological status” for all waters, through the integrated management of the water resources.
- One of the specific objectives of the Sector Operational Programme Environment (SOP Environment) is to improve the quality and access to the water and wastewater infrastructure, by providing water supply and wastewater services in most urban areas by 2015 and by setting efficient regional water and wastewater management structures



Romania – wind energy

- Romania is considered to have the highest potential for renewable energies in the region
- The EU has recently approved an incentive program for renewable energy technology in Romania as the country seeks to meet a goal of generating 24% of its power from green sources by 2020
- EBRD, IFC recently signed a 'Landmark' \$266 million loan for Pestera Power SA, a wind company of EDP Renovaveis SA (EDPR)
- Romania will offer the highest incentives in the EU – 160 EUR / MWH - for wind investors after a law approved by the government comes into force in September

Bulgaria – general info



- Bulgaria is situated in SE Europe, with strategic geographic position as a bridge between Europe and Asia
- It has direct access to transport by sea and the Danube
- It has EU's most favourable taxes:
 - 10% corporate income tax rate; 0% in high-unemployment areas
 - 10% flat tax rate on personal income
- Major foreign investors include Agropolichim, Hyunday, Kraft Foods, E.ON, CEZ, Actavis

Bulgaria - challenges

- Bulgaria still lacks modern facilities for the waste management and recycling. Separate collection of garbage has recently been introduced but is still to prove effective.
- The capital city, Sofia, is struggling with the amount of waste that it produces and is planning to build a waste management plant in the coming years.
- The Bulgarian energy sector is undergoing a major overhaul characterized by:
 1. Improvement of Energy efficiency
 2. Construction of new facilities
 3. EU directives for at least 20% renewable energy by the year 2020
 4. Environment technology improvements

Bulgaria - opportunities

- Numerous opportunities exist in the Bulgarian waste management sector as most of the cities and towns in Bulgaria use rather old methods of dealing with their waste
- Certain areas of Bulgaria have favorable wind conditions and investment in wind power generators are showing good returns
- Bulgaria is one of the top countries identified for wind energy development (3,400 MW mid term potential).
- Biodiesel consumption in Bulgaria registered a staggering increase in 2010 amounting to nearly 39,000 tons
- Russia's oil major Lukoil will invest \$4 million in the construction of a photovoltaic park near the Black Sea city of Bourgas, with an expected annual output of 1,500 MWh

Poland – general info



- Poland is situated in the Northern part of CE Europe, with a coastline of 440 kms at the Baltic Sea. Direct access to markets such as Germany, Ukraine, Scandinavia, Baltic States
- It has a population of over 38 million, out of which 61% is urban
- It is the only EU country that avoided recession in the recent years and in 2010 it registered a GDP y-t-y growth of 3.8%
- Major foreign investors include Amtech, Cargill, ArvinMeritor, Conoco, Eaton, Flextronics, Oracle

Poland - challenges

- Selective waste collection and recycling is still an issue in Poland
- Over 80% of municipal waste in Poland is stored in landfills without any pre-sorting. Although EU legislation is now in force in Poland, this is still the most popular means of waste disposal. Systematic approaches to waste management are lacking, and there are not enough waste recovery and recycling plants.
- The main market restraints are frequent legal changes and the market's slow adoption of EU directives
- Low environmental awareness as a key challenge in the uptake to technology and problems with social acceptance of waste incineration facilities

Poland - opportunities

- The Polish waste management market is at a growth stage. Large international market participants as well as public waste management companies are driving the development of better waste solutions. Even though there are many private market participants with state-of-the-art technology, the Polish market requires more investments in waste treatment infrastructure in order to better and more efficiently direct waste away from landfills
- Investments in municipal solid waste (MSW) treatment facilities, and in particular recycling services of MSW, are projected to present the most lucrative growth opportunities over the long term
- As the market for MSW develops, it is important for participants to offer technology-based waste treatment solutions, as such treatment approaches are more efficient than landfill disposal, hitherto the most popular method of MSW disposal.

Poland – renewable energies

- Some of the key objectives of Poland's energy policy on RES are:
 - Increase the share of renewable energy sources in final energy consumption to 15% by 2020 and 20% by 2030,
 - Achieve a 10% share of biofuels in the transport fuel market by 2020 and maintain this level in the years to follow
- Poland has very favorable technical and economical factors for renewable energy. In the recent years, it has begun to experience a shift in political and public support away from traditional fossil fuels and toward the development of renewable energy resources.
- Plans to invest in renewable energy in the coming years have been declared by the biggest energy companies operating in Poland, including:
 - RWE – to build wind farms with a power capacity of 300 MW by the end of 2015;
 - Tauron Polska Energia – to earmark 8.6 billion PLN for investments in RES;
 - PGE – to invest in wind farms with a power capacity of 1000 MW by 2016;
 - Enea S.A. and Dalkia Polska.

Turkey – general info



- Turkey is situated in the Southern part of Europe, making the connection with Asia and the Middle East
- With a population of 73 million and an increasing consumer purchasing power, Turkey offers a huge and dynamic domestic market to investors and exporters
- Turkey's well-regulated financial markets and banking system weathered the global financial crisis and GDP rebounded strongly to 7.3% in 2010
- Major foreign investors include Ford, Toyota, Castrol, Unilever, Pirelli, Coca-Cola, Delphi-Packard

Turkey - challenges

- Economic growth in Turkey has caused an increase in energy demand, industrialization and urbanization, raising concerns about environmental issues. These environmental concerns are forcing Turkey to establish effective water, waste and air pollution control management. As a result, waste management, water supply and air pollution control have become areas with an ever growing demand and opportunities for investment.
- Currently Turkey's waste management infrastructure is not sufficient to cover the country's needs where an annual amount of 30 million tonnes of waste is produced. The majority of this waste is stored in municipal waste storage facilities and landfills. Existing landfills are insufficient in number and there is only one waste energy plant in the country.
- Population growth in recent years resulted in an increasing demand for drinking and irrigation water supply.

Turkey - opportunities

- The Turkish environmental market is dominated by EU, US and Japanese firms, which provide funding arrangements and are gaining an important role in the market
- As Turkish enforcement of environmental legislation increases, Turkey has started to offer a wealth of opportunities for foreign firms with expertise in major environmental projects and foreign suppliers of environmental technology. While Turkey is still developing its capacity for implementing these investments, there is a need for technical support for capacity build-up as well as financial assistance.
- Turkey's efforts to become a full-fledged EU member are creating a positive environment for foreign investment. Regulations in the sector are becoming more favourable for foreign investment, resulting in foreign investors partnering with local businesses in waste management and environmental solutions.

Turkey – renewable energies

- Recent developments in Turkey such as liberalization of the electricity market and improvements in renewable legislations have opened the door for the growth and investment opportunities in renewable energy sources.
- These developments coupled with the country's naturally endowed potential for solar, geothermal and wind energy resources create a vast potential in this market.
- Turkey represents an attractive geography for wind energy investments. The Aegean and Marmara regions are the most attractive regions for wind energy power generation with the total wind energy potential estimated at 131,756 MW.

Turkey – renewable energies

- Solar energy is mainly utilized as flat plate solar collectors for domestic hot water production despite the huge potential for electricity generation in Turkey.
- Turkey's annual average insolation duration is estimated as 2,640 hours (7.2 hours/day) and the average annual solar radiation is 1,311 kWh/m²-year (3.6 kWh/m² per day) by EIE.
- With its high potential in agriculture and installed capacity in biodiesel and bio-ethanol, Turkey can be the bio-fuel supply center of Europe.
- The total amount of investments to be made to meet the energy demand in Turkey until 2023 is estimated around USD 130 billion

Takeaways

- The emerging markets in Europe present numerous opportunities for exports, consulting expertise and high yield investments in environmental technologies, energy efficiency, waste management and renewable energies
- Level of technical education and professional English is good in the region
- EU co-funding is available for investments in water infrastructure, waste management and green energies
- Numerous development projects in countries such as Romania, Poland, Baltic States, Turkey, Bulgaria are being co-financed by IFC, EBRD

About FRD Center

Privately owned boutique-type consulting firm assisting foreign companies since 2000 to:

- assess market opportunities
- identify and select local business partners and buyers
- develop their local presence

in the emerging markets in Europe.

Services include:

- market intelligence, competitive analysis
- business matchmaking
- product introduction and assessment of interest from buyers
- M&A and investment advisory
- follow-up, pursuit of local targets

Sources

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