Financing small hydropower plants in Romania
Profile – Banca Comerciala Romana

- Banca Comerciala Romana (BCR) was established in 1990
- Taking over the commercial banking operations of the National Bank of Romania
- BCR is the most important financial group in Romania - currently manages assets of over EUR 15bn, has over 3.4 million customers, and is the market leader with over 19% market share
- BCR is the most valuable financial brand in Romania, according to level of customer trust and number of clients who mainly bank with BCR.

Integration into Erste Group

- From 2006 BCR became a member of Erste Group
- Erste Group was founded 1819 as the first Austrian savings bank.
- Since 1997 Erste Group has developed into one of the largest financial services providers in Central and Eastern Europe,
- 46,000 employees, 16.6 million clients, 2,900 branches in 7 countries

Commitment to Romania

- Erste Group has invested so far more than EUR 7.5 bn in Romania, through BCR and as direct investments in Romanian commercial exposure
- BCR has doubled the volume of its outstanding loan portfolio since 2006 and has been the main supporter of the Prima Casa program (60% market share for Prima Casa 4)
- Financial results as of FY2013e - Erste Group posts net profit of EUR 60 million

Financing small hydropower plants in Romania
Group Infrastructure Finance
Energy and Environment infrastructure targeted

Wind Parks
Wind Parks Offshore
Solar PV
Solar Thermal

Oil/Gas Generation
Hydro Plants
Electricity Networks
Transmission Systems

Public Systems
Waste Management
Water Treatment
Waste Treatment

Financing small hydropower plants in Romania

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Renewable Energy

Sectors currently financed in Erste Group

Total exposure of Erste Group towards renewable energy is approx. EUR 1.7 billion

Czech Republic: Solar, Wind, Hydro, Biomass

Austria: Wind, PV, Biomass

Croatia: Biomass

Slovak Republic: Solar, Hydro, Biomass

Hungary: Biomass

Romania: Wind, Hydro, PV

Germany: Biomass

Financing small hydropower plants in Romania
<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Type</th>
<th>MW</th>
<th>Capex (EURm)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>xxx</td>
<td>Wind</td>
<td>108.0</td>
<td>191.5</td>
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<tr>
<td>2</td>
<td>Marguerite, Power Fund, EP</td>
<td>Wind</td>
<td>80.0</td>
<td>130.0</td>
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<tr>
<td></td>
<td>Global, Chirnogeni</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Martifer</td>
<td>Wind</td>
<td>42.0</td>
<td>67.2</td>
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<tr>
<td>4</td>
<td>xxx</td>
<td>Wind</td>
<td>33.0</td>
<td>47.9</td>
</tr>
<tr>
<td>5</td>
<td>xxx - 10MHPP</td>
<td>Hydro</td>
<td>25.6</td>
<td>86.9</td>
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<td>6</td>
<td>xxx</td>
<td>Wind</td>
<td>24.0</td>
<td>34.8</td>
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<tr>
<td>7</td>
<td>xxx - xxx 1-4</td>
<td>Hydro</td>
<td>12.3</td>
<td>44.7</td>
</tr>
<tr>
<td>8</td>
<td>xxx - xxx 1,2,3</td>
<td>Hydro</td>
<td>11.4</td>
<td>39.9</td>
</tr>
<tr>
<td>9</td>
<td>Espe - Sapanta</td>
<td>Hydro</td>
<td>9.9</td>
<td>23.0</td>
</tr>
<tr>
<td>10</td>
<td>LC Business</td>
<td>Wind</td>
<td>9.0</td>
<td>14.7</td>
</tr>
<tr>
<td>11</td>
<td>Elektra - Tortomanu 2</td>
<td>Wind</td>
<td>8.0</td>
<td>13.7</td>
</tr>
<tr>
<td>12</td>
<td>xxx</td>
<td>Solar</td>
<td>7.5</td>
<td>13.4</td>
</tr>
<tr>
<td>13</td>
<td>xxx</td>
<td>Solar</td>
<td>6.3</td>
<td>10.5</td>
</tr>
<tr>
<td>14</td>
<td>Balkan Hydro Energy</td>
<td>Hydro</td>
<td>4.0</td>
<td>8.5</td>
</tr>
<tr>
<td>15</td>
<td>xxx</td>
<td>Solar</td>
<td>3.5</td>
<td>8.4</td>
</tr>
<tr>
<td>16</td>
<td>xxx - xxx 1</td>
<td>Hydro</td>
<td>3.0</td>
<td>14.3</td>
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<tr>
<td>17</td>
<td>xxx - xxx 3</td>
<td>Hydro</td>
<td>2.9</td>
<td>12.1</td>
</tr>
<tr>
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<td>Hydro</td>
<td>2.9</td>
<td>9.1</td>
</tr>
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<td>Solar</td>
<td>2.1</td>
<td>3.6</td>
</tr>
<tr>
<td>20</td>
<td>xxx</td>
<td>Hydro</td>
<td>1.9</td>
<td>6.1</td>
</tr>
<tr>
<td>21</td>
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<td>Biogass</td>
<td>1.5</td>
<td>5.3</td>
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<tr>
<td>22</td>
<td>Zagra Hidro SRL</td>
<td>Hydro</td>
<td>1.4</td>
<td>3.5</td>
</tr>
<tr>
<td>23</td>
<td>Elnet - Repedea 3</td>
<td>Hydro</td>
<td>1.1</td>
<td>2.8</td>
</tr>
<tr>
<td>24</td>
<td>Elnet - Repedea 2</td>
<td>Hydro</td>
<td>1.0</td>
<td>2.3</td>
</tr>
<tr>
<td>25</td>
<td>xxx</td>
<td>Solar</td>
<td>1.0</td>
<td>1.8</td>
</tr>
<tr>
<td>26</td>
<td>Constructim Top - Buzias</td>
<td>Solar</td>
<td>0.9</td>
<td>2.3</td>
</tr>
</tbody>
</table>

**Total** | **404.1** | **798.4**
Romania’s Renewable energy targets (2020)

<table>
<thead>
<tr>
<th>Overall energy (electrical, heat&amp;cooling and transportation)</th>
<th>Electrical energy including large hydro</th>
<th>Electrical energy excluding large hydro</th>
</tr>
</thead>
<tbody>
<tr>
<td>24%</td>
<td>38%</td>
<td>20%</td>
</tr>
</tbody>
</table>

- Calculated as total energy from renewable sources (including heat, electricity and transportation) divided by the **total final gross energy consumption**.
- This percentage is **legally binding** to EU, as per the **EU Directive (2009/28/EC)** incorporated also in the National Renewable Energy Action Plan (NREAP) submitted by Romania in 2010.
- The **total energy** covers: electricity, heat and transportation(fuel).
- The high level of RES in heating and cooling comes from quantification of wood burnt by households for heating.

<table>
<thead>
<tr>
<th>Category of energy</th>
<th>Gross Final Consumption (2010) ktoe</th>
<th>RES 2010 (ktoe)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat</td>
<td>16.056</td>
<td>2.819</td>
<td>18%</td>
</tr>
<tr>
<td>Electrical</td>
<td>5.350</td>
<td>1.435</td>
<td>27%</td>
</tr>
<tr>
<td>Transportation</td>
<td>4.856</td>
<td>275</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26.262</strong></td>
<td><strong>4.529</strong></td>
<td><strong>17.2%</strong></td>
</tr>
</tbody>
</table>

Source: NR EAP Romania 2010

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Year 2013 showed a decrease of consumption of 5% compared to the correspondent period of 2012
The consumption is kept constant each year, as the economic situation does not show significant improvement;
Under these assumption and based on the already installed capacity we believe that the green energy quota may be reached in 2014;
Actual installed capacity 4,418MW as of 31.12.2013: 2,783MW wind, 1,022MW photovoltaic, 530MW hydro, 83MW biofuels.
BCR financing criteria
Renewable Energy Projects

**Financing Structure**

- Recourse on Sponsor or additional comfort;
- Focus on refinancing operational projects;
- Currency of financing: EUR or RON;
- Maturity: depending on project and sponsor, up to 12 years;
- Interest rate hedging;
- Gearing: based on the financial model – max. 50% debt (depending on project characteristics, price assumptions etc.);
- Sculpted repayment profile that is adjusted to predicted revenue streams (Black Power and GC income, costs etc.);
- Grace period (principal and interest) during construction phase;
- Envisaged DSCR on bank case – 1.25.

**Other requirements**

- Detailed construction budget and construction program, financial model of the project;
- Hydrological study, covering at least 20 years of water data;
- Technical and legal due diligence performed by reputable parties;
- Permits and licences – status and copies;
- Contractor and Supplier of technology anticipated, basic conditions of the contract (unit price, payment schedule, warranty period, scope of warranty);
- Proven technology;
- Reputable constructors and O&M operators;
- PPA and GCPA (concluded on OPCOM market only after projects become operational);
- Track-record of site operator.
The Renewable Energy Business Model
Project Finance Type of Financing

EPC Contractor
- Construction (EPC Contract)

Operator
- OMS*-Agreement
- Right to Dispatch

Authority
- Special Purpose Company (SPC)
- Debt Service

Off Taker / Utility
- Completion Guarantee
- Debt

Consumer
- Dividend

Supplier
- Technology
- Equity (100%)
- Completion Guarantee

Bank(s)

Sponsor(s)

Legal Counsel

Transaction Advisors
- Legal Counsel
- Insurance Consultant
- Independent Engineer
- Model Auditor
- Market Consultant

* Operation, Management & Service

Financing small hydropower plants in Romania
## Financing Hydro Projects in Romania

### Risk Mitigation Mechanism

<table>
<thead>
<tr>
<th>Cash Deficiency Guarantees</th>
<th>Project Reserve Accounts</th>
<th>Cash Cascade</th>
<th>Cash Sweep</th>
<th>Dividend Restriction</th>
<th>Involvement of International Financing Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Additional payment obligations from sponsors in order to mitigate certain project risks (e.g. cost overrun risks)</td>
<td>- Debt Service Reserve Account, Maintenance Reserve Account</td>
<td>- Exact definition/order for the use of the project cash flow (Opex, taxes, senior debt, Capex, replenishing project accounts etc.)</td>
<td>- Agreements regarding application/distribution of surplus liquidity (mandatory prepayment)</td>
<td>- Distributions lock-ups: e.g. only allowed if certain financial ratios are met, phasing, etc.</td>
<td>- Benefit from longer loan maturities and political and commercial risk cover (ECAs)</td>
</tr>
<tr>
<td>- Include additional cash-flow buffers (e.g. 6-12 months debt service)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Financing small hydropower plants in Romania

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10
Renewable Energy
Selected credentials

**Poland:**
- Participation in the financing of a 24 megawatts wind park project in Kisielice, central Poland. Banking Consortium: Spanish La Caixa, Polish BreBank and Erste Group Bank

**Czech Republic:**
- Mandated Lead Arranger and Debt Coordinator in a programme loan project financing of a 17.6 megawatt photovoltaic project pipeline in the Czech Republic. Banking Consortium: Erste Group Bank and BNP Paribas Fortis

**Romania:**
- We have built a diversified portfolio in terms of number of projects, still concentrated on wind and micro-hydro projects, accounting for more than 400 of installed MW.

**Turkey:**
- Lead Arranger in Turkey’s Enerjisa Enerji Üretim project comprising 10 hydroelectric power plants and a natural gas-fired thermal plant with a total capacity of 1,900 megawatts. The financing package is the largest international transaction for a private company in Turkey
Romanian Regulation For Renewable Energy
Multiple law amendments – lack of predictability

- 2004: Gov. Ordinance 1892 - 1 **Green Certificate allocated** for all technologies
- 2008: Law 220 - established the support scheme to stimulate production of electrical energy from RES, however it was not applicable until Nov 2011
- **2011 November: Law 220** – in full force only for approx. 1.5 year – represented basis for investments
- 2013 June: Government Emergency Ordinance 57 introducing **changes to the incentive scheme**
- 2013 December: Government Decision 994 reducing the number of green certificates for new projects because of overcompensation
- 2014 February: the Romanian Parliament adopted the law approving the Government Emergency Ordinance No. 57/2013 **with certain amendments/clarifications**
New amendments to Law 220/2008
OUG 57/2013 and the new GD 994/2013 for overcompensation

Effects on existing projects

1. For all renewable energy projects
   - The debt service has been calculated based on a certain number of GCs, therefore any reduction creates difficulties for the companies to serve the debt
   - On top of revenues decrease, the new introduced taxes put even more pressure on the repayment capacity

2. For projects that have received EU non-reimbursable funds
   - BCR has financed more than 18 renewable energy production units that received EU non-reimbursable funds, with a total investment cost exceeding EUR 166 million; in 2013 these projects were even in a worse situations because of GCs postponement
   - In case the law sets at least 1 GC, what will happen with the difference up to 1 that was postponed in 2013?

Effects on future projects

1. Number of GCs
   - What will happen with the postponed GCs?
   - The new report regarding the overcompensation should take into account the number of GCs that can be traded, plus the additional taxes

2. Change of the annual quotas
   - By allowing ANRE to change the annual quotas each year, the entire GCs system will loose its transparency and predictability

3. New taxes
   - How the new tax of 1.5% on special constructions will operate? What is considered a “special construction”?

4. No possibility to secure revenues through long term off-take agreements before the financing is granted

5. New Regulation regarding the Access to the Electricity Market
   - A new regulation regarding the access to the electricity market up to the safety limit of the national grid shall be approved by government decision, upon the proposal submitted by the Department for Energy.
## What is next?

<table>
<thead>
<tr>
<th>We are looking to finance good projects, that have...</th>
<th>Common problems encountered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong sponsor</td>
<td>Short term focus of the investors, limited track record</td>
</tr>
<tr>
<td>Additional support from the Sponsor</td>
<td>In the light of the new law limitations</td>
</tr>
<tr>
<td>All the permits and licences</td>
<td>Legal issues related to the title and permits Issues related to grid connection limitations</td>
</tr>
<tr>
<td>Good renewable energy source that secure a certain level of revenues</td>
<td>Market risk associated with GCs in case the quota of green energy is reached</td>
</tr>
<tr>
<td>Ideally 5-10 yrs PPA and GCPA</td>
<td>Long-term PPA and GCPA are no longer available on the market</td>
</tr>
<tr>
<td>Minimum level of equity</td>
<td>Higher level so that it is correlated with the new number of GCs</td>
</tr>
<tr>
<td>Reputable EPC and O&amp;M contractors</td>
<td>Construction delays, operating problems</td>
</tr>
<tr>
<td>Proven technology</td>
<td>New technologies might generated additional risks</td>
</tr>
<tr>
<td>Satisfactory result of legal and technical DD performed by a reputable party</td>
<td>Different interpretation of the legal framework or technical specifications, production forecast etc.</td>
</tr>
<tr>
<td>Suitable insurance program</td>
<td>Not all insurers are specialized on renewable energy projects</td>
</tr>
</tbody>
</table>

Financing small hydropower plants in Romania
Team and Contacts

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