

Financing small hydropower plants in Romania



February, 2014

Profile – Banca Comerciala Romana



BCR brand

- 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

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



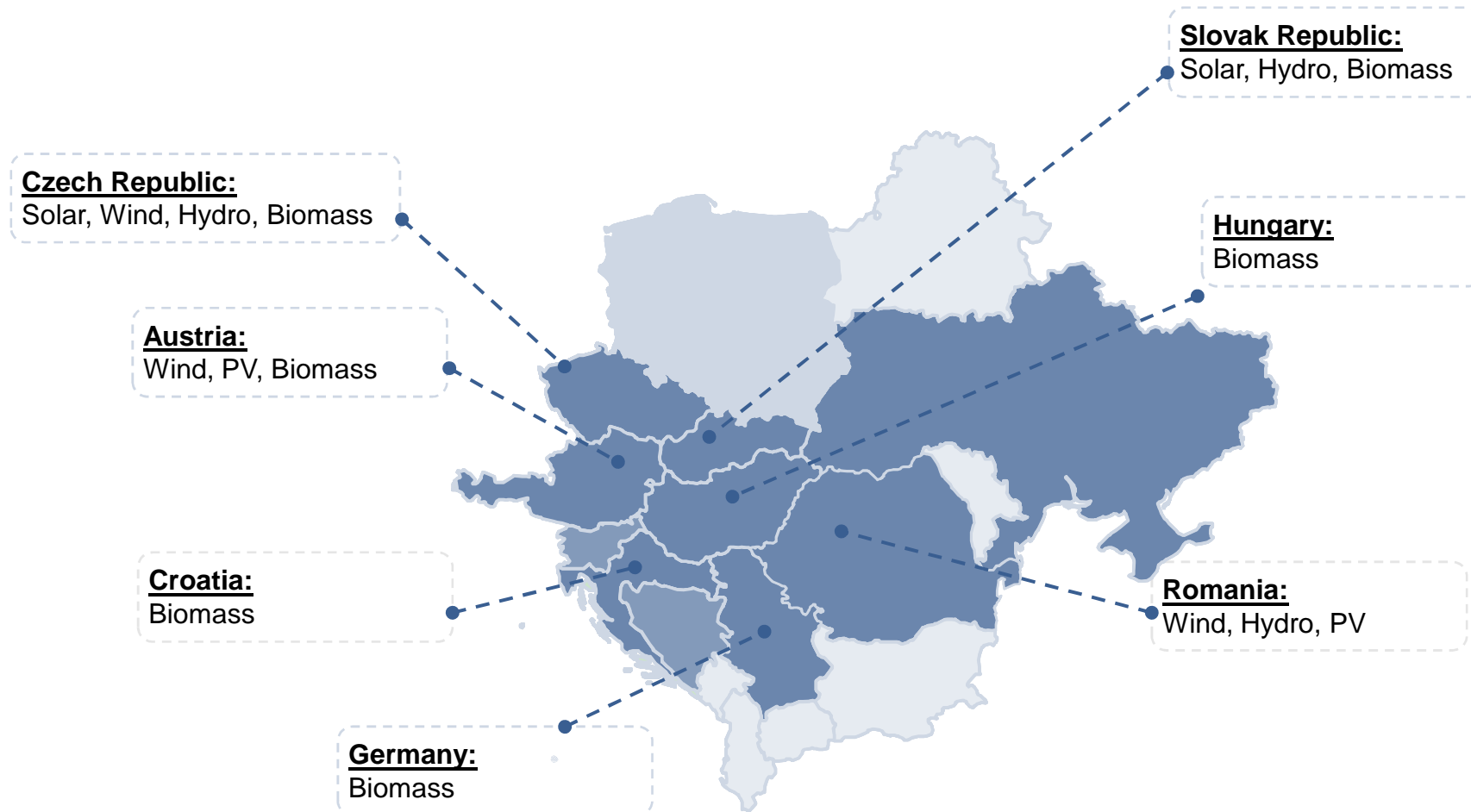
Waste Treatment



Renewable Energy

Sectors currently financed in Erste Group

Total exposure of Erste Group towards renewable energy is approx. EUR 1,7 billion



BCR/ERSTE Public and Infrastructure Finance

Achievements in RES financing in Romania



ERSTE GROUP

No	Name	Type	MW	Capex (EURm)
1	xxx	Wind	108.0	191.5
2	Marguerite, Power Fund, EP Global - Chirnogeni	Wind	80.0	130.0
3	Martifer	Wind	42.0	67.2
4	xxx	Wind	33.0	47.9
5	xxx - 10MHPP	Hydro	25.6	86.9
6	xxx	Wind	24.0	34.8
7	xxx - xxx 1-4	Hydro	12.3	44.7
8	xxx - xxx 1,2,3	Hydro	11.4	39.9
9	Espe - Sapanta	Hydro	9.9	23.0
10	LC Business	Wind	9.0	14.7
11	Elektra - Tortomanu 2	Wind	8.0	13.7
12	xxx	Solar	7.5	13.4
13	xxx	Solar	6.3	10.5
14	Balkan Hydro Energy	Hydro	4.0	8.5
15	xxx	Solar	3.5	8.4
16	xxx - xxx 1	Hydro	3.0	14.3
17	xxx - xxx 3	Hydro	2.9	12.1
18	xxx - xxx 2	Hydro	2.9	9.1
19	xxx	Solar	2.1	3.6
20	xxx	Hydro	1.9	6.1
21	xxx	Biogas	1.5	5.3
22	Zagra Hidro SRL	Hydro	1.4	3.5
23	Elnet - Repedea 3	Hydro	1.1	2.8
24	Elnet - Repedea 2	Hydro	1.0	2.3
25	xxx	Solar	1.0	1.8
26	Constructim Top - Buzias	Solar	0.9	2.3
Total			404.1	798.4

Romanian RES energy market

Regulatory framework

Romania' Renewable energy targets (2020)

Overall energy (electrical, heat&cooling and transportation)	Electrical energy including large hydro	Electrical energy excluding large hydro
24%	38%	20%

- 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 an cooling comes from quantification of wood burnt by households for heating.
- Calculated as **electrical** energy from renewable sources (including large hydro capacities of over 10 MW each) divided **by the final gross electricity consumption**.
- The target is national as (**law 220/2008**), set-up in order to achieve the EU target.
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Category of energy	Gross Final		
	Consumption (2010) ktoe	RES 2010 (ktoe)	%
Heat	16.056	2.819	18%
Electrical	5.350	1.435	27%
Transportation	4.856	275	6%
Total	26.262	4.529	17,2%

Source: NR EAP Romania 2010

Romanian RES energy market

Green Energy Quotas

Year	Demand						Supply					
	Gross end electricity consumption (GEEC) (GWh)	Mandatory ("RE Law") quotas of green electricity	Excess Supply current quota (-)	Proposed quotas of green electricity	Excess Supply proposed quota (-)	Effective quotas of green electricity	Total green electricity production (GWh)	(average) Wind power installed (MW)	(average) Photovoltaic power installed (MW)	(average) Biomass power installed (MW)	(average) Small hydro power installed (MW)	Total power installed (MW)
	1	2	3=(2-6):6	4	5=(4-6):6	6=7:1	7	8	9	10	11	12=(8+9+10+11)
2009	42,858	6.3%		6.3%		0.6%	240	14	0	8	74	96
2010	44,014	8.3%		8.3%		1.6%	675	398	0	23	76	497
2011	59,400	10.0%		10.0%		2.5%	1,510	826	1	25	381	1,233
2012	59,700	12.0%		12.0%		5.8%	3,436	1,822	49	40	426	2,337
2013	56,400	14.0%	26%	14.0%	26%	11.1%	6,279	2,100	400	45	450	*4,418
2014	56,400	15.0%	-8%	11.5%	-29%	16.3%	9,177	2,800	1,022	83	550	4,455
2015	56,400	16.0%	-6%	11.5%	-32%	17.0%	9,589	2,900	1,022	90	600	4,612
2016	56,400	17.0%	-1%	11.5%	-33%	17.1%	9,646	2,900	1,022	100	600	4,622
2017	56,400	18.0%	5%	11.5%	-33%	17.1%	9,646	2,900	1,022	100	600	4,622
2018	56,400	19.0%	11%	11.5%	-33%	17.1%	9,646	2,900	1,022	100	600	4,622
2019	56,400	19.5%	14%	11.5%	-33%	17.1%	9,646	2,900	1,022	100	600	4,622
2020	56,400	20.0%	17%	11.5%	-33%	17.1%	9,646	2,900	1,022	100	600	4,622
Total	657,173					12.04%	79,133					

* please note that for 2013, average value of installed capacities were considered, but the total power installed as of 31.12.2013

- 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

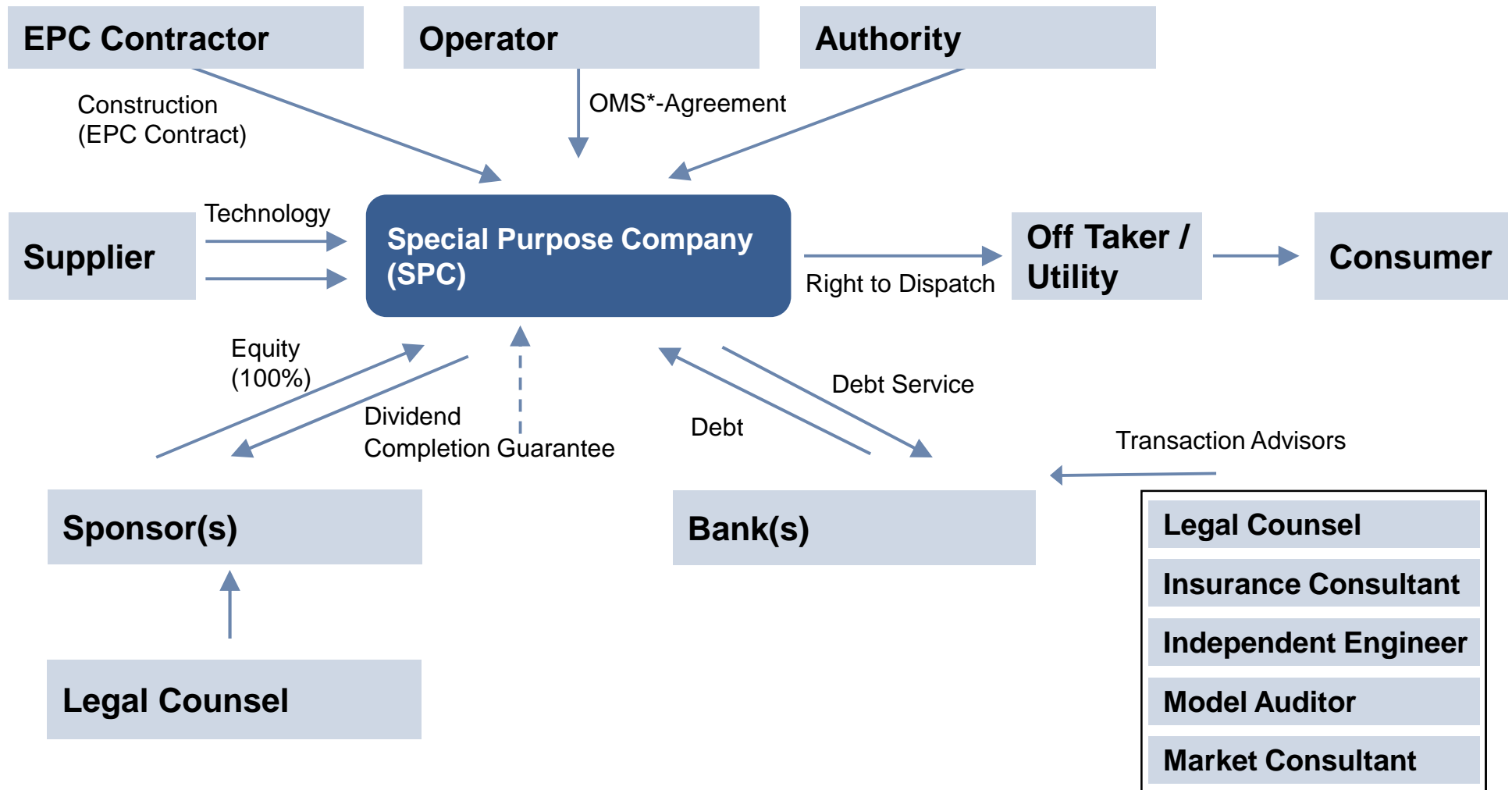
- Recourse on Sponsor or additional comfort;
- Focus on refinancing operational projects;
- Currency of financing: EUR or RON;
- Maturity: depending on project and sponsor, up to 12 years;
- Interest rate hedging;
- Gearing: based on the financial model – max. 50% debt (depending on project characteristics, 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

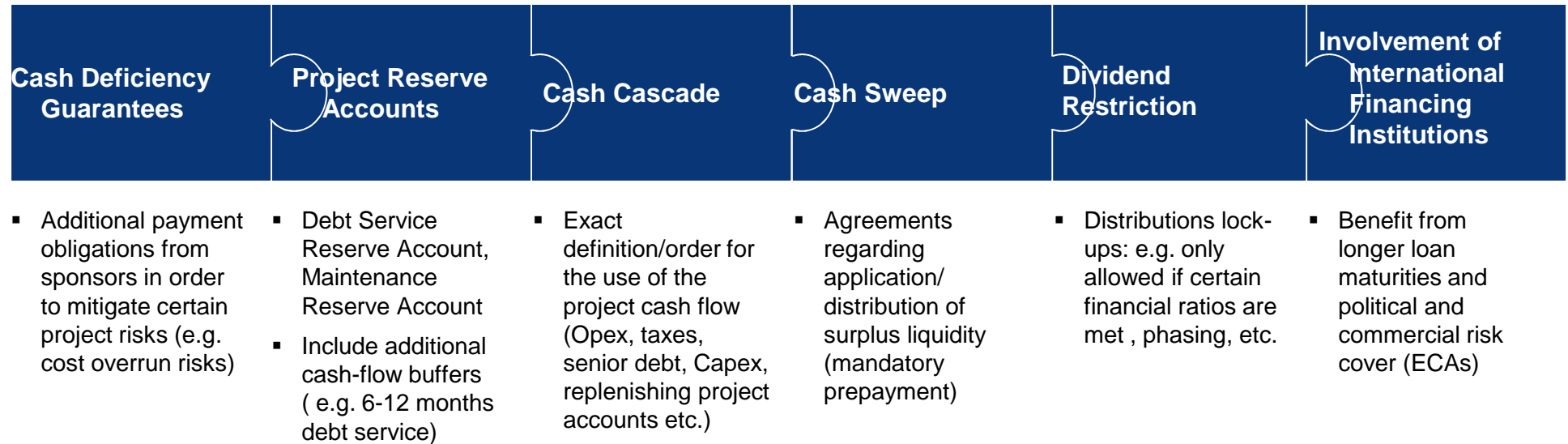
Project Finance Type of Financing



* Operation, Management & Service

Financing Hydro Projects in Romania

Risk Mitigation Mechanism



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**

Technology	Projects accredited before 31 December 2013					Projects accredited from 1 January 2014		
	GCs/MWh received in any year	GCs/MWh postponed from trading between 1 July 2013 and 31 March 2017	GCs/MWh immediately		Postponed GCs/MWh recovery period	GCs/MWh received	GCs/MWh postponed from trading	GCs/MWh immediately available for trading
			Between 1 July 2013 and 31 March 2017	After 31 March 2017				
Wind power producers	2 GCs	1 GC	1 GC	2 GCs	1 January 2018 - 31 December 2020	1.5 GC	0	1.5 GC
Solar power producers	6 GCs	3 GCs	3GCs	6 GCs	1 April 2017 - 31 December 2020	3 GCs	0	3 GCs
Small hydropower producers	3 GCs	1 GC	2GCs	3 GCs	1 April 2017 - 31 December 2020	2.3 GCs	0	2.3 GCs
Biomass energy producers	2-4 GCs	0 GC	2-4 GCs	2-4 GCs	-	2-4 GCs	0	2-4 GCs

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 lose 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?

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

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