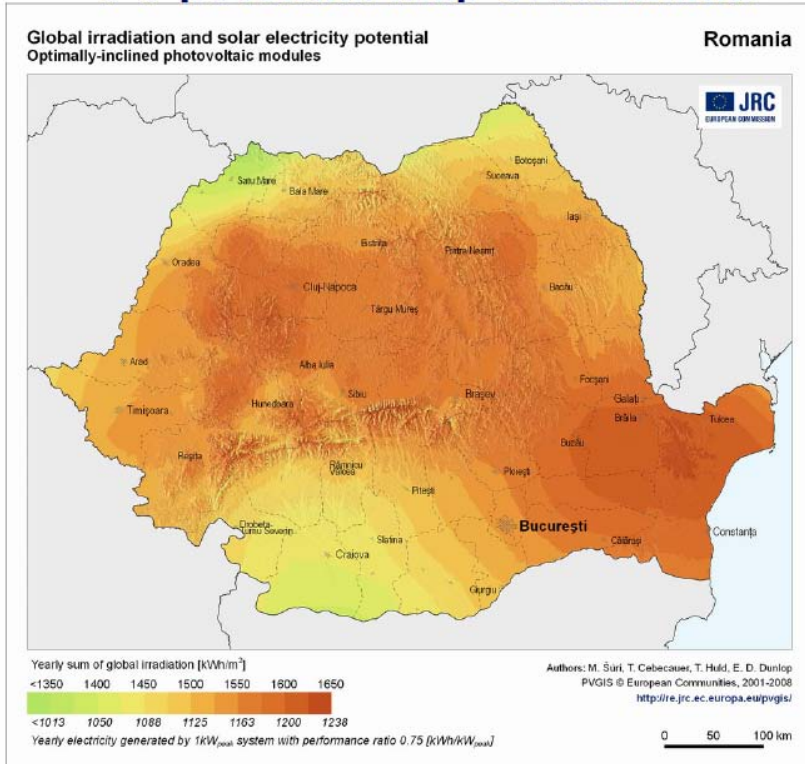


ROMANIAN PV MARKET OVERVIEW

PV potential map of Romania

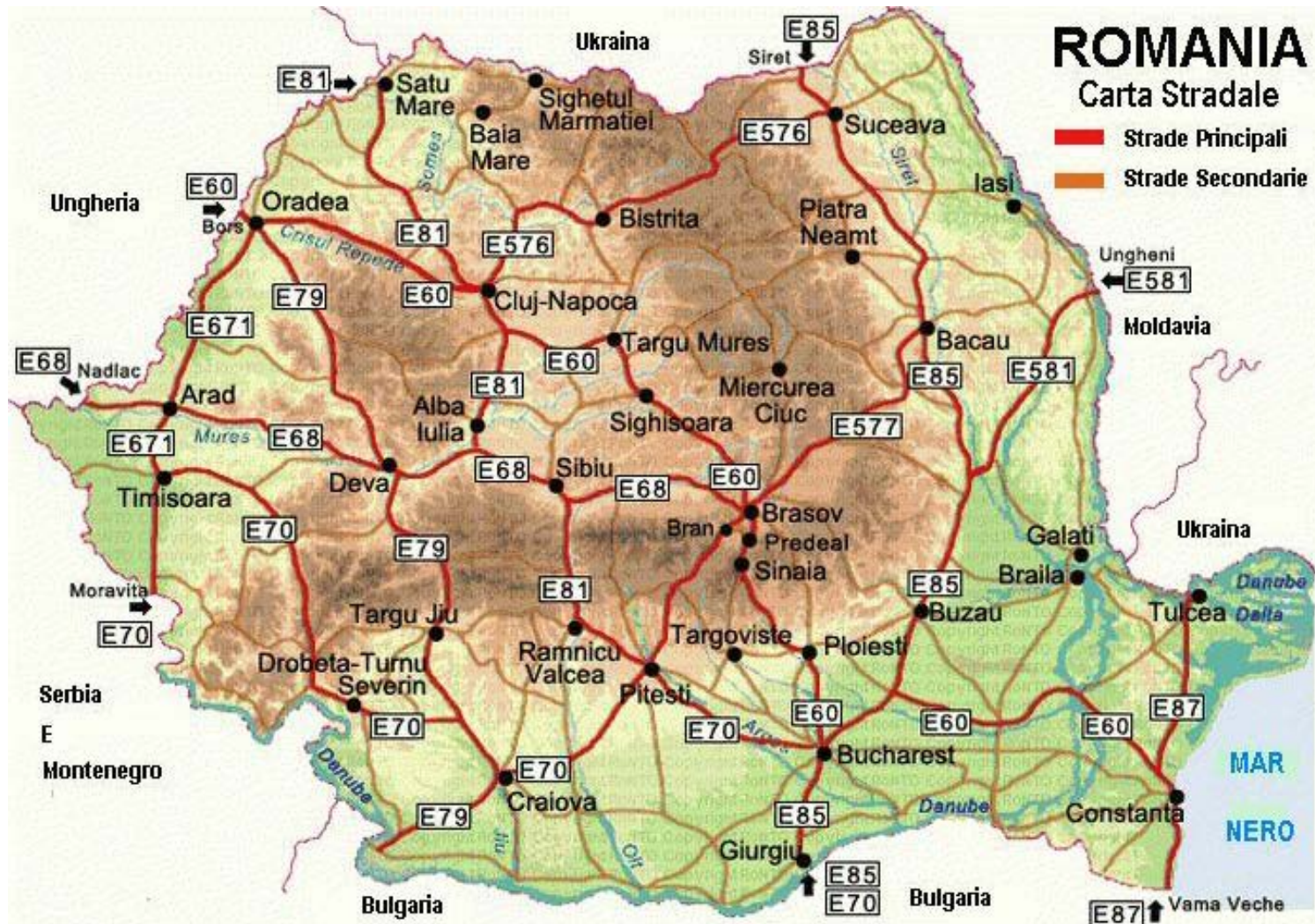


- 1) Romania overview, economics and country risk*
- 2) Energy market, solar promotion system*
- 3) Attractive aspects of the market*
- 5) Critical aspects*
- 6) Consultancy service*

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ROMANIA OVERVIEW



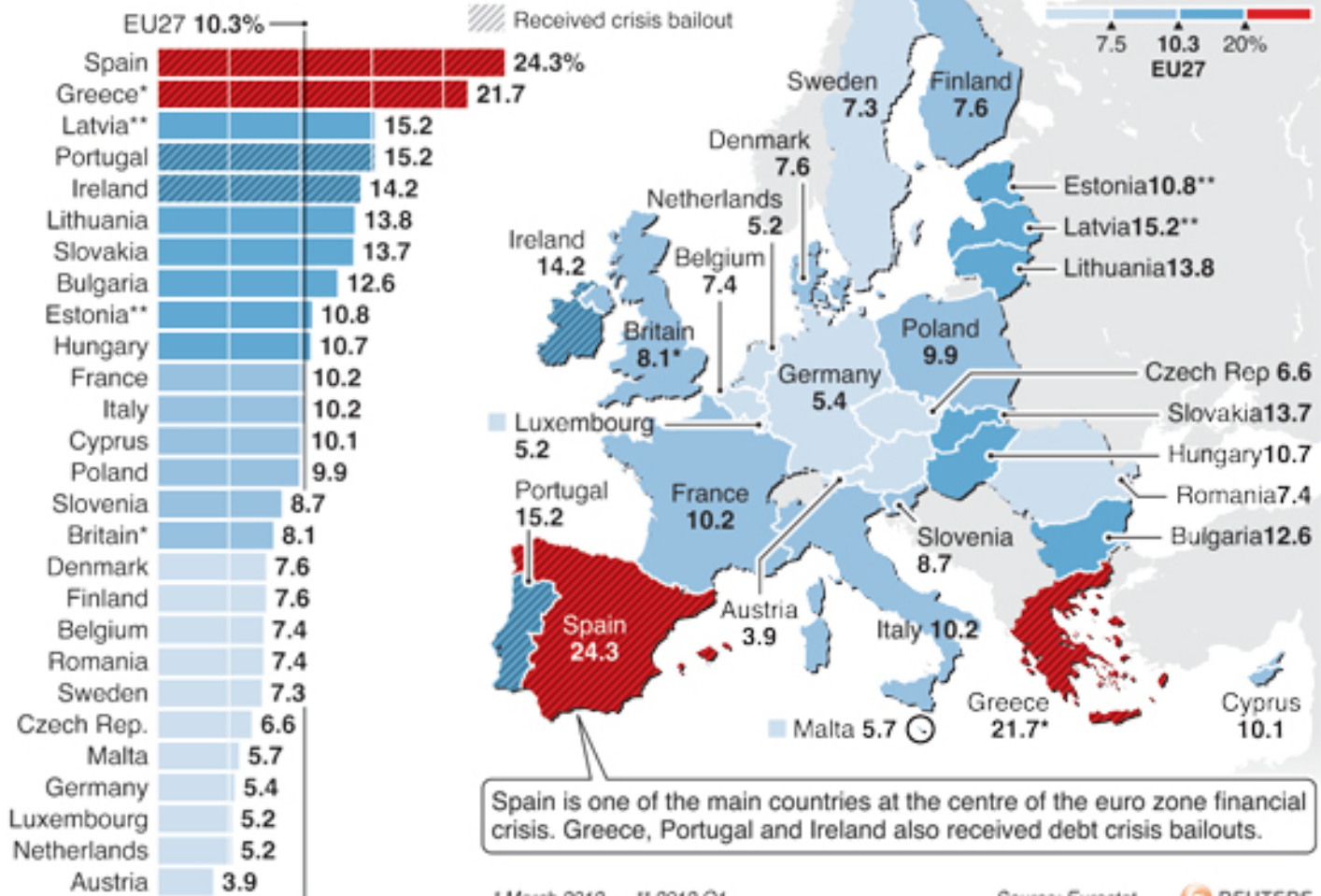
ECONOMICS AND GENERAL INDICATORS OF THE COUNTRY

- Romania is one of the most interesting emerging economies of Europe.
- The country is **NATO** (North Atlantic Treaty Organization) member since 2004 and a member of the **European-Union** since 2007.
- Strategic, with the countries position: Southeastern Europe, bordering the Black Sea, between Bulgaria and Ukraine
- One of the lowest unemployment rate in Europe (similar to Scandinavian countries)

EUROPEAN UNEMPLOYMENT RATE

EUROZONE UNEMPLOYMENT

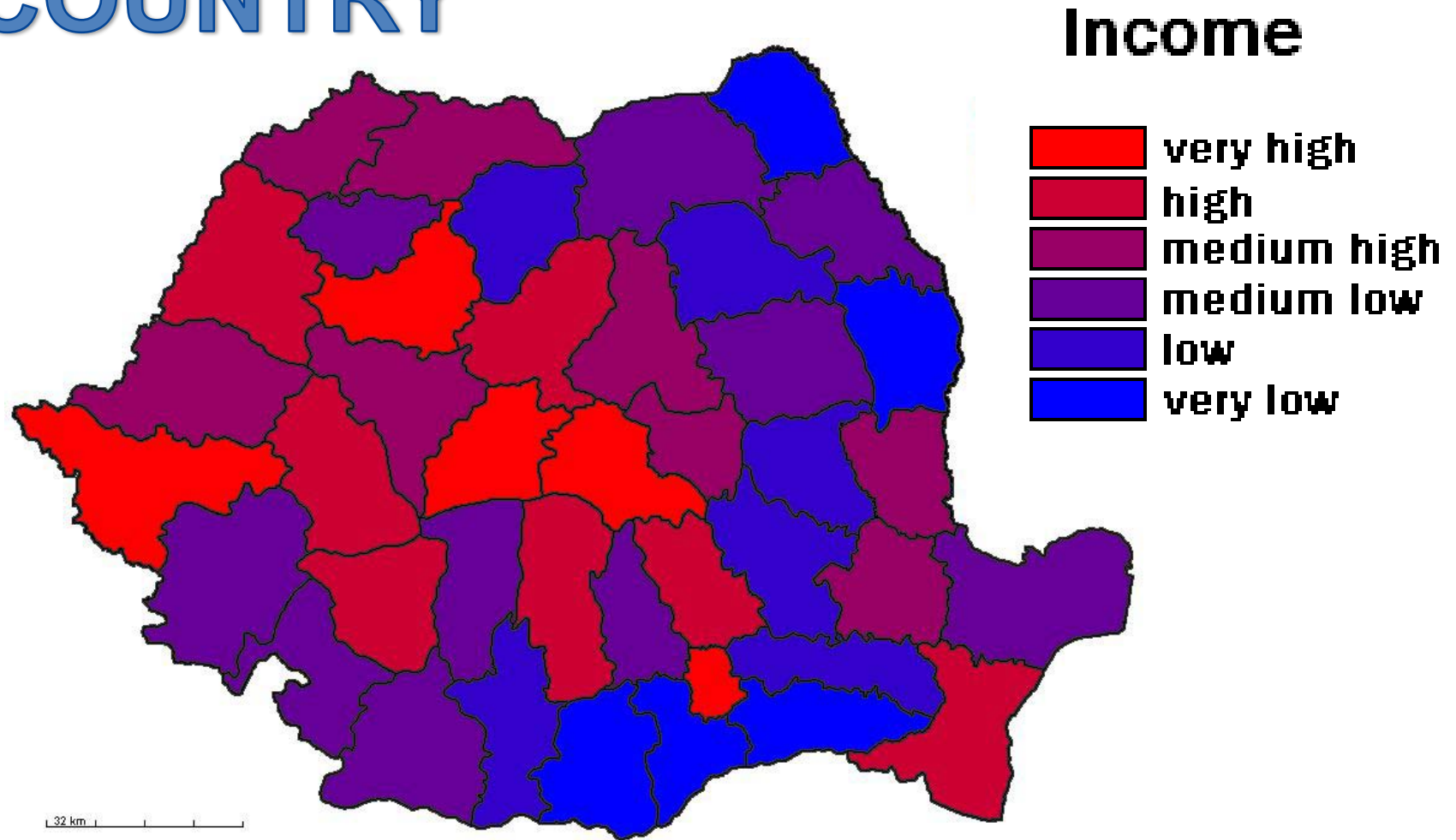
Eurostat estimates that 24.7 million people in the EU27 were unemployed in April. Seasonally-adjusted EU27 unemployment rates for April:



ECONOMICS AND GENERAL INDICATORS OF THE COUNTRY

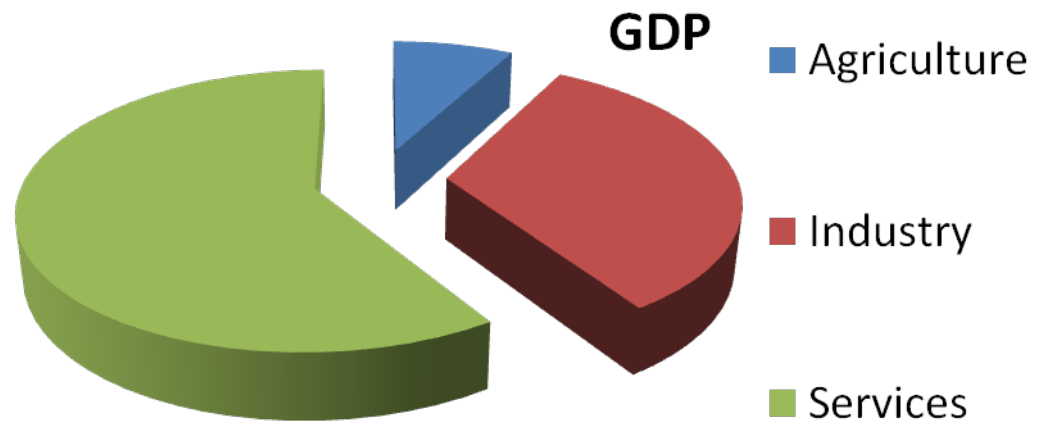
- Romania's main resources are: Petroleum (reserves declining), Timber, Natural Gas, Coal, Iron Ore, Salt, Arable Land, Hydropower.
- **GDP - per capita (PPP)** shows GDP on a buying power parity basis divided by population: 12.600 \$
- Progress in macroeconomic: stabilization
- Renewable energy: hydro, wind and sun.
- Low labour cost.
- With strong trade and financial sector linkages, Romania is exposed to the euro area crisis.

INCOME DISTRIBUTION THE COUNTRY



ECONOMICS

- The GDP grew around 2,5% in 2011
- Expected to grow within 0,9% and 1,5% in 2012 and at 2,5% in 2013
- Inflation rate around 3% in 2012.
- Unemployment in 2011: 7,4%
- GDP in 2011:
- agriculture: 7.9%
- industry: 32.9%
- services: 59.2%



AGRICULTURE

- Romania is the ninth largest country of the European Union by area, and is a low density populated country.
- More than 90% of agricultural land has been privatized giving back to the legitimate owners their plots of land
- Has been created a small size agricultural structure.
- Some companies are buying several adjacent plots of land in order to have big properties .

COUNTRY RISK

COUNTRY ORIENTED IN FAVOUR OF FDI (foreign direct investment)

Economic risk:

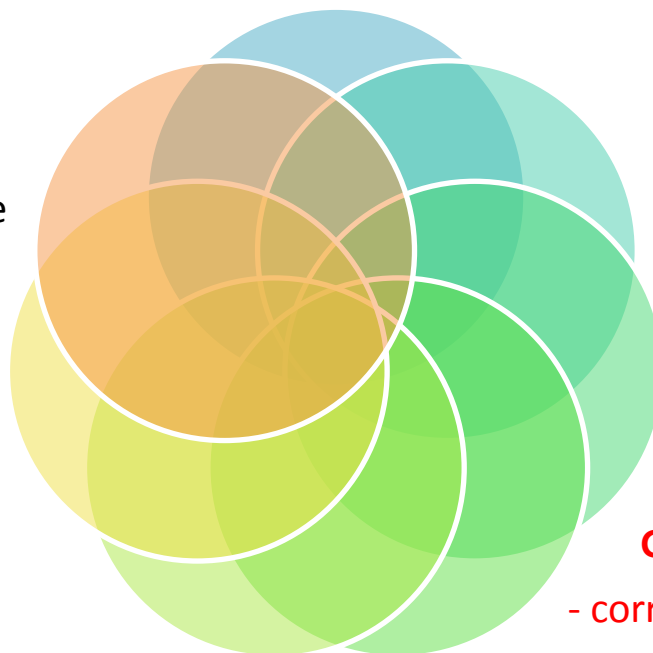
After two years of recession the Romanian economy is gradually recovering over the medium term. Still exposed to the Euro area crisis.

(outlook: steady)

Political risk:

In december 2012 the social liberal coalition (USL) won the national elections.

The new government should support renewable energy



Banking risk:

banking sector remains well capitalized.

(outlook: steady)

General negative factors :

- corruption
- difficulties in access to financing
- law change

OPERATIVE RISK – LEGAL ASSISTANCE

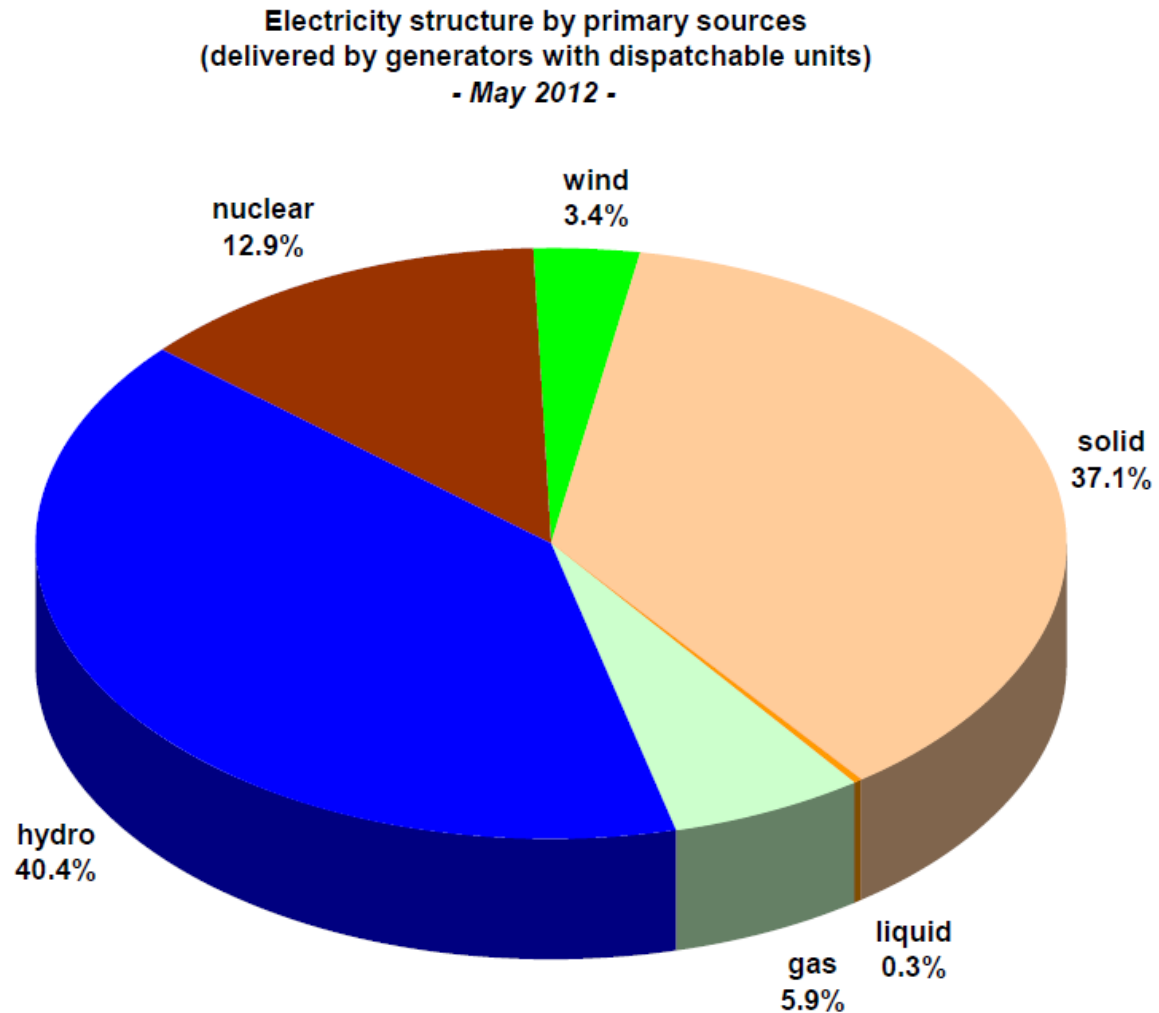
- Corruption and extremely frequent changes in the energy laws reduce certitude of the rules
- Having good legal assistance is a fundamental support to be observed in the country in this business
- Not only for the due diligence, but for the constance update on the next coming change and on how serious there could be a business risk.

ENERGY MARKET EVOLUTION

- The energy sector, just as the entire economy of Romania is under a process of full restructuring and development
- Privatization moves forward.
- Reforms started put the basis for a competitive structure in the energy market
- Solar energy has been very relevant is creating a very big interest for the players and the investors.

ENERGY PRODUCTION QUOTA PER SOURCE

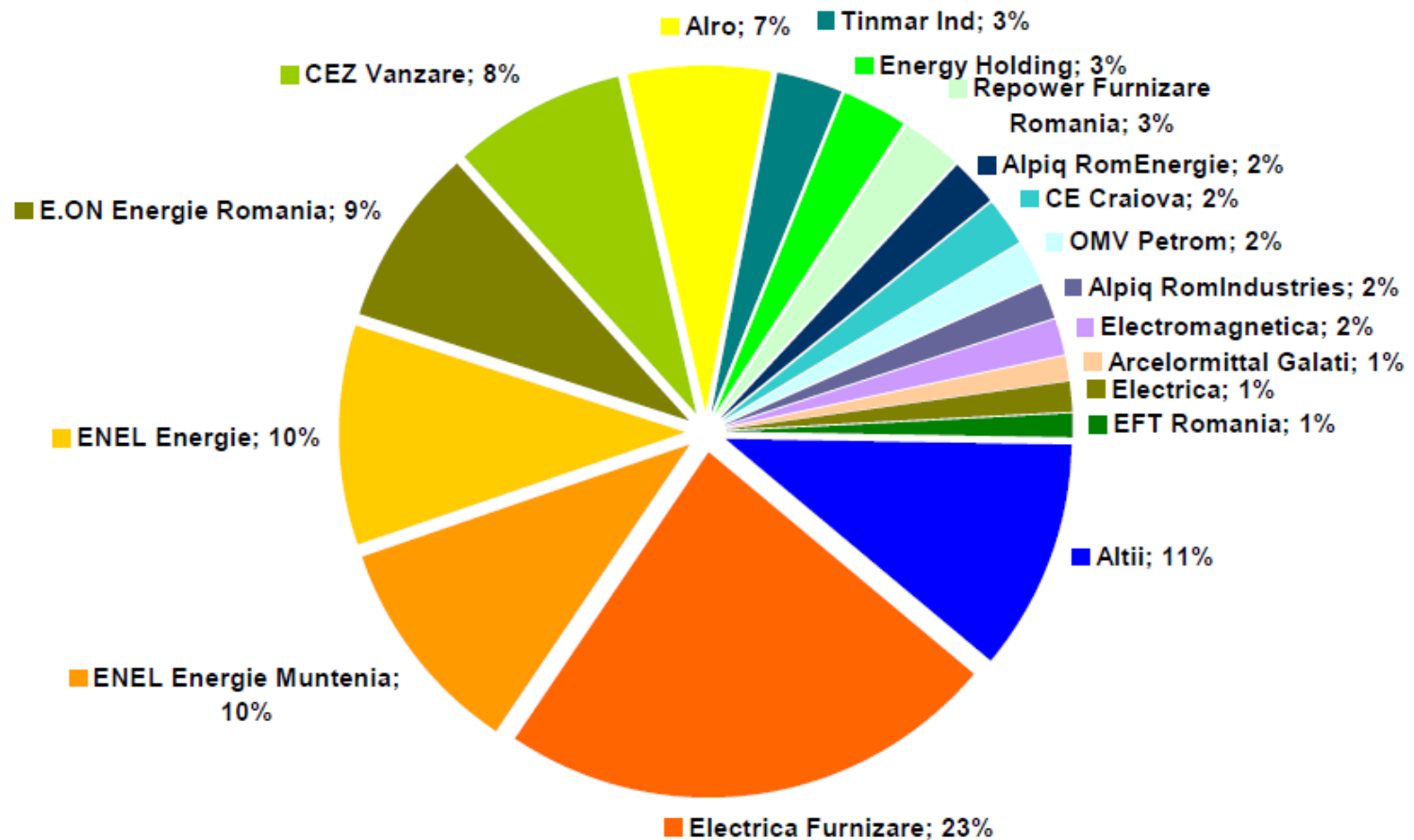
3. *Generation structure of National Energy System on resources types*



ENERGY SUPPLIERS

Market shares of suppliers for final consumers

- JANUARY - MAY 2012 -



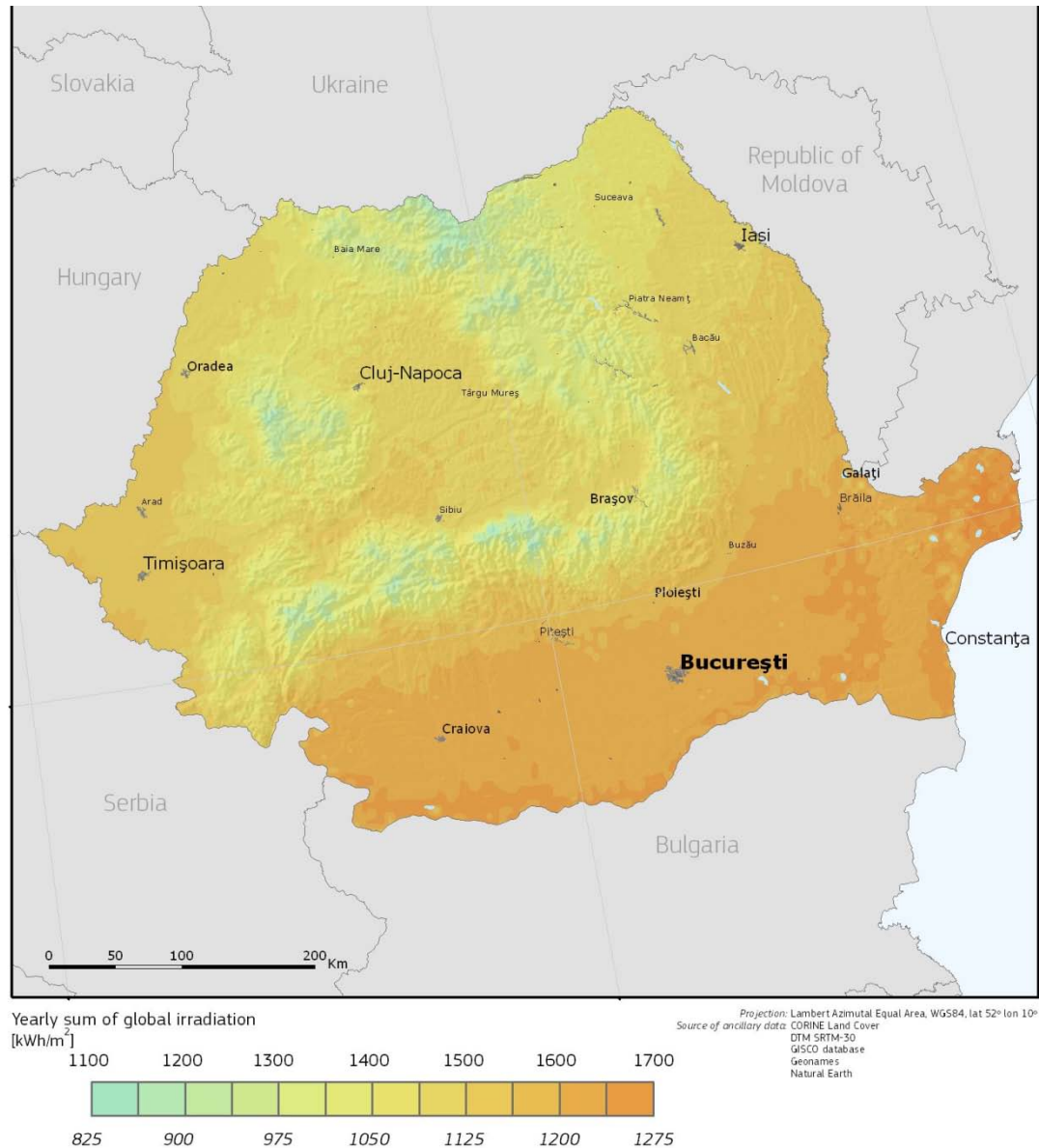
WHY IS THE ROMANIAN PHOTOVOLTAIC SO ACCTRACTIVE 1

- There are 6 green certificates per each MWh produced if connected before the law change.
- Minimum value of each GV: 27 € + inflation
- Max value of exchange: 55 € + inflation
- Price of the energy around 40 €/MWh
- Only 25 MW operational at december 2012
- One of the very few appealing market in European PV

WHY IS THE ROMANIAN PHOTOVOLTAIC SO ACCTRACTIVE 2

- Romania is an area with high potential in terms of solar energy, with 210 days of sunshine per year and with an annual energy flow between 1,000 and 1,300 kWh/m²/year.
- The reduced costs of materials and installation makes the potential return extremely attractive
- There are only a few MWs operational so far
- The market is now interesting for the investors

ROMANIAN IRRADIATION



CRITICAL ASPECTS

- Difficulties in terms of financing
- Investors and EPC have to be solid, well known, in a good financial situation and bankable
- The solar market is very young with almost no history. The wind instead grew first.
- Infrastructural problems on the grid.
- Green certificate value not fixed if not through PPA
- Very frequent changes in law and in the rules

FORECAST OF VALUE EXCHANGE AND FLUCTUATION IN THE MARKET OF THE GREEN CERTIFICATES

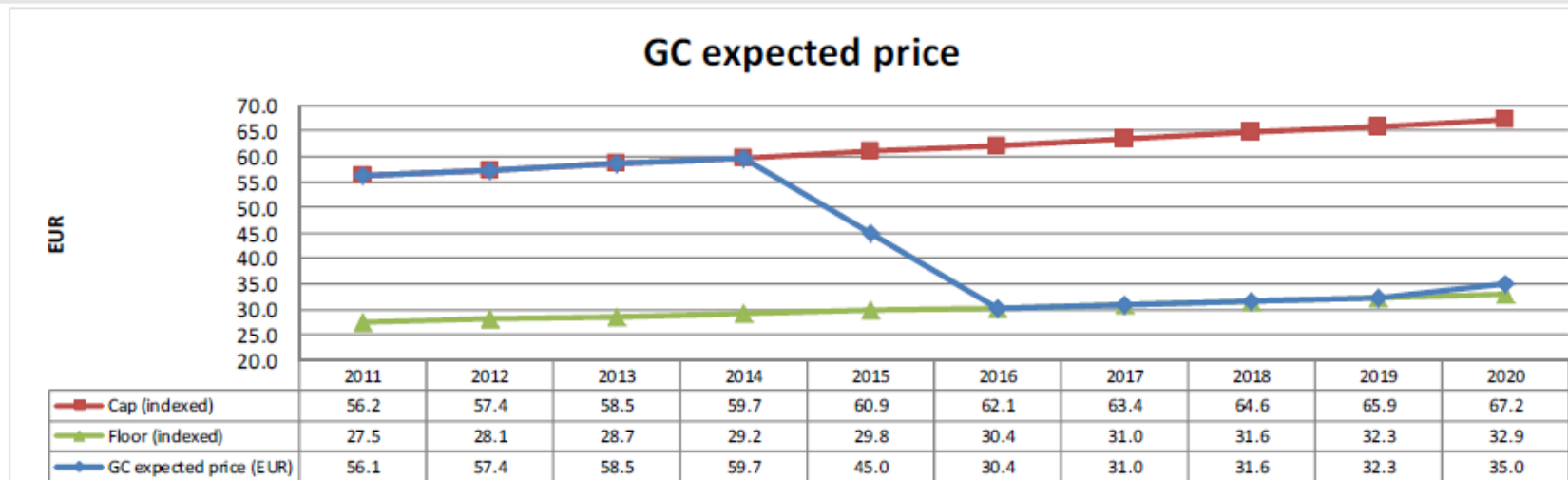
Romanian RES energy market

GC price estimates



ERSTE GROUP

GC expected price



The demand (quota * consumption) is still unsatisfied by the installed capacity

The demand is reached, but the excess of GC can be kept as their validity is for 16 months.

The demand is fulfilled by the installed capacity. Since 2016 is the last year the RES companies can benefit from the GC scheme, no new entrants are expected if the scheme is not prolonged.

The demand increases as only one certificate per MWh of RES is awarded starting 2018.

MAIN PLAYERS OF THE PV MARKET

- **ANRE:** AUTORITATEA NATIONALA DE REGLEMENTARE IN DOMENIUL ENERGIEI (<http://www.anre.ro/>)
- **OPCOM:** PUBLIC MARKET FOR THE ENERGY SALE (<http://www.opcom.ro/pp/home.php>)
- **TRANSELECTRICA:** NATIONAL COMPANY OF ELECTRICITY TRANSMISSION (<http://www.transelectrica.ro/>)

ANRE: sees an extremely highly increasing number of the new photovoltaic plants in 2013:

Year	2012	2013	2016
MW	100	1.000	1.500

PRINCIPLE OF *OVERCOMPENSATION*

- The risk of reduction of the number of the green certificates is linked to the principle of *overcompensation* that forecasts the number of the GC in case the IRR overcomes of more than 10% the established quotas per each source of energy
- In solar the IRR of reference is 11,6% (ANRE).

RES	Wind	Hydro	Biomass, biogas	Solar
IRR	10,9	10,2	10,5-11,8	11,6

REQUIREMENTS ASKED BY THE BANKS TO FINANCE CONSTRUCTION

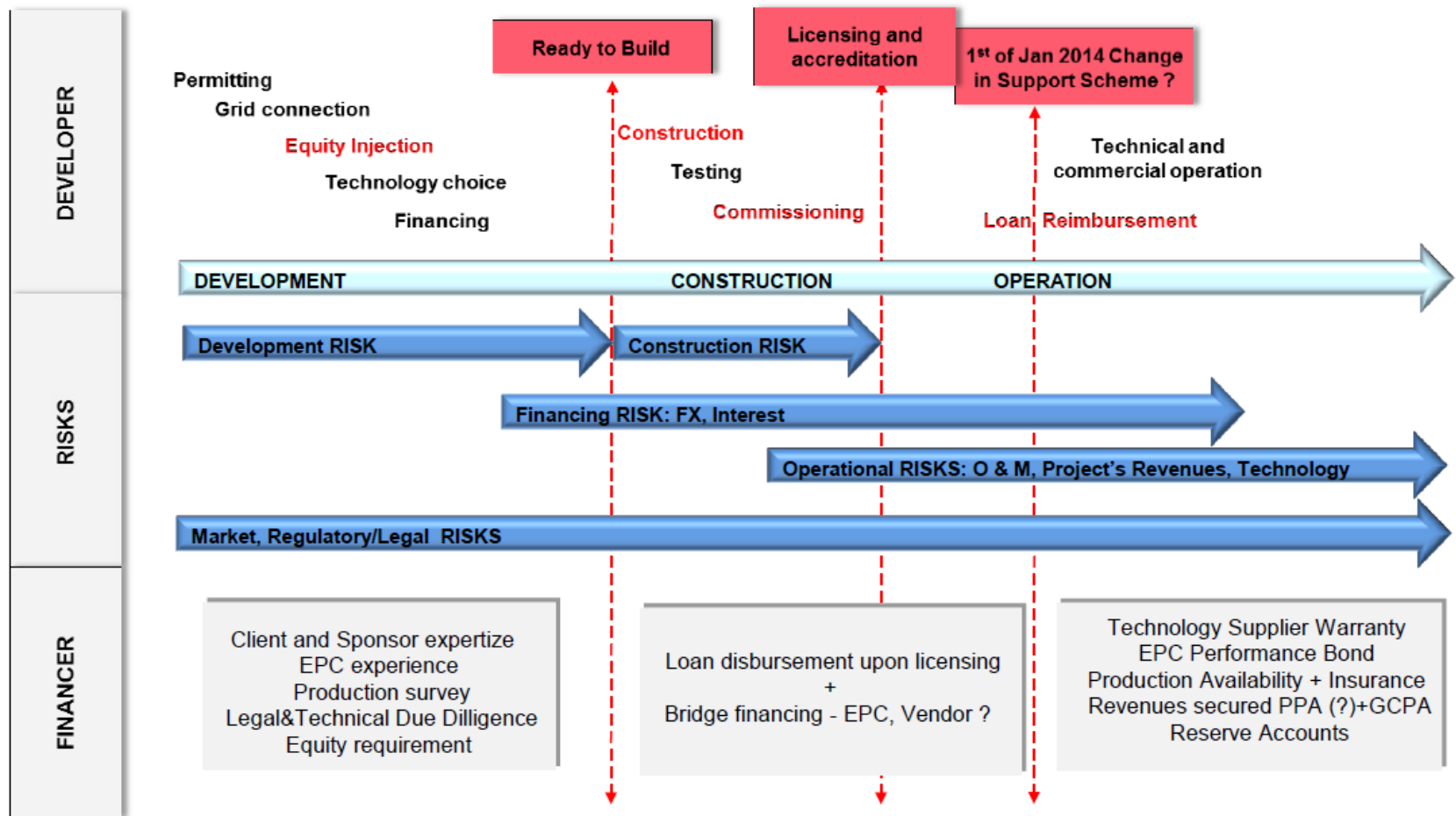
- Strong sponsor
- EPC e O&M with references
- All the permits have to be obtained and OK
- Good area in terms of sun
- Ideally 5-10 years PPA
- Equity requested : 40%
- Bankable and good technology and insurance
- Positive technical and legal due diligence

MOST COMMON FINANCIAL PROBLEMS :

- Investors with a low term target
- Problems related to permits or on the lands
- Market risk due to the green certificates number and future change in the market
- Difficulties in obtaining long period PPAs
- Low financial – economical level of the Sponsor or of the EPC

Project risk

from development to operational



ENERGYMORE

- Business developer fotovoltaico in Italy since 2010
- Present with sister company in Romania (2006)
- Good knowledge of local language, culture, mentality and economy
- Consultancy for internazionalization of EPC

ENERGYMORE

- Partner specialized (developers, electric companies, selected legal firms, EPC)
- RPIA Member
- Advisory for project acquisition and partners
- Internazionalization in other countries
- (South America, USA, Africa)

ENERGYMORE



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Thank you

