PPC and Energy Poverty in West Balkans area

The case of PPC Albania Sh.A.

George Lantzas

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Energy poverty

- A household that would need to spend more than 10% of its annual income on having adequate energy services is in energy poverty (1991)
- . . . While the main focus is on heating, energy poverty refers to all uses of energy in the home, whether for lighting, washing, keeping food cold or whatever. It is the household's total energy bill that matters, so the policies must encompass all the fuels and all the uses of energy in the home. . .

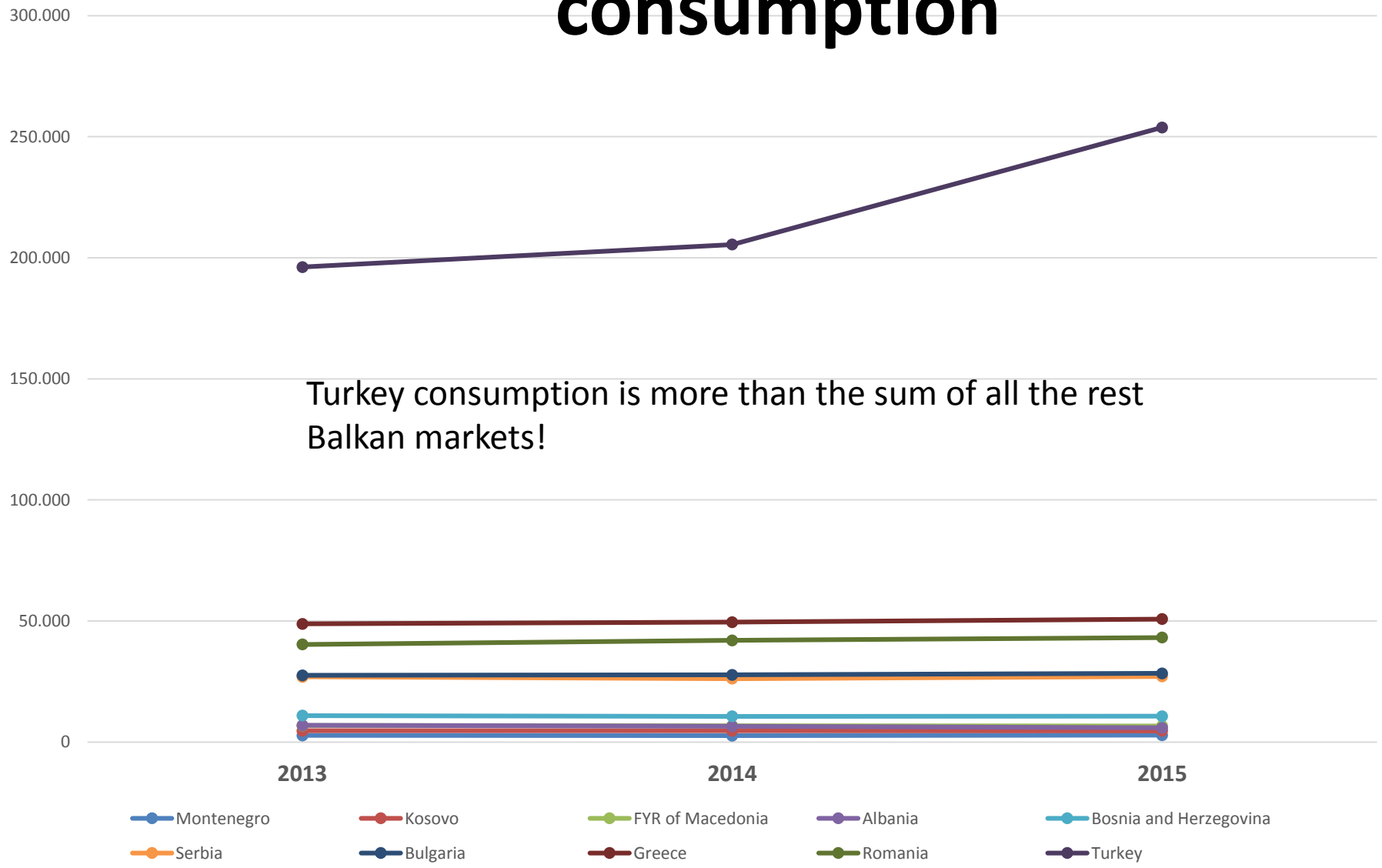
Dr Brenda Boardman,

MBE, FEI Emeritus Fellow, Environmental Change Institute University of Oxford

Balkan area indices

	Energy consumption (Gwhr)					
Year	**2013**	**2014**	**2015**	**Population**	GDP PPS index	**MWhr/ capita**
Montenegro	2.706	2.610	2.809	620.000	42	4,53
Kosovo	4.640	4.675	4.633	1.840.000	-	2,52
FYRoM	6.801	6.729	6.628	2.069.000	36	3,20
Albania	6.893	6.507	5.897	2.886.000	30	2,04
B&H	10.933	10.587	10.675	3.792.000	28	2,82
Serbia	26.903	26.158	27.073	7.114.000	36	3,81
Bulgaria	27.533	27.732	28.348	7.154.000	47	3,96
Greece	48.791	49.500	50.787	10.955.000	68	4,64
Romania	40.317	41.957	43.134	19.861.000	57	2,17
Turkey	196.168	205.442	253.841	79.863.000	52	3,18
Total	**371.685**	**381.897**	**433.825**	**136.154.000**		

Balkan area electricity consumption



Market change and human needs

- Energy market “liberalisation” and other geographical and historical specificities of the region make energy poverty situation especially severe in the South-Eastern European (SEE) countries.
- It is estimated that in SEE countries 30 %, or more, of households, are struggling with energy poverty
- The region remains heavily dependent on energy imports and with an energy inefficient housing stock, heating systems and household appliances

Energy for everyone . . .

. . . who pays

Investor

Hardware

Power plants
Transmission lines
Substations

Client

Software

Policies and development plans
Pricing and subsidizing systems
Consumers mindset
End users approach

Market place

EX
Auction offices

TECHNOLOGY INNOVATION

The West Balkan societies and business environment

1. The business relationships are based in the interpersonal relationship and the long-term networks of people. Physical presence and bonding is needed.
2. Governmental changes affects immediately the organograms in the Public sector
3. Funds from international donors through development programs are important for the economic development
4. The orientation of W/B countries is towards EU and EU directions and policies will be set in place.
5. Nationalistic rhetoric is orientated basically to the internal national audience

Balkan area electricity balance

yr 2014

Country	Production (GWhr)	Consumption (GWhr)	Δ
Montenegro	3.174	2.610	564
Kosovo	5.436	4.674	762
FYRoM	5.374	6.729	-1.355
Albania	4.724	6.523	-1.799
B&H	16.160	10.587	5.573
Serbia	34.060	26.158	7.902
Bulgaria	47.485	27.674	19.811
Greece	50.474	59.293	-8.819
Romania	65.676	41.905	23.771
Total	**232.563**	**186.153**	**46410**

Electrical networks in W/B area

Business development in energy sector

- **Energy Trade**
- **Energy Supply (to end users)**
- **Consulting projects**
  - Policy design and implementation
  - Project management
  - Know how transfer (rehabilitation of existing production units, training, κλπ.)
- **Direct investments**
  - Power Generation (Hydro-, **RES**, Thermo-)
  - Transmission and Distribution (smart grids, etc.)
- **New energy sector opportunities**
  - Energy efficiency in buildings and industry
  - Transportation means (electrical car)
  - Energy storage

The Albania's investing space

Strengths

- Candidate for accession to the European Union
- Youthful profile of the population
- Hydro power potential
- Low energy deficit
- Strength of the currency (the lek, against the euro)
- The expressed will of the local Authorities to support development

Weaknesses

- Size of grey economy (30 to 40%)
- Poverty (per capita GDP = 30% of the European average), low priority given to education (3% of GDP)
- Dependence on rainfall: agriculture (23% of GDP and 45% of jobs) and hydroelectricity (95% of electricity production)
- Ineffective and politicized court system and administration
- Corruption and organized crime

Advantages for PPC for energy investments in Albania

- Neighbor country with traditional good relationship in energy trade. Close to the energy production area of Kozani and Ptolemais
- Good transmission (line 400kV and 150kV)
- Albanian energy market is under liberalization process
- Existing energy deficit of 3TWhr / yr expected to be increased
- Efficient energy supply is a prerequisite by international donors for increasing finds inflow
- Albanian government encourages investments in HPP
- The banks offering financial support (i.r. 3,5% – 4,5%)

Priorities for the Albanian economy

- restoring fiscal sustainability and financial stability;
- establishing a high-quality business environment that promotes firm growth and job creation;
- providing **clean energy** efficiently, equitably and sustainably;
- formalizing and enhancing the inclusiveness and sustainability of the land market;
- enhancing governance, transparency and accountability of government.

Data of the Albanian Energy market

- Existing power: 1.800 MW (99% are HPP)
- Energy production 4,8 TWh / year
- Energy consumption: 7,7 TWh / year. Estimated demand on 2025 of 11,0 TWh / year.

In order to cover this gap additional investments for

2000 MW are needed

Albanian energy Market Opening and Price Regulation

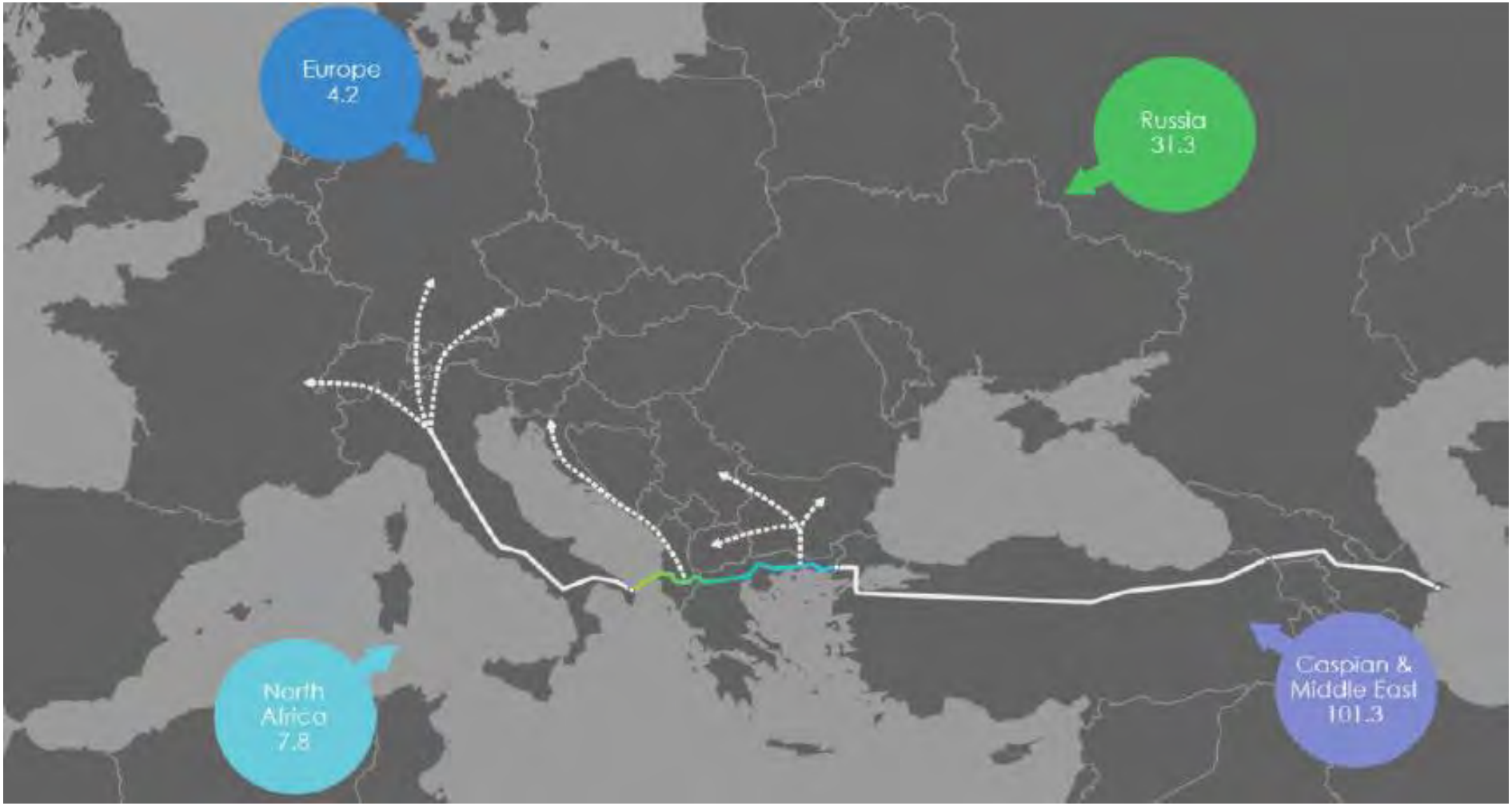
- Full competitive supply for the customers connected to the 110 kV voltage network and customers with an annual consumption of more than 50 million kWh
- since 30 June 2016, full competitive supply for those customers connected to the 35 kV voltage network.
- Full competitive supply for lower voltage levels is the end of 2016 for those connected to a 10 kV voltage network and the end of 2017 for the 6.0 kV voltage network.
- An action plan for phasing out price regulation for low voltage (0.4 kV) customers until 2019 is defined by the market model.

Hydropower potential

HPP sector (2015)

HPP Owner / Power classicication	**No of HPP**	**Total Power (MW)**	**Energy produced during 2015 (MWhr)**	**working time (hrs)**
KESH > 150 MW	3	1.350	4.452.000	3.298
16MW - 75MW	5	200	772.000	3.860
,08MW - 14MW	97	245	641.000	2.616
	105	**1.795**	**5.865.000**	**3.267**

TAP system


Europe
4.2
Russia
31.3
North
Africa
7.8
Caspian &
Middle East
101.3

TAP in Albania

The decision of PPC for business expansion in West Balkans . . .

. . . is a reasonable consequence of the following trends:

- Balkan area energy market is changing rapidly and deeply market and opportunities have arisen in trade, services and power generation
- The energy demand will be increased
- Greek energy market under deep radical changes mainly under forced actions by “institutions” demands for new sources of turnover for PPC
- PPC has the capacity in know how in order to capitalize on it abroad.

Assumptions

- Energy market in S/E Europe (and W. Balkans) are becoming "liberal" and coupling > increase complexity!
- The energy market legal frame is changing in all region towards liberalization. The EU directions prevail.
- Business in a transition phase from nationally regulated energy markets to regional "liberalized" ones.
- Challenge: the balance between Trade and Power generation
- PPC position is changing and from a national producer, trader and supplier is becoming a regional one. PPC definitely combatable with the neighbor countries needs and habits and is experienced to manage inefficiencies.
- PPC has a robust knowledge in every aspect of electric industry and is a market player.

Internalization = challenge and necessity

Scope of the PPC Albania

- To exploit the existing technical knowledge and experience in PPC in the electrical energy sector in the region and transform those attributes to profitable business
- To offer flexibility to the PPC for several project activities abroad
- To invest in Power Generation (RES mainly)

To learn to act effectively regionally

Geography

The West Balkan region is a market of **18.000.000** consumers

The distances from Tirana to the main cities of the area is covered within 4hr by car or 1hr by plane (Belgrade)

Conclusions

- Energy poverty is a negative development factor and must be decreased for the benefit of all
- Energy poverty eliminations needs a different mentality from customers and local administration: energy is a product!
- The general EU principles must be modified properly for the W/B region
- There are still peculiarities at national level but the **regional approach** will prevail
- Energy poverty demands for productive foreign investments and funds allocation