Sustainable Energy Investment and Financing

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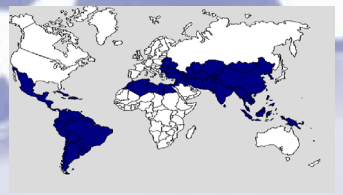
Track III: Matchmaking and Investor Confidence, 13 November 2018

EU Technical Assistance Facility for Sustainable Energy



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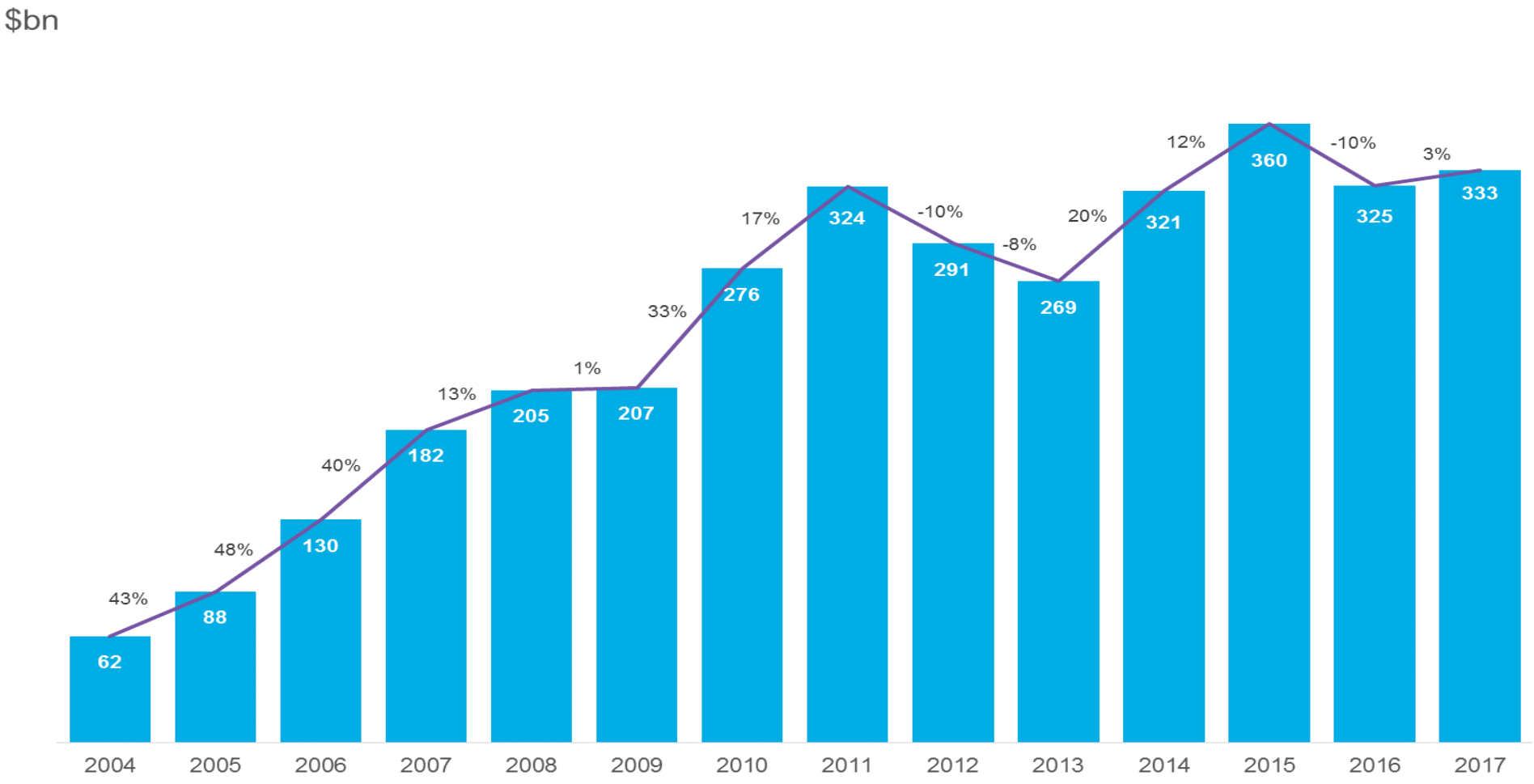
Agenda

1. Introduction
2. Sustainable Energy Investment Globally and UNECE region
3. Supply-side investment: Barriers and tools to de-block financing
4. Demand-side Investment
5. Conclusions

2.1: Global status of RE Investment



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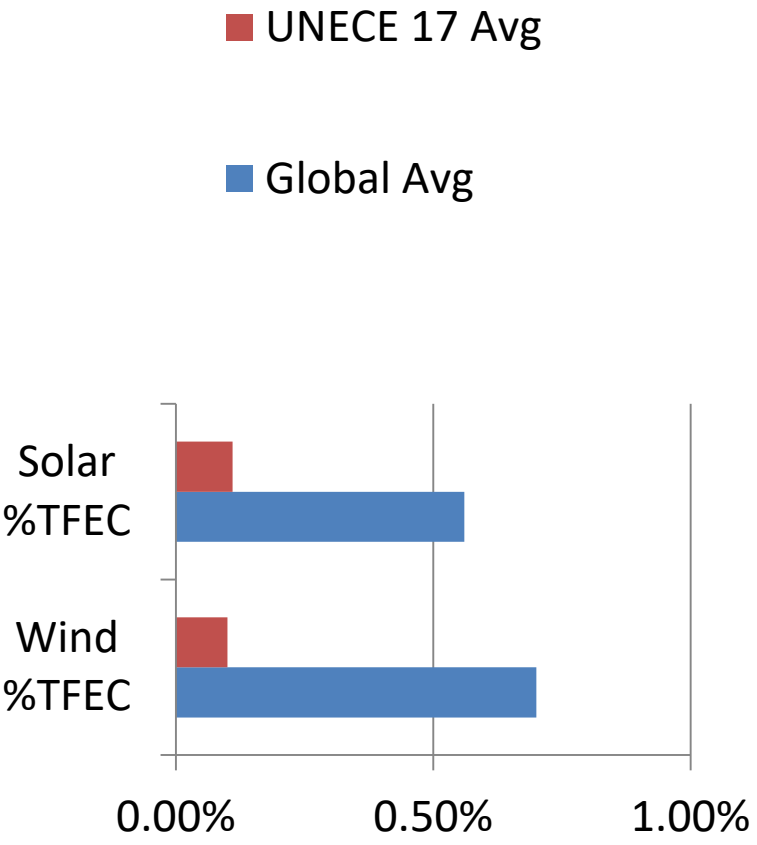
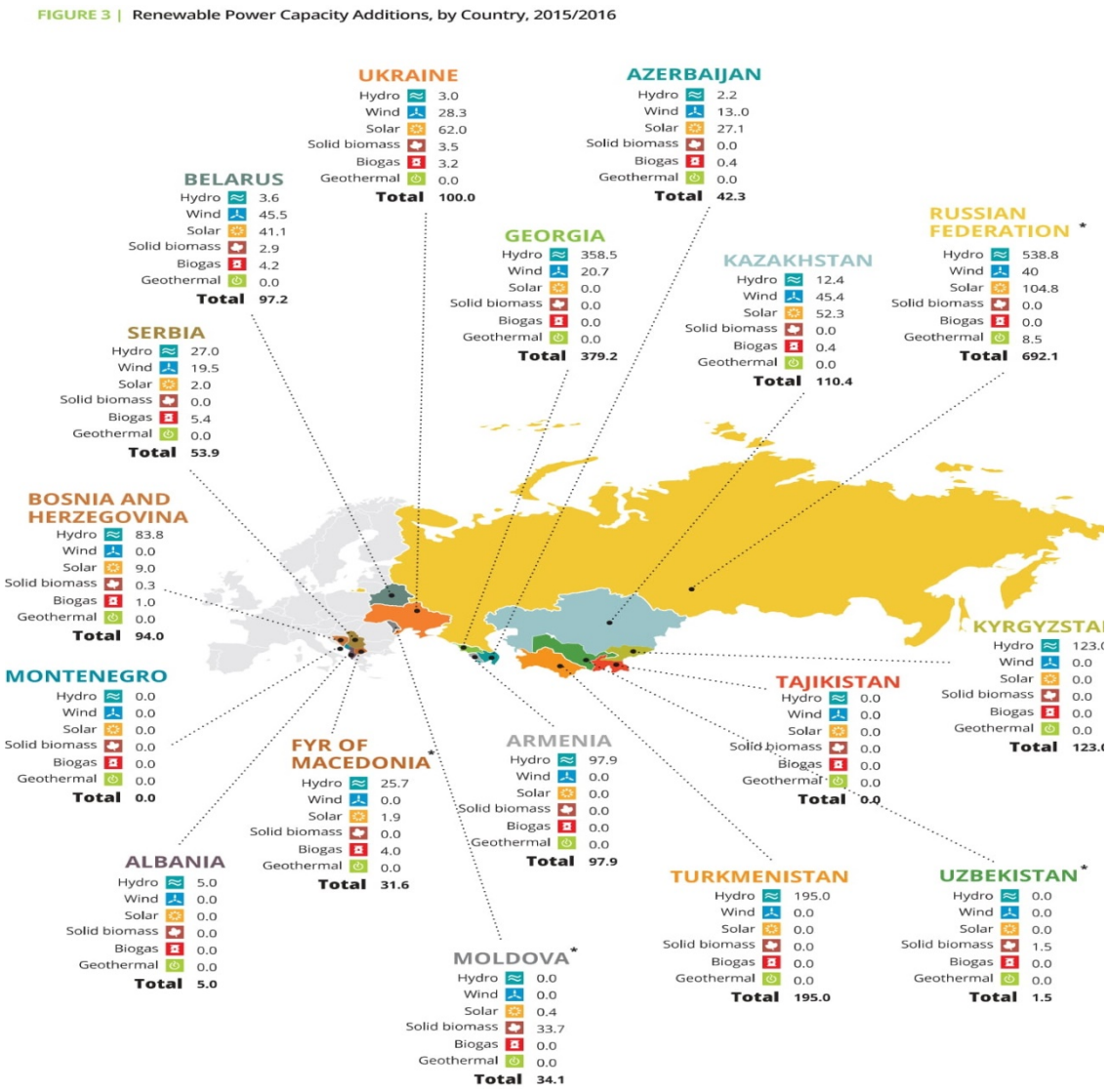
All values nominal

Source:
Bloomberg New Energy Finance

2.2: Regional outlook on RE Investment





Source: REN21 UNECE RE Status Report 2017

3.1 Supply-side investment

Asset financing methods for new capacity	• On-balance-sheet financing • Non-recourse project finance (debt + equity)
Key RE investment characteristics	• Heavy upfront costs / low operational costs / decrease of overall costs →Cost of capital has decreased →LCOE is pushed down
Key financing / investment challenges	• Move away from subsidies increases revenue risk • Foreseen increase in financing cost • Interesting investment opportunities but region still not capitalizing ➢ **Need to focus on issues that prevent investment and to apply lessons learnt and best practices to the region**

3.2. Project Identification Issues

Issues	Lessons Learnt
Developing project pipelines	• Capacity building in project identification • Resource potential mapping • Institutional initiatives in project identification and matchmaking
Improving project facilitation	• Better processes and procedures for permitting/land use
Project Bankability	• Bankable PPA • Clear and transparent connection methodology, terms and tariffs

3.3. Access to Capital Issues

Issues	Lessons Learnt
Access to foreign capital (FDI)	• Analyze maturity of country's and sector's economy and utilize relevant financing tools (lending structures, loan syndication, subordinated debt, convertible grants, convertible loans) • Remove currency restrictions (e.g. dividend repatriation restrictions)
Access to domestic capital - commercial loans / viable terms for financing	• Increase capacity in RE financing with local Banks

3.4. Political and Currency Risk Issues

Issues	Lessons Learnt
Political risk	• International guarantees (MIGA)
Currency risk	• FE currency indexing
Liquidity and creditworthiness risk	• Liquidity facilities and guarantees • Competitive procurement procedures
Policy measures as risk factors (e.g. local content requirement)	• Abolish trade barriers

3.5. Revenue Risk Issues

Issues	Lessons Learnt
Change of legislation risk (subsidized/FiT approach)	• International investment arbitration (e.g. Energy Charter arbitration)
Price volatility risk (market approach)	• Corporate PPAs • Financial hedging – derivatives markets

3.6. RE Project Showcase: Cibuk 1 Windfarm, Serbia

Cibuk 1

- Plant Type: Onshore windfarm
- Location: Dolovo, Serbia
- Installed Capacity: 158 MW (57 GE turbines)
- **Developer**: Wind Energy Balkan Group (WEBG)-Masdar (UAE), 60% and Cibuk Wind Holding (US), 40%
- Commissioning: 2019
- **12-year PPA** with EPS (state utility)
- Total investment cost: **€300M**
- **EBRD and IFC loans: €215M** (72%)

4.1 Demand – side Investment: Overview

- Global investment in energy efficiency reached USD 231 billion in 2016. More than 50% on buildings, which account for approx. 30% of total global energy demand.
- Public finance is key, with increasingly important role for private investment, banks and insurance companies.
- "**Core**" and "**integrated**" energy efficiency investments.
- "**EE 1st**" principle: cost-optimal investment decision making and integrated approach to energy investment

4.2. Demand - side Investment Issues

Issues	Lessons Learnt
Access to capital	• Public finance versus private/banks/insurance • IFIs provide incentives and capacity for local stakeholders • Ensure access to financing
Lack of social understanding and acceptance of benefits	• Increase involvement of local communities – promote community/municipality projects, energy cooperatives, etc. • Clear communication of energy costs and financial benefits (revision of artificially low energy prices and fuel subsidies)
Lack of market efficiency	• Adopt flexible, market-oriented financing tools (blending, revolving funds, etc.) • Adopt policies that give market incentives • Strengthen the role of ESCOs

4.3. EE Project Showcase: EBRD's Sustainable Energy Financing Facility (SEFF)

- SE credit lines (e.g. KazSEFF, KyrSEFF, UKEEP, WeBSEFF) to local banks in UNECE region
- Energy efficiency and small-scale renewable energy
- Project Implementation Team
- €2.8 billion since 2006
- "Excellent" RoI for clients, "rapid" payback for banks

Conclusions

Towards an integrated approach to sustainable energy investment

1. RE and EE : two sides of the same coin
2. Produce cheap, clean energy from the supply side and use it efficiently to get the best possible benefits
3. Investment should take both sides into consideration to maximize benefits (financial, social, environmental) from both

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Thank you for your kind attention