



Group of Experts on Renewable Energy



Cooperation with the UNECE Group of Experts on Renewable Energy (GERE)

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Group of Experts on CEP, Geneva, 27 October 2017



GERE is a platform to boost changes:

The Group was launched in 2014 as subsidiary body of the Committee on Sustainable Energy and aims to:

- Understanding RE status and tracking progress in the UNECE region
- Facilitate the exchange of best practices
- Consider the role of RE within future energy systems
- Promote instruments for assessing RE potential possible synergies between RE and fossil fuels in the energy production
- Identify needs, key bottlenecks and opportunities for market conditions and possible investment promotion

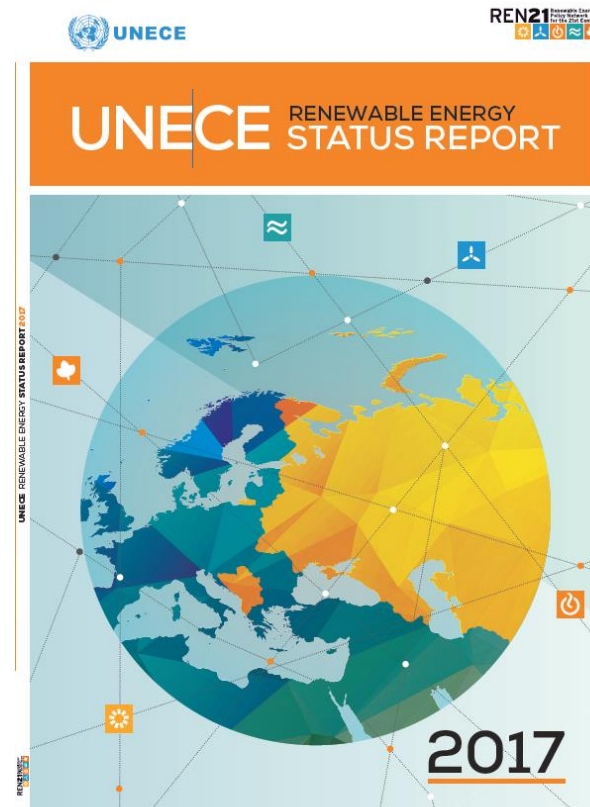
Key partners:

- REN21: UNECE RE Status Report/ Hard Talk (MoU in 2014), support to GERE (MoU in 2014) including with a Vice-Chair of its Bureau
- IRENA: Potential in SEE; Potential in Central Asia, support to GERE (MoU in 2014) including with a Vice-Chair of its Bureau
- IEA: Data and contribution to the UNECE RE Status Report; support to GERE (Cooperation agreement 2015) including with a Vice-Chair of its Bureau
- Other UN Agencies, UN RCs, WB, EU, EBRD
- Bilateral donors, in particular Germany (GERE tracking/ best practices) & Italy (Nexus)

Key outputs:

- REN21 UNECE Renewable Energy Status Report (2015 & 2017)
- Best Practices and Lessons Learned
- Hard Talks (Georgia, Ukraine, December 2016, Azerbaijan, October 2017)
- Matchmaking in Baku (2016) and Astana (2017) – 7th and 8th International Forum on Energy for Sustainable Development

The UNECE REN21 Renewable Energy Status Report 2017



ENERGY



Energy overview

| | Energy imports, net (% of energy use) 2011 | Energy Subsidies as % of GDP 2015 | Energy use per capita (MJ/capita) 2011 | Electrification rate (% of population) 2012 |
|------------------------|--|---|--|---|
| Albania | 34% | 1,9% | 32 253 | 100% |
| Armenia | 67% | 4,3% | 38 362 | 100% |
| Azerbaijan | -377% | 6,3% | 57 332 | 100% |
| Belarus | 86% | 7,0% | 129 695 | 100% |
| Bosnia and Herzegovina | 35% | 37,0% | 77 268 | 100% |
| Georgia | 68% | 5,2% | 33 099 | 100% |
| Kazakhstan | -107% | 11,0% | 195 565 | 100% |
| Kyrgyzstan | 51% | 26,4% | 25 133 | 100% |
| Macedonia (FYR) | 44% | 18,7% | 61 833 | 100% |
| Moldova | 96% | 5,6% | 39 088 | 100% |
| Montenegro | 36% | 16,7% | 76 013 | 100% |
| Russian Federation | -78% | 16,0% | 216 281 | 100% |
| Serbia | 31% | 34,7% | 93 674 | 100% |
| Tajikistan | 30% | 7,1% | 11 691 | 100% |
| Turkmenistan | -164% | 23,2% | 202 591 | 100% |
| Ukraine | 32% | 60,7% | 115 929 | 100% |
| Uzbekistan | -21% | 26,3% | 67 389 | 100% |


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Renewable energy share of total primary energy supply (TPES), 2014

| Country | Total Energy TPES | Non-Renewable Energy TPES | Renewable Energy TPES | Share of Renewable Energy TPES |
|------------------------|-------------------|---------------------------|-----------------------|--------------------------------|
| | ktoe | ktoe | ktoe | % |
| Albania | 2,336 | 1,698 | 637 | 27% |
| Armenia | 2,959 | 2,753 | 206 | 7% |
| Azerbaijan | 14,322 | 14,088 | 234 | 2% |
| Belarus | 27,746 | 26,302 | 1,444 | 5% |
| Bosnia and Herzegovina | 7,824 | 5,821 | 2,003 | 26% |
| Georgia | 4,390 | 3,191 | 1,199 | 27% |
| Kazakhstan | 76,667 | 75,934 | 734 | 1% |
| Kyrgyzstan | 3,795 | 2,649 | 1,147 | 30% |
| Macedonia (FYR) | 2,623 | 2,334 | 289 | 11% |
| Moldova | 3,302 | 2,991 | 311 | 9% |


ENERGY

Renewable energy share of total primary energy supply (TPES), 2014

| Country | Total Energy TPES | Non-Renewable Energy TPES | Renewable Energy TPES | Share of Renewable Energy TPES |
|--------------------|-------------------|---------------------------|-----------------------|--------------------------------|
| | ktoe | ktoe | ktoe | % |
| Montenegro | 957 | 640 | 316 | 33% |
| Russian Federation | 710,883 | 692,912 | 17,970 | 3% |
| Serbia | 13,259 | 11,256 | 2,003 | 15% |
| Tajikistan | 2,805 | 1,429 | 1,376 | 49% |
| Turkmenistan | 26,749 | 26,742 | 7 | 0% |
| Ukraine | 105,683 | 102,887 | 2,797 | 3% |
| Uzbekistan | 43,677 | 42,655 | 1,021 | 2% |

RE share of TPES in UNECE region: 9%

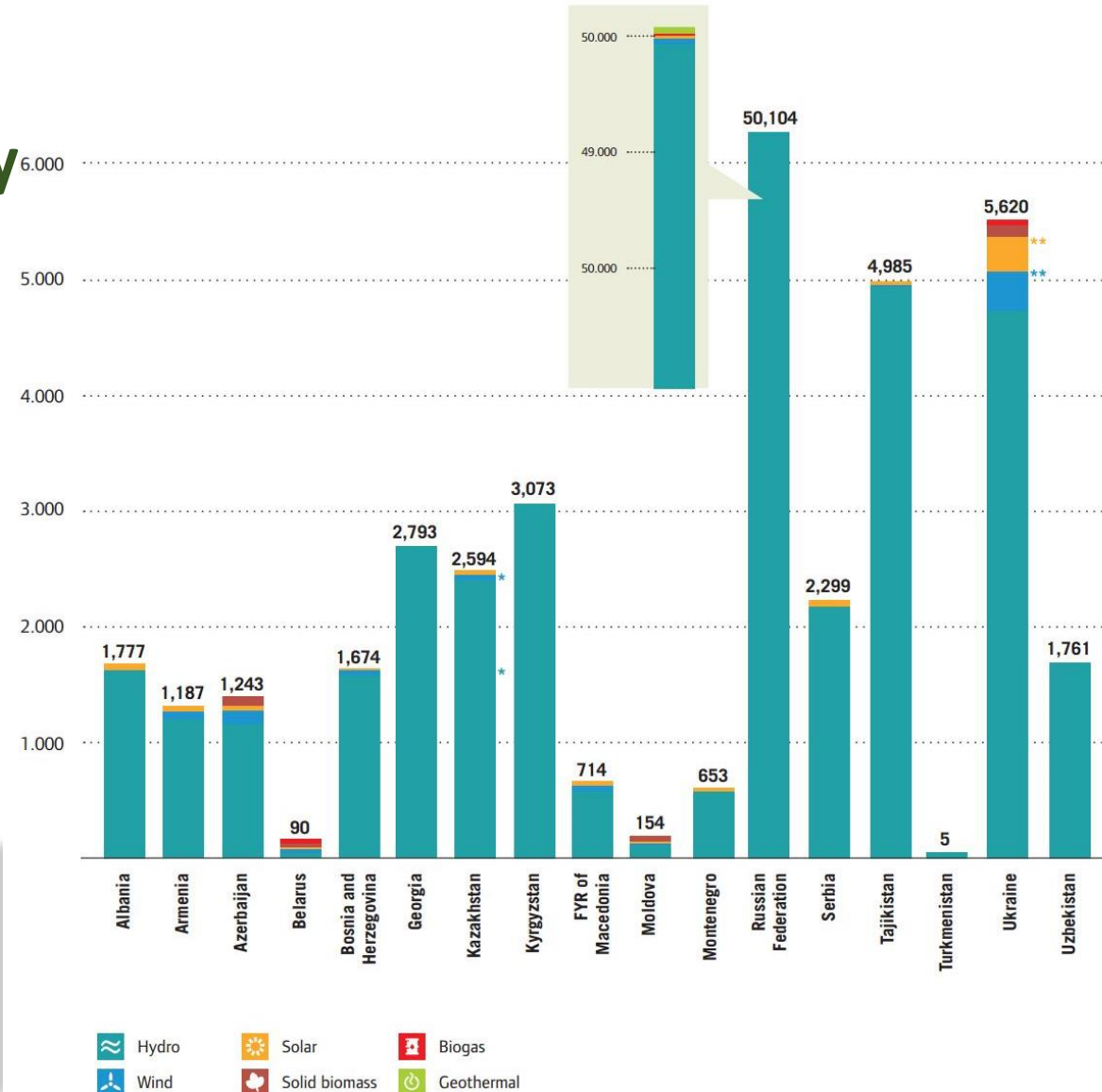
RE share of TPES in 17 UNECE countries: 3%



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Renewable Energy for Power, Installed Capacity in MW, 2014

- Big variations from country to country
- Hydropower is backbone
- Other renewable energy technologies are nascent, with few regional exceptions
- Smaller developments are beginning to pick up

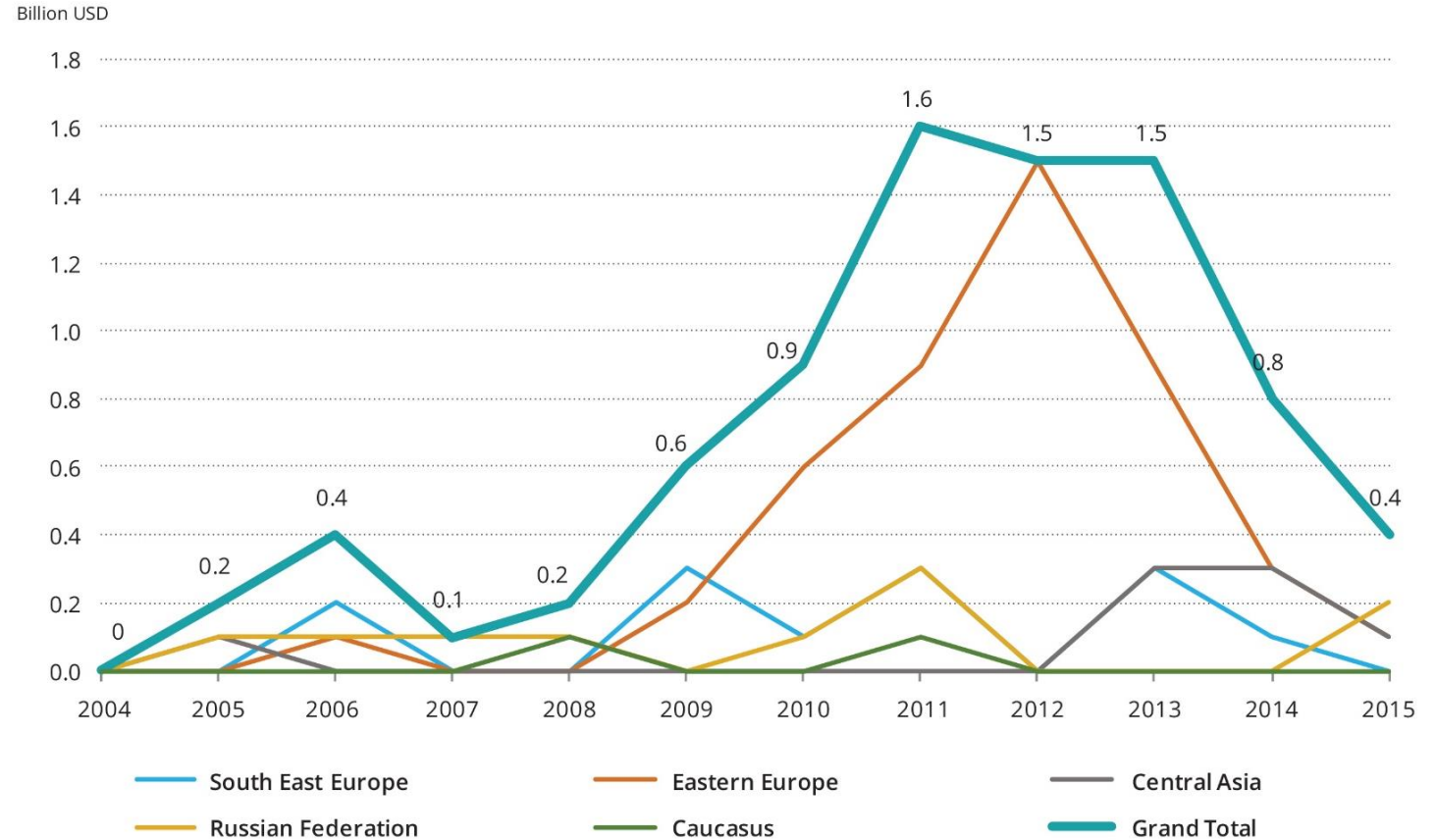


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Renewable Energy Investment Overview, 2004 - 2014

- The covered countries only represent 0.2 % of new RE investment in 2015 worldwide
- Investment attraction remains an issue for RE development in the region

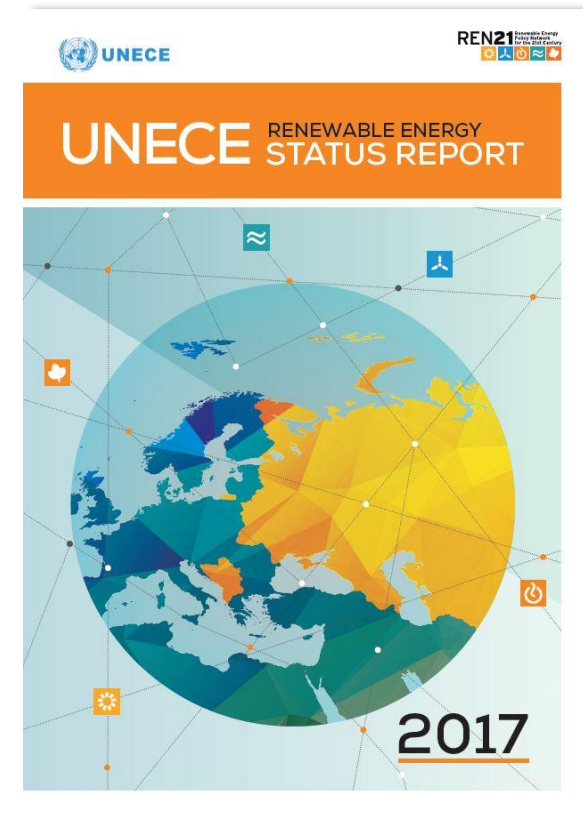




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Conclusion

- South East and Eastern Europe, Caucasus, Central Asia and Russian Federation made strides into the realm of renewable energy and energy efficiency over the past two decades
- Governments advance in developing targets and policies that promote renewable energy sources present abundantly in different forms across the region
- Numerous barriers remain (energy subsidies, legal & administrative complexities, awareness of affordability, etc.) and delay projects implementation
- Viewed from global perspective, capacity and investment in the covered 17 countries remain marginal



Full report is available at:

[https://www.unece.org/energywelcome/areas-of-work/renewable-energy/unece-renewable-energy-status-report.html](https://www.unece.org/energy/welcome/areas-of-work/renewable-energy/unece-renewable-energy-status-report.html)

GERE Work Plan 2018-2019

- **Tracking Progress; Best Practices; Investments; Energy Systems**
- **D. Cross-cutting cooperation to strengthen integration of renewable energy in future sustainable energy systems**
 - **Description:** The Group of Experts will work to improve the integration of the various renewable energy technologies into present and future energy supply systems and different sectors, including electricity generation, heating and cooling, gas and liquid fuel distribution as well as autonomous energy supply systems.
 - **Implementation:** The Group of Experts will cooperate with the Group of Experts on Gas and the Group of Experts on Cleaner Electricity Production from Fossil Fuels, in the implementation of activities related to renewable energy within the respective work plans, supporting possible synergies between renewable energy and fossil fuels, especially gas in energy production, and in the grid integration of renewable energy (Lead: Group of Experts on Gas; Group of Experts on Cleaner Electricity Production from Fossil Fuels);

More on GERE:

<http://www.unece.org/energy/se/gere.html>

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Thank you!

