Key messages from the status of renewable energy in 17 selected UNECE countries

Group of Experts on Renewable Energy

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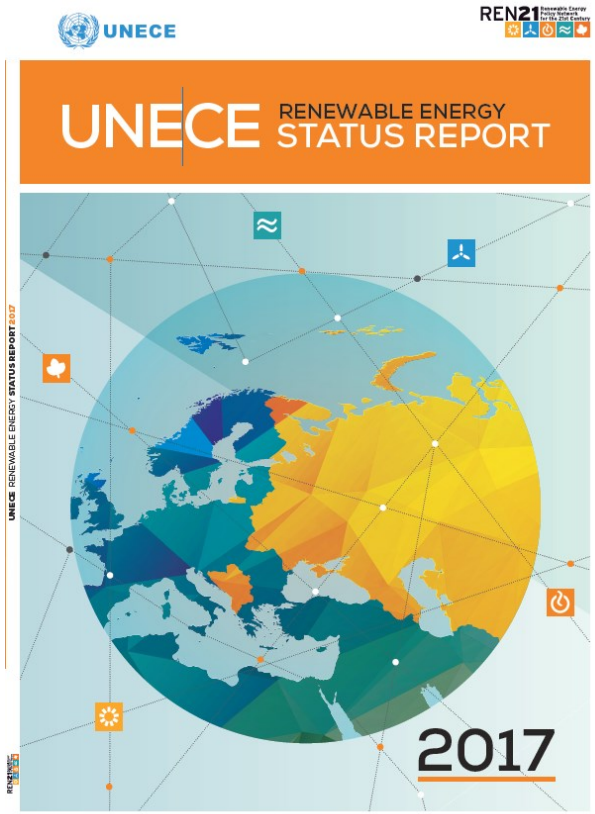
UNECE GERE

GERE is a platform to boost changes and increase substantially the share of renewable energy in the energy mix

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

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

The UNECE REN21 Renewable Energy Status Report 2017



REN21 Renewable Energy Policy Network for the 21st Century

UNECE

Gefördert durch:

Bundesministerium für Wirtschaft und Energie

aufgrund eines Beschlusses des Deutschen Bundestages

iea International Energy Agency

In 2016 investors were able to acquire more renewable energy capacity for less money.

- 176 countries had renewable energy targets, renewable energy auctions were held in 34 countries in 2016 – more than double the year before
- Newly installed renewable power capacity set new records in 2016, with 161 gigawatts (GW) added, increasing the global total by almost 9% relative to 2015.
- For the fifth consecutive year, investment in new renewable power capacity was roughly double the investment in fossil fuel generating capacity, reaching USD 249.8 billion.

- 2016 was the third year in a row where global CO_2 emissions from the energy sector remained stable despite a 3% growth in the global economy and an increased demand for energy.

ENERGY

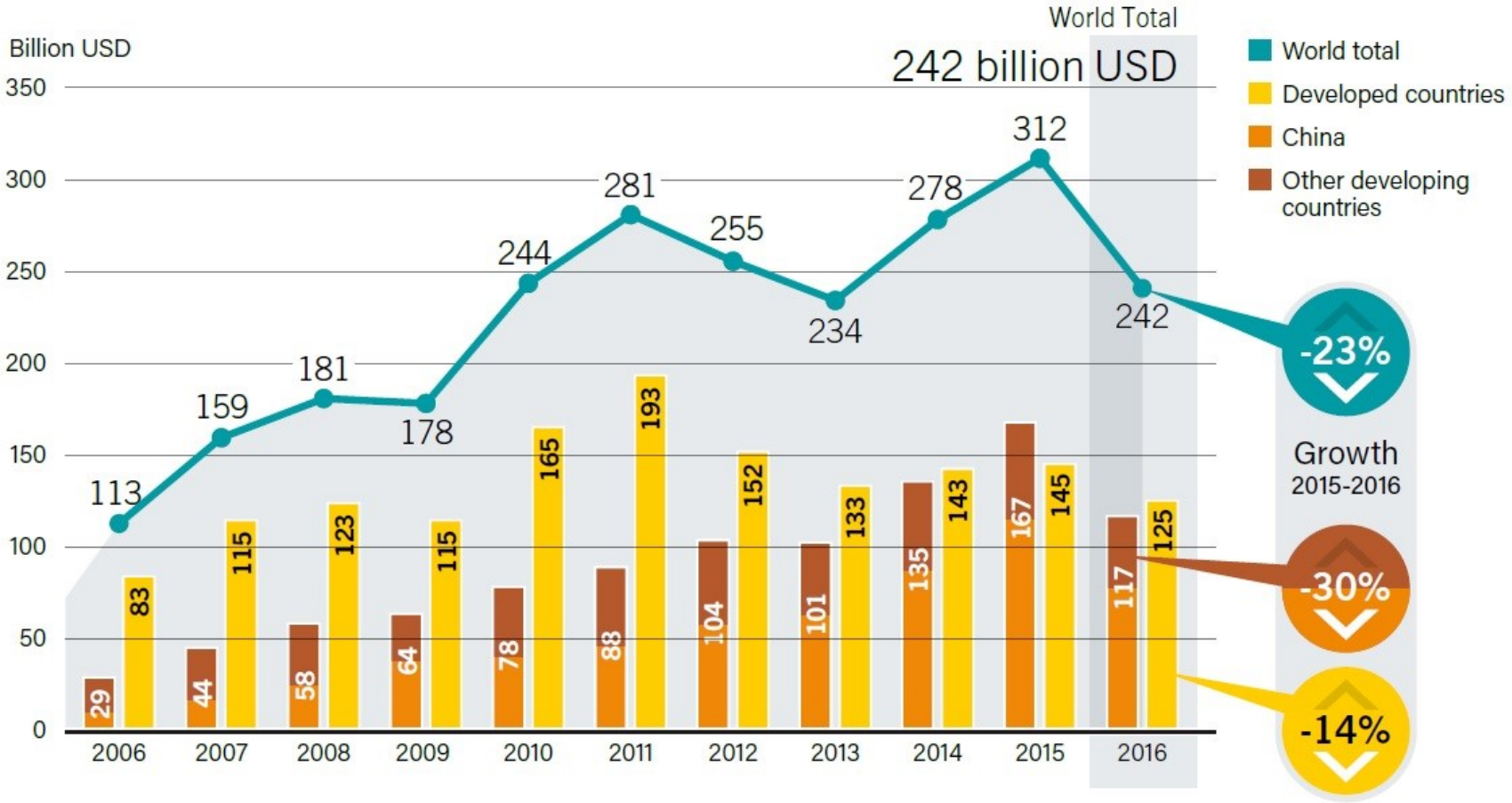
Another extraordinary year for renewable energy

Total global capacity was up 9% compared to 2015 (161 GW added), to more than 2,016 GW at year's end (920 GW not including hydro)

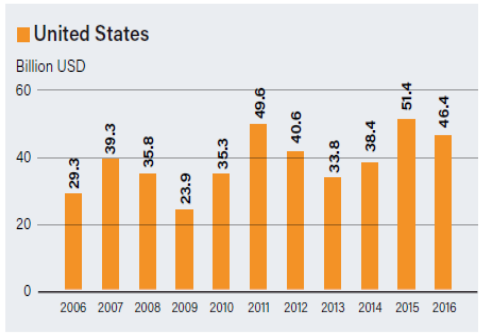
Solar PV - 47% of newly installed renewable power capacity in 2016
Wind - 34%
Hydropower - 15.5%

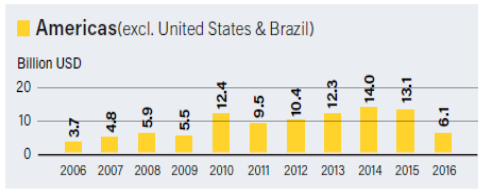
		2015	2016
INVESTMENT			
New investment (annual) in renewable power and fuels[1]	billion USD	312.2	**241.6**
POWER			
Renewable power capacity (total, not including hydro)	GW	785	**921**
Renewable power capacity (total, including hydro)	GW	1,856	**2,017**
Hydropower capacity[2]	GW	1,071	**1,096**
Bio-power capacity	GW	106	**112**
Bio-power generation (annual)	TWh	464	**504**
Geothermal power capacity	GW	13	**13.5**
Solar PV capacity	GW	228	**303**
Concentrating solar thermal power capacity	GW	4.7	**4.8**
Wind power capacity	GW	433	**487**
HEAT			
Solar hot water capacity[3]	GW_{th}	435	**456**
TRANSPORT			
Ethanol production (annual)	billion litres	98.3	**98.6**
Biodiesel production (annual)	billion litres	30.1	**30.8**

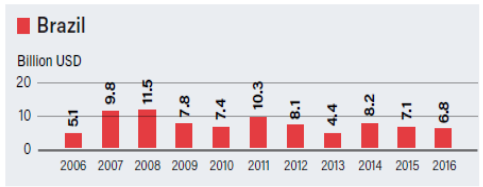
Global Investment in Renewable Energy

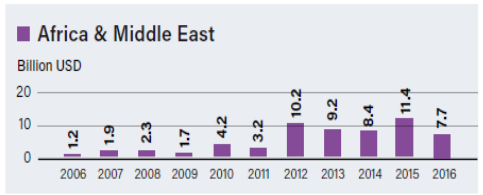


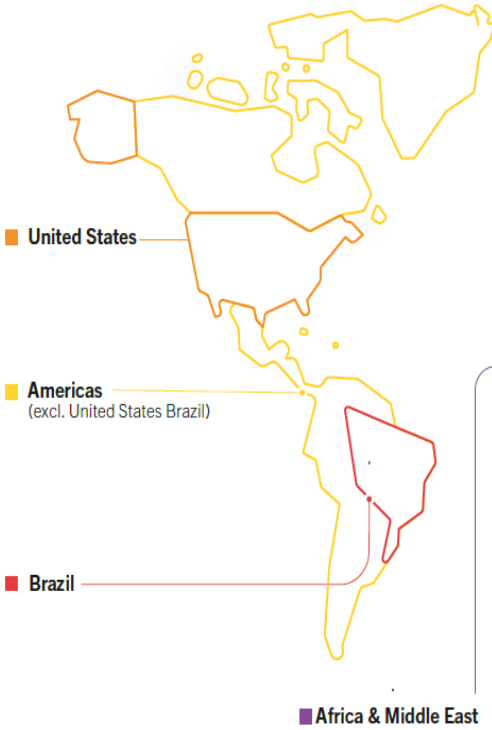
Renewable Energy Investment Overview, 2004 – 2014 – World

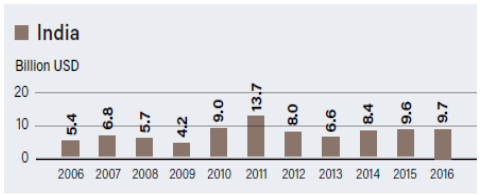


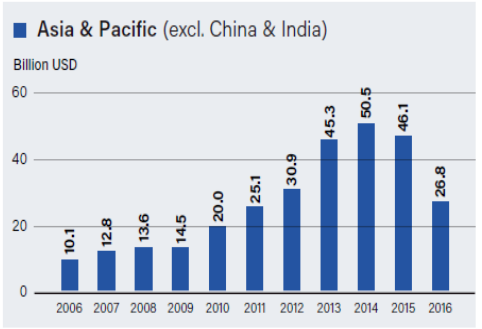


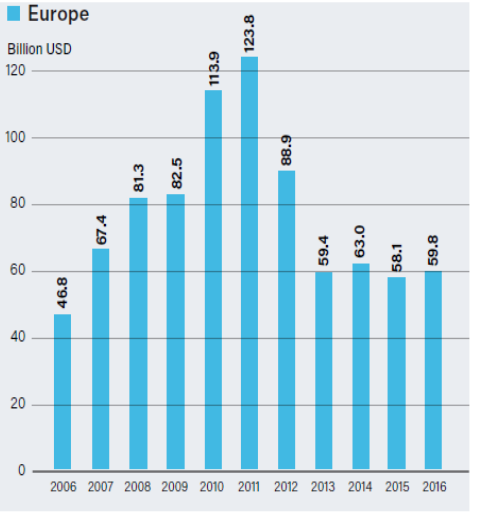


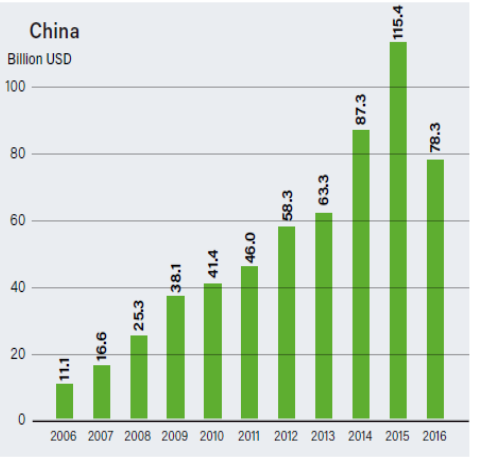




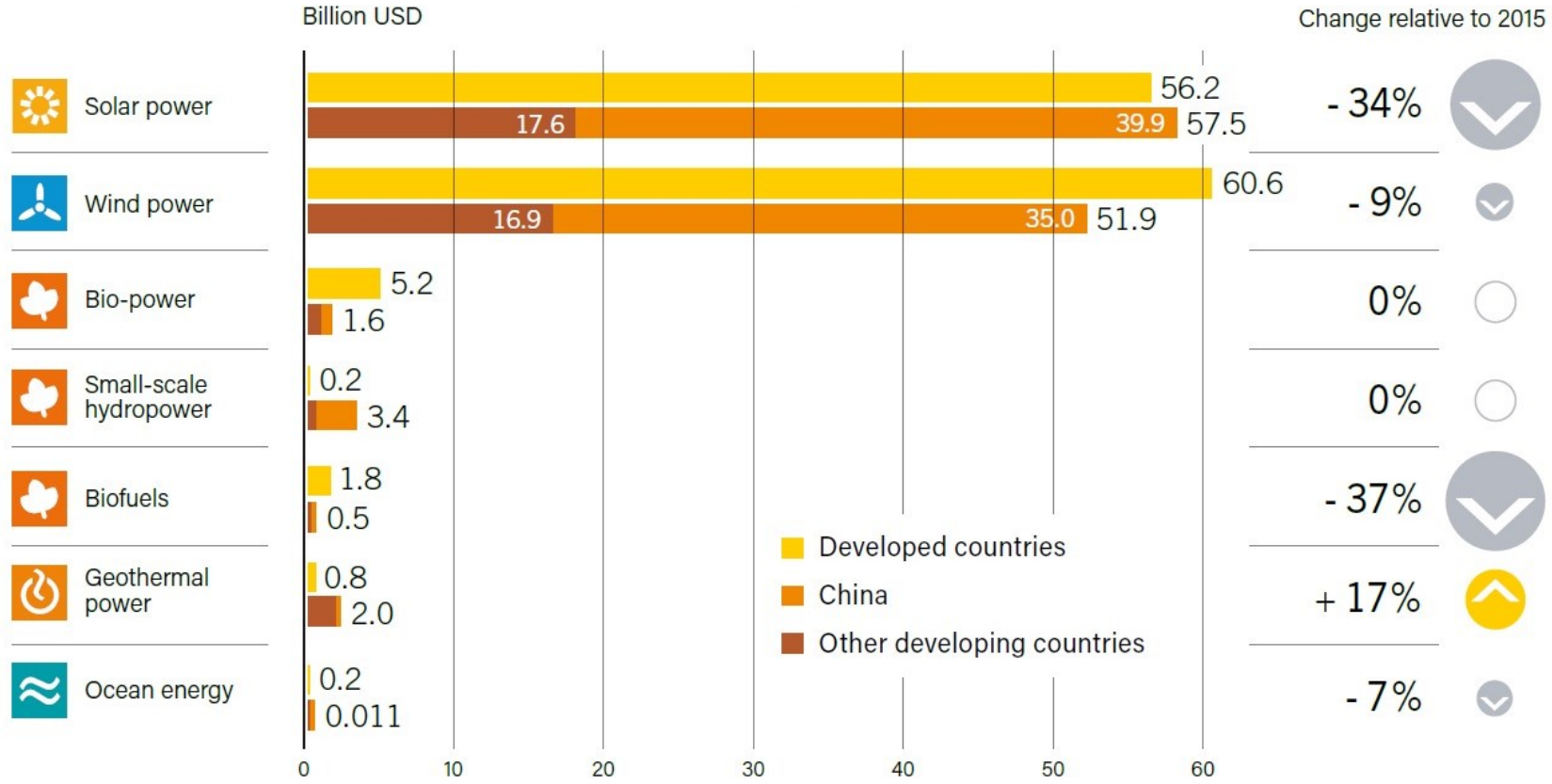








Global Investment in Renewable Energy by Technology

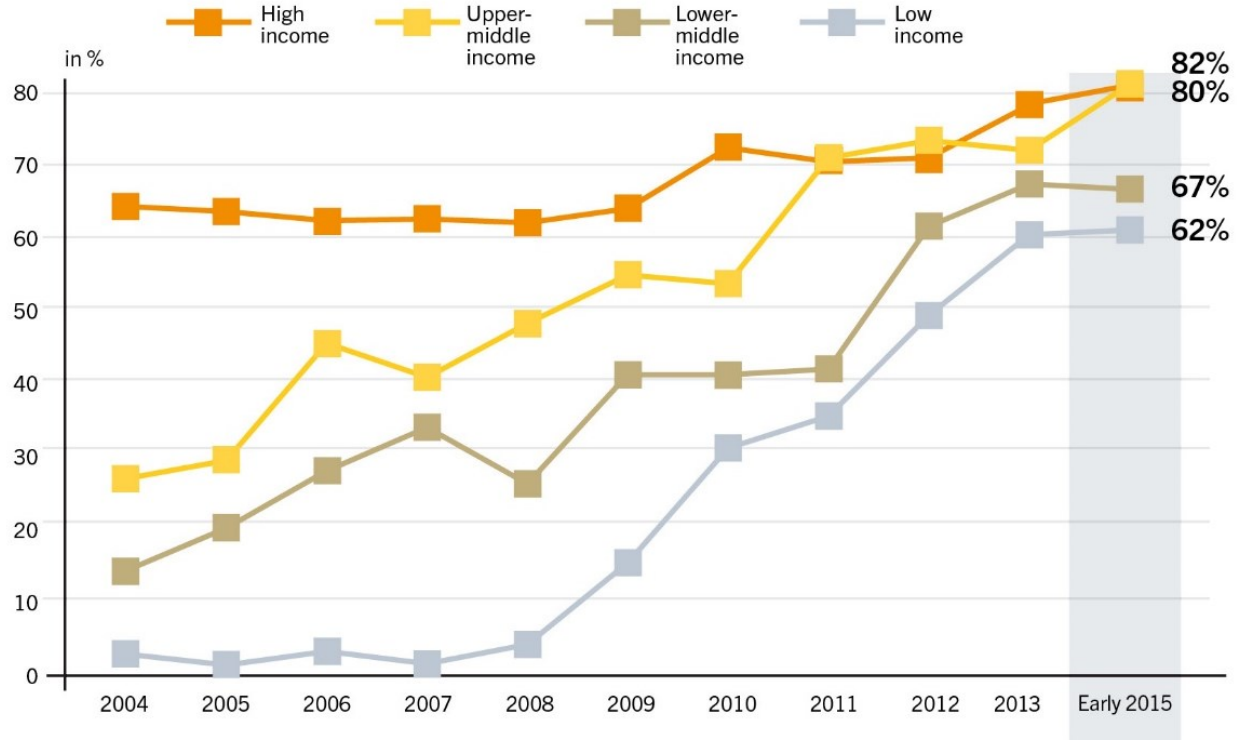


- Solar and wind power continue to lead for money committed during 2016, each accounting for roughly 47% of total investment

Evolution of Renewable Energy Policy Over Time (2004 – 2014)

- At least **164** countries had **renewable energy targets.**
- At least **145** countries had **renewable energy support policies** in place.
- Low-income, lower-middle income as well as upper-middle income countries feature fastest policy uptake during the last decade.

Share of Countries with Renewable Energy Policies, by Income Group, 2004–Early 2015

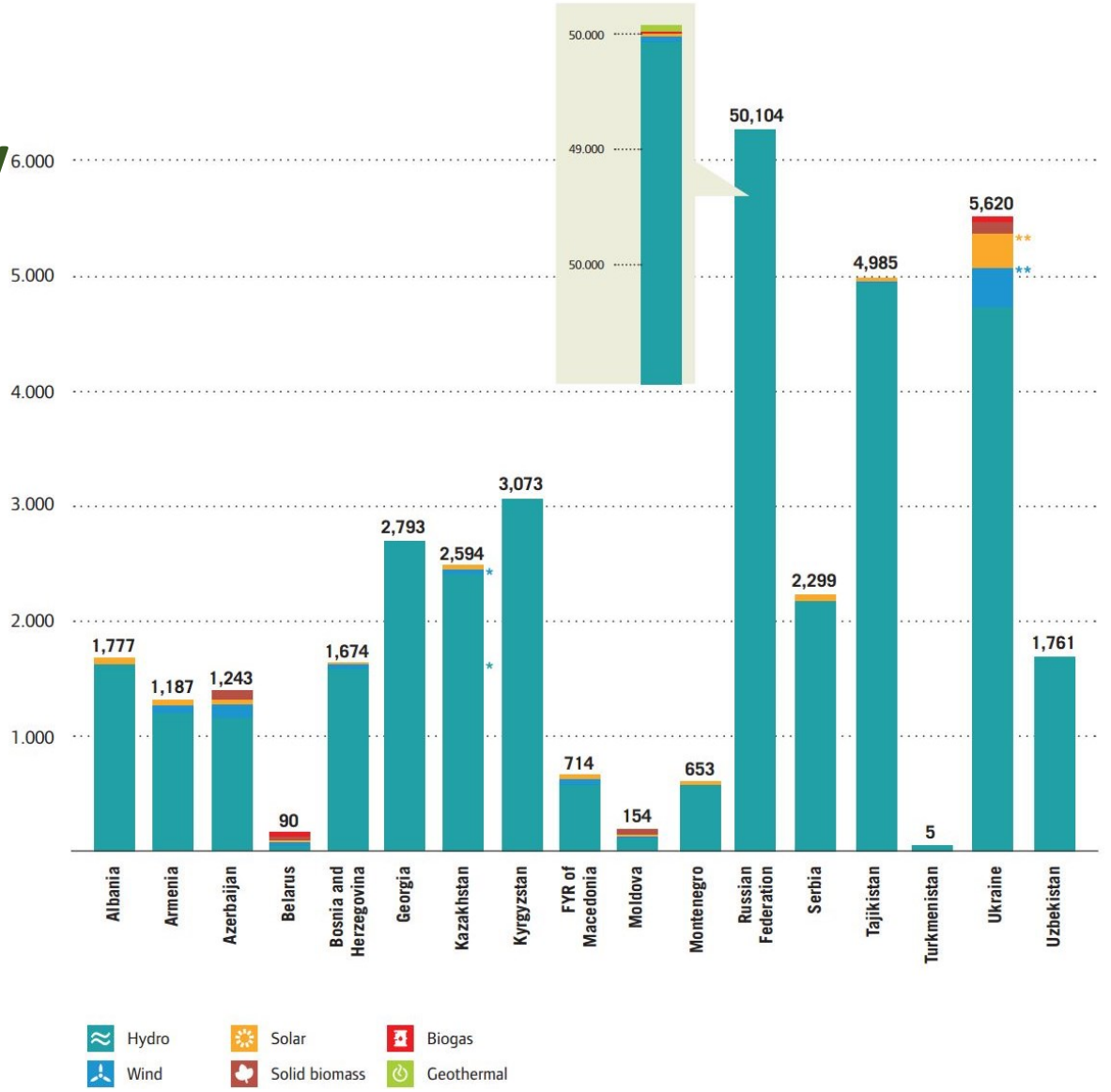


The UNECE REN21 Renewable Energy Status Report 2017

- Detailled look at the status of renewable energy in select 17 countries in the UNECE region
- Part of the initiatives of the UNECE Group of Experts on Renewable Energy (GERE) – building on existing process with GERE
- Utilisation of the established REN21 global data collection process from formal and informal sources
- Objective to obtain a reliable data baseline for increased investment activity
- Strong Involvement of governments, international organisations (IEA, EBRD, European Commission, World Bank, UNDP, etc.) and civil society during data collection and review
- Key finding: decline of RE investments: Why? What to do?

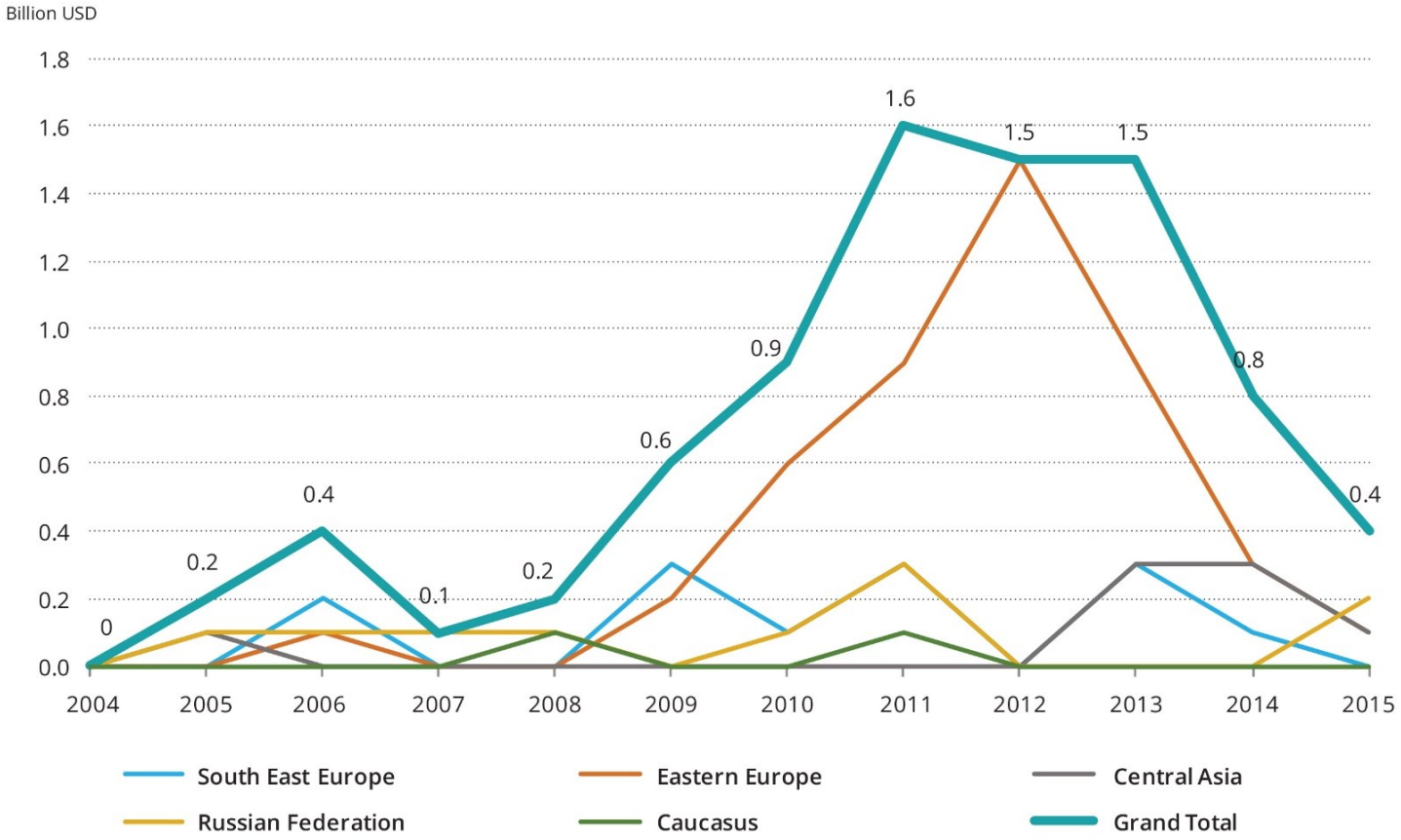
Renewable Energy for Power, Installed Capacity in MW, 2014

- 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



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



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

More on GERE:
http://www.unece.org/energy/se/gere.html

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Thank you!