Energy Transition and the Role of Women: Where do we Stand Today?

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REN21 – A policy network to build a sustainable energy future with renewables

Who we are...

What we do...

Global Status Report: yearly publication since 2005

Renewables in Cities Status Report:

Regional Reports

Thematic Reports

Global Futures Reports

23-25 October, 2019
Another strong year for renewable energy

- **Total global capacity rose 8% in 2018**

- **Non-hydro capacity grew 15%**
  - 1,246 GW by the end of 2018

- **181 GW** of renewable power added
  - Leaders:
    - Solar PV = 100 GW (55% of new additions)
    - Wind power = 51 GW (28%)

### Renewable Energy Indicators 2018

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
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</thead>
<tbody>
<tr>
<td><strong>INVESTMENT</strong></td>
<td></td>
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<tr>
<td>New investment (annual) in renewable power and fuels¹</td>
<td>billion USD</td>
<td>326</td>
</tr>
<tr>
<td><strong>POWER</strong></td>
<td></td>
<td></td>
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<tr>
<td>Renewable power capacity (including hydropower)</td>
<td>GW</td>
<td>2,197</td>
</tr>
<tr>
<td>Renewable power capacity (not including hydropower)</td>
<td>GW</td>
<td>1,081</td>
</tr>
<tr>
<td>Hydropower capacity²</td>
<td>GW</td>
<td>1,112</td>
</tr>
<tr>
<td>Wind power capacity</td>
<td>GW</td>
<td>540</td>
</tr>
<tr>
<td>Solar PV capacity³</td>
<td>GW</td>
<td>405</td>
</tr>
<tr>
<td>Bio-power capacity</td>
<td>GW</td>
<td>121</td>
</tr>
<tr>
<td>Geothermal power capacity</td>
<td>GW</td>
<td>12.8</td>
</tr>
<tr>
<td>Concentrating solar thermal power (CSP) capacity</td>
<td>GW</td>
<td>4.9</td>
</tr>
<tr>
<td>Ocean power capacity</td>
<td>GW</td>
<td>0.5</td>
</tr>
<tr>
<td>Bioelectricity generation (annual)</td>
<td>TWh</td>
<td>532</td>
</tr>
<tr>
<td><strong>HEAT</strong></td>
<td></td>
<td></td>
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<tr>
<td>Solar hot water capacity⁴</td>
<td>GWₚₑ</td>
<td>472</td>
</tr>
<tr>
<td><strong>TRANSPORT</strong></td>
<td></td>
<td></td>
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<tr>
<td>Ethanol production (annual)</td>
<td>billion litres</td>
<td>104</td>
</tr>
<tr>
<td>FAME biodiesel production (annual)</td>
<td>billion litres</td>
<td>33</td>
</tr>
<tr>
<td>HVO biodiesel production (annual)</td>
<td>billion litres</td>
<td>6.2</td>
</tr>
</tbody>
</table>

¹ Includes hydropower, solar, wind, bioenergy, geothermal, ocean, and concentrating solar thermal (CSP) capacities.

² Includes run-of-river hydropower and other hydropower.

³ Includes photovoltaics (PV) and concentrating solar power (CSP).

⁴ Includes solar heat and district heating and cooling capacities.
Solar PV capacity additions were more than 100 GW for the first time

Cumulative capacity reached 505 GW, an increase of 25% from 2017

India: 33 GW, 5th in the global rankings
181 gigawatts of renewable power added in 2018

→ Around **55%** of these new additions were solar PV

→ Added in 2018:
  • 100 GW of solar PV
  • 51 GW of wind power
  • 20 GW of hydropower
  • 10 GW of bio-power, CSP and geothermal power

→ 2018 was the **4th** consecutive year that **more than 50 GW of wind power** was added
Global investment in renewable power and fuels totalled **USD 288.9 billion**, a decrease of **11.5%**.

Fifth consecutive year in which investment topped USD 280 billion.

India: USD 15.4 billion, 4th globally, a decrease of **16%**.
Beyond power: over 80% of demand for heating, cooling, and transport

- **Over half** of final energy demand is from the heating and cooling sector
  - < 10% of this demand is supplied by renewable energy

- **32%** of final energy demand is for transport end-uses
  - Just over 3% is renewable and primarily met by biofuels

- Around **26%** of electricity was renewable in 2016
Advances in power made possible by policy support, other sectors lag

- Renewable power **auctions** were held in at least 48 countries
- **FITs** in place in 111 countries
- No new countries adopted biofuels mandates
- The number of countries with H&C regulatory policies **fell by 1**
Global subsidies for fossil fuel consumption reached an estimated **USD 300 billion** in 2017
- an 11% increase from the year before
- about double the estimated support for renewable power generation

Fossil fuel subsidies remained in place in at least **115 countries** in 2017

73 countries provide subsidies of **more than USD 100 million** each

Not a level playing field: fossil fuel subsidies are still widespread
Renewables in Cities
Drivers for renewable energy in cities

Source:
REN21 Renewable in Cities
2019 Global Status Report
- Preliminary Findings -
Renewable energy sector employed around **11 million** people worldwide in 2018.

Solar PV was again the largest employer of all renewable energy industries.

The largest employer remained **China**, followed by the EU, Brazil, US, and India.
The transition is possible – positive examples are showing the way!

- Leadership from national governments is paving the way towards 100% renewables in countries.
- Cities and sub-national governments are setting more ambitious policies than their national governments.
- 1000+ organisations, totaling USD 8 trillion of managed assets, have committed to divesting from fossil fuels.
- The private sector has doubled its investment in sourcing renewable power.
Create a level playing field by removing fossil fuel subsidies and adopting carbon pricing

Create sustainable market conditions

Encourage sector integration among power, heating and cooling, and transport and build on energy consuming sectors

Align policies across the national, sub-national and local levels

Link to energy efficiency in renewable energy policy initiatives

Use policies and regulation to change perception

From an electricity transition to an energy transition