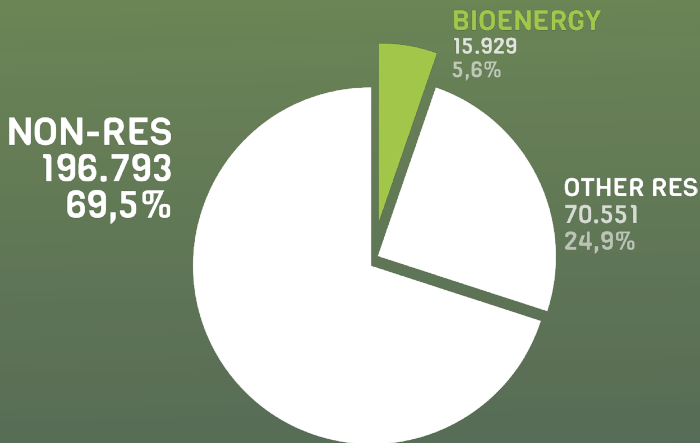




EU-28 SHARE OF ENERGY FROM RENEWABLE SOURCES IN THE TOTAL GROSS ELECTRICITY GENERATION

(2016, KTOE, %) Source: EUROSTAT, BIOENERGY EUROPE

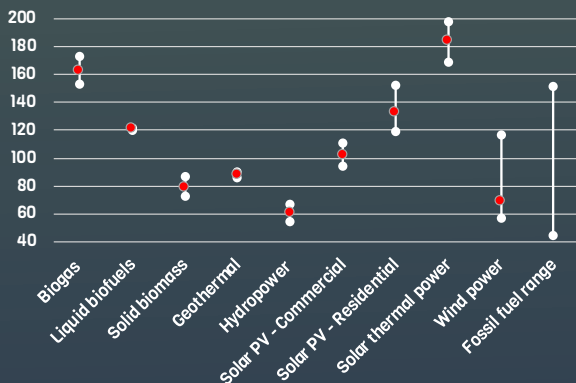


Bioelectricity, a flexible asset

Our power system, increasingly based on variable renewable sources of energy such as wind and sun, will need a dispatchable and flexible supply of power. Biomass is easily storable and can be used when the wind is not blowing, and the sun is not shining. The development of variable and flexible renewables such as bioenergy goes together, and synergies are required to achieve a 100% renewable power system.

LEVELISED COST OF ELECTRICITY FOR DIFFERENT RENEWABLE TECHNOLOGIES COMPARED WITH RANGE COST FOR FOSSIL FUEL TECHNOLOGIES

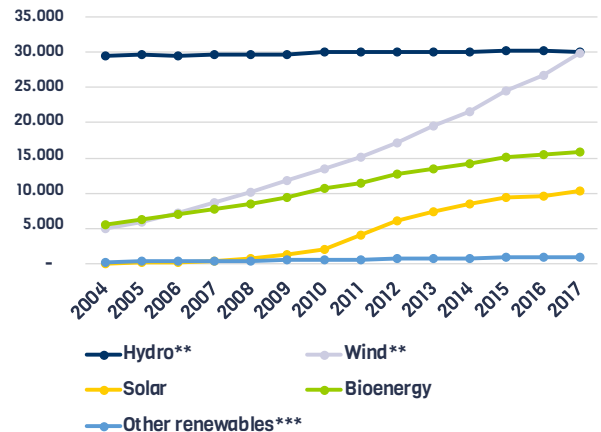
(€/MWh) Source: EUROBSERVER (renewables), IRENA (fossil fuels)



Nearly 70% of electricity is still produced by non-renewable fuels in 2017. In the future a 100% renewable energy mix is needed to achieve a net-zero carbon economy by 2050. Bioenergy is a key solution in this mix thanks to its flexibility, cost-effectiveness and energy efficiency.

EVOLUTION OF GROSS FINAL CONSUMPTION OF ELECTRICITY FROM RENEWABLE SOURCES* IN EU-28

(2004-2017, KTOE, %) Source: EUROSTAT, BIOENERGY EUROPE



* Calculated according to the methodology established on Directive 2009/28/EC and also Regulation (EC) No 1089/2008
 ** Wind and hydro are normalised to take into account the changes due to weather conditions
 *** Other renewables includes electricity generation from geothermal, and tide, wave & ocean

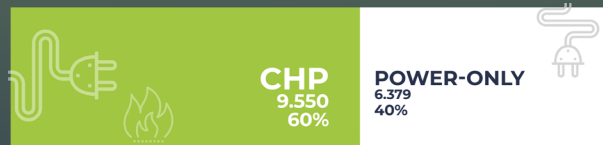
Bioelectricity, a cost-competitive asset

Bioelectricity is cost-competitive with other renewables and fossil fuels. This is even more true when the total cost of electricity production is taken into account. The more our electricity network evolves, the more complex is the effort to manage it properly. Today's LCOE (levelised cost of electricity, a standard methodology used by utilities, policy-maker, and industry to calculate the cost of electricity produced by a generator over its lifetime) does not integrate additional grid management costs brought by an increasing renewable-based power system, such as intermittency and balancing costs, as well as transmission costs, to ensure a stable and secure supply of electricity at all time. These costs should be integrated into the LCOE to allow a fair comparison of total costs linked to energy production.

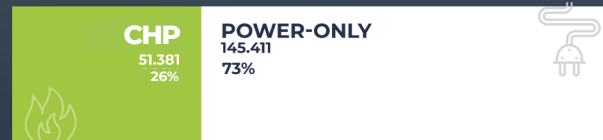
Bioelectricity, an efficient asset

Biomass fosters energy efficiency. While 60% of bio-electricity is produced in combined heat and power plants (CHP), only 26% of the electricity produced by conventional thermal sources is produced in CHP.

**BIOELECTRICITY
GENERATION
IN EU-28 BY TYPE
OF PLANTS**
(2017, KTOE, %)
Source: EUROSTAT



**TOTAL ELECTRICITY
GENERATION FROM
CONVENTIONAL
THERMAL SOURCES
IN EU-28 BY TYPE
OF PLANTS**
(2017, KTOE, %)



our messages

- 1 Recognise the role of **flexible renewables** to stabilise the power system and secure electricity supply, allowing for a full transition to renewables in the power sector (including capacity markets);
- 2 Create a level playing field with **variable renewables** by integrating balancing and transmission costs as well as the value of dispatchability and security of supply in the costs of energy, or by rewarding these services;
- 3 Support **research and development** in plant and fuel flexibility and invest in demonstration projects of fuels and technologies;
- 4 Incentivise combinations with other renewables to allow biomass to provide seasonal balancing.

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