



FES 2030

AFTER COP 21 (PARIS): FOSSIL EXIT STRATEGY 2030

One year after the conference in Paris, the world is moving away from the targets of COP21. The most embarrassing fact is the ongoing increase of the CO₂ concentration in the atmosphere. This concentration reached 400ppm in 2014 for the first time in the human history. A value of 420 ppm is usually regarded as upper limit to keep a temperature rise below 2°C likely (*Source: IPCC*)

The main reason of this growing concentration of CO₂ in the atmosphere is the huge inflow of CO₂ emissions caused by burning fossil fuels. Moreover, the oil prices have dropped 50% in the past two years which is an incentive to use more fossil fuels and thus increase emissions further.

If the flow of CO₂ emissions continues for another decade at the same pace, the threshold of 420 ppm CO₂ in the atmosphere will be surpassed and the targets of COP21 agreement will be unreachable for centuries!

The world needs an exit strategy to leave fossil fuels, step by step and year by year. A minimum reduction path, in terms of fossil fuel energy consumption, would be from the current 463 EJ in 2013 to 300 EJ by 2030 and near zero by 2050.

At the same time, each country needs a strategy for **fast deployment of renewable energy sources** including solar, wind, bioenergy, geothermal and hydropower. The world must move towards a 100% renewable energy before 2050 to achieve the Paris COP21 targets.

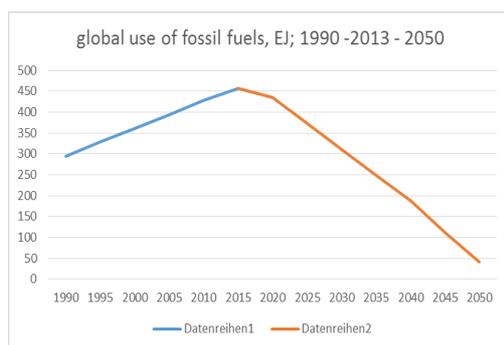


Figure 1 Global use of fossil fuels (2013 - 2050)

Fossil exit strategy for Europe:

Similar to the global scenario, Europe is moving away from the targets of COP 21. In 2015, the emissions increased as compared to 2014. The EU targets for 2030 – reduction of 40% emissions as compared to 1990 and 27% renewable energy share - do not comply with the targets of COP 21. Europe also needs a fossil exit strategy to achieve the targets of Paris. The



core of this strategy should be an exit path that distributes the burden of this fossil fuel replacement evenly over the present and coming generation.

A WBA proposal includes a step by step reduction of fossil fuel use and increasing use of renewable energy sources. According to this concept, 540 Mtoe renewable energy will be needed by 2030 which corresponds to 41% of renewables by 2030! This will ensure that Europe moves towards a 100% renewable energy future before 2050 and be a world leader!

Table 1 Exit strategy for fossil fuels, EU 28, 2013 – 2030 (Source: WBA)

	Fossil fuels	Renewables	Nuclear and others	Total
2013	1230	197	239	1666
2020	1000	298	230	1528
2025	800	419	210	1429
2030	600	540	190	1330
2045	Near zero	750	100	900

Table 2 Paris Agreement; the needed deployment of renewably energy by 2030,

	Renewables Total	Bioenergy	Hydro	Wind	Solar	Geothermal
2013	197	128	31.9	20.2	10.6	5.9
2030	540	251	48	116	105	20
Annual Growth (%)	5.9%	3.9%	2%	10%	16%	3.2%

The main instruments for such a global and European transition include:

- A global carbon tax
- Rapid deployment of solar, wind, biomass based electricity generation systems on Feed in Tariffs
- Mobilization of biomass from forestry, agriculture and waste sectors, increased use of by-products and use of unused land to generate more biomass for heat, electricity and transport fuels
- No new investments in fossil fuel infrastructure! Future investment should go to renewable energy technologies and energy efficiency and not to fossil fuels!