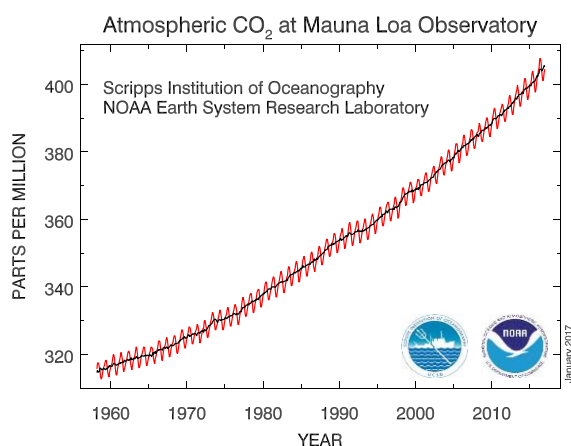


Declaration of Graz, January 2017: The role of bioenergy in Europe after COP 21 Paris

From 18th to 20th January 2017 the leading bioenergy experts of forestry, agriculture, the heating transport and power sector as well as science and technology providers meet at the 5th Central European Biomass Conference in Graz. On this occasion the biomass associations signed below and published the following declaration as a guideline for the development of bioenergy in Europe towards 2030.

1. Physical facts as basis for the climate policy

Physical facts should be the basis of the future European climate and energy policy. The most embarrassing fact is the ongoing increase of CO₂ concentration in the atmosphere. This concentration reached 400ppm in 2014 for the first time in the human history. The main reason of this growing concentration of CO₂ in the atmosphere is the huge amount of CO₂ emissions caused by burning fossil fuels. Following IPCC publications, a value of 420 ppm can be regarded as upper limit to keep a temperature rise below 2 °C likely.¹



This graph shows on the vertical axis that CO₂ concentration in the atmosphere went from 315 ppm in 1959 to 404 ppm in 2016 as measured on Mauna Loa, Hawaii. The horizontal axis is the time covering the years 1959 to 2016. The red line shows the variation between summer and winter due to the different assimilation of the vegetation over the year, the black line shows the average development. The critical threshold of 400 ppm was crossed in 2015!

2. The Paris agreement and the fossil fuel exit strategy

The world as a whole as well as Europe in particular need a fossil fuel exit strategy to stop the further growth of the CO₂ concentration in the atmosphere in order to achieve the targets of Paris. The core of this strategy should be a fossil exit path that distributes the burden of this fossil fuel replacement evenly over the present and coming generations. Following is the proposal for Europe in particular:

Table 1: Exit strategy for fossil fuels, EU 28, 2013 – 2030²

Mtoe	Fossil exit	Renewables	Nuclear & others	TOTAL
2013	1230	197	239	1666
2020	1000	298	230	1528
2025	800	419	210	1429
2030	600	540	190	1330
2040	Near zero			

According to this concept the use of fossil fuels should be halved by 2030 and renewable energy sources should contribute 540 Mtoe; which corresponds to 41% of renewables by 2030! **The current EU targets for 2030 - minus 40% emissions as compared to 1990 and 27% RES share - do not comply with the targets of COP 21.**

¹ IPCC 2014, summary for policy makers, mitigation of climate change, III. Working group, page 12

² WBA calculation

3. The promotion of renewable energy up to 2030

Europe needs an ambitious strategy to promote all renewables to comply with the agreement of COP 21. Following is the proposal for Europe in particular:

Table 2: Paris Agreement; the needed deployment of renewably energy by 2030, EU 28, MTOE³

	Unit	Renew-able total	Bioenergy	Hydro	Wind	Solar	Geothermal others
2013	Mtoe	196,8	128,1	31,9	20,2	10,6	5,9
2030	Mtoe	540	251	48	116	105	20
Annual Growth	%	5,9	3,9	2	10	16	3,2

Although a fast deployment of wind and solar electricity is needed, bioenergy will remain by far the most important renewable source by 2030.

4. The leading role of bioenergy

The sustainable potential of biomass coming from the European continent is by far not used. It comprises by-products of agriculture, forestry, organic waste, better utilisation of not used or not needed land for energy crops, better use of existing forests for wood production for material and energetic use.

Biomass for energy offers various benefits such as a supply of the markets for heat, electricity and transport fuels; it is stored solar energy and reduces the cost of energy storage; it creates new jobs thanks to the construction and operation of bioenergy plants, it allows the productive use of land not needed for food supply, it improves energy security.

More than 75% of bioenergy is used for heating purposes in Europe, a rather small share goes to transport fuels and electricity. In the future the main role of biomass is seen in the heating sector followed by transport fuels and electricity.

5. Transformation of the heating sector

About 50% of the final energy demand is heat: heat for buildings, heat for the industry etc. In cities, more district heating and cooling grids are needed. The heat supply for district heating should be converted step by step to fossil free sources such as waste heat from the industry, heat from renewable part of waste incineration, heat from biomass combustion and from solar thermal installations. Individual heating should be more and more based on fossil free sources such as biomass, solar thermal, and high efficient (SPF4⁴) heat pumps based on renewable electricity. It has to be secured that Power to Heat do not support fossil power generation.

6. Biofuel – binding minimum targets for 2030

Conventional biofuels are an important option to reduce the use of fossil fuels in the transport sector. They not only serve to reduce CO₂ emissions but also to improve the fuel security. In addition they deliver protein feed and reduce the European dependence on protein imports from abroad. They improve food security because they favour a powerful production capacity of the European agriculture that can be shifted to the food sector in case of a food shortage. EU commission has an intention to restrain total biofuels growth by 2030 making division based on raw material base; this is a strategic mistake and has to be rejected.

Advanced biofuels, along with conventional biofuels should play a growing role in countries with a sufficient feedstock supply. Minimum blending targets are proven instruments to increase the share of

³ Source: EU commission energy in figures, pocket book; WBA calculation

⁴ Seasonal Performance Factor of 4 reduces the negative impacts on grid stability and power supply security during the winter months.

biofuels in the market. Blending targets have to be related to the domestic potential of the European agriculture and forestry and the fuel consumption patterns in Europe. Member states should have the freedom to choose their biofuel mix by their own. With respect to the fuel security target, the Biofuel production based on European biomass should be tripled.

7. Mobilisation of biomass

The increased need for bioenergy requires a proactive policy to develop the European potential of biomass for energy. Such a policy should include incentives to plant energy crops on abandoned land or on land not needed for food production, incentives to a better use of waste and by-products from agriculture and for an enhanced utilization of sustainably managed forests.

8. Carbon Pricing

A general answer for many questions concerning the transformation to a fossil free energy system is the phasing out of all subsidies for fossil fuels and nuclear energy and the implementation of a general tax on fossil CO₂ emissions. Such a step would encourage the growth of bioenergy and other renewables but also incentivise all efforts for better efficiency without any administrative burden. Sweden with a carbon tax of 121 Euro/ton CO₂ demonstrates how fast and efficient the transformation of the energy system can be attained using this steering instrument. Step by step the carbon pricing should be introduced to non-ETS and ETS-sector. As a carbon pricing is introduced other taxes should be reduced to keep the tax burden for the economy and the society stable.

9. Other instruments

In addition to such a carbon tax additional measures are needed to accelerate the exit from fossil fuels such as:

- Deployment plans for electricity from wind, PV, biogas/biomass based on feed in tariffs or other proven support schemes
- A mobilisation of biomass from by-products or from abandoned land to generate more bioenergy for heat, transport fuels and electricity
- No investment in fossil fuel infrastructure! Future investment should go to renewable energies and better efficiency and not to fossil fuels, otherwise huge amounts of capital will be locked to the detriment of the national economies!

10. SUMMARY GRAZ DECLARATION

Key parameters:

- Halving the use of fossil fuels by 2030
- Phase out fossil generated electricity
- A doubling of the final energy use of biomass
- A 2.5 fold increase of renewables

Key measures:

- A general pricing on fossil CO₂ emissions to progressively reach 100 euro/ton CO₂
- A renewable heat strategy for district heat, industrial and residential heating
- Blending obligations for biofuels
- An integrated concept to mobilise biomass for energy
- Promoting integration of all renewables along with biomass for electricity generation

Europe has a specific responsibility to lead the way to a fossil free society. Technologies, know how, experience, capital, potential and positive examples are available as on no other continent. With a successful climate policy Europe could urge other continents to follow the European Example. Without European leadership no other continent will take the lead to implement COP 21 targets in time and the race against uncontrolled global warming will be lost globally. Given this background decision makers are urged to act accordingly.

Signing Organisations:



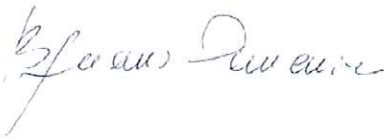
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