

Monsieur Buffetaut, dear friends from the EESC SD observatory,

Thanks a lot for your generosity, to host that workshop at your premises and for the flexibility to offer us a larger room in reaction to the large number of participants. I hope you will not regret this afterwards!

Ladies and gentlemen

To be honest: your interest in that workshop is overwhelming ! –Not all of you will know the organisation that has organised the workshop, so let me briefly introduce it.

EEAC is a network of government advisors – more specifically of expert councils established by national governments to give advice, to offer policy evaluation or to deliver early warnings on false choices or to come up with innovative ideas on environment and SD issues.

We have been working on energy issues for many years, namely on climate targets, energy efficiency and infrastructure planning for a renewable future. The most recent EEAC statements are available on the information desk and on the website. Our common ambition is to look a long way ahead, so that today we can make the right choices for the future.

Looking into the long-term future on energy – this is also at the core of our workshop today, so let me extend a warm welcome here to all of you!

I tell you little news, when I say, that decarbonisation – and especially the complete decarbonisation of the electricity sector is on the EU agenda. Despite the Copenhagen – Disaster, we all know, that climate change is not waiting for an international agreement. Even if international progress is slow, there are still strong arguments to prepare for the transformation ahead.. Many recognise today that first movers on solutions to that global threat will be also be the

economic winners. The double face of climate policy- as an urgent necessity and as an economic opportunity - certainly has inspired President Barroso's commitment to decarbonisation. And as we move towards the spring council we see that this idea has become an important element of the Europe 2020 plan. Some even suggest- that the climate and energy agenda could be the big project unifying Europe – after the successful completion of the internal market and the monetary union.

Perhaps I am too optimistic, when saying, that we now tend to agree on the overall targets – the 2°C degree guard rail and the 80-95 % reductions needed to get there. But I believe, we are now moving towards the second stage: how to achieve those targets. The Commission is working on a road map 2050 to show how this is feasible. That is the broader context of this workshop.

Let me say a few words on this “how” question.

Conventional wisdom says, there must be a portfolio of low carbon technologies. No single energy source alone will be able to do the job efficiently. This argument is supported by a number of economic models, such as the RECIPE Scenarios or the Eurelectric Power Choices study. Most of those scenarios do not really ask: can renewables do the job, but rather what is the economically optimal power mix. Most then start with the existing power mix and do some kind of forecasting or projections. Forecasting and economic modelling has a conservative bias: Today's costs and energy mix enter the models and determine the results. And the results are very sensitive to the assumptions. What you get out of a model depends on what you put in!! Insiders say: garbage in – garbage out! This applies to all types of long-term models: as the future is uncertain we have to make assumptions and those assumptions can always be challenged. So scenarios do not tell you an “objective truth”, but simply inform you about choices and their implications and sometimes about the preferences of the involved scientists and their sponsors. For this workshop we decided, to gather here some of “renewable optimists”. Most of the 7 scenarios

presented here share the idea, that renewable sources in Europe have the potential to provide most if not all the electricity needed. I also would like to draw your attention to an 8<sup>th</sup> 100% scenario made by PWC and PIK, which is available on the Information desk and which came too late to be included in this workshops. . One of the authors, A. Battaglini is present here. Some even say, that 100% REN can be achieved at competitive cost while respecting biodiversity and while ensuring that electricity demand is met at all times. In other words: the scenario studies claim, that renewables are the sustainable solution to our electricity system and that we can decarbonise without using nuclear power and CCS technology. What is also interesting about these studies is, that they model different pathways towards renewable future. The first part of the workshop aims to compare and contrast the methodologies, assumptions and limitations of these different scenario studies and to draw conclusions about the robustness of their results.

The scenario – debate naturally has a policy dimension.

First: The future power mix determines infrastructure needs and the infrastructures will to some extent determine, which power mix is feasible. A Market based Bottom-up development of electricity grids will not deliver the transformation towards the infrastructure required by a largely renewables-based system. Grid Investors will not invest, if investment risk is too high and investment risk is too high, if they do not know future power capacities.

Therefore targets – and not only for 2020 but beyond - play a crucial role for the further dynamics of the TEN-E. And target setting is informed by scenarios.

Second: We may soon face the end of a reasonably friendly coexistence of different power sources. The old, baseload oriented, relatively rigid power supply does not fit to the need for flexible dispatch created by intermitting sources. Coexistence may soon become an expensive luxury. There are already days in Germany where conventional power utilities pay 1500 Euro per KWh in

order to stop a wind mill delivering electricity. This is cheaper than to run or shut down a large coal or nuclear plant. As wind energy capacities grow such situations happen more and more frequently. Eventually we will face hard decisions either on limiting renewables growth – as demanded by EDF and EON in UK or to reduce conventional power capacity – as it is the present trend in Europe!

So we are at the beginning of a big strategic discussion. And the very beginning of that discussion is: Can we imagine an affordable, secure and sustainable renewable future? It seems to me that the insight from this workshop will be: yes we can!

Floor is now open to speakers.