

Low Carbon Societies Network



Dear reader,

This newsletter highlights the current activities of the Low-Carbon Societies Network Project, in particular the project's experiences from cooperation with stakeholders to develop German low-carbon scenarios (see next page). It is also the first announcement of the final project conference, where we hope to see many of you, and where, together, we can plan new activities with scenarios and strategies for curbing our too-high greenhouse-gas emissions. On the last page we also found the space to describe two other new, interesting scenarios.

INVITATION to the Public Conference: Engaging Civil Society and Stakeholders in Low-Carbon Scenarios, March 15, 2012, Paris (tentative date, please check web site)

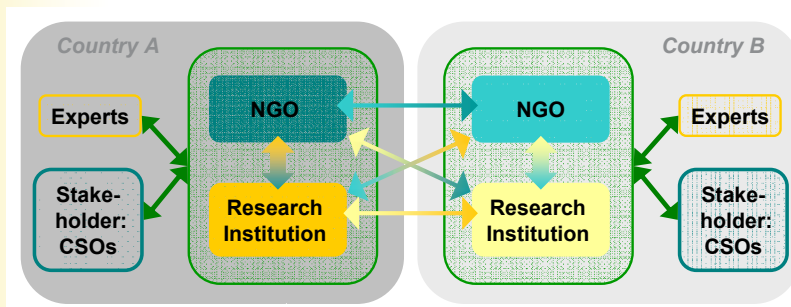
This conference will present the experiences gained and results from developments of lowcarbon scenarios for Germany and France in interactive dialogues with stakeholders. It will sum up experiences from the German and French part of the ENCI-LowCarb project, where low-carbon scenarios have been developed within the last two years in dialogues with experts, civil society, and a large number of stakeholders.

The development processes have highlighted some sectors that are key for the transition: the energy-supply sector, the transport sector, and the residential sector.

The conference will also give ideas and guidance to groups that are planning or considering low-carbon scenarios in interactions with stakeholders.

The conference will be free, but registration is necessary and spaces are limited. Registration via e-mail to: meike@rac-f.org.

Looking forward to meeting many of you, Meike Fink, Project Coordinator



Graph: The interactions in the process for the development of scenarios.

Collaborative Scenario Creation Process

Within the framework of the ENCI-Low-Carb project, a blueprint for collaborative scenario-creation processes has been developed. It has already been successfully deployed for the development of scenarios for Germany.

Its main innovative approach is to integrate the opinions of various stakeholders into a scenario-creation process using a macroeconomic model, translating political visions concerning technology choices and cost assumptions into interpretable data.

The methodology underlines the importance and possible threats of each phase of the process. NGO partners and research institutes compose the core scenario group but the final scenario outcome will be based on the opinions of experts and stakeholders.

More information: Schmid/Knopf/la Branche/Fink "Social Acceptance in Quantitative Low Carbon Scenarios", Int. Conference: Connecting Civil Society and Science, Stuttgart, Germany, Oct 20-21, 2011.



This newsletter is published by the "Low-Carbon Societies Network" project, financed by the European Commission's 7th Framework Program for Research (FP7).

The project's official name is ENCI-LowCarb or "European Network Engaging Civil Society in Low-Carbon Scenarios". The project period is 2009-12.

The project's aims include the creation of a European network on energy scenarios to facilitate information flows between Civil Society Organizations (CSOs) and research institutes in Europe about low-carbon energy scenarios and technologies.

We want to establish a lively exchange concerning existing scenarios and examples of best practices already in place today that will be indispensable in meeting the requirements of a low-carbon society.

If you want to join our network, please register on the web site, as well as subscribe to this newsletter.

Our Project Team builds ambitious energy scenarios for 2050 for Germany and France. In the process we meet with stakeholders to build support for the scenarios and to identify measures that might counter negative social and economical impacts.

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www.lowcarbon-societies.eu

Stakeholder Integration in Remind-D, Germany



by Jan Burck,
Germanwatch

On the way to a low-carbon scenario, Germanwatch and the

Potsdam Institute for Climate Impact Research (PIK) have now completed all four stakeholder dialogues that were held to integrate the positions, estimations and ideas of crucial actors in the sector. In two rounds, the stakeholders of, respectively, the transport and electricity sectors were given a chance to contribute to the scenario in order to make it more realistic and socially acceptable. In the first round the stakeholder dialogues included a moderated debate on various topics and a standardized questionnaire. On the basis of the results of both discussion and questionnaire, Germanwatch and the PIK created scenario pathways that were then presented to the stakeholders in the second round. So again, they had the opportunity to criticise presumptions of the scenarios, to express their positions toward certain scenario options and to rate its outcomes as realistic or not.

First Rounds: May-June

Stakeholder-Dialog #1

Transport Sector, Dialog #1

The first round of the stakeholder workshop in the transport sector took place at the bureaus of Germanwatch in Berlin on 27.05.2011. Among the 13 participants were representatives of Daimler, the German association of the bio-fuel industry (VDB), the alliance "pro Schiene" that advocates for railway transportation, the German Bicycle Club (ADFC), the association of German transportation companies (VDV), and environmental groups such as the WWF.

The discussion included strategies to decarbonise transportation of freight and passengers, political and technical measures for more energy-efficiency, and the substitution of fuels.

The central results of the first round of the stakeholder dialogue in the transport sectors are:

- Although many actors were in favour of changes in the field, for example the reduction of freight traffic on the road and breaking the correlation of freight traffic with GDP, the realistic estimation went in the opposite direction.



- It seemed that the transport sector is conceived by the stakeholders as a very slowly changing field that lacks strength in terms of political attention as well as of capacity to change consumers' habits.

Stakeholder-Dialog #1

Electricity Sector, Dialog #1

The first round on the electricity sector took place on 30.06.2011. Fifteen stakeholders attended the dialogue: RWE, one of the four big German energy companies; two German grid companies (50Hertz, TenneT); a trade union of the mining and energy sector (IG BCE); the German association for renewable energies (BEE); a renewable-energy company (Lichtblick); the German consumer association (vzbv); and environmental groups (WWF, NaBu, Klima-Allianz).

The discussion focused around the topics of grid construction and social acceptance, changes in landscape due to new forms of electricity production, energy efficiency, and transitory technologies on the way to a renewable-energy system.

The workshop was particularly interesting because it was held in the phase when the German government discussed and presented their new energy policy that included the shorted runs of nuclear power plants.

The central results of the dialogue were:

- The development and restructuring of the German power grid is a great challenge that has to be taken seriously in order to establish a new energy system.
- There are still many open points in the field, varying from reliable and transparent data about the degree of necessary reorganization of the power grid to the new strategies for social acceptance.

The stakeholders discussed whether a renewable-energy system needs a different appearance in order to gain popular support. They were convinced that various new technologies will change the electricity market (demand-side management, smart metering, etc.), that the industry's electricity use will fall, and that the prices of electricity in the industrial and private sector will rise.

Scenarios

Scenarios

On that basis, three scenario pathways with the following characteristics were constructed. Their overall goal is to meet the 85% carbon-reduction target by 2050.

Smart Policy as Usual:

- existing coal-power plants are not shut down,
- renewables are developed moderately,
- energy efficiency is growing as today, Carbon Capture and Storage (CCS)-technology is not used,
- freight transport keeps growing as today,
- the modal-split does not change (though electric vehicles replace fuel-driven) and the fuel mix stays as it is.





















Green World:

- existing coal-power plants are shut down,
- renewables and energy efficiency grow faster than today,
- CCS-technology is not used,
- freight transport stays at the current level while railroad and priority for shorter distances gain importance,
- the modal-split changes to more public transportation and
- the use of conventional fuels is minimized.

All Technology Options:

- existing coal-power plants are shut down,
- renewables and energy efficiency grow faster than today,
- CCS-technology is used,
- the freight transport stays at the current level while railroad and priority for shorter distances gain importance,
- the modal-split changes to more public transportation and
- the use of bio-fuels and hydrogen as fuels is intensified.

Stakeholder-Dialog #1

Electricity Transport			 	 	 
			CCS	CCS	CCS
  	"Smart Policy as Usual"				
    		"Green World"			
     			"All Technology Options"		

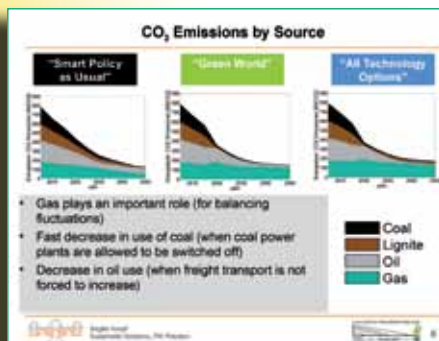
Electricity / Transport Scenario Matrix with symbols.

Scenario Consequences

The scenarios especially allow analysis of how the sectors and parameters interact under given circumstances. Since all the results cannot be discussed here, only some examples may show how the scenarios work:

In the "Smart Policy as Usual" scenario the persistent growth of the freight transport forces the passenger transportation to shrink and the heating sector to decarbonize to a larger degree than in the other scenarios in order to meet the 85% goal. The overall fuel use will sink in all scenarios from about 2500 PJ today to 1000-1500 PJ depending on the scenario.

In the "Smart Policy as Usual" and the "Green World" scenarios, only oil and gas will emit carbon in 2050, coal will not be playing a role, in the "all technology options" scenario there is also brown coal with CCS emitting carbon in 2050.



CO₂ Emissions by Sources at the scenarios.

Second Rounds: October

In the second round the scenarios and their consequences were presented to the stakeholders. Unfortunately some were not able to come, so the groups diminished to ten for the transport and five in the electricity sector. The results of the second rounds are not fully collected yet so we will give here only an overview of the discussion.

Transport Sector, Dialog #2

The dialogue for the transport sector took place on 4.10.2011. The stakeholders discussed various issues:

The model does not take into account means of transportation that do not use energy on a large scale, like biking or e-biking. The role of prices (carbon, energy, etc) is under-represented in the model.

The "Green World" and "All Technology Options" scenarios need an enormous construction of infrastructure for public transportation that does not seem realistic due to current political (will, attention, finance) and social (acceptance, habit change) constellations. According to some stakeholders, already the "Smart Policy as Usual" scenario needs big political and social changes, like introduction of electric vehicles, so they had difficulties to judge whether it is realistic or not.

From 2030, all scenarios include means of transportation that are currently not ready for mass production so there is a great need for research whose results cannot be predicted.

Stakeholder Dialog #2

Electricity Sector, Dialog #2

The dialogue for the electricity sector was held on 5.10.2011. Here the scenarios were criticized on a very different level:

There is a gap between the logic of the model-building and its practical use. The conditions of every scenario need to be clearly communicated, otherwise the abstract logic of the model is not understandable to the readers.

The "Smart Policy as Usual" scenario does not fully reflect the political realities.

The model does not take into account the micro economic issues of the companies: With the extinction of coal-based energy production the business plans of the existing energy companies have to change due to a new market design.

Final Scenarios

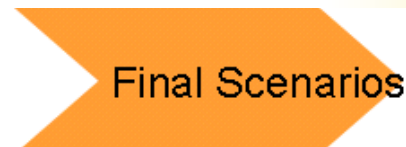
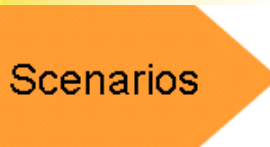
Towards the Final Scenarios

Although the two groups of stakeholders criticized the scenarios and the model profoundly, both discussions were very differentiated and gave much new input.

After its full documentation and analysis in the coming days, we hope to integrate all the mentioned issues in the model and set it on a more realistic base.

More information:

- Final Conference, March 2012, France
- Presentations, October 25, 2011
- Reports of the ENCI-LowCarb Project <http://www.lowcarbon-societies.eu>





A new French energy scenario developed by the association négaWatt “Scénario négaWatt 2011”

The basic methodology of this new French scenario is to reduce energy demand through energy sufficiency and -efficiency in order to be able to cover in 2050 100% of the energy demand with renewable energies (RE) and

to complete nuclear phase-out by 2033. This transformation of the energy system results in a 62% reduction of the primary energy consumption and a CO₂ emission reduction of roughly 94% by 2050.

All technologies used in this scenario are known and approved today with one exception: the storage of renewable electricity in the form of artificial methane (methanation). This technology would store RE, especially that generated by wind, for use in times of low production, largely compensating for inevitable fluctuations in RE input.

No economic evaluation of the transition costs was done for this report. Instead, the authors of the study emphasize that

future economic modeling should capture and include newer, all-positive benefits (health, security, more competencies for local authorities, responsibility towards future generations, etc.) of such a transformation.

Here you can download the report in French: <http://www.negawatt.org/>

In English, you can download a presentation of the scenario by Yves Marignac on the ENCI LowCarb seminar in Brussels on October 25, 2011:

http://lowcarbon-societies.eu/files/resource_1/ENCI_BXL_11_oct_25_Negawatt_en.pdf



A new energy scenario has been published in October, 2011 by WWF UK: «Positive Energy: how renewable electricity can transform the UK by 2030»

This report shows that renewable energy is the key to reducing carbon emissions from the UK power sector in a way that is stable, secure and affordable. The analysis that it puts forth clearly shows the feasibility of deriving from renewable energy

sources 60% or more of the UK's electricity demand by 2030, reducing emissions successfully while turning away from the much-hyped toxic option of nuclear power. Further, reducing the demand for energy in the UK brings down the costs of new low-carbon generation capacity by around £40 billion by 2030, making it easier to achieve climate targets.

The amount of renewable capacity that the UK can build is determined by economic constraints, not by available resources or by how fast infrastructure can be built. Going beyond 60% depends on whether there's a market in other countries for the excess electricity that the UK would generate in times of high RE production.

Therefore, given uncertainty over future markets, several scenarios have been developed.

In the core scenarios A and B, a European market for UK renewable power is assumed despite the construction of high levels of interconnection under the B scenarios. By contrast, in the stretch scenarios (C), we assume that interconnection creates a European market for the UK's excess power, and that it becomes economic to build much more renewable capacity in the UK.

Here you can download the report: http://www.wwf.org.uk/what_we_do/tackling_climate_change/renewable_energy/?uNewsID=5356

Proceedings Available: Brussels Stakeholder Seminar: “Engaging Civil Society in the EU Roadmap Process” October 25, Brussels, Belgium

The seminar started with a presentation of the “Climate Roadmap” by Damyana Stoynova, representing DG Climate Action of the European Commission.

This was followed by comments by Greenpeace, Eurelectric, and the Trade Union EPSU.

Everybody recognised that the Roadmap's 80% reduction of greenhouse gases by 2050 is ambitious.

Commentators highlighted problems in the scenarios, however, and Greenpeace asked for a scenario closer to the 95% reduction included in statements by the EU leaders, who called for 80-95% reductions.



Greenpeace also asked for scenarios with assumptions more positive for renewable energy and for a scenario combining high use of renewable energy with high energy efficiency.

In the afternoon, the Seminar participants heard about the scenario development with stakeholders in the ENCI-LowCarb Project, as well as about the new "Negawatt" scenario for France and about social acceptance of renewable-energy innovations.

Read presentations and discussions at <http://www.lowcarbon-societies.eu/index.php?id=50>

