CCS from a NGO Perspective Christoph Bals, Germanwatch PIK, 10.03.2010



Limit Climate Change as far as possible below two degrees

World wide: - 80% until 2050 Germany: - 95% until 2050

Joint position of German NGOs



Electriciy Sector in Europe until 2050: nearly 100% Renewable

Joint position of German NGOs



The BIG Question:

- Can CCS be a bridge into the solar age (carbon neutral electricity sector by 2035)?
 Or:
- Is CCS a road to prevent the solar age by building acceptance for new coal power plants with vague future promises regarding CCS?
 - System question: How many base load power plants are consistent with the rapid transformation to a renewable based energy system?



The NGO answer:

One target, one strategy, two tactics Together

against all attempts to use CCS as Trojan horse for live extension of the fossil age;

against all attempts to build new coal power plants without binding CCS commitment;

and for the necessary structures to create

dynamics for energy efficiency and renewable energies and necessary grid extension: ca. 40% renewable share of electricity by 2020;

But:

- One group of NGOs: against any form of CCS
- One group of NGOs: supporting CCS as a bridge technology



Coal and CCS

- It is very unlikely that the EU emission trading target (20 or 30% reduction until 2020) creates enough incentives to use CCS for coal power plants;
- We don't believe that *under today's market conditions* new coal power plants will be equiped with CCS before 2020 ;
- CCS doesn't make economic sense for coal power plants older than 10 years.



Germanwatch demands

- no new coal power plant without CCS
- until 2015 a dozen demonstration projects in Europe (not only coal);
- 2020-2030: equiping existing coal power stations with CCS or phasing them out;



For Lignite the Situation is Different

- Lignite have the biggest climate destruction potential
- Lignite is economically feasible. For very low costs without CCS.
- For Lignite: CO2-price from 10 to 20 Euro could make CCS profitable



Consequences

- A lignite power plant without CCS should be considered as a mass destruction weapon;
- Until 2025: equipping all existing lignite power plants with CCS or phasing out.
- System question: How many base load power plants are consistent with the rapid transformation to a renewable based energy system?
- Climate question: CCS doesn't mean Zero-CO2. How much lignite CCS fits with path towards a 80 to 95% reduction scenario (2050)?
- The answers decide about the bridge character of lignite CCS



CCS for other purposes

Not only fossil power plants produce CO2 but also the production of:

- cement
- steel
- aluminium
- fertilizer



In the second half of the century we might need world wide negative emissions

- Biomass and CCS is a plausible scenario;
- But: Aren't there (until then) more intelligent ways to use CO2?



So far CCS is the only visible instrument to deal with emissions from these sectors

- CCS-discussion should be decoupled from only coal discussion;
- But: risk of preventing innovation and creative destruction: e.g.: carbon fibre might replace much of steel and cement;



Worldwide Perspective

- Countries like China, South Africa and the US will not step out of coal in a foreseeable future (But 80% of new US coal power plans stopped in the last two years);
- We don't know any not only technically – plausible global scenario to stay below two degrees without CCS;





Photo courtesy of DONG Energy A/S

Thank you – for using CCS as a ladder to jump beyond coal

New coal and gas power plants hardly economically feasible

Climate protection – economic feasibility – security of supply ... but many power plant projects cancelled



* Comparable production capacity from replacing old hard-coal with new hard-coal and new CCGT plants.

