

The Great (Green) Transformation

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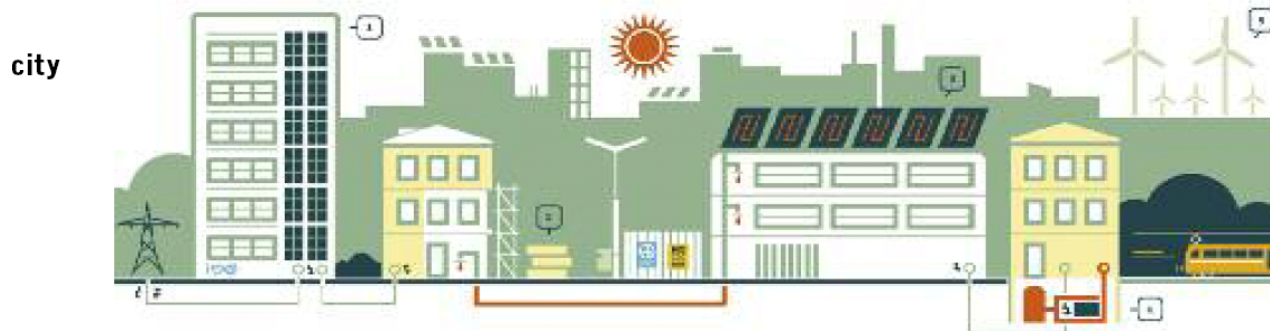
The Challenge

- We're going to cross the limits to growth with respect of the regeneration capacity of the earth system (atmosphere, water systems, topsoil).
- Climate Change, according to new scientific findings, is taking place more rapidly than initially anticipated.
- Shortage of natural resources on which economic growth has been based, in particular oil (which still is the source for roughly one third of total global energy consumption) and a variety of industrial metals
- Over the next decades, global economic growth will accelerate: Speeding up the pace we're approaching the iceberg.
- Stumbling into an era of sharpening resource conflicts

Basically, there are **two ways to expand limits to growth**:

- 1) Efficiency Revolution (Factor 5): Gaining time
- 2) Leapfrogging towards a solar-based circular flow economy

Going Green is not about more or less of the same. It's about revolutionary change (technologies, infrastructure, culture).



We are facing the beginning of a new era: a historical turn

- from fossil fuel – based economic growth and limited natural resources to renewable energies and materials, from exploiting the past to living from the present
- from linear production & consumption chains to recycling: redesign of products, reuse of all kind of materials (zero waste, cradle to cradle), leasing instead of buying stuff (return to sender)
- from resource intensity to resource efficiency (factor 5)
- from moving in nature like an army in hostile environment to learning from nature (bio-technologies, co-evolution)

Triple dividend (Let's talk about opportunities)

- 1) Preserving earth as an human-friendly environment for coming generations
- 2) Transition towards an economy based on renewable energy sources will improve energy security.
At the same time, it will divert trillions of dollars now being spent to oil-based autocracies (Iran, Saudi-Arabia, Russia, Venezuela & Co) to domestic jobs and services.
- 3) Going green will offer big opportunities to entrepreneurs and workers alike – as can be seen by what happened in Germany within the last decade. Today, in Germany, there are about 1.9 million jobs in the green sector, about 300.000 in the renewable energy-sector alone, and we are confident that by 2020, these figures will double.

GOING GLOBAL

How can we extend the concept of Greening the Economy to the developing world?

If we want to turn around global greenhouse-gas-emissions by 2020 and cut them by 50% until 2050, it's essential that emerging economies are ready to cap their greenhouse-gas-emissions in the short term, and to reduce them in the long term.

This will only happen once we develop a consensus about **a fair modus of sharing burdens and opportunities.**



GOING GLOBAL II

The introduction of a binding international cap & trade system for CO₂-emissions, based on equal per capita-emission-rights, is key. It will help to raise funds to be redistributed to developing countries.

We need further agreements on technological and financial transfers to developing countries.

Four Key Projects

- DESERTEC: using the solar power potential of deserts.
Large-scale installation of highly effective Solar Thermal Power Stations in the Sahara. The potential for solar power in the desert zones of North Africa is huge – more than enough to supply the energy needs of the respective partner countries as well as meet a substantial portion of Europe's electricity needs.
- European Smart Super Grid
Replacing the outdated base-load model for providing electrical power by an integrated network of renewable energy sources. Stability no longer is provided by large scale coal and nuclear power plants, but by the network itself.

Four Key Projects II

- E-Mobility
Sustainable urban mobility: replace the private car – based model through an integrated e-mobility-system: comfortable public transport + car to go + biking + walking. The effect: less emissions - regain urban public space – make inner cities more attractive living places – restrict urban sprawl.
- Greening the tax-system
Switching from taxing labor income to taxing consumption of emissions and limited natural resources (fossil fuels, uranium, minerals, land use)