

## **Conference Theme: Towards Low-Carbon Energy Systems**

Paper proposal:

### **Addressing Climate Change: The Governance of Technical Innovations in the Energy Sector**

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The development of the energy sector in the past had been determined by a small group of industrial actors along with political and regulatory decision makers (Viktor 2002). In many countries decisions on the use of specific technologies (e.g. nuclear energy, renewable energies) have not been the result of the activities of optimizing actors. The essential incentives for changes in the energy sector have come from the so called oil-price shocks in the mid ninety-seventies of the last century, the Chernobyl accident and the resulting critical attitude towards nuclear energy in many countries, the liberalization of markets driven forward by the European Commission and finally the Fukushima catastrophe.

Such external events can lead to changes in the governance structure. The standard operating procedure surely is to have the incumbent actors deal with external challenges in the established way of doing things (structures and actors). We assume that changes in the governance structure are not an immediate reaction to external shocks, but rather these external shocks have to be interpreted, mediated by new, skilled actors and seen as a chance to see things differently and organize and build coalitions around new ideas of how things could be done differently. In order to be successful, a change in the relevant power constellations which supports the governance structure is required. Processes of change in the end deal with the question, who gets what under what conditions.

The proposed paper will analyze along this line of reasoning four cases in the energy sector: the governance of carbon, capture & storage in Germany and Norway and the development of governance for Photovoltaics development in Japan and Germany.