



PSI Colloquium

Energy: an industry in transition

Balancing the Energy Trilemma in a context of uncertainty

Dr. Christoph Frei

Secretary General of the World Energy Council

DATE : Friday, November 16, 2012
COFFEE: 11:00 am
SEMINAR: 11:15 am
PLACE: WHGA/001

Abstract:

The World's Energy Trilemma

Even with improvements in energy efficiency global energy demand will at least double by 2050. This is the consequence of global population growth, global economic growth, continued urbanization, as well as the increased demand on mobility and other energy dependent services. During the same period global greenhouse gas emissions will need to be reduced by half. And, there are still 1.3 billion people without access to electricity. These three challenges constitute the World's Energy Trilemma as improving one will often come at a cost for another.

Increased uncertainty and complexity

What seemed unimaginable two decades ago has become reality: energy is again on the top of the political agenda and has in many countries – think of Japan, Russia, or Germany – become a priority issue for prime ministers or even Presidents. The post Fukushima nuclear future, the game changing shale gas, supply uncertainty and price volatility related to the “Arab Decade”, the shift of demand to East, tumbling solar cell prices and related trade disputes between Europe (or US) and China, climate framework uncertainty, but also the global recession are rocking the foundation of what many believed two decades ago to be a steady roadmap into our energy future.

The Transition

As a result of these challenges and in a context of high uncertainty and increasing complexity the global energy sector will need an investment of half a World GDP over the next two decades in order to expand and adapt the energy infrastructure. In the absence of global institutions and regulations on energy or climate policy which would guide such a transition, the main policy decisions remain in the authority of national and sometimes sub-national decision makers. The breaking down and benchmarking of the Energy Trilemma to national policy frameworks is the World Energy Council's contribution to inform and guide policy makers around the world in their efforts to ensure adequate energy policy frameworks are developed.

Christoph Frei is Secretary General of the World Energy Council (WEC) and titular professor at EPFL. He will present developments from WEC's recently completed issues survey from its more than 90 national member networks around the world. This provides a unique snapshot of the global energy agenda, and captures recent changes in what keeps energy leaders awake at night. Building on this insight, he will discuss WEC's perspective on key global drivers, and present WEC's Energy Trilemma Index.

The World Energy Council

is a global body representing more than 3000 organizations from governments, private and state corporations, academia, and other stakeholder organizations, from over 90 countries around the world. Its mission is to promote the sustainable supply and use of energy for the greatest benefit of all. Its primary focus is to promote policies and strategies that promote transition the current state of energy supply, conversion and end use, towards an environmentally sustainable future. This includes defining current key issues, and promoting development and monitoring effectiveness of both short-term and long-term strategies and policies.