What keeps Future Energy Leaders awake at night?

FELs have created their own World Energy Issues Monitor 2014.

The World Energy Issues Monitor provides an annual assessment of the issues impacting the global and regional energy sector based on the views of the WEC's energy leadership community. The maps identify the key uncertainties while highlighting the areas where action is most required to enable the sustainable supply and use of energy.

Discover the FELs map below and compare its outcomes with other maps available in the <u>DATA</u> <u>section</u>.



How to read the Issues Monitor

- Issues with high uncertainty and high impact ("critical uncertainties" in the upper right corner) include these, which will most benefit from multi-stakeholder dialogue and scenario analysis.
- The issues on the high-impact/low uncertainty side are these where immediate action finds easy consensus ("need for action" bottom right).
- The low impact/low uncertainty ones include issues of perceived lesser importance but also "weak signals" (bottom left), which may be issues that are still badly understood.
- The urgency of an issue is proportional to the size of its bubble.

Analysis

The climate framework, serving to consolidate global efforts to reduce pollutants and mitigate negative impacts of climate change, remains the primary critical uncertainty for the Future Energy Leader (FEL) community. While the negative impacts of climate change are now widely (though not universally) acknowledged, the actual consequences are difficult to predict as climate change models differ greatly. The lack of collective commitment from the global community to address these issues leaves the FEL community facing two major uncertainties:

- How best to tackle challenges associated with climate change.
- How best to determine which policies should be implemented at global and national levels.

Macroeconomic factors such as energy prices, for example, are clear signals that the global recession remains high on the FEL agenda. As prices of primary energy resources declines, the appeal and interest in investing in new technology developments also declines. It is important to note, however, that high energy prices can prevent people from directly accessing energy, which, in turn, contributes to ongoing energy poverty.

FELs pay much attention to advancements in electric storage and the development of unconventional resources. If such technologies become widespread, electric storage could become a game-changer. Indeed, as storage technologies grow, the need for peak electricity production will decline. However, this is likely to require more power production overall because of the increased use of electric vehicles in cities.

In contrast to the global monitor, which cites renewable energies as a critical uncertainty, the FEL perspective identifies renewables in the need-for-action quadrant. This suggests the FEL outlook for renewables is more positive than that of the existing generation of energy leaders and that future leaders believe the development of renewables will have a significant impact on the future global energy mix.

Related to renewable development, though perceived with much less certainty, is the issue of energy subsidies. Like the existing energy leaders, this issue is identified in the top right quadrant of the monitor and is considered to be a critical uncertainty. Improved access to effective energy subsidies will facilitate innovation and research. Ineffective subsidies can, however, create market signals which result in negative social outcomes and should be avoided. Further development of renewable energy technologies will require upgrading existent power grid systems in order to successfully manage decentralised power generation and distribution.

Surprisingly, FELs do not identify terrorism and corruption as critical long-term barriers to energy development. Unfortunately, many countries are still suffering from these problems. Equally surprisingly, FELs do not view lack of talent as an issue that requires immediate attention. There may be many reasons for this view, but one explanation suggests that FELs are more ready to pool together their resources in order to tackle today's energy challenges.

Finally, the FEL outlook identifies a need for further investment into advancing energy-efficient technologies. Long-term, market-driven price signals will drive these investments and innovation. New technologies will play a fundamental role in meeting the growing energy demand from the emerging countries, providing clean, affordable and reliable energy for all.