



Transmission Grids, Capital Cost and Energy Storage are the key action priorities that stand out in Finland’s energy horizon, according to the 2024 World Energy Issues Monitor survey results. **Risk to Peace, Affordability and Acceptability** are also identified as having a large impact.

The uncertainty regarding **Trilemma Management** is very high and above all other issues. Additionally, **Demand management, H2 & P2X and Domestic Growth** stand out distinctly from other critical uncertainties in Finland. Uncertainty surrounding these factors has increased significantly in recent years while uncertainty about other issues has decreased compared to previous years.

While **H2 and P2X** solutions remain one of the top issues on minds of energy leaders, uncertainty related to them has decreased considerably since 2022. This is likely due to the fact that the first hydrogen plant investments are already underway and will begin operating in the coming years in Finland. Many P2X projects also include capture of biogenic CO2 (CCU).

In Finland electricity is produced diversely using multiple energy sources and production methods, with the main energy sources being nuclear power, hydropower, bioenergy and rapidly growing wind power. The increasing share of renewable energy sources in electricity generation and their production variability likely have contributed to the growing impact of **energy storage, capital costs, and energy transmission networks**.

Energy storage has been identified as the most uncertain topic guiding operations. Several energy companies are currently planning significant investments in both electricity and heat storage. However, achieving competitive pricing and scalability remains a challenge. The topic is also prominently featured on the agendas of European and domestic research policies and universities.

Additionally, **Risk to Peace, Affordability and Acceptability** are topics that currently affect the actions of energy leaders but are associated with only moderate or little uncertainty. It is evident that the maintenance of peace has significant implications for the energy industry. Furthermore, with the effects of the Russian invasion of Ukraine accelerating energy transitions, significant fluctuations in energy prices on windless and cloudy days have gained more attention over the past year than in previous years.

Concerns regarding **Demand Management** have increased notably in recent years due to the substantial societal reliance on electricity and the swift electrification across industry and transportation sectors. This heightened reliance underscores the increasing significance of demand response. In Finland, a notable surge in demand response was observed during the winter of 2023, with both industrial entities and consumers actively participating. This response was prompted by fluctuating electricity prices and widespread discussions on the topic in the public media.

The three takeaways from 2024 Issues Monitor in Finland are:

- **Transmission Grids, Capital Costs, Energy Storage**, keep energy leaders busy with modest to low uncertainty. **H2 & P2X** and domestic growth are also high on the agenda, but with higher uncertainty.
- **Trilemma Management** is the number one issue keeping energy leaders awake at night.
- Uncertainty around **Domestic Growth** and **Demand Management** have increased compared the previous years.

