

## **Plenary keynote: Vera van Zoest**

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### **Energy security in Europe: are we at risk?**

#### **Abstract**

We are facing several crises simultaneously: we have not yet seen the end of the effects of the pandemic, we are in the middle of a climate crisis and now we face an energy crisis because of the war in Ukraine, in turn leading to an economic crisis. The European energy system has a high resilience, but can be vulnerable when the four pillars of energy security collapse: availability, accessibility, acceptability, and affordability. The availability pillar may be at risk of collapsing when the war in Ukraine spreads further into Europe. During the war in Ukraine, we have seen that energy has become a prioritized war target to destabilize society. The accessibility pillar is at risk when electricity can no longer be transported, or when the system is out of balance. With climate change, the risk of natural hazards increases. Simultaneously, the increased use of smart devices increases the risk of cyber-attacks. Smart devices could, in the hands of a third party, be steered to bring the entire energy system out of balance for a short period of time. Finally, polarization in Europe may lead to instability in the last two pillars of energy security: acceptability and affordability. Already now, we see a strong polarization in many countries, which is further fed by the ongoing economic crisis. When polarization increases to a level where the European Union is scattered, countries may become egocentric and international agreements may not be met. This, in combination with decreased availability and accessibility,

and an increased demand for electricity as a result of decarbonisation efforts, could lead to an increase in electricity prices. We can thus conclude that the four pillars of our resilient energy infrastructure are in need of guarding, through a strong Europe with tempered polarization, a strong cyber security including awareness amongst users of smart energy devices, a decreased dependency on large centralized power production, and local mapping of risks related to natural hazards, including predictions for climate change.