Focus session 1 of the NNV section for Energy and Climate: Long Duration Energy Storage (LDES).

Chair: prof. dr Gerard van der Steenhoven (TU Twente, former chair NNV, former general director KNMI).

In this interactive session, **Fonz Dekkers (Clustermanager Energy Innovations, Ministry of Climate and Green Growth)** will introduce the challenges of Long Duration Energy Storage (LDES). Expert physicists comment on the case and give their view. The public is also encouraged to participate.

Experts for this session:

- **Dr Süleyman Er (DIFFER, Department Head, Chemical Energy & group leader Autonomous Energy Materials Discovery.** He can link cutting-edge materials science to real-world LDES challenges, highlight how AI-driven Self-Driving Labs accelerate the discovery of new materials for LDES, and the role of interdisciplinary research in fundamental science for LDES solutions.
- **Dr Anton de Fockert (Deltares, expert advisor hydraulics).** He will comment on the option of storing energy in water basins (either based on water storage in "inner lakes", (*so called " val-meren" in Dutch*), and on storing thermal energy in water).
- **Dr Stijn van Aken, Project Leader Metal Fuels, Metalot.** He will explain the pro's and cons of energy storage in Fe grain, based on the equation: $3Fe + 4H_2O \Leftrightarrow Fe_3O_4 + 4H_2$.