



Session 2 – Renewables and the buildings sector

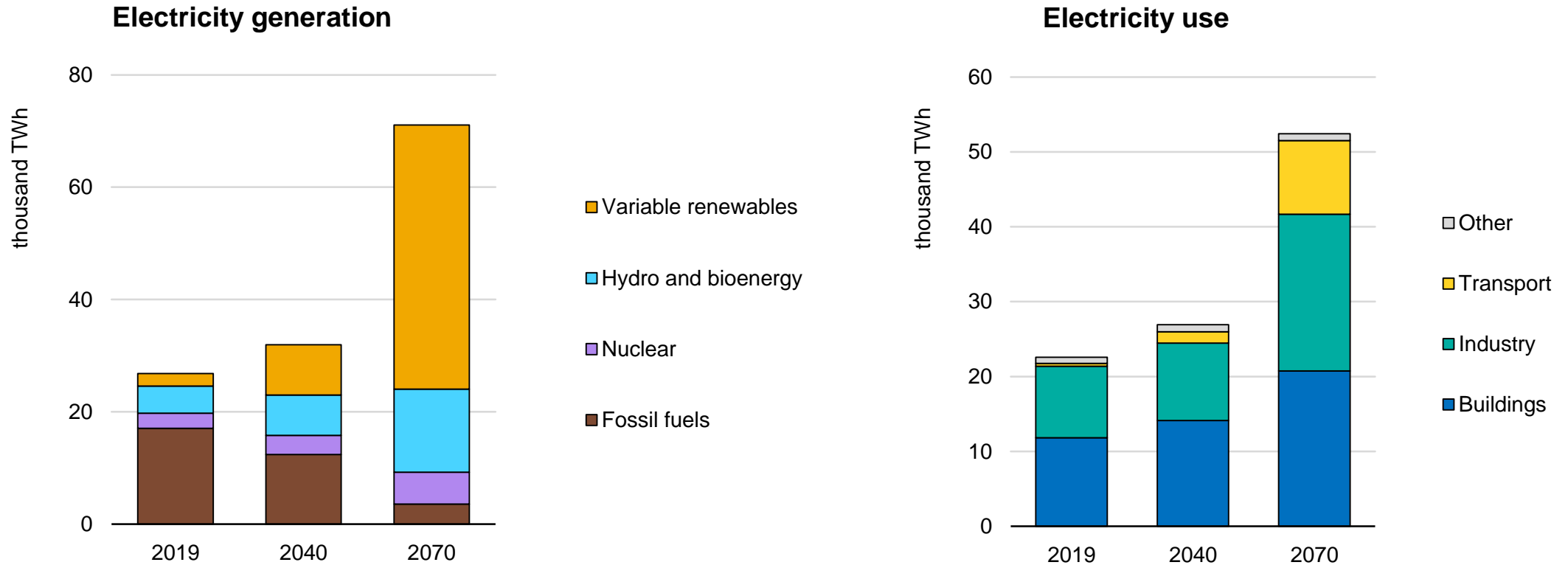
Insights from Energy Technology Perspectives 2020

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A growing electricity demand met by intermittent sources

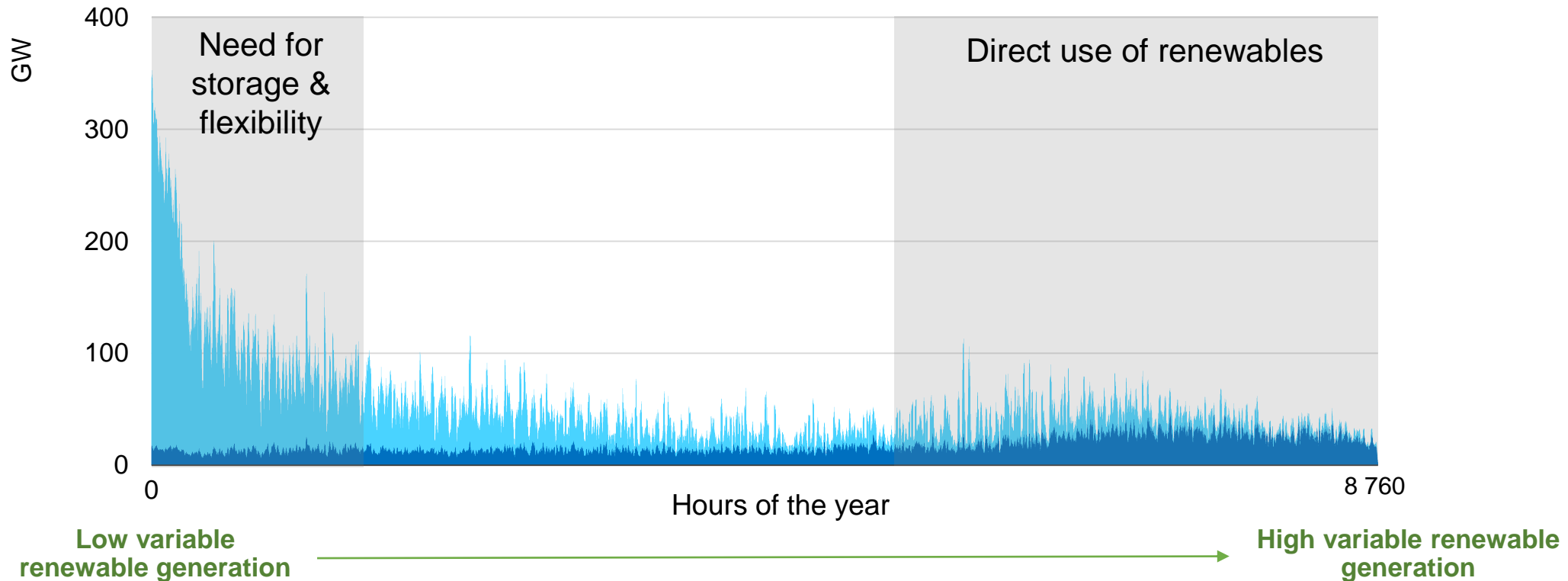
Global electricity use and generation in the Sustainable Development Scenario, 2019-70



Variable renewables dominate the electricity generation mix in 2070 as emissions reach net-zero. Buildings hold both the potential and responsibility to provide flexibility services.

Thermal demand is set to be driving the peak load in key regions

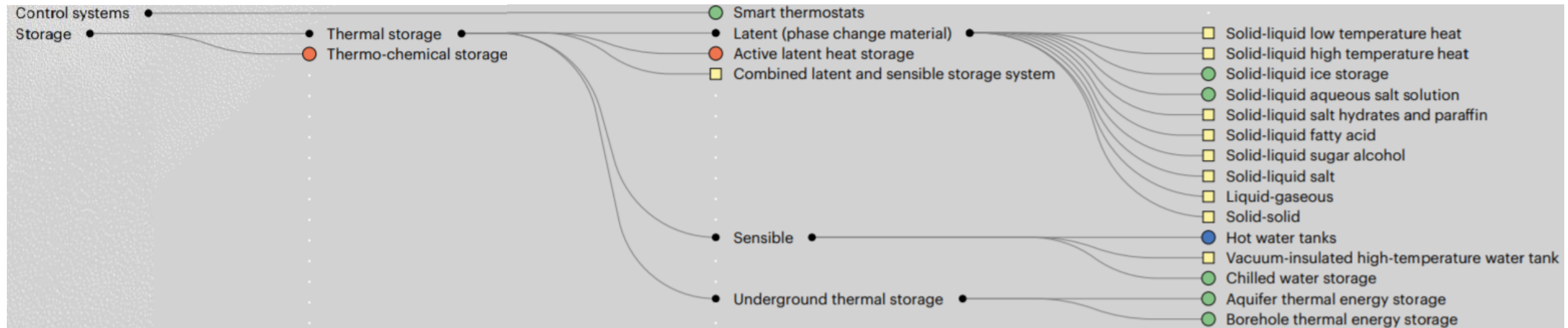
Cooling load profile in China, 2030
(Cooling demand of the Sustainable Development Scenario)



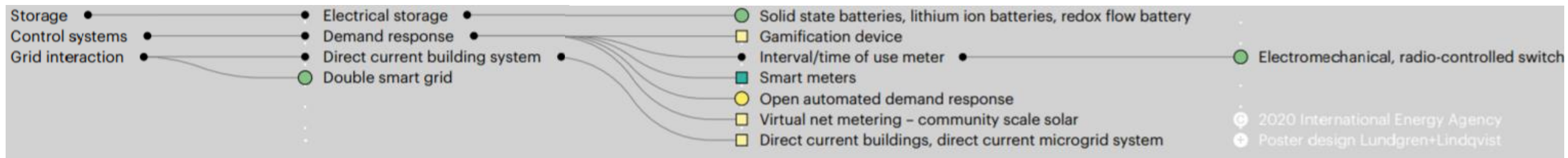
Growing cooling demand may lead to additional power capacity needs of more than 150 GW in China by 2030. Cooling storage systems and other flexibility measures need to address such variability in demand.

Building energy storage and integration in the ETP Clean Energy Technology Guide

Thermal storage technologies in buildings



Building integration technologies



The ETP Clean Energy Technology Guide contains information for over 400 individual technology designs and components across the whole energy system that contribute to achieving net-zero emissions.

Buildings can support sustain both the rise of variable renewable energy sources and their integration to the energy system. Effective policy toolkits must address five core areas:

1. Increase the adoption of building-integrated renewable energy capacity, including for renovations
2. Promote demand-side response, behind-the-meter and utility-scale storage infrastructure
3. Foster cross-sectoral collaboration for greater sector coupling and interoperability
4. Boost support for research, development and demonstration
5. Expand international technology collaboration

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