District Heating – The backbone of sector coupling

14.1.2026 Tampere Hydrogen Summit

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100% owned by the people of Tampere

Founded in

1888

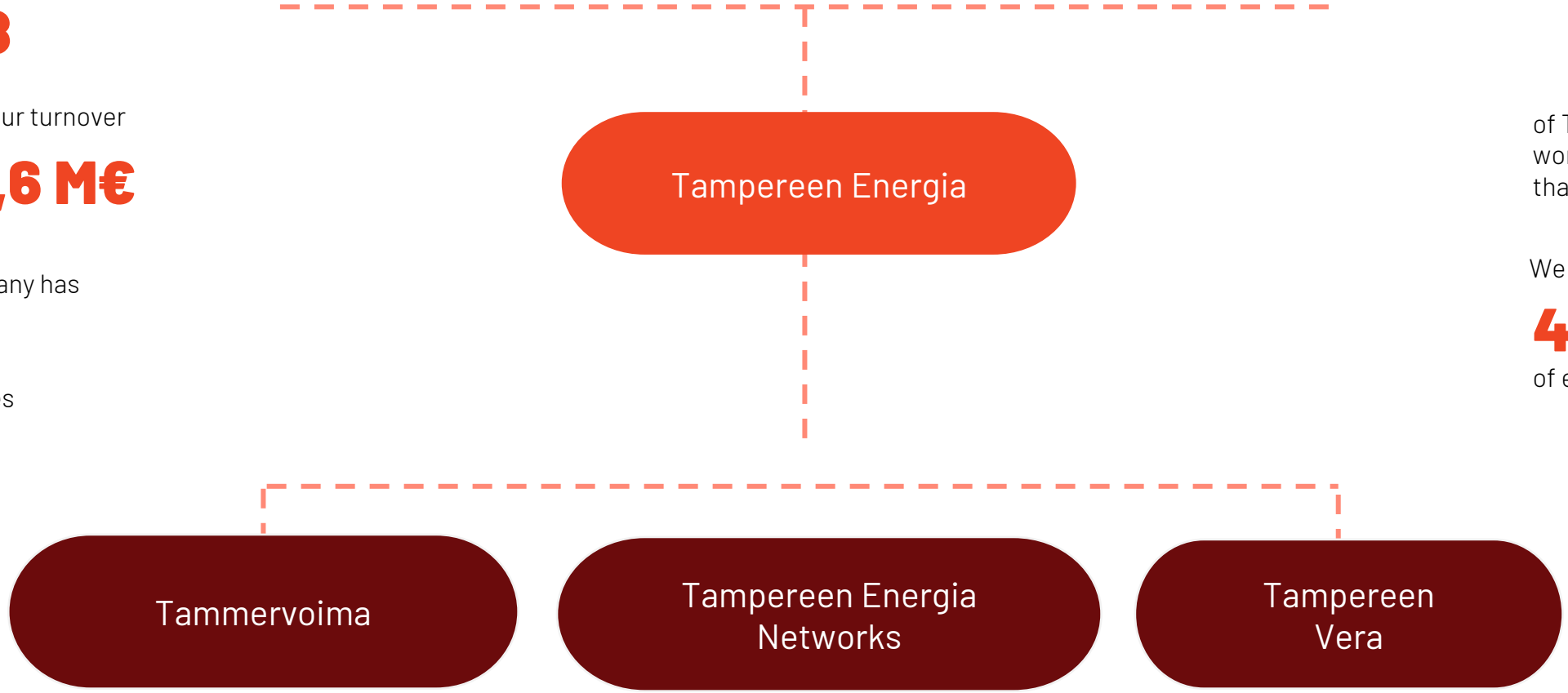
In 2024, our turnover

302,6 M€

The company has

370

employees



86 %

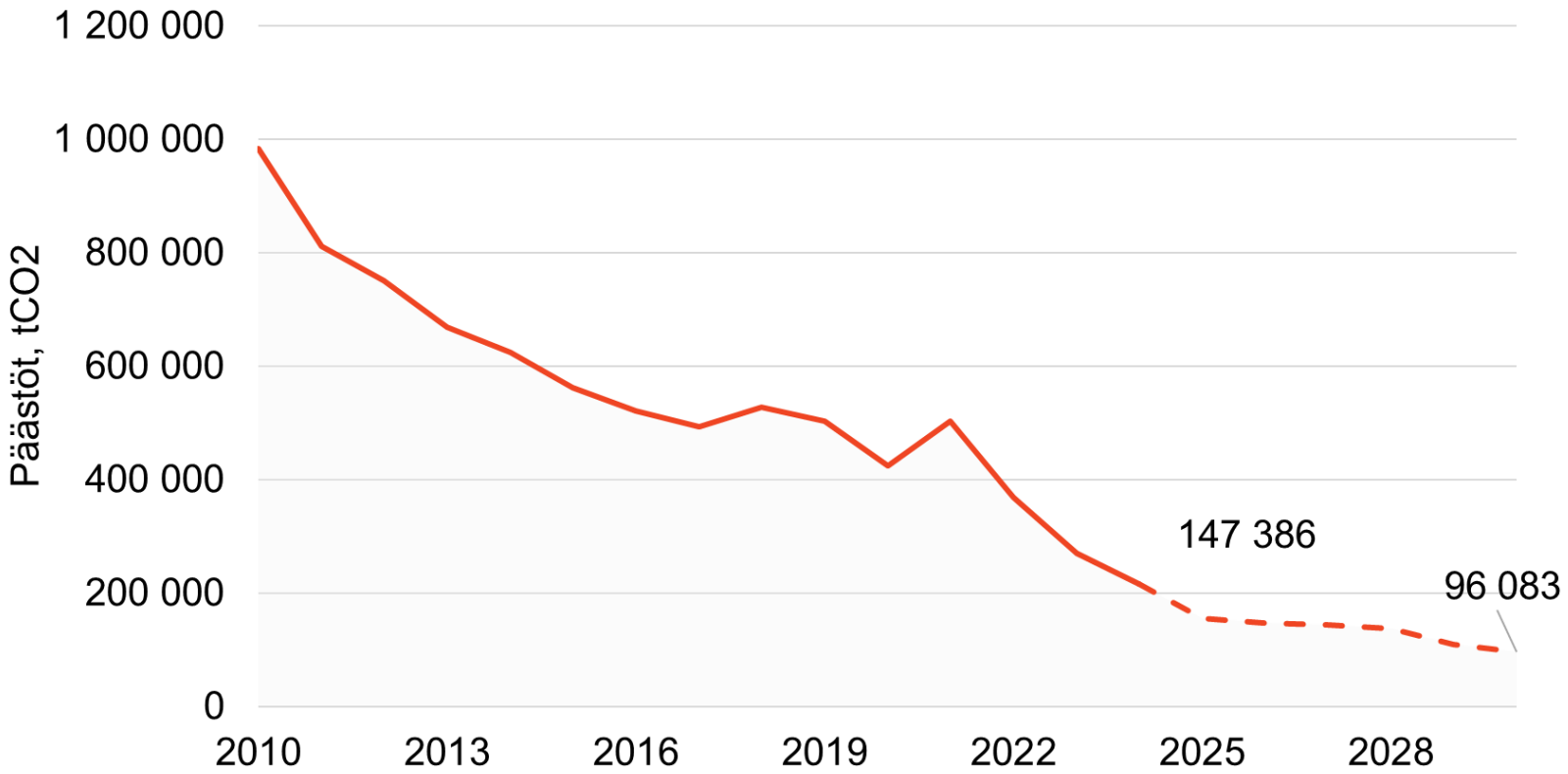
of Tampere residents live or work in a home or business that uses district heating.

We develop and maintain

4 000 km

of electricity network.

Tampereen Energia fossil CO_2-emissions

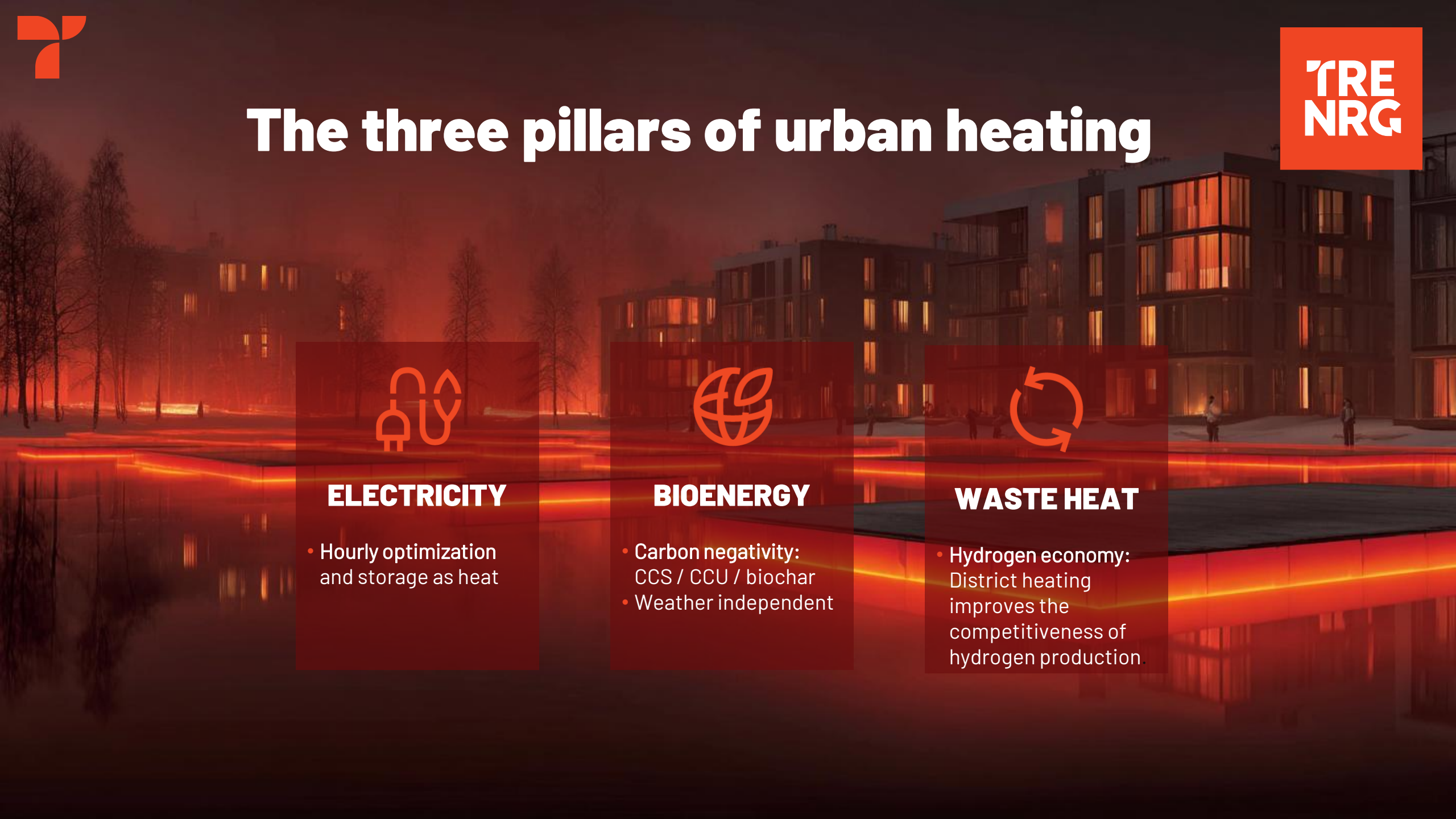


Towards net zero

By 2025, we reduced our fossil emissions by 85% compared to 2010.
The remaining fossil emissions primarily come from waste incineration.

Currently, waste incineration is a necessary service for society. Over time, as recycling improves, waste incineration will decrease, but until then, these emissions remain.

The three pillars of urban heating



ELECTRICITY

- **Hourly optimization** and storage as heat

BIOENERGY

- **Carbon negativity:** CCS / CCU / biochar
- Weather independent

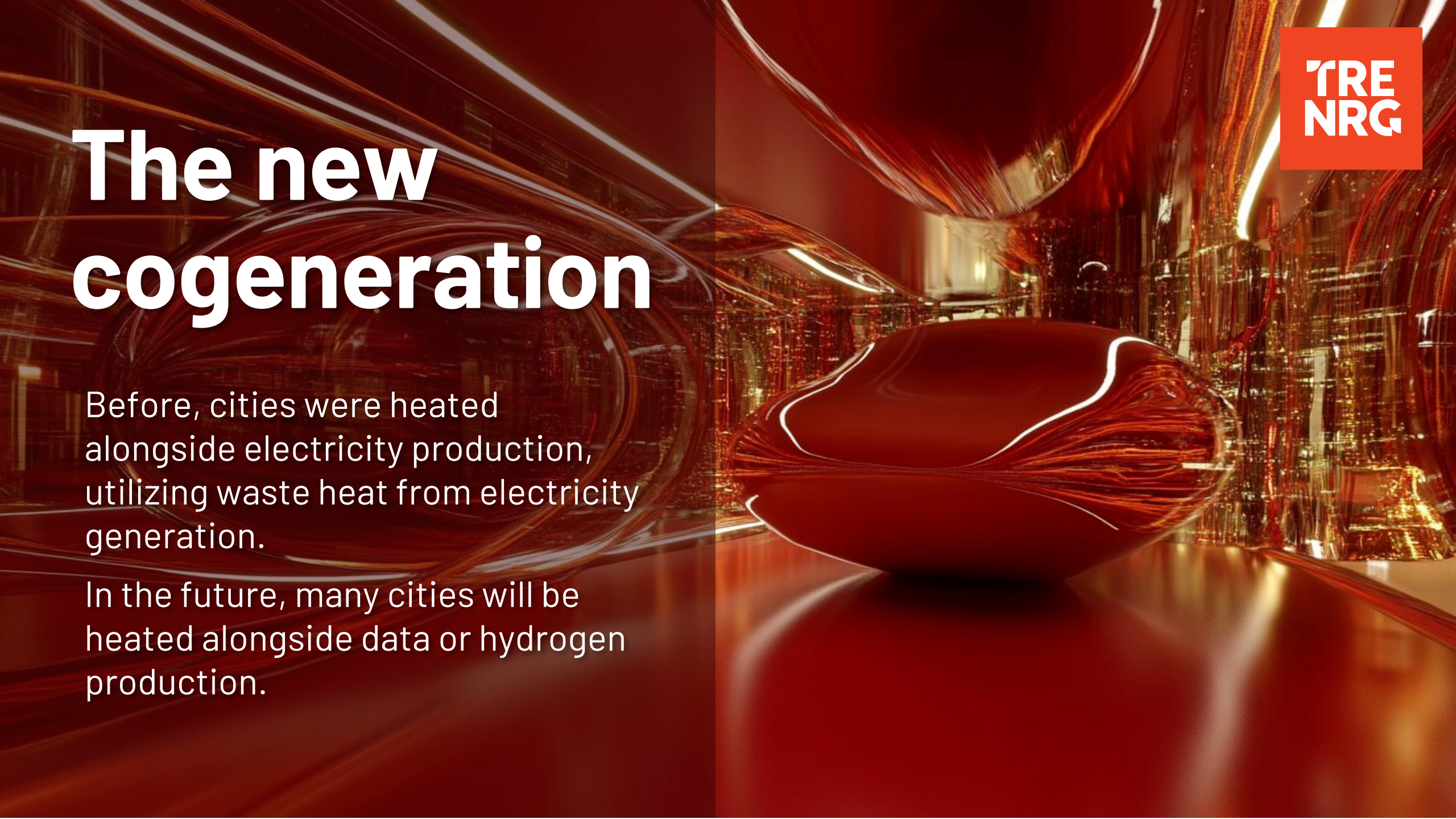
WASTE HEAT

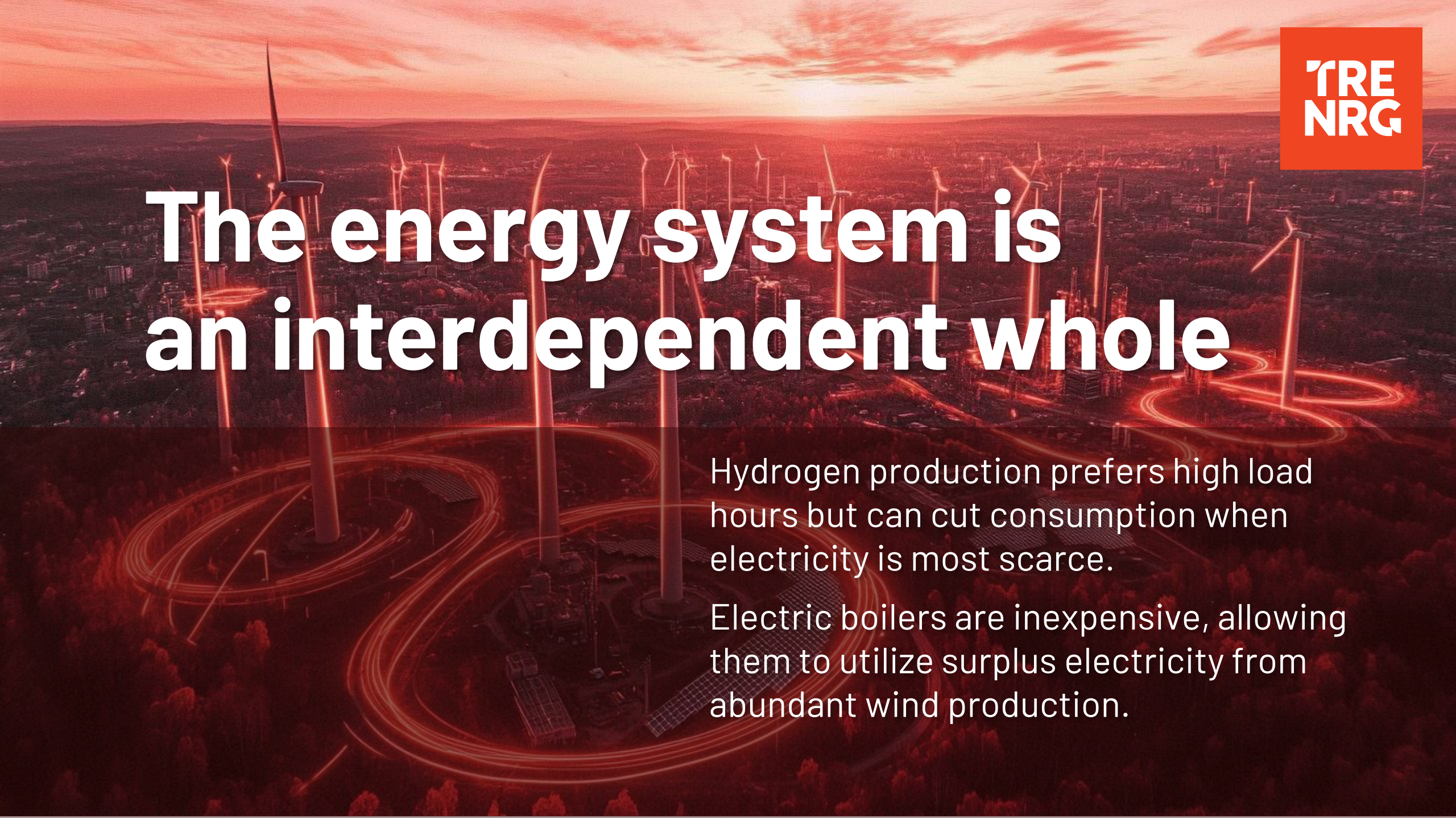
- **Hydrogen economy:** District heating improves the competitiveness of hydrogen production

The new cogeneration

Before, cities were heated alongside electricity production, utilizing waste heat from electricity generation.

In the future, many cities will be heated alongside data or hydrogen production.

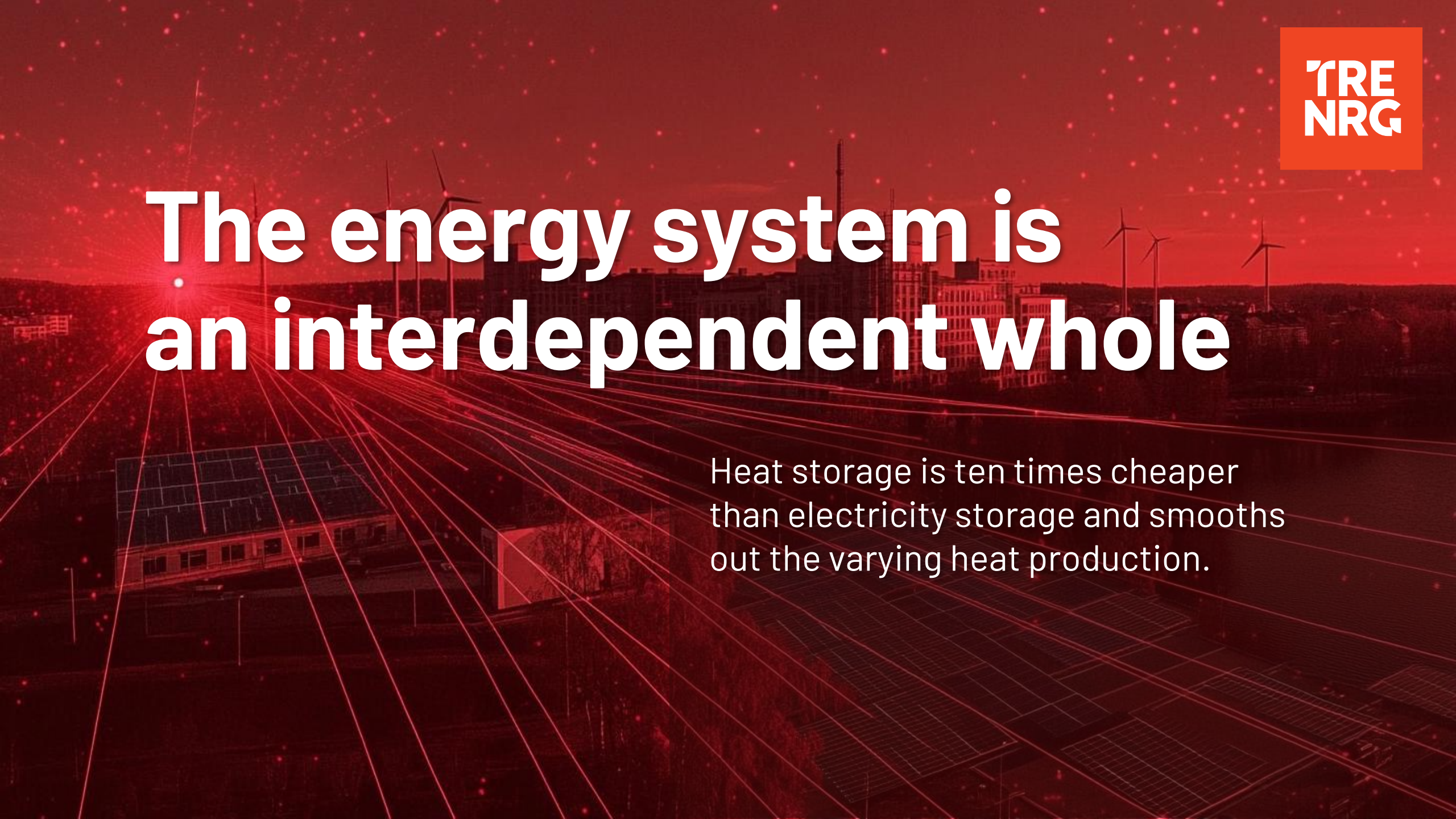




The energy system is an interdependent whole

Hydrogen production prefers high load hours but can cut consumption when electricity is most scarce.

Electric boilers are inexpensive, allowing them to utilize surplus electricity from abundant wind production.



The energy system is an interdependent whole

Heat storage is ten times cheaper than electricity storage and smooths out the varying heat production.

The energy system is an interdependent whole

Local bioenergy is a critically important heat and power source.

For the hydrogen industry, bioenergy serves as a source of renewable carbon dioxide.

Centralization enables optimization

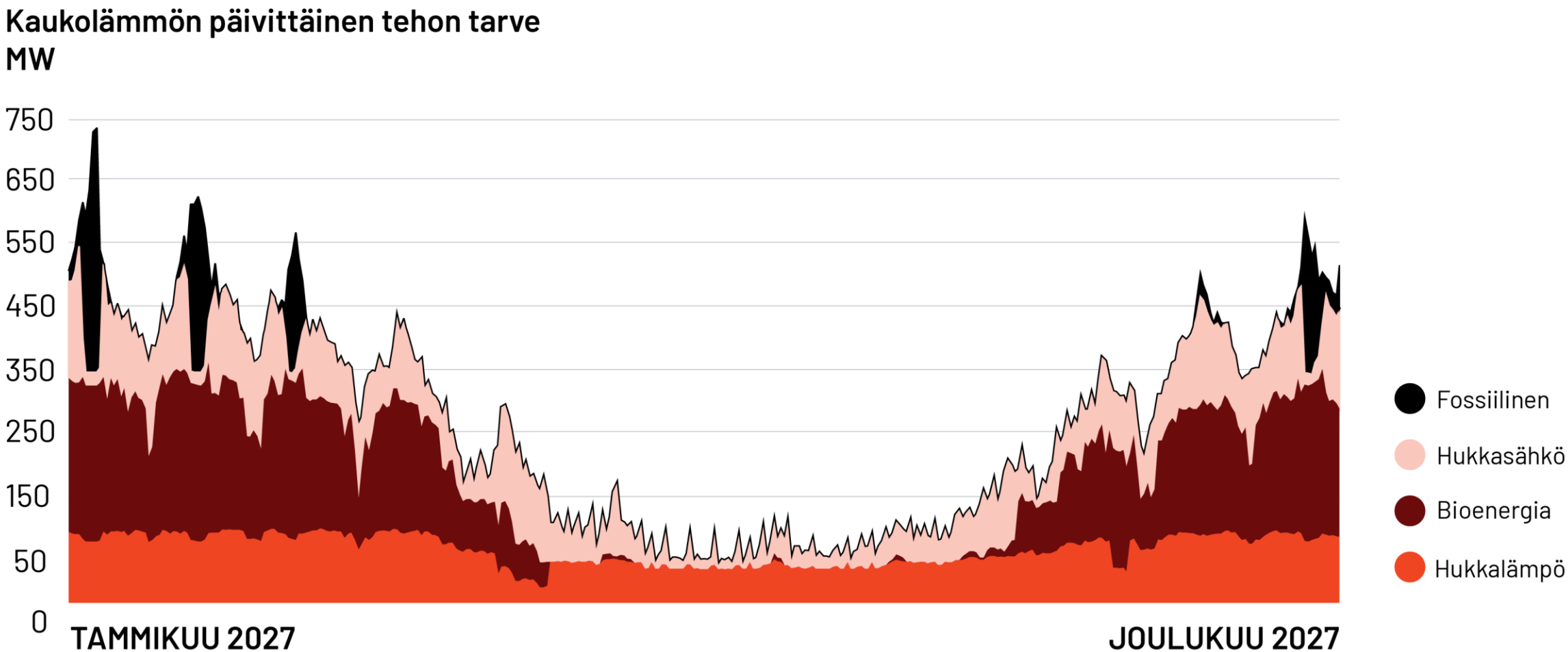
POWER ADJUSTED TO GRID DEMAND:

150 MW of production (CHP)

OR

145 MW of consumption (electric boilers)

Tampereen Energian kaukolämmön tuotantorakenne vuonna 2027

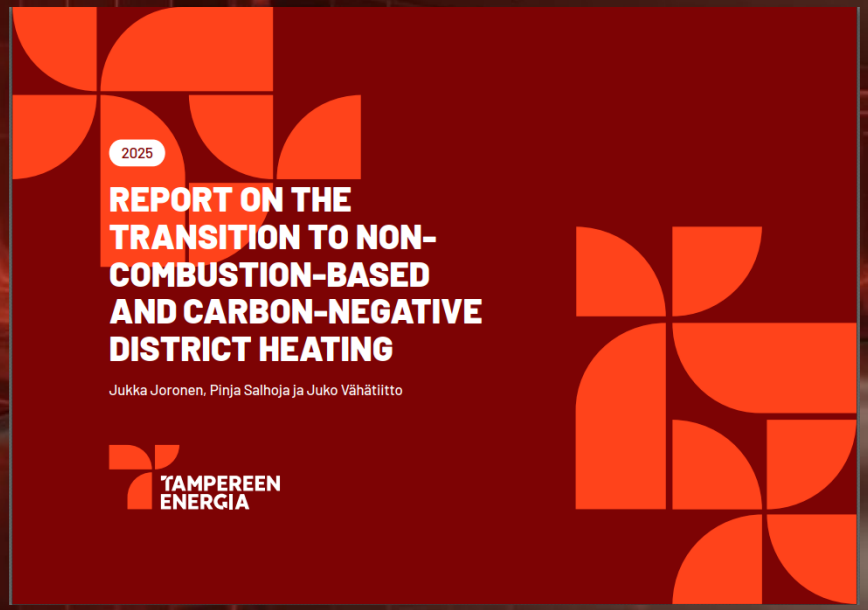


Summary

The district heating system enables smart electrification and the green transition.

- Urban heating, the hydrogen economy, and wind power are interconnected.
- Integration reduces costs for heating customers, hydrogen and wind power producers, and enhances the utilization of renewable energy.
- The use of biomass enables carbon negativity and the production of renewable fuels.

Join us &
Shape the future
here in Tampere!



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