



Clean Energy for a Green Europe

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Case Study by Zsolt ZENTAI, Audi Hungária Zrt.

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GROWTH AND SUSTAINABILITY: A EUROPEAN UNION PERSPECTIVE



Clean Energy Package: A crucial part of Green Deal aiming the decarbonization of energy systems



European Green Deal

- A new growth strategy for Europe
- Climate Neutrality by 2050
- Financing mechanism: European Green Deal Investment Plan; Just Transition Mechanism
- **Clean Energy**: a key aspect and crucial element

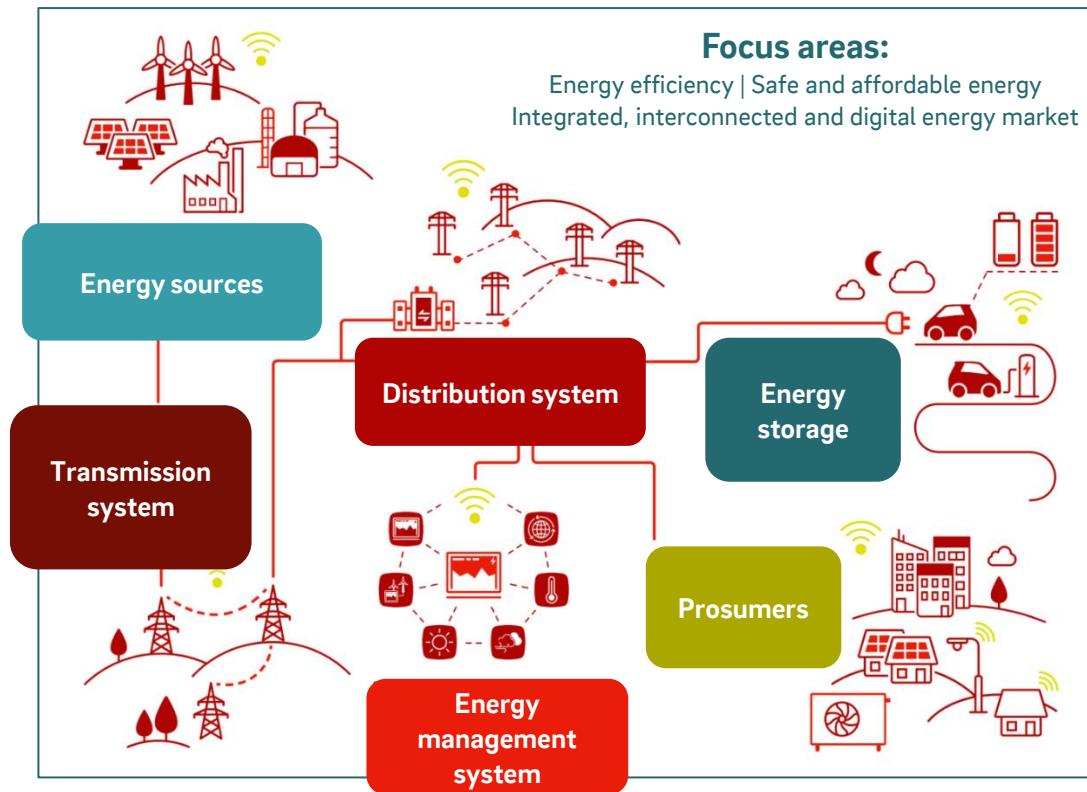


Clean Energy Package (CEP)

- Global competitiveness by clean energy
- 32,5% higher energy efficiency by 2030
- 55% GHG emission reduction by 2030
- 900,000 new jobs by 2030
- Active customers, empowerment



Goal: Offer sustainable solutions in a fundamentally changing, digital and decentralized energy ecosystem



A sunset scene over a field of tall grass. The sun is low on the horizon, creating a bright glow and lens flare. The sky is filled with soft, orange-tinted clouds. In the foreground, the grass is dark and silhouetted. A semi-transparent dark blue banner is overlaid across the middle of the image, containing the title text. To the right of the text, there is a circular icon with the Hungarian flag's colors (red, white, and green). On the far right edge of the image, there are two vertical bars: a red one and a light blue one.

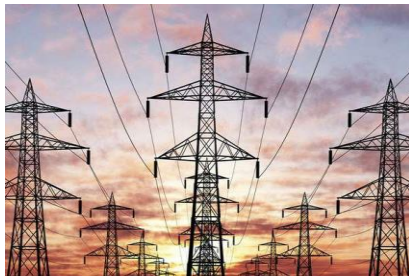
ON THE WAY TO ENERGY TRANSITION: HUNGARY'S PATH FOR CLEAN ENERGY

Hungary's National Energy Strategy 2030: Four pillars



Consumers at the heart of the strategy

- Active consumers
- Aggregator and Demand Side Response (DSR)
- Energy communities (local and virtual)
- "Smart" tariffs and smart meter
- Local flexibility platform



Security of energy supply

- Increasing energy efficiency
- Reducing gas consumption
- Energy conscious society: education & awareness



Climate-friendly transformation of the energy sector

- Strengthening system-level flexibility
- DSO network absorption capacity
- Active network (DSR, voltage control, storage)



Innovation

- E-mobility: charging infrastructure
- „Green bus” programme
- Domestic biogas incentives

Hungary's National Energy Strategy 2030: Key targets



- >6 GW PV by 2030
- Heating gas consumption down by 2 mrd m³
- 1 million smart meter units
- Renewable-based technologies for heating
- 21% share of renewables in final energy consumption
- Close-to-zero energy buildings





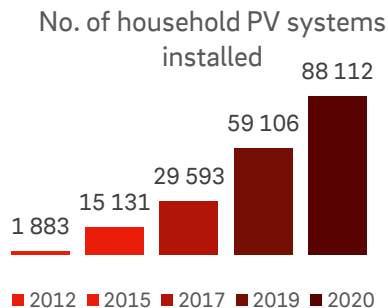
**ENERGY SERVICE PROVIDERS' VIEW:
AT E.ON WE ARE READY TO TAKE OUR PART AS ENABLER**

e-on

Smart grids to act as market enablers

Grid investments

- PV-boom: Renewable energy integration challenge
- Huge network investments to get ready for Clean Energy



Grid operations: Intelligent, innovative solutions



Smart metering



Machine vision technologies



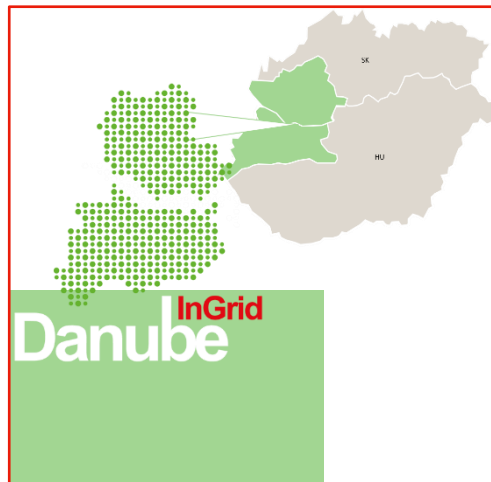
Drones



Tree trimming with GPS

Integrated and interconnected energy networks

- Danube InGrid: EU co-financed smart grid Project of Common Interest (PCI) (2020-2025)
- Integrate more renewables
- Smart & flexible technologies
- Big data, MI

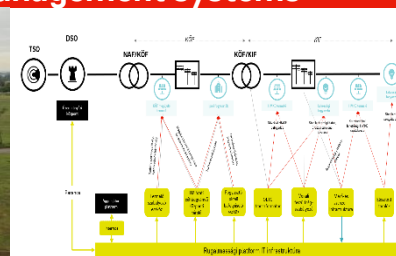


Successful pilots – flexibility and active network management systems



iElectrix

- Increase RES grid integration
- Flexible and smart micro-grids



Flex.ON

- Smart distribution grid pilot
- IT platform to ensure flexibility

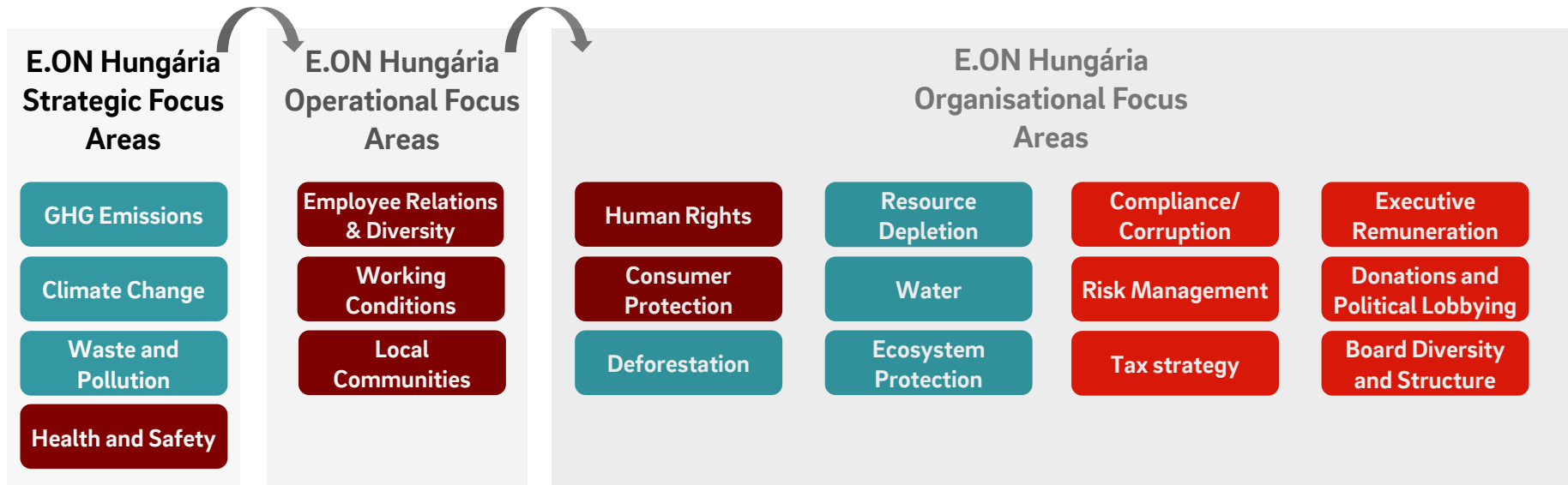
A high-angle photograph of a solar panel installation on a dark, corrugated metal roof. Two workers are visible: one on the left in dark blue overalls and one on the right in bright blue overalls. They are positioning a large, dark blue solar panel. Several other panels are already laid out in a grid pattern. A power drill is visible on the roof near the workers. A red banner with white text is overlaid in the lower half of the image. The e-on logo is in the bottom right corner.

**"SUSTAINABLE CUSTOMERS"
A MUST WITH OPPORTUNITIES**

e-on

ESG: Economic, Social and Governance at E.ON Hungária

New model to drive sustainability on all levels



Switching to clean energy in business and operation



- We contribute to a carbon-neutral Europe
- Sustainability is the key driver in our business
- We look out for each other: diversity and inclusion



UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

- Clear commitment
- Direct effect on 3 goals

2030:

- Carbon-neutral buildings
- Electric car fleet
- 30% GHG-reduction

2050:

- 100% carbon-neutral operation

7 AFFORDABLE AND
CLEAN ENERGY



11 SUSTAINABLE CITIES
AND COMMUNITIES



13 CLIMATE
ACTION

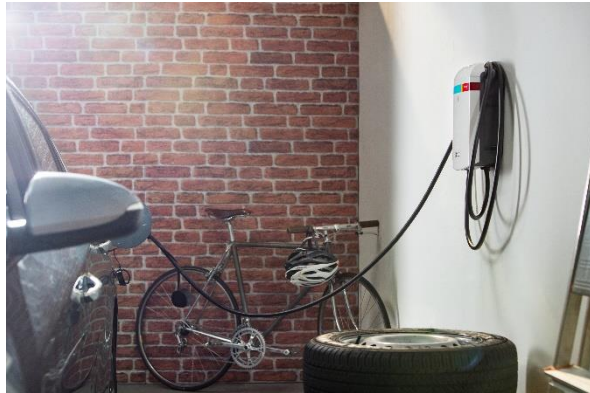


Enabling our customers: Sustainable solutions in all segments



B2C

- Digital platforms
- E-charging, home charging
- E.ON Solar
- DrivE.ON app
- Bike sharing (Blinkee)



B2B

- Integrated solutions
- E-charging network (Aldi)
- Solar energy parks (Audi)



B2M

- Electric car fleet
- CNG mobility
- Public lighting installation



Prosumer role case study: E.ON-Audi PV rooftop project

- Europe's largest PV roof system
- An exemplary project on the way to carbon neutrality by 2050
- Inaugurated in October 2020
- 35,000 solar modules installed
- 12 MW installed peak power
- 9.5 GWh/year of renewable energy production
- Total rooftop area of about 160,000m²

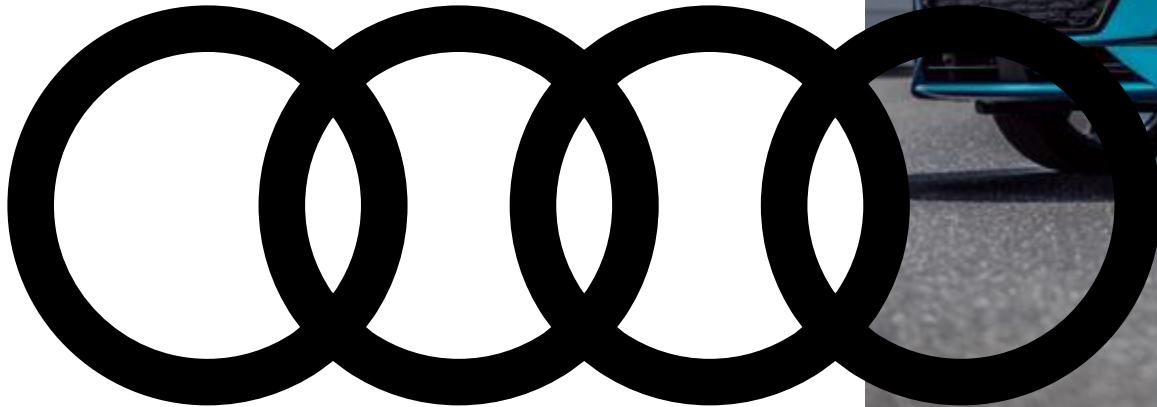
e-on



Utilization of renewable energies at AUDI HUNGARIA Zrt.

Zentai Zsolt

Head of building technology and infrastructure design



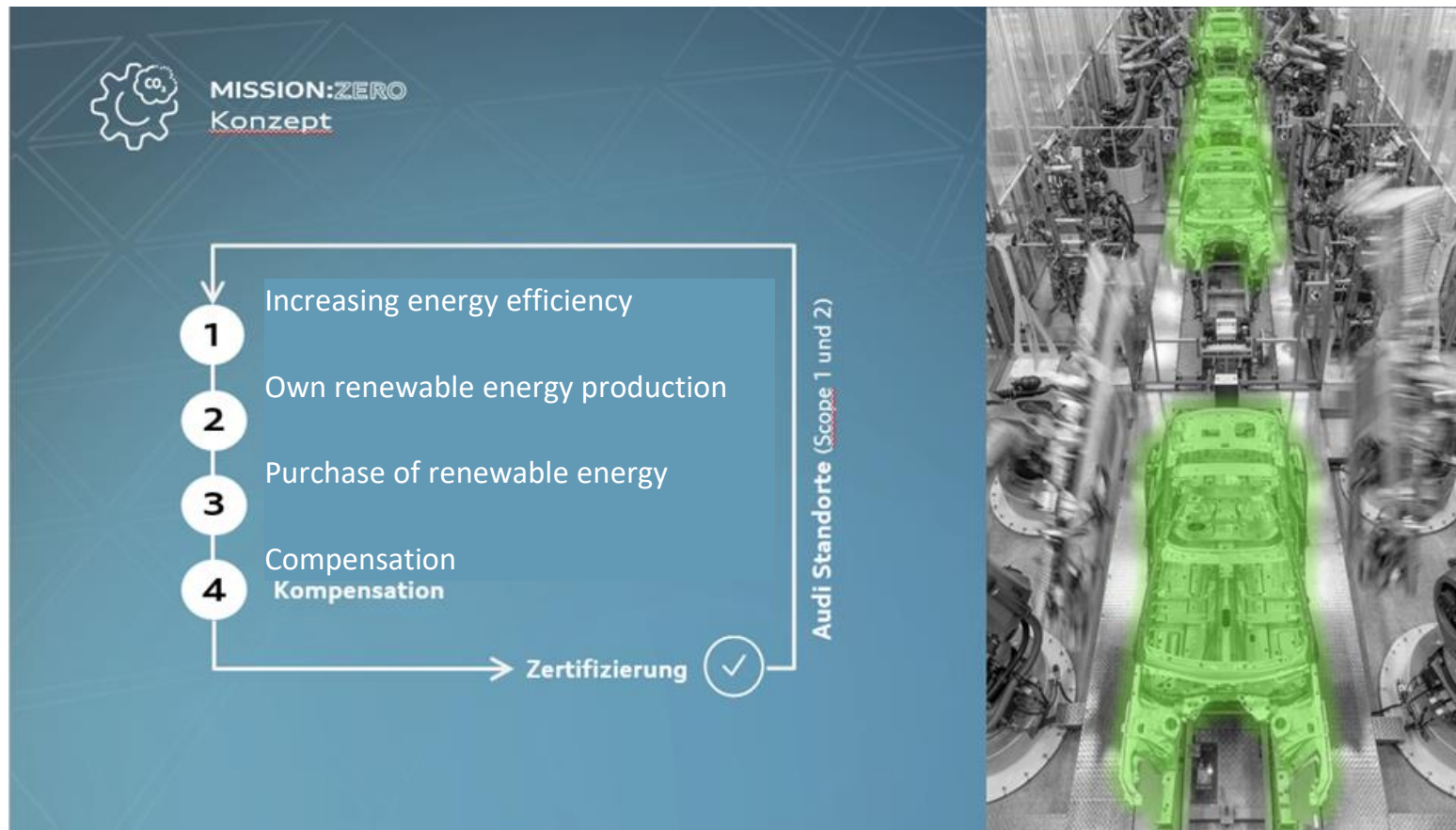
1. Vision – Climate-neutral production in the VW Group's factories



VISION

We are designed to be climate neutral
striving for our factories to the maximum
energy efficiency and
for the use of renewable energies

2. Concept – Climate-neutral production in the Audi Group's factories





**Thank you for
your attention**