



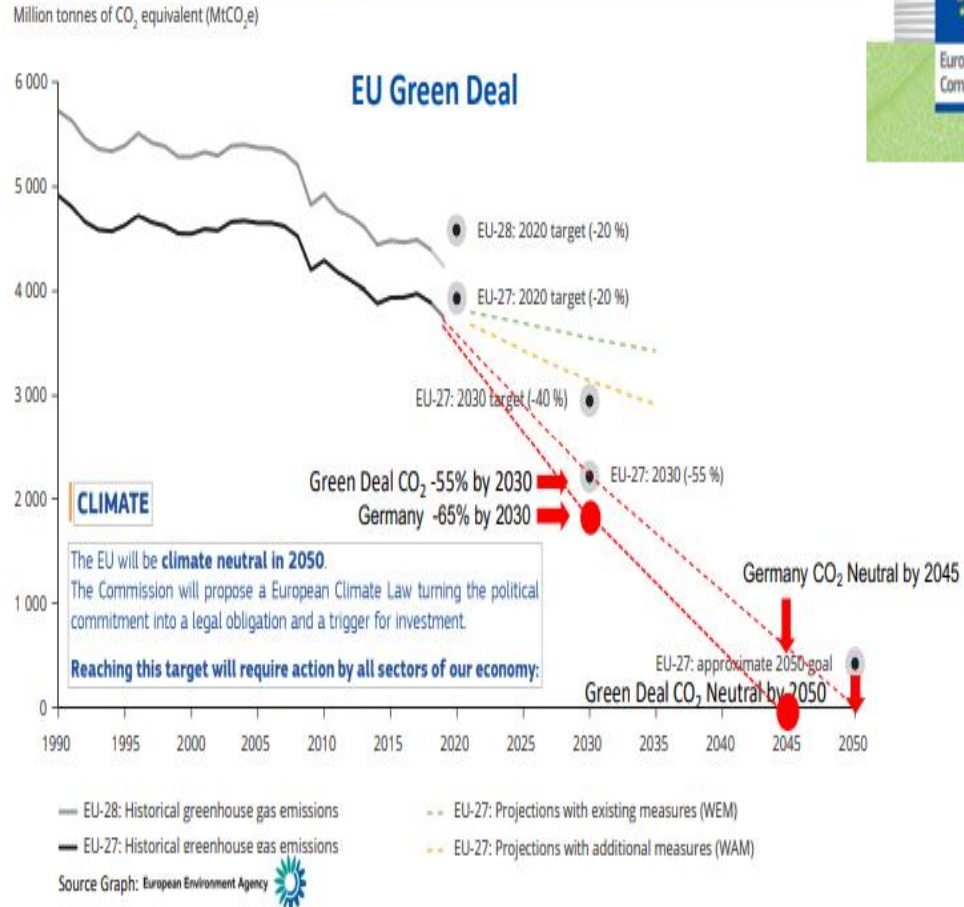
ECPE:

Facilitating the European Green Deal

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ECPE European Center for Power Electronics e.V.

The European Green Deal

EU – Green Deal Climate Goals



What will we do?

ENERGY

Decarbonise the energy sector



The production and use of energy account for more than **75%** of the EU's greenhouse gas emissions

BUILDINGS

Renovate buildings, to help people cut their energy bills and energy use



40% of our energy consumption is by buildings

INDUSTRY

Support industry to innovate and to become global leaders in the green economy



European industry only uses **12%** recycled materials

MOBILITY

Roll out cleaner, cheaper and healthier forms of private and public transport



Transport represents **25%** of our emissions

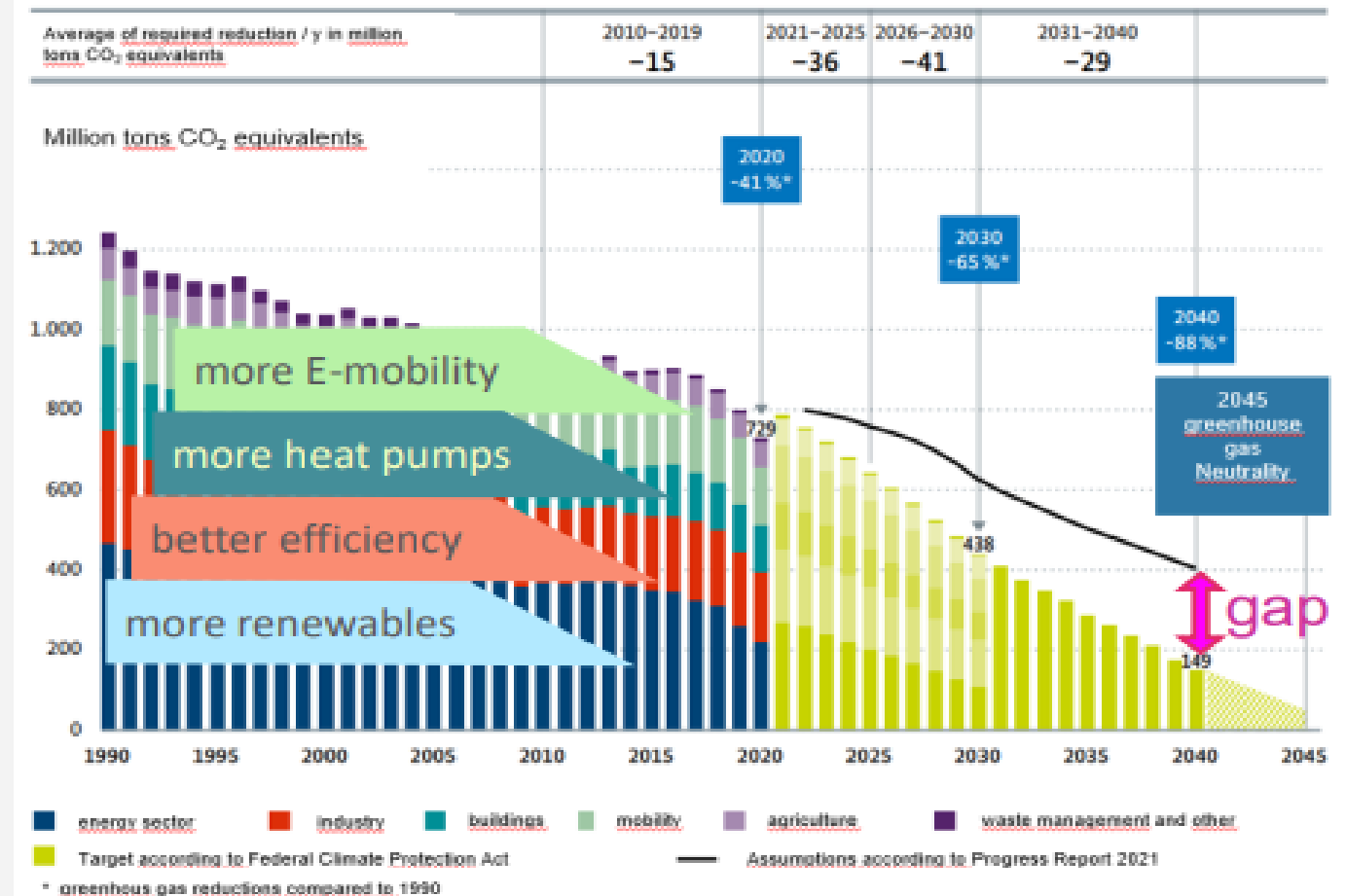


Source:

https://ec.europa.eu/commission/presscorner/api/files/attachment/859152/What_is_the_European_Green_Deal_en.pdf.pdf

Energy Transition Demands from the Perspective of the Climate

How to fill the gap?





Life-Cycle-Assessment

Symo GEN24 Plus 10.0

20 Years operation in
Germany

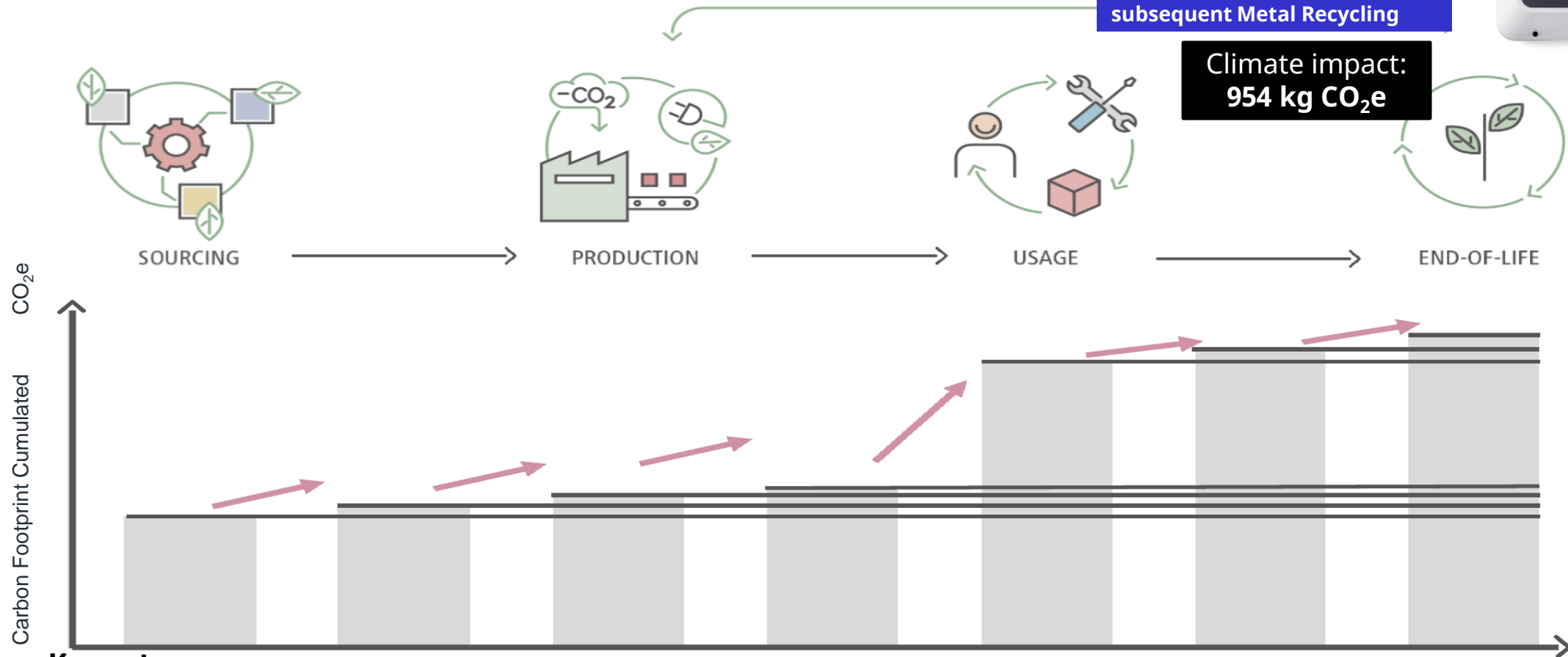
Conventional Modules

Thermal Waste Treatment with
subsequent Metal Recycling



= Sustainability valuation of the ecological dimensions

Climate impact:
954 kg CO₂e



Keynote

PCIM 2023

Franz Musil

Fronius International GmbH

*Results for using electricity
from the PV system
instead of grid supply*



The **environmental benefit** exceeds the effort by a **factor of**

16,8

The **payback period**
for climate impacts is in
the range of

1,2 years (GEN24)

1,8 years (PV System)

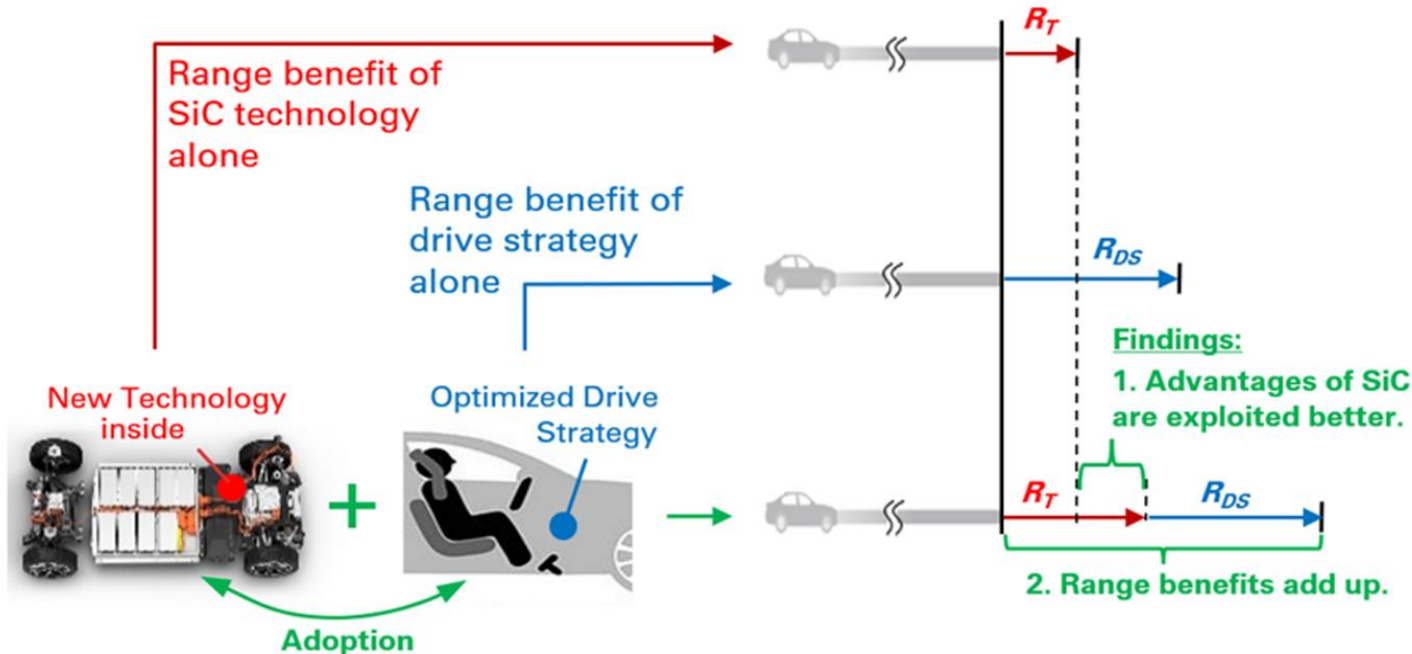
up to

15.986 kg (GEN24)

CO₂e are saved \triangleq 14 flights from
Vienna – New York

It appeared that:

1. The advantages of SiC can be exploited much better in an autonomous car (SAE level 4 or 5) than in a BEV with human driver and SAE level 2 assistance. Energy Saving: (8% SiC + 8% Level4 (predictive driving partial Load, etc. + Airflow (Resistance) by Level 4 doubling (28%.....35%)
2. The optimization levers of SiC and autonomous driving go in the same direction so range benefits of SiC and an optimized driving strategy add up.



Relevance and Range Benefit of Wide Bandgap Power Semiconductors in Autonomous Battery Electric Vehicles

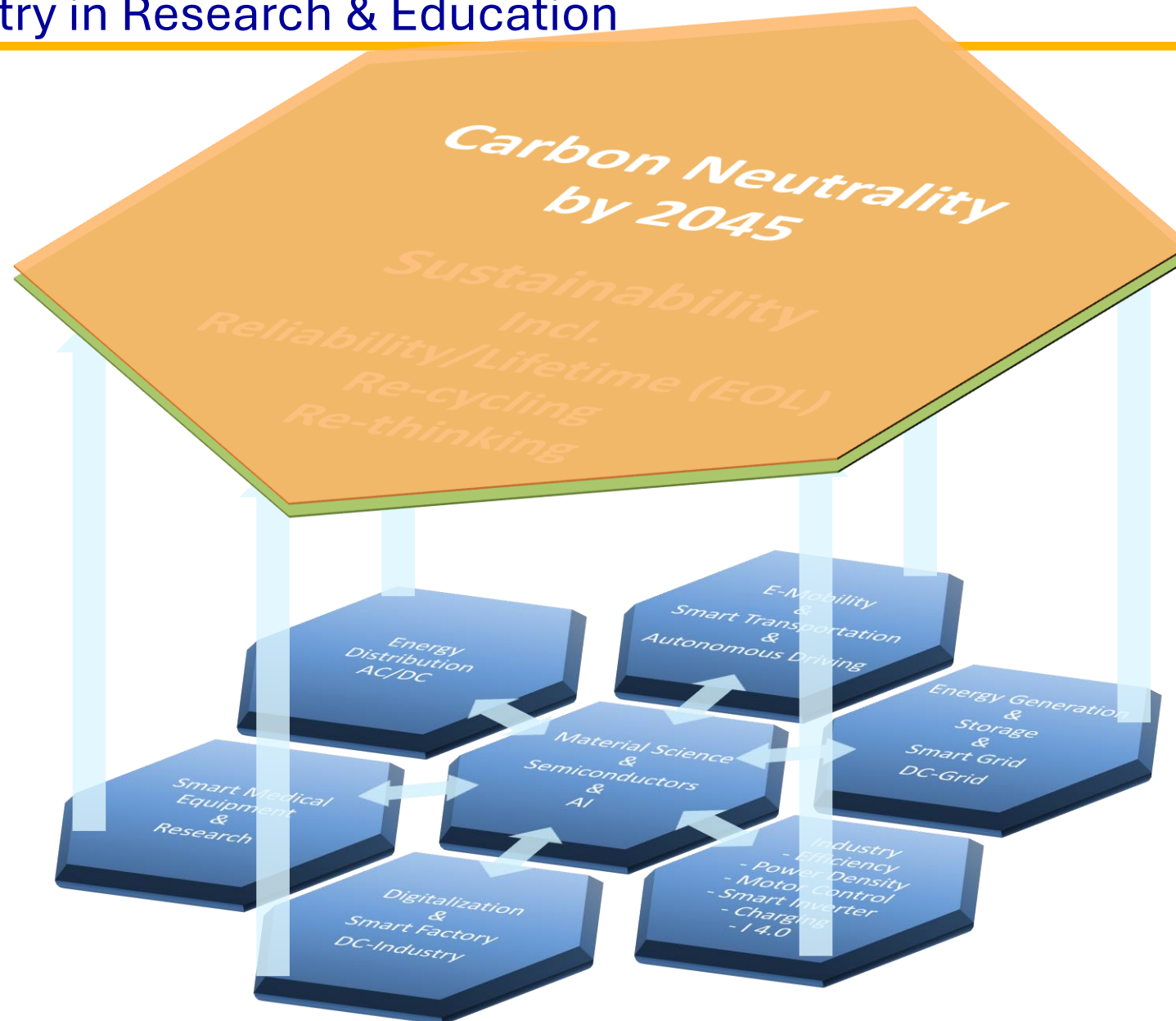
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Facilitating European Power Electronics Industry in Research & Education





Facilitating the European Green Deal by:

Driving Pre-Competitive Research

Driving Tutorials , Workshops, Working Groups, etc.

Driving Public Rel. Management , Y. E. Needed