



Decarbonization – the mobility evolution with fuel cells and electrolysis

International Mobility Days 2021
#imdays2021

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We Owe It to the Planet

It is our duty as an organization to contribute to the resolution of social, cultural and global issues – especially with regards to environmental protection, sustainability and global emission reduction.

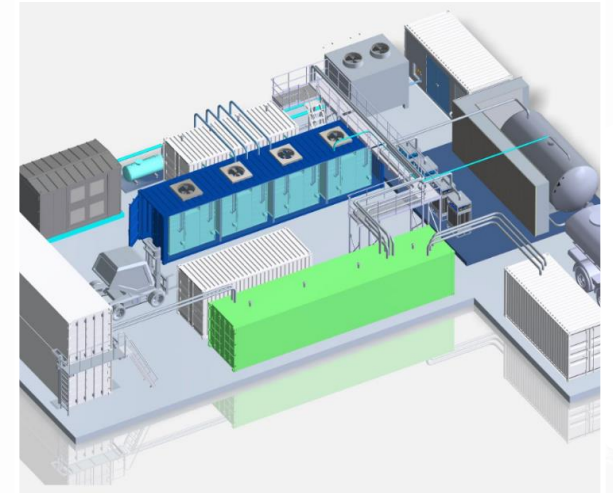
AVL Fuel Cell Technology Roadmap 2030+



PEM
H2 Mobility



SOFC
Power Generation

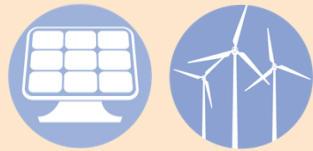


SOEC
E fuels & Reversible
Power

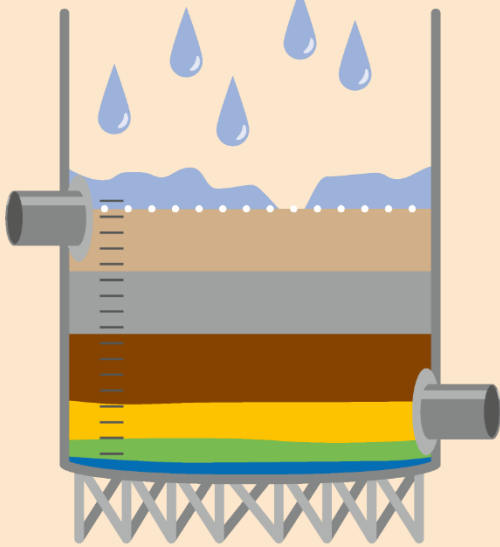
Energy Storage Metaphor: Water-Tower

2021

Fluctuating
Energy Supply



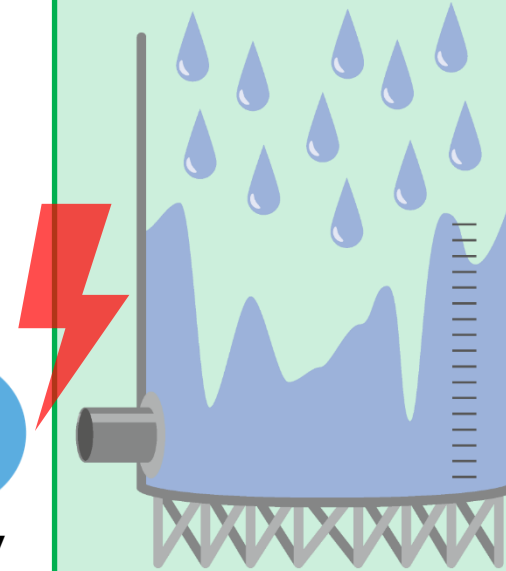
Predictable Energy
Supply



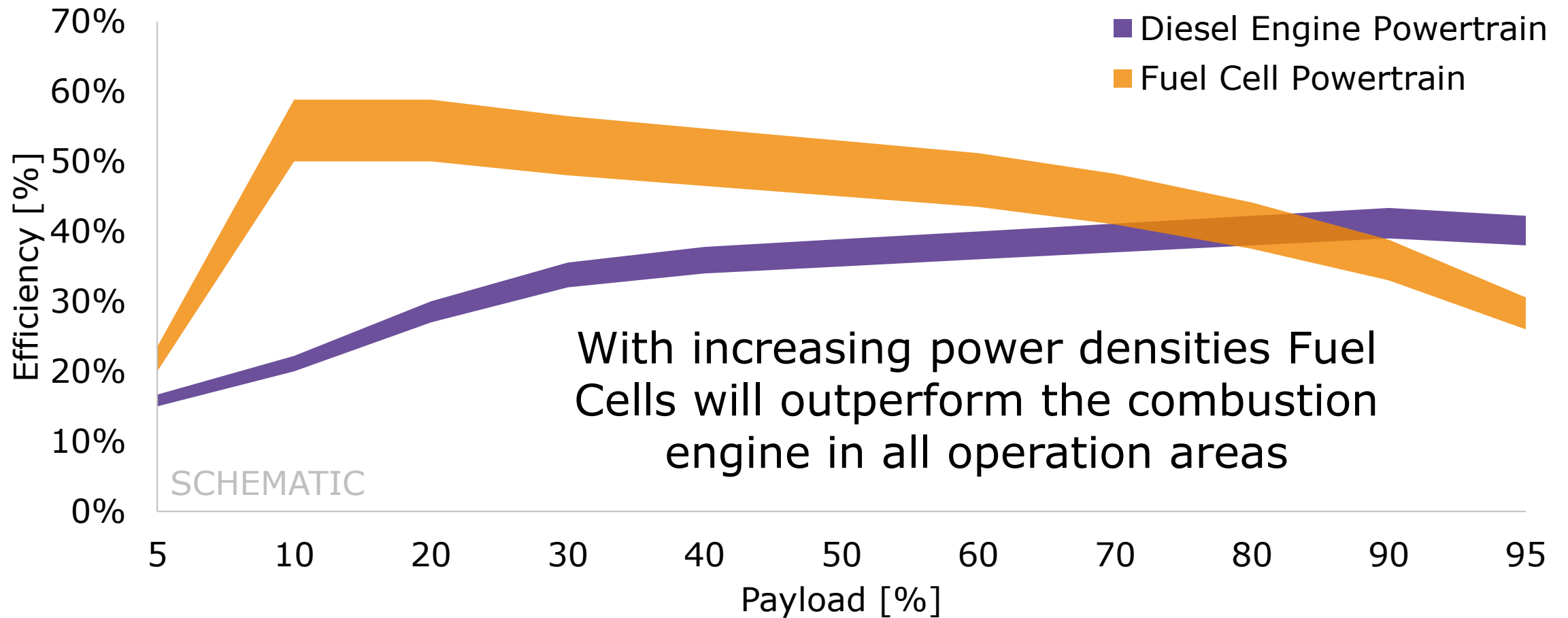
Energy Security
for end consumer

2050

Fluctuating
Energy Supply



Efficiency of PEM Fuel Cell vs. Diesel Powertrains for similar sized systems



AVL PEM References

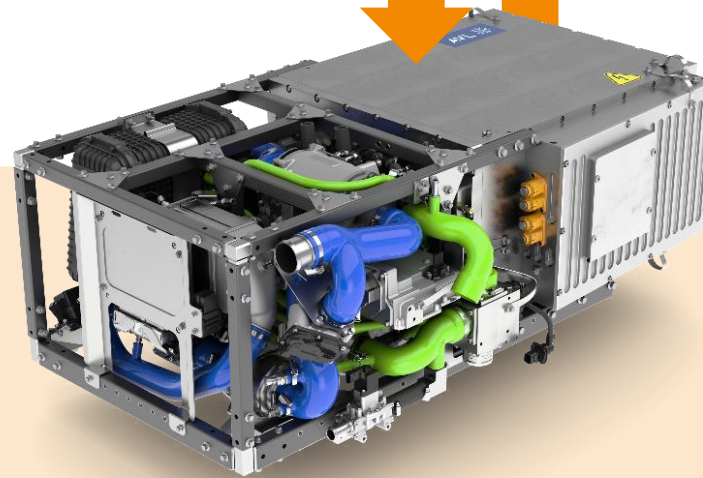
Technology demonstrators (AVL R&D)



AVL PEM Stack Platform

Current Status:

- Gen0 → A-Sample Status
- Application specific tailored development



AVL PEM System Platform

Current Status:

- 156kW System is running on the testbed using the Gen0 Stack technology performing freeze start tests



AVL PEM Truck Demonstrator

Current Status:

- Prototype truck built will be finished end of 2022

AVL offers only stack and system engineering services, AVL will not produce and sell stacks and systems!

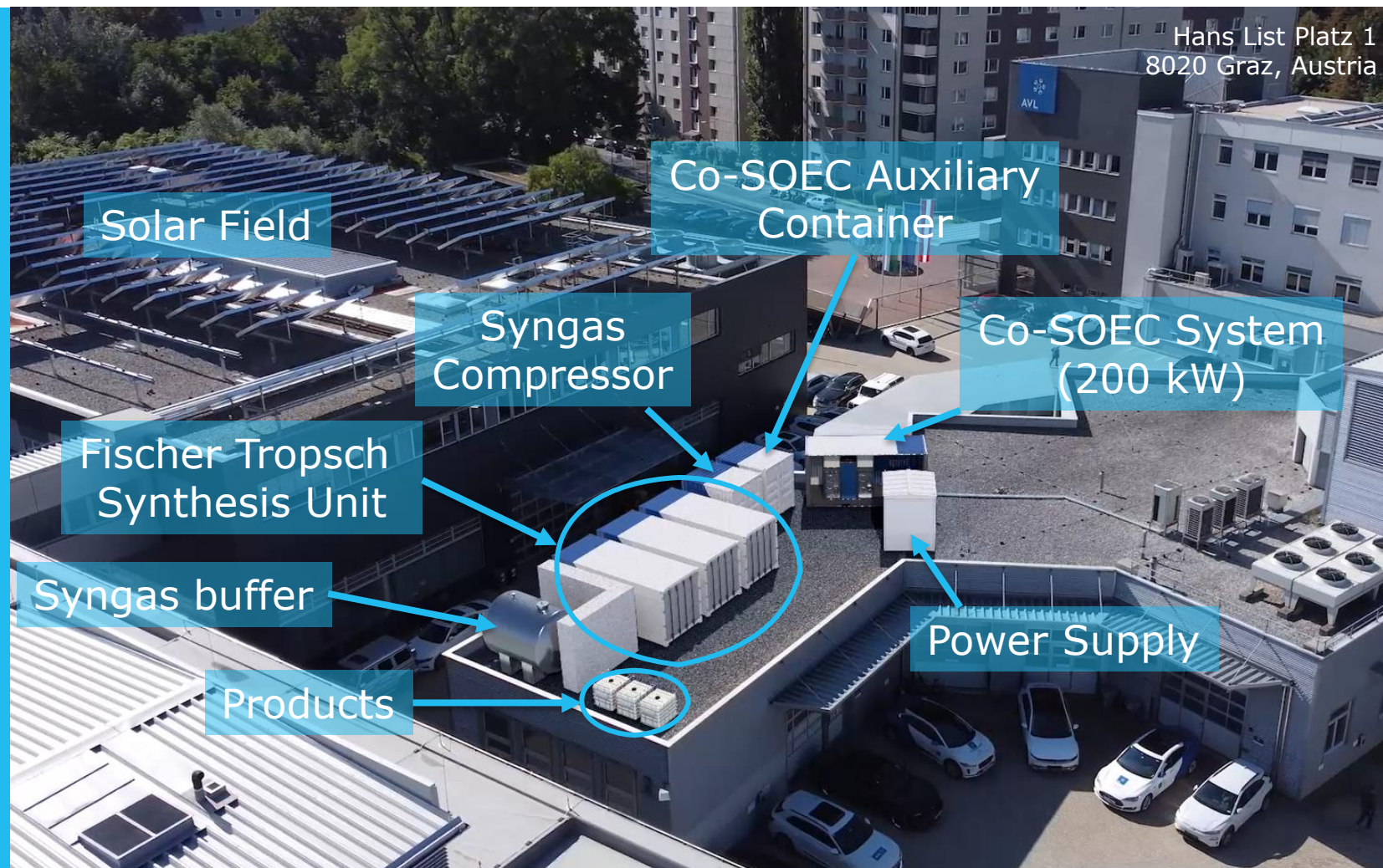
200kW Power-to-Liquid Demonstration Plant

200kW_{el} renewable electricity

E-Fuel Production per year

- Diesel: 32.000 L
- Wax: 30.000 L
- Naphta: 30.000 L

Start of operation early 2023



Thank you



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