



1/3 less fuel consumption
for power generators:

The BEETRON Team.



Franco Merli
CEO

M.Sc. in Mech. Eng. ETH Specialist in
Engines and Precision Engineering



Sandra Lehmann
CFO & Innovation

M.Sc. in Environmental Science,
ETH Bachelor of Arts in
Architecture



Daniel Hagen
Industrialization

Industrial innovation expert driving
technology commercialization and
scale



Dr. Silas Wüthrich
Engine Expert
Win GD / Wüthrich Engineering



Gilles Hardy
Technology Lead
Accelleron

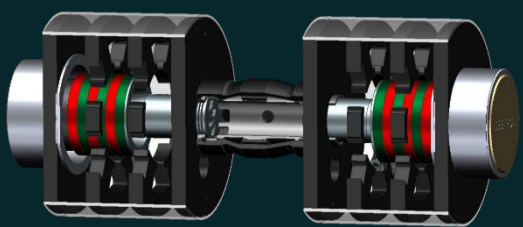


Prof. Dr. Tommaso Lucchini
Advisory Board
Politecnico di Milano



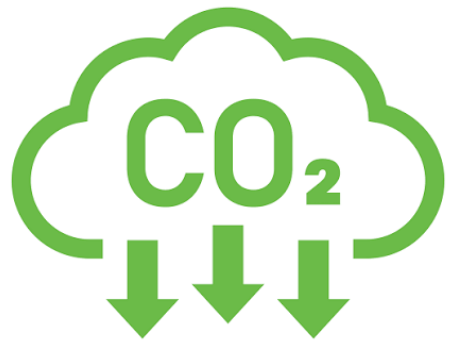
Mario Illien, Mentor
Independent Designer of the Most
Successful Racing Engines

The Profit: 13 Liters of Fuel Saved per Operating Hour.



	Traditional Power Generator	Beutron Power Generator
Power output (el.)	125 kVA (100 kW)	125 kVA (100 kW)
Fuel consumption	35 Liter / h	22 Liter / h
Savings		13 Liter / h
Running time per year	7'500 h	7'500 h
	Fuel savings: 97'500 Liter / year	
	Value at EUR 1.00 / Liter: EUR 97'500.-- / year	

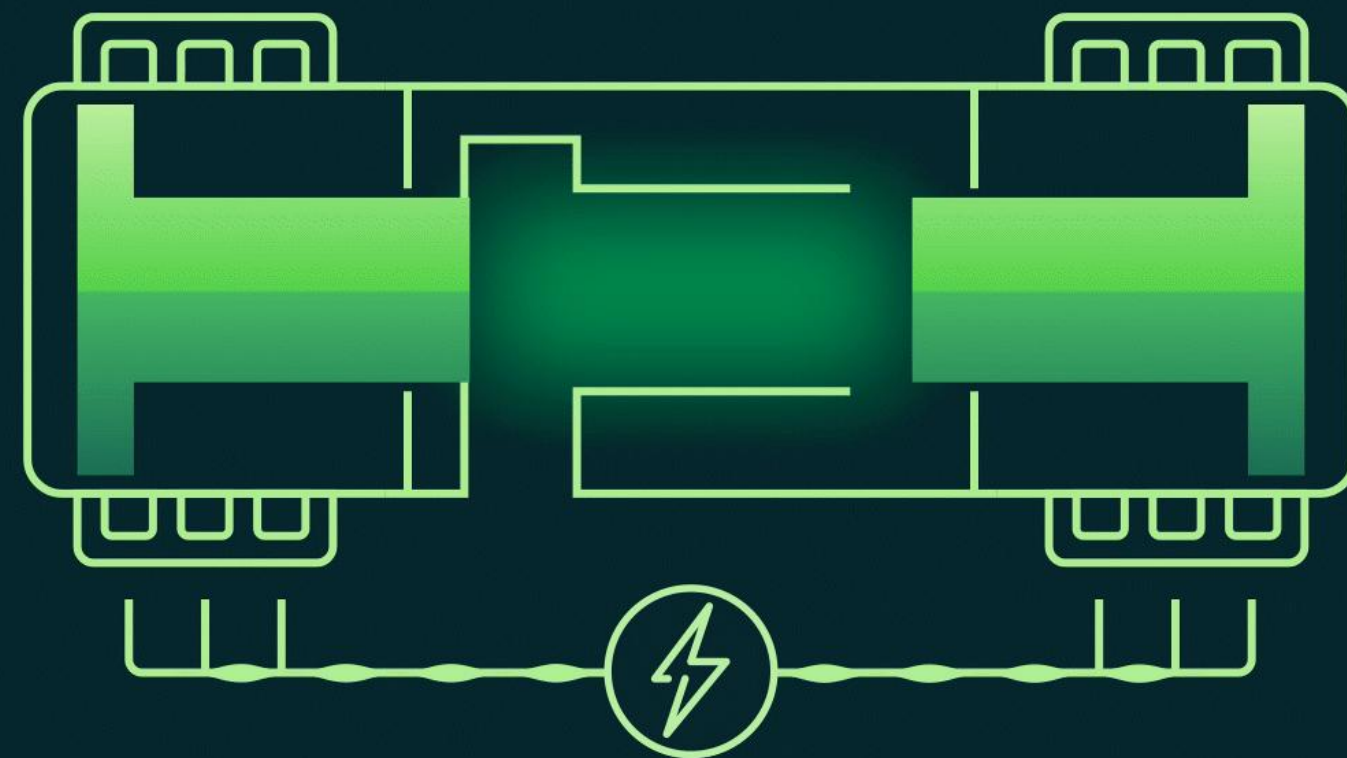
With >7'500 operating hours per year, operators can save up to EUR 100'000.-- annually.
Beutron quickly pays for itself through fuel savings.



The Patented Technology.

Liquid and gaseous fuels
(diesel, gasoline, hydrogen,
methanol, natural gas, etc.)

Power Output: up to 100 kW
AC / DC current
Scalable



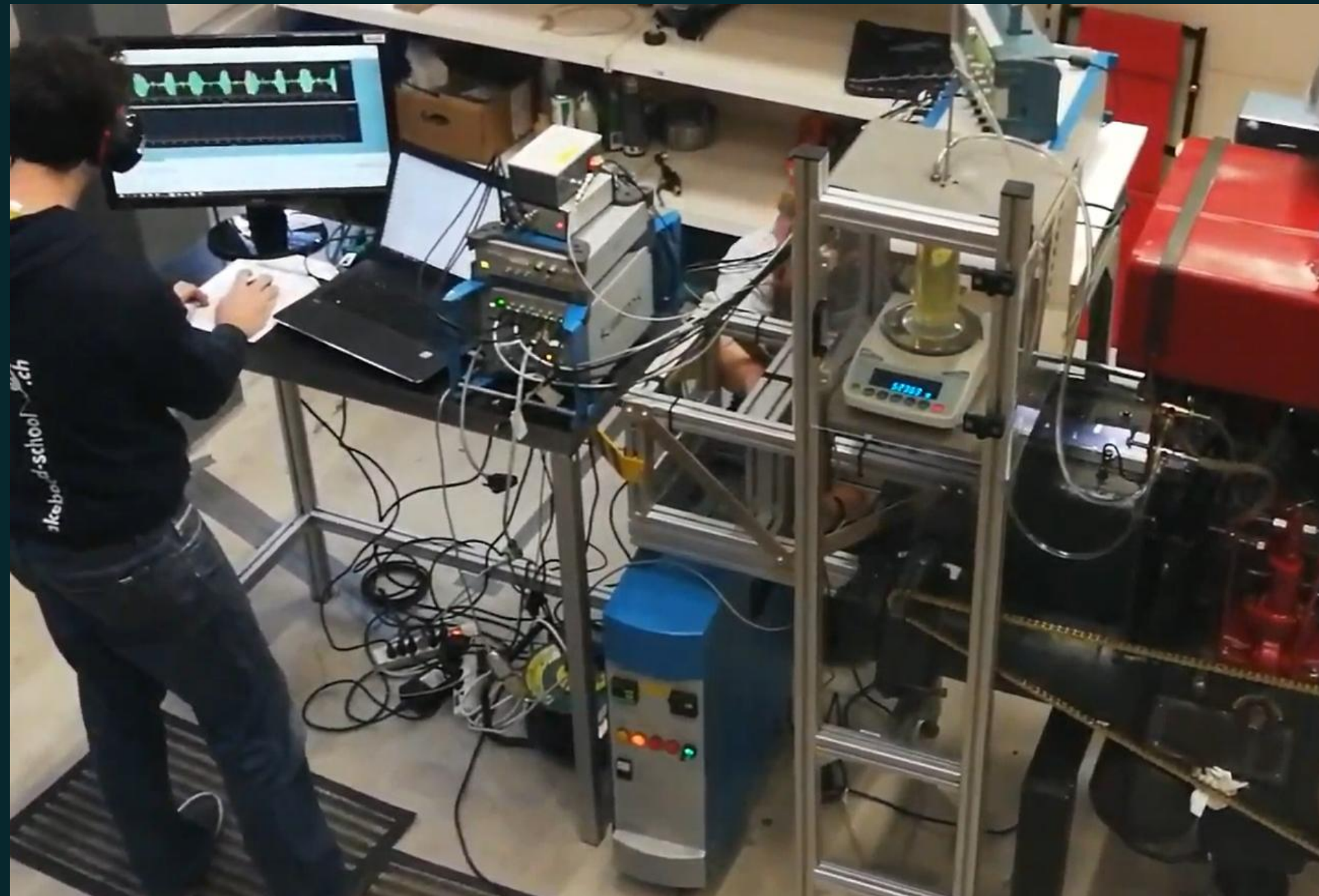
Pistons with permanent magnets
Magnetic induction in copper coils
>50% electrical efficiency

Central Reaction Chamber
Conversion of fuel into an
oscillating motion



Verification.

TRL 5 achieved: Technology achieving >50% electrical efficiency verified by the University of Applied Sciences Northwestern Switzerland (simulation, model validated by experiment).



Verified by the University of Applied Sciences Northwestern Switzerland :

- Test bench runs
- Simulation model development
- Reaction principle
- Oscillating piston motion
- Linear power generation



Fachhochschule
Nordwestschweiz

Next step: Integrated 125 kVA / 100-kW prototype on the test bench (to verify target specifications)

The Potential.



Phase 1:
Offgrid Telecom Towers



Phase 2:
CHP / Microgrids,
Heavy-Duty Offgrid



Phase 3:
Offgrid Charging, Marine, Range
Extender, Drones, etc.



Phase 1: Telecom Towers

TAM for Diesel Generators worldwide: 21–25 billion USD per year

SAM Diesel Generators for Off-Grid Telecom Towers: 3.2 billion USD per year

- Generators between 50 and 125 kVA (40–100 kW) dominate the market with a share of about 40%.
- The annual market size of the target market is estimated at USD 1.3 billion.



Telecommunications is a major consumer of diesel worldwide. India alone consumes approx. 700 Mio. liters of diesel per year just to power off-grid telecom transmission towers.

The global market for diesel generators for telecom towers is expected to double by 2035, reaching USD 3 billion- representing enormous potential for cost savings.

Key Regions: Asia-Pacific is the fastest-growing market, while North America and Africa are strongly represented by rural network infrastructures.

Sources:

Diesel Fired Telecom Generator Market Summary (MRFR)

Telecom Power Systems Market Key Takeaways (GMI)

Diesel Fired Telecom Generator Market (Research and Markets)



Competitive Advantage.

Strategic buyers gain access to a patented platform technology for highly efficient decentralized power generation:

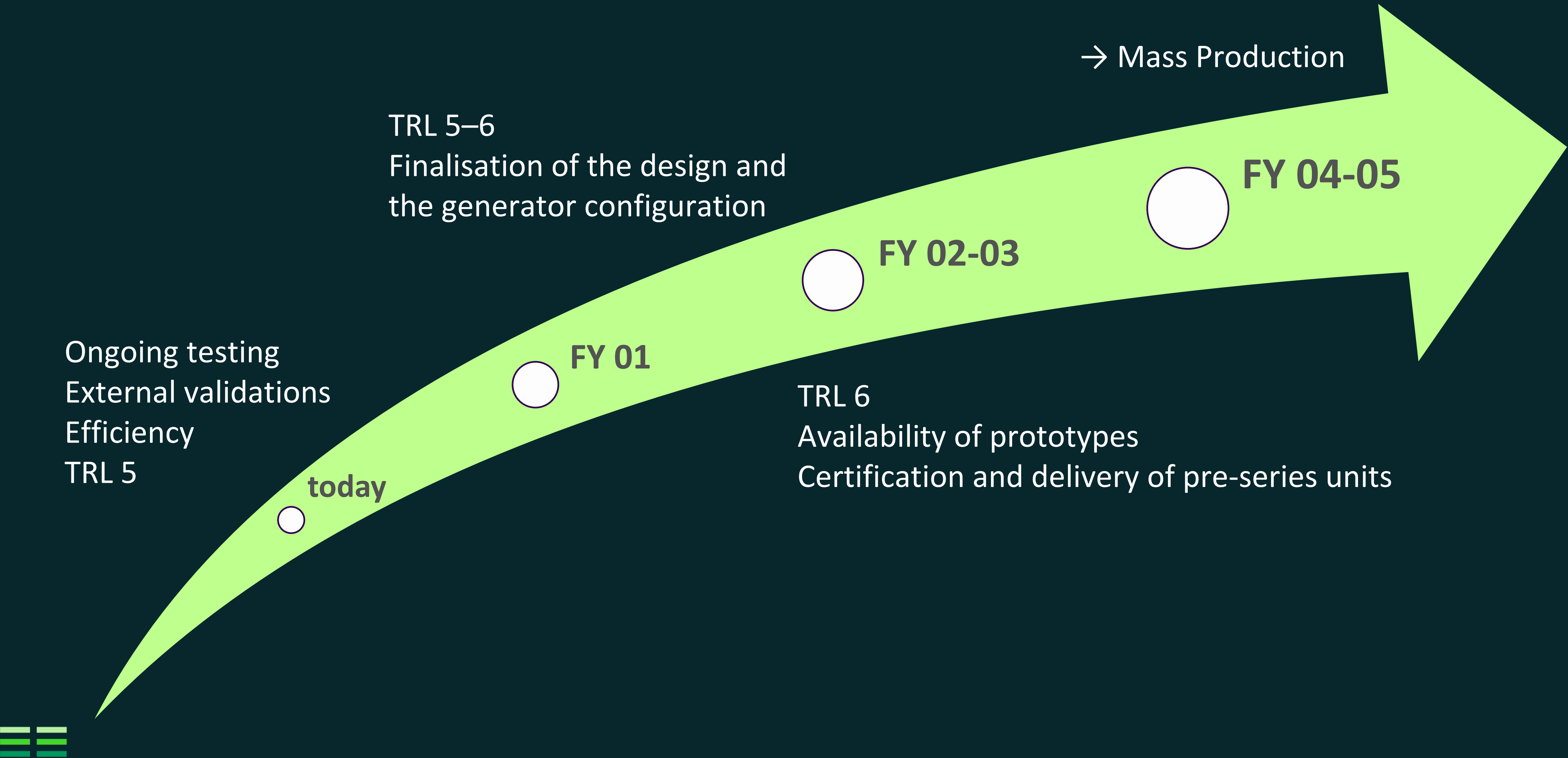
- Low Operating Costs
- Fuel Flexibility
- Efficiency Leadership

Business Model.

- Phase 1: Technology and IP companies (currently up to TRL 6/7)
- Phase 2: Sales of reference systems to OEMs and integrators
- Phase 3: Licence model / Energy-as-a-Service / etc.

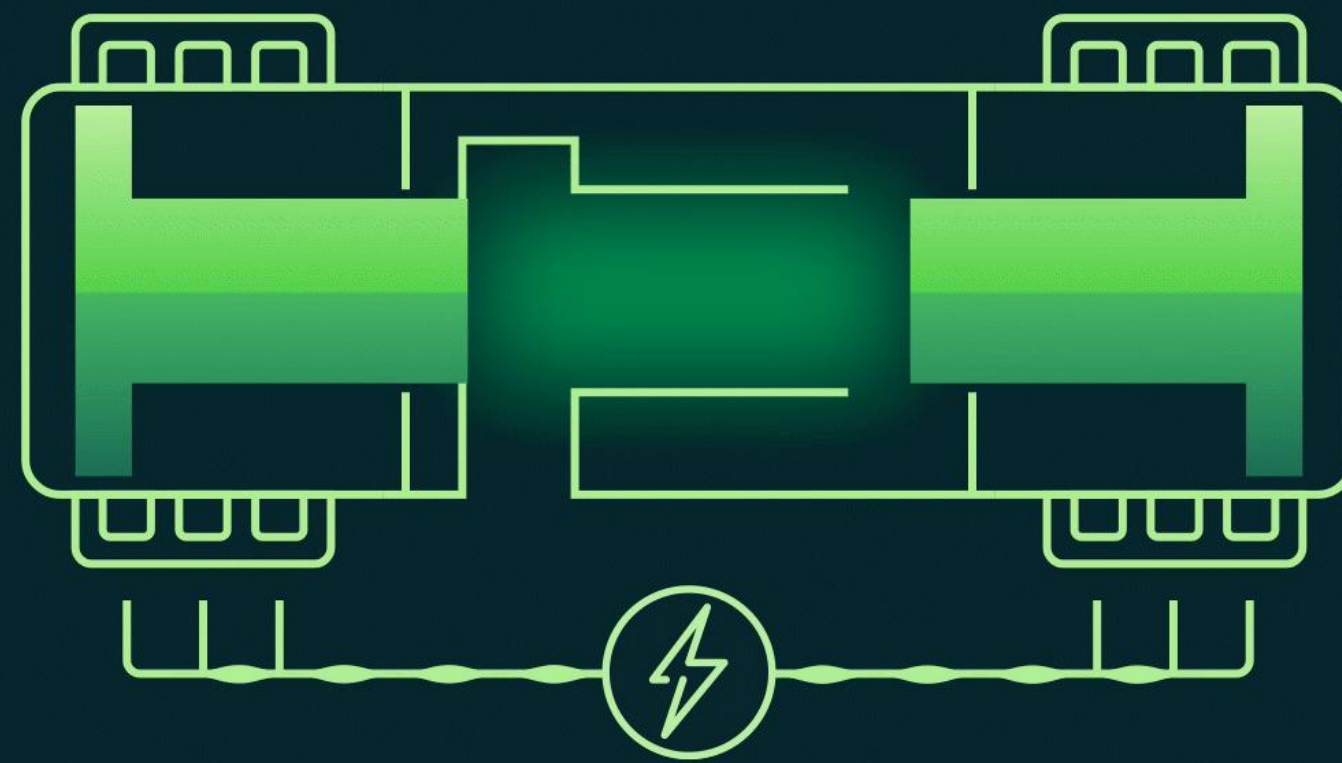


The Roadmap.



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