

Ludovico Bonfiglio
CEO & Founder

PROBLEM

Hydraulic Turbines



High costs

Suboptimal.

Long payback period

PROBLEM

Compressors and hydraulic pumps



High energy costs



Low efficiency

PROBLEM

Hydraulic pumps for agricultural fields



High costs

They consume diesel and the exhaust gases pollute agricultural fields

PROBLEM

Storage Photovoltaic and Wind Farms



**High costs and
Battery disposal**

PROBLEM

Hydrogen is highly explosive

High production costs

Poor distribution infrastructure



Video Explosion of a hydrogen car charging station in Norway <https://www.youtube.com/watch?v=R4EqOU2Sdq0&t=31s>

The author of the video talking about the accident <https://www.youtube.com/watch?v=KBmwjvMluUQ>

Problems of electric cars

Autonomy: The autonomy is lower than that of traditional cars, especially for long journeys.

Range anxiety: The fear of being left stranded with a flat battery

Charging Infrastructure: Charging infrastructure is still under development,

Environmental impact: The production and disposal of batteries

Dependence on raw materials: Batteries such as lithium, cobalt and nickel

Battery recycling: It is still a complex and expensive process.

Safety: Lithium ion batteries can catch fire in the event of an accident or malfunction

SOLUTION

Multifunctional Toroidal Electric Generator

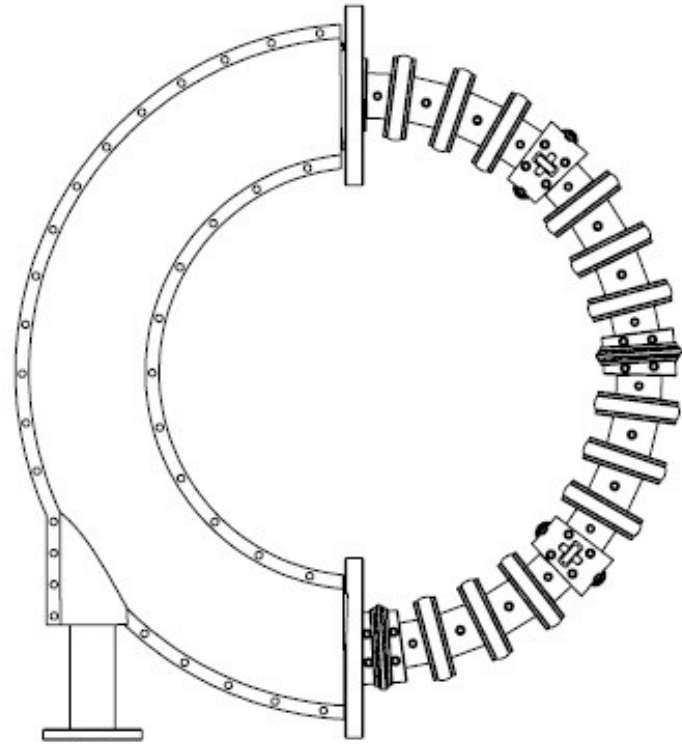
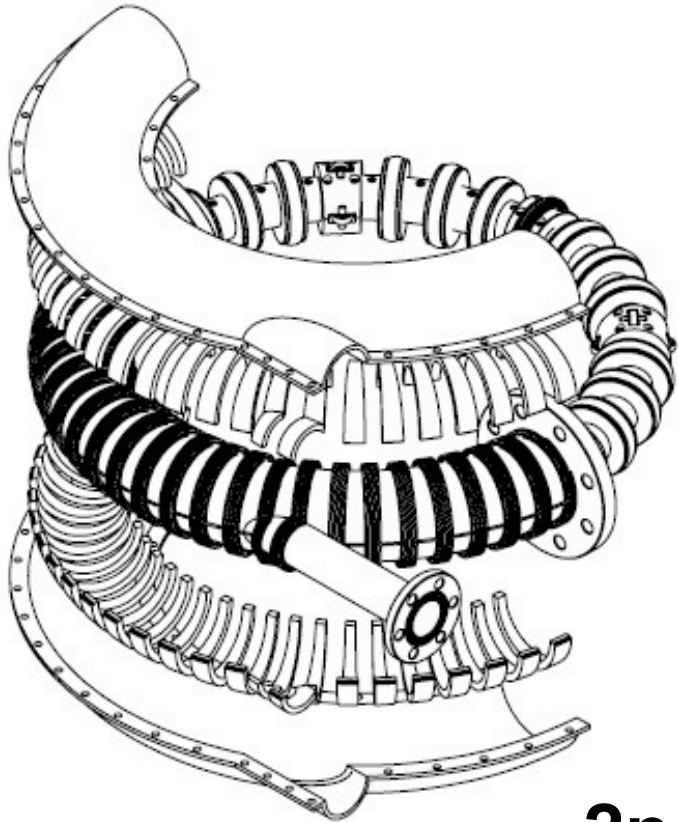


1st Patent

**It produces electricity driven by any pressurized fluid as:
water, compressed air, steam, nitrogen, gas!**

SOLUTION

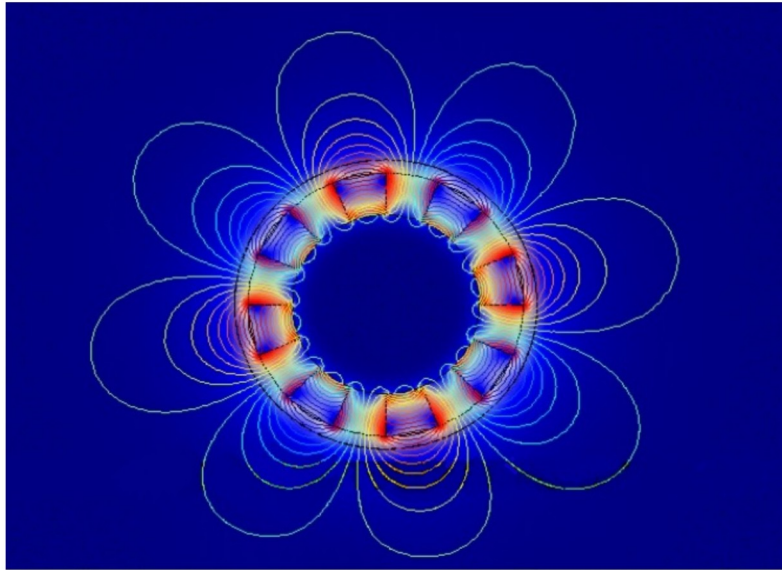
Multifunctional Toroidal Electric Generator



2nd Patent

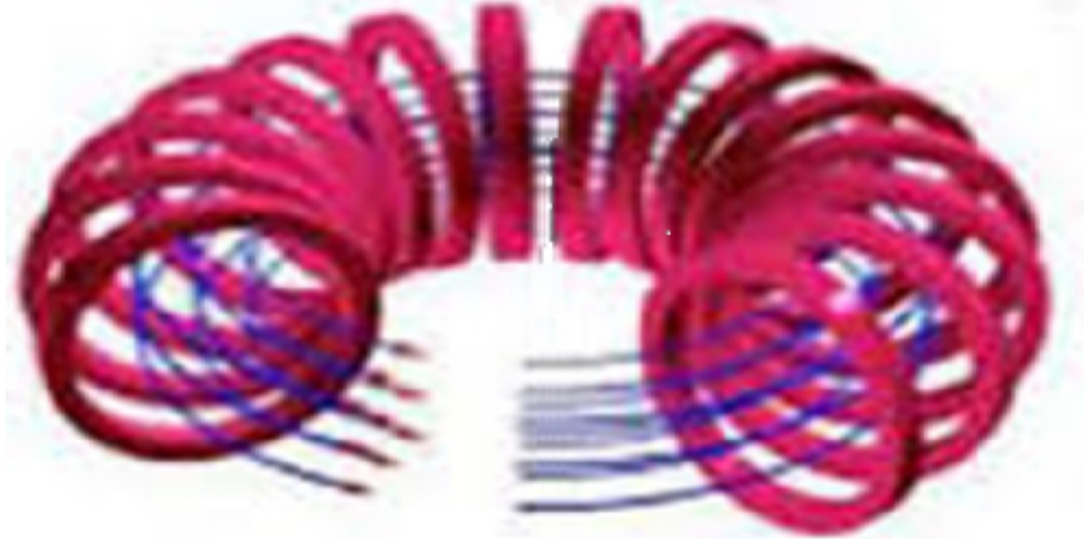
Powered by electricity It is reversible

**Dispersion
Magnetic flux**



**Electric Generators
Electric Engines**

Internal rotary magnetic flux



**Function as a compressor or
high pressure hydraulic pump**

FEM study

ELECTRICITY POWER = **5,7kW**

EFFICIENCY = **99.3%**

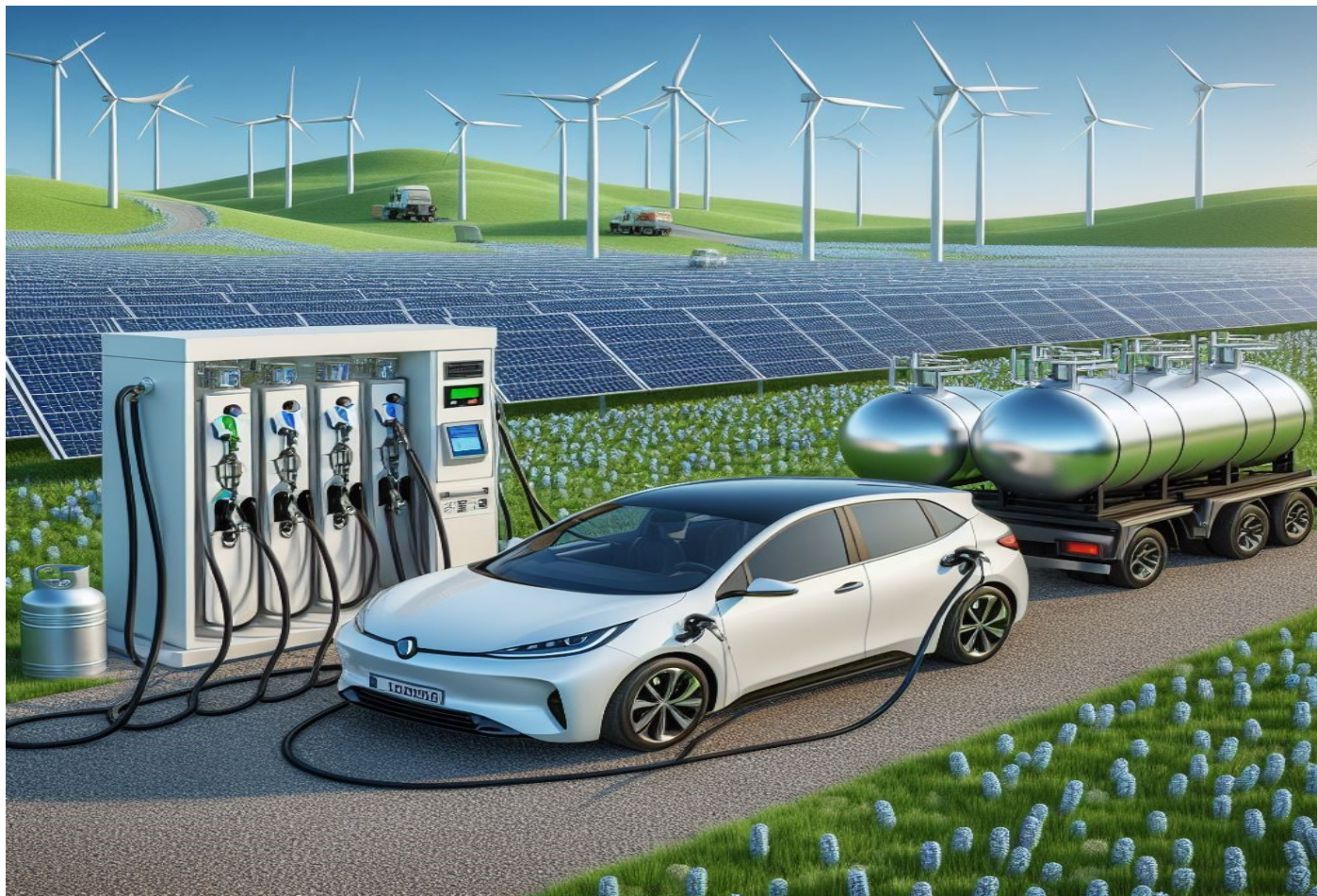
1st Patent

ELECTRICITY POWER = **27,3kW**

EFFICIENCY = **99.9%**

2nd Patent

Multifunctional Charging Station: Compressed Air and Electricity from Renewables



Refueling with compressed air or nitrogen tank trucks

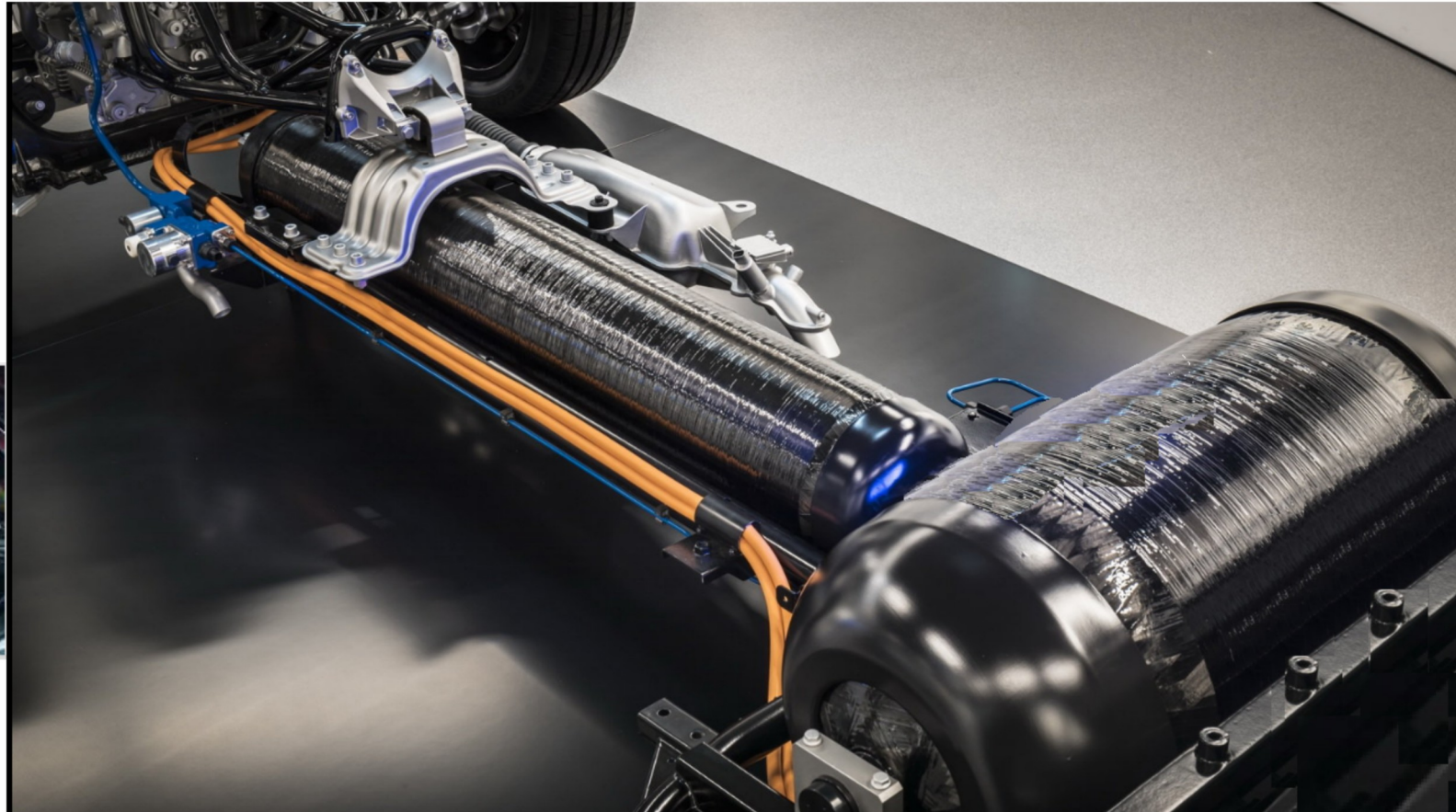


850 bar cylinders with compressed air that drive the toroidal electric generator that recharges the batteries or powers the electric motor of electric cars

Toroidal Generator



Batteries



Advantages Sustainable Mobility

- 1) Fast charging in a few minutes**
- 2) Compressed air or nitrogen**
- 3) Autonomy + 50 ~ 70Km**
- 4) End anxiety from flat batteries**

Competitor



Tesla

Honda

Hyundai

Siemens

GE

ENEL

BYD

Bosch

Turboden

TurBinde

Franco Tosi

Zuccato Energia

End-to-end process

Process automation

Competitor

Target Customers

- 1) Energy Producers
- 2) Energy Storage
- 3) Energy-intensive industries
- 4) Water Pumping
- 5) Gas Pipeline
- 6) Sustainable Mobility

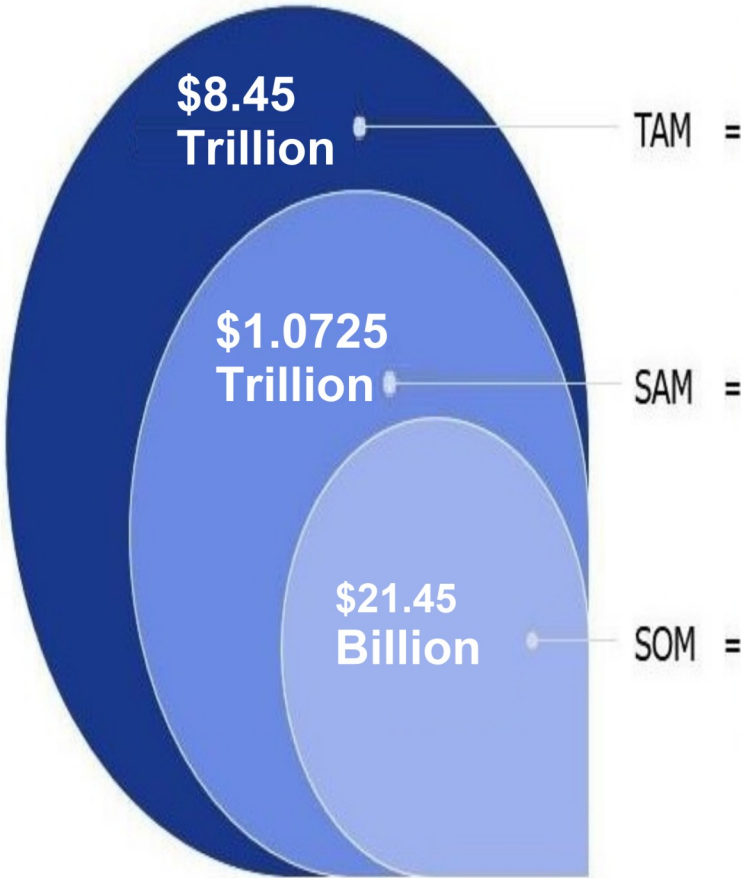
Business model

- **Participation in the European calls for Green Deal, RepowerEU, CINEA, PNRR, national calls, etc...**
- **After having created the prototypes, tests and certifications and economic evaluations of the patents.**
- **Licensing the patents**
- **Sell the Patents to the highest bidder**
- **Build electricity production plants**
- **Sell Electricity and/or plants**

Competitive advantages

- 1) **Diversification of international patents already filed**
- 2) **New patents that we will register in the coming years**
- 3) **+85 Inventions on Renewable Energy, Energy Saving and Sustainable Mobility**
- 4) **Focus on research and development**
- 5) **Strategic collaborations**
- 6) **Renewable energy production**

TAM SAM SOM GLOBAL Toroidal Electric Generator



Global electricity market: \$2.5 trillion
Global fluid compression market: \$1.5 trillion
Global hydraulic pump market: \$0.5 trillion
Global electric car market: \$2 trillion
Global energy storage market: \$1 trillion
 $\$2.5 + \$1.5 + \$0.5 + \$2 + \$1 + \$0.45 = \mathbf{\$8.45 \text{ Trillion}}$

We assume that the turbine can capture 5% of the TAM for power generation, fluid compression and hydraulic pump applications
We assume that the turbine can capture 10% of the TAM for electric car applications
We assume that the turbine can capture 5% of the TAM for energy storage
 $\text{SAM} = (0.05 * \$8.45 \text{ trillion}) + (0.1 * \$2 \text{ trillion}) + (0.05 * \$1 \text{ trillion}) = \mathbf{\$1.0725 \text{ Trillion}}$

Let's assume that 2% of the SAM can be captured in the first year
 $\text{SOM} = 0.02 * \$1.0725 \text{ trillion} = \mathbf{\$21.45 \text{ Billion}}$

Financial need

Elevated!

Time Line

24/36 Months

Team



- **Ludovico Bonfiglio** - Inventor

CEO & Founder

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- **Ing. Anita BoggioMerlo** - Electronic Engineer

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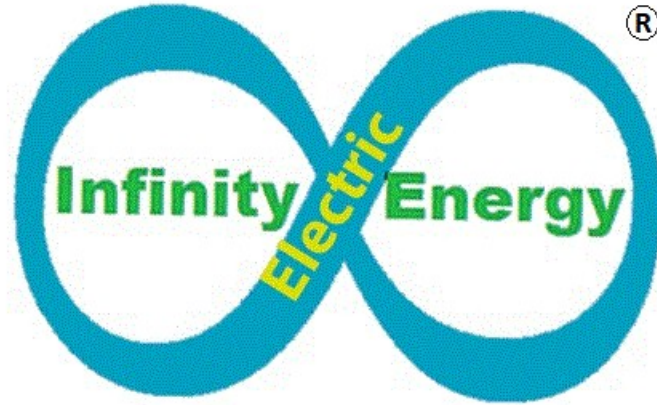
Honors and Awards



Which planet do you want to leave to future generations?



Help us save the Planet, please!



Thank you for your kind attention.

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