RePG Energy

Patented Deep Tech, turning humidity and low waste heat into clean energy and water

The Big Idea

What if the air and waste heat around us could power the world?

Global Problem

Energy & water shortages threaten lives, economies, and the planet.

Water Shortage

771M

The number of people who struggle to find clean drinking water every day worldwide

Source: World Health Organization (WHO) and UNICEF, 2021

Energy Shortage

940M

The number of people worldwide who live without access to electricity

Source: IEA and World Bank, 2021

Waste Heat

70%

The percentage of industrial heat lost as waste globally

Source: Bian, Z. Waste heat: Environmental Systems Research, 2020

Our Solution

RePG technology extracts electricity and potable water from:

Industrial Waste Heat

(50ºC to 99ºC)
(100ºC to 500ºC)

Ambient Humidity

Low Temperature Geothermal & Solar-Thermal Sources (Below 100ºC)

Unique Technology

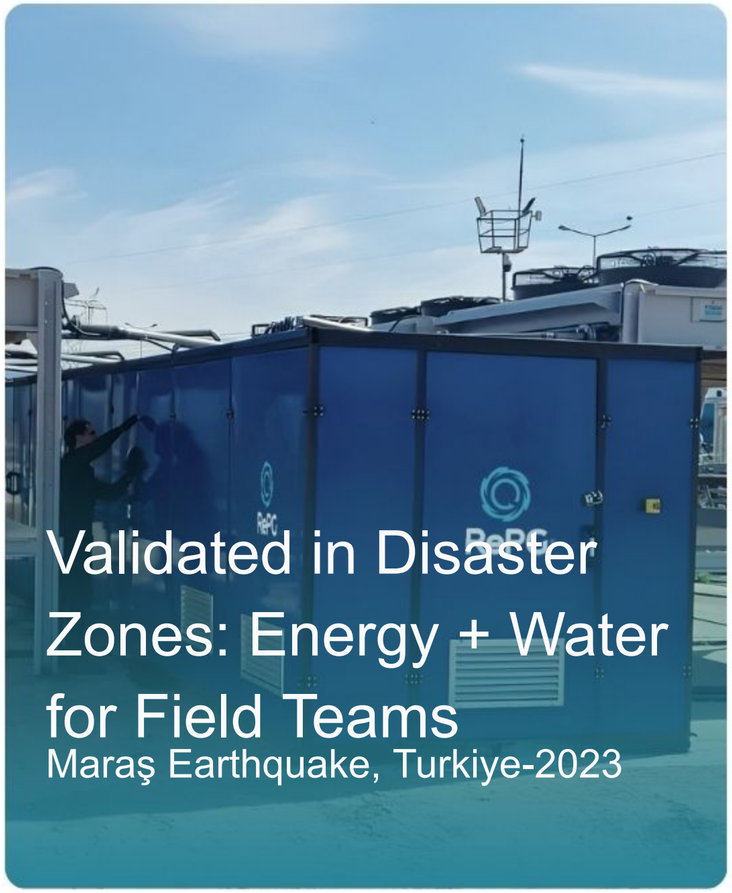
World’s most efficient tech using osmosis and diffusion to convert waste heat and humidity into energy and water, field-tested and commercially proven.

38 Patents | 24 Trademarks | 5 Designs

Field Proven

16+ Waste Heat Generation Systems Installed
Germany, Uzbekistan, Turkiye (x14)

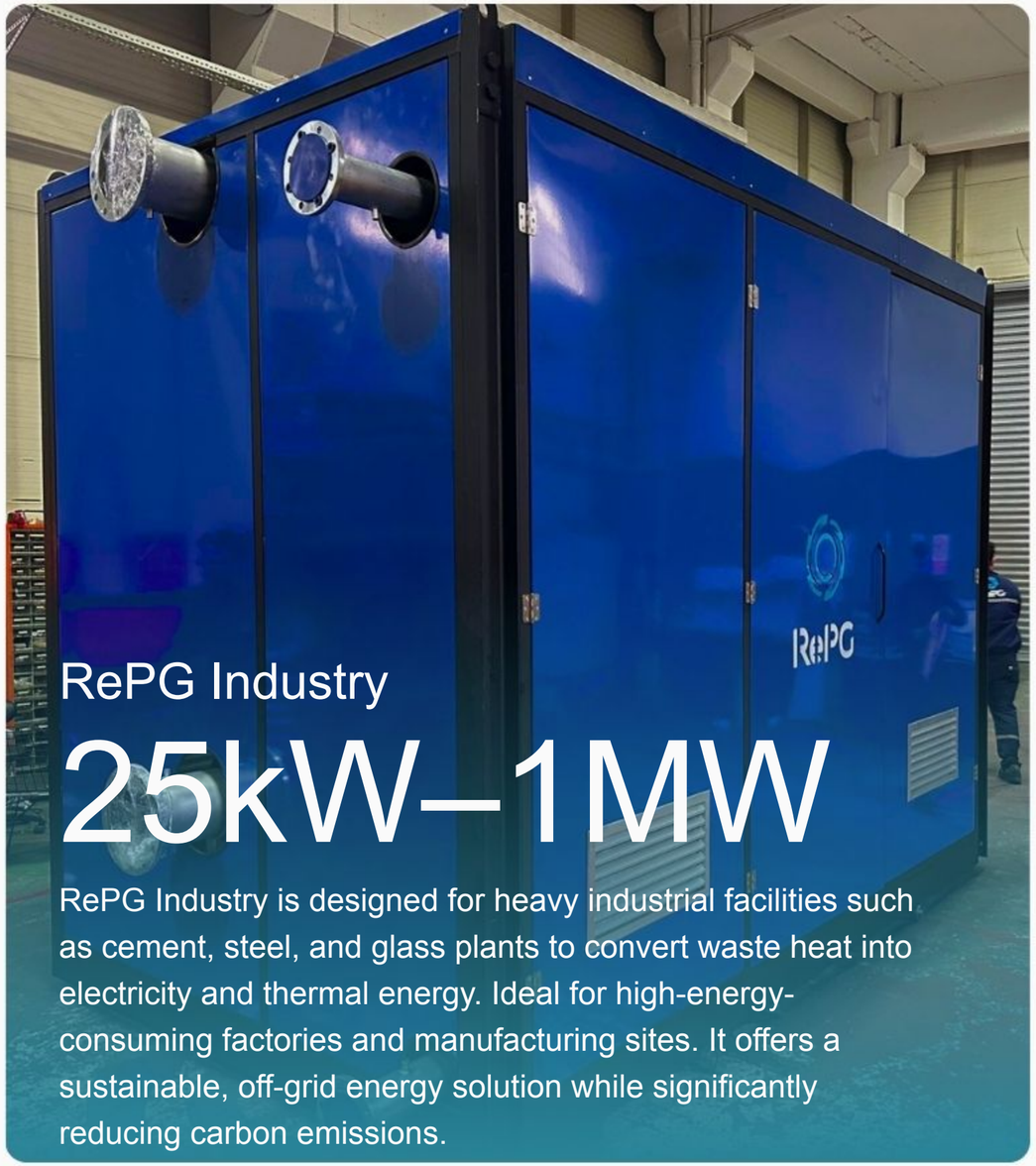
100+ Individual Water Generation Systems & 1 Industrial (Oman) Installed



Validated in Disaster Zones: Energy + Water for Field Teams
Maraş Earthquake, Turkiye-2023

Product Lines

RePG Industry	25kW–1MW
RePG Home & Buildings	0.1–25kW
RePG Aqua	10L–25kL /day water
RePG Vehicle, HVAC, Data Center	Prototypes in pipeline



RePG Industry

25kW–1MW

RePG Industry is designed for heavy industrial facilities such as cement, steel, and glass plants to convert waste heat into electricity and thermal energy. Ideal for high-energy-consuming factories and manufacturing sites. It offers a sustainable, off-grid energy solution while significantly reducing carbon emissions.

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RePG Home & Buildings

0.1–25kW

RePG Home & Buildings brings energy independence to residential and commercial buildings by converting ambient heat and humidity into usable power. Ideal for homes, apartments, offices, and small hotels. Enables lower energy bills and increased sustainability without reliance on fossil fuels.

Home Energy Varieties

Humidity Based

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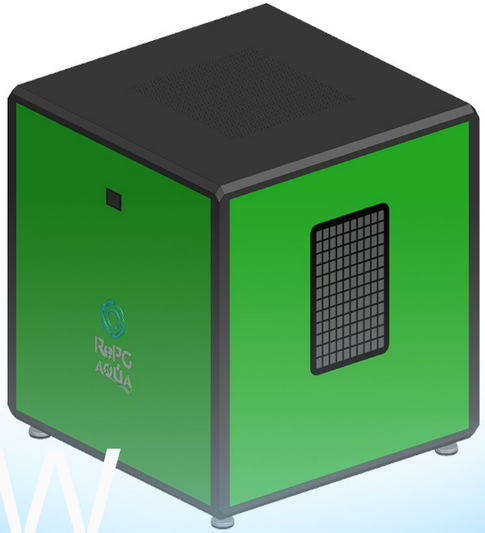

RePG Homes & Buildings

0.1–25kW

RePG Homes & Buildings brings energy independence to residential and commercial buildings by converting ambient heat and humidity into usable power. It is ideal for homes, apartments, offices, and small hotels. It enables lower energy bills and greater sustainability without relying on fossil fuels.

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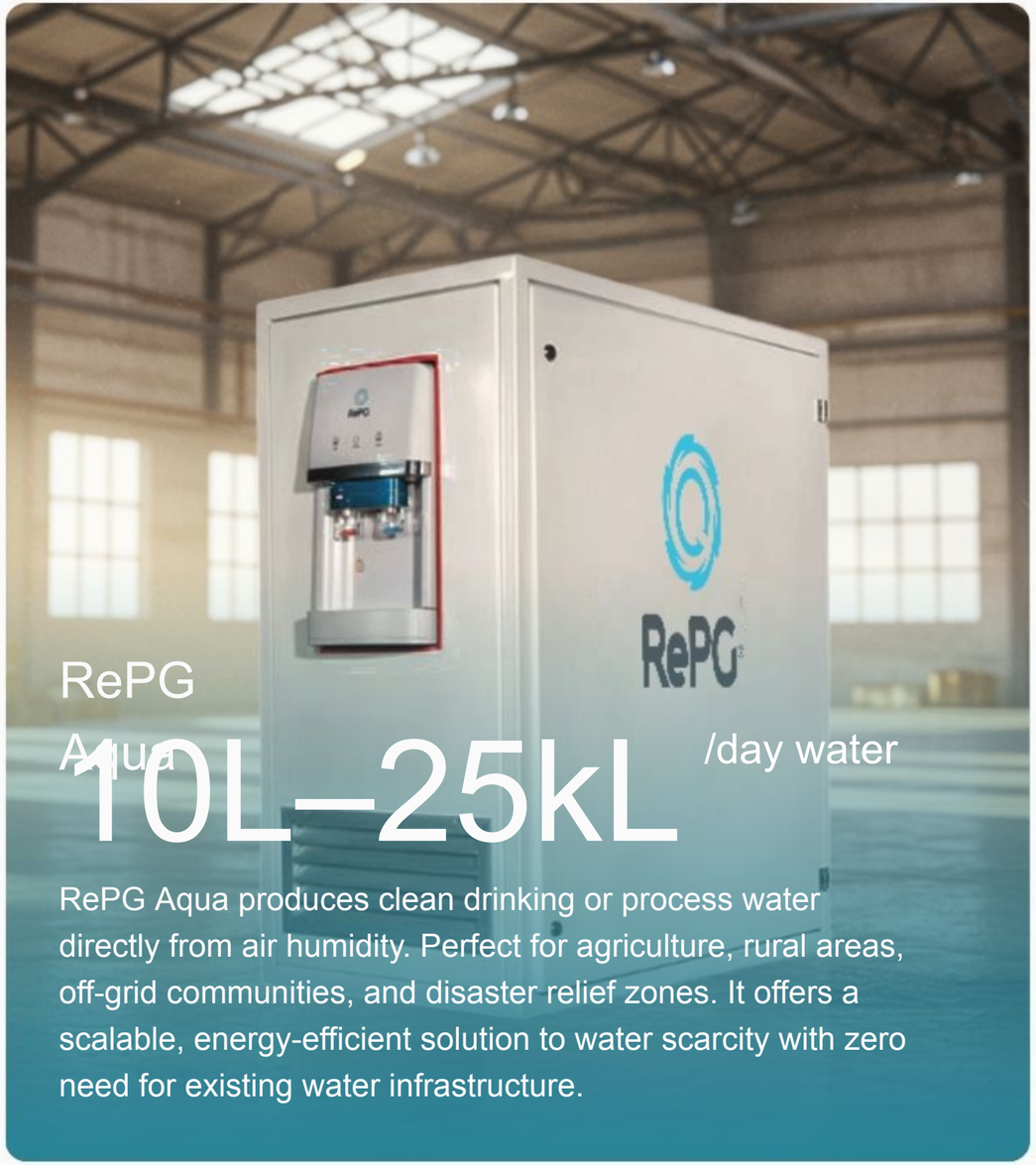


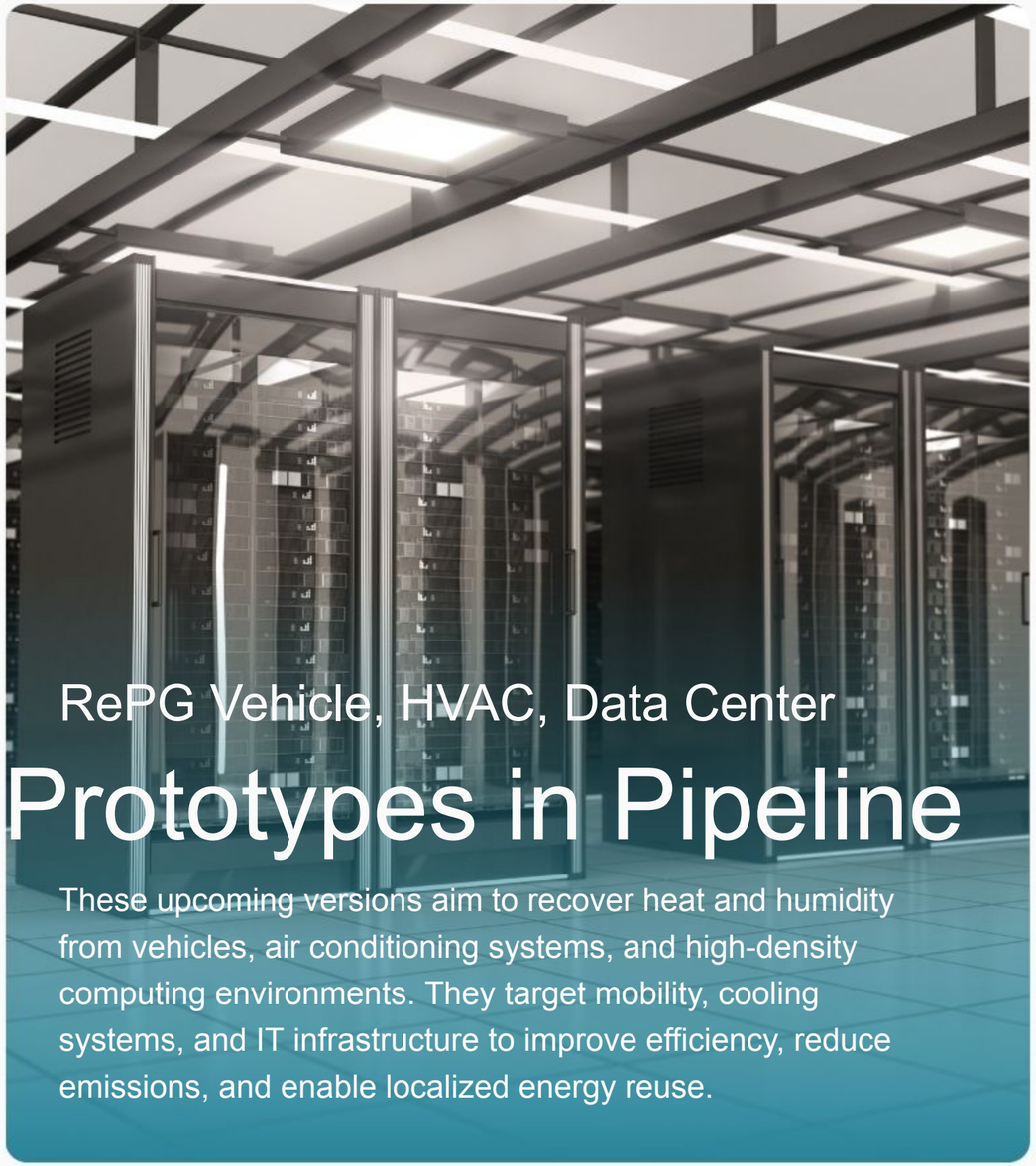
RePG Aqua

10L–25kL /day water

RePG Aqua produces clean drinking or process water directly from air humidity. Perfect for agriculture, rural areas, off-grid communities, and disaster relief zones. It offers a scalable, energy-efficient solution to water scarcity with zero need for existing water infrastructure.

Product Lines

RePG Industry	25kW–1MW
RePG Home & Buildings	0.1–25kW
RePG Aqua	10L–25kL /day water
RePG Vehicle, HVAC, Data Center	Prototypes in Pipeline **(TRL5-6)**



RePG Vehicle, HVAC, Data Center

Prototypes in Pipeline

These upcoming versions aim to recover heat and humidity from vehicles, air conditioning systems, and high-density computing environments. They target mobility, cooling systems, and IT infrastructure to improve efficiency, reduce emissions, and enable localized energy reuse.

Market Opportunity

Total Adressable Market (2031) - Early mover advantage in multi-billion-dollar verticals

Competitive Analysis / Energy

SME ORC Firms	*Min Working Temperature, °C	Ideal Working Temperature, °C	Minimum Delta Temperature, °C**	Minimum Capacity, kWe	Thermal Efficiency (Gross) %
ORCAN	80	140	60	50	8-20
ORMAT	100	140	80	+1000	10-20
TURBODEN	300	400	260	250	15-30
EXERGY	90	400	60	100	%5-30
REPG	55	120	30	0.500	5-20

* Minimum operating temperatures may vary depending on air temperatures

**(ΔT): Indicates the difference between the waste heat source and the cooling source of the system. The RePG system, which is cooled by radiators at an air temperature of 30ºC, can generate electricity from a 60ºC waste heat source, while its closest competitor can do this at temperatures above 90ºC.

Competitive Analysis / AQUA

	Capacity Per Day*	Energy Consumption	Working Humidity Range	Weight	Temperature Range
RePG	20 L	0,35 kW/l (30ºC-%80)	15-99%	40 kg	5-45 ºC
WaterGen	25 L	0, 4kW / l (30ºC-%80)	40-99%	80 kg	21 - 32 ºC
Majik Water	25 L	0, 38kW / l (30ºC-%80)	40-80%	53 kg	25 - 32 ºC
WatAir	25 L	0,5 kwh (30ºC-%80)	20-95%	42 kg	15-40 ºC

*RePG AQUA makes systems that produce drinking and potable water from 17 liters to 25 tons per day.

Business Model

Direct Sales (B2B, B2G, B2B2C)

Licensing & Tech Transfer

Revenue Sharing & Energy-as-a-Service Water-as-a-Service

Investment Award & Recognition

$10 M

Last Raised $2.4 M from Ziraat Portfolio Deep Tech VCIF (2024)

$0.6 M grants received

RePG

$0.6 M

Patent Champion Startup in Türkiye (2023-2024-2025)

Patent Champion

World Intellectual Property Organization Global Awards 2023 – Top 25 Patented Tech

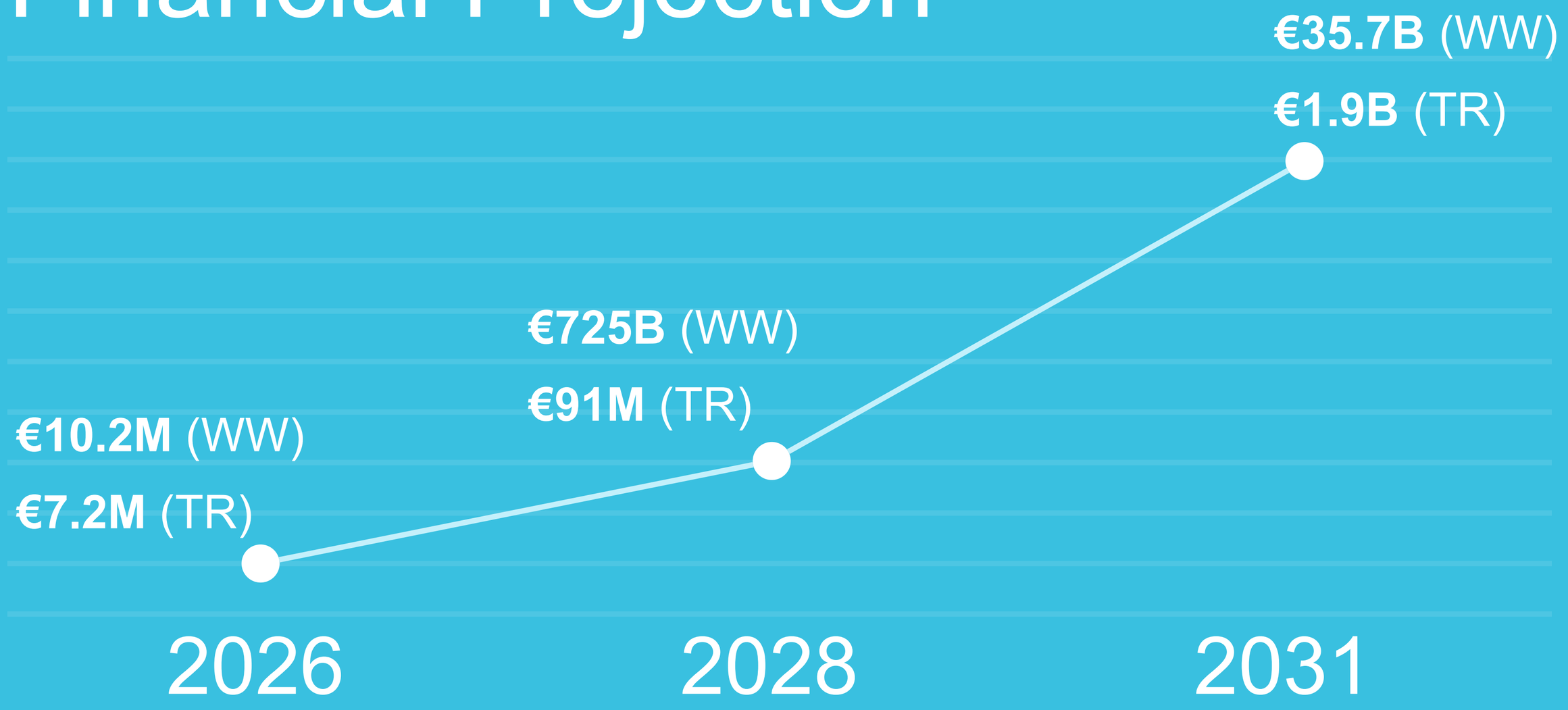
Hello Tomorrow 2026 Climate Tech & Environmental Protection Track Finalists

Top 25 Tech

Traction Snapshot

Revenue	€2M+
60M+ funnel in water & industrial products	60M+
Raised $10M investment Received $0.6M Grants	$10M
Horizan Europe 215 TWh/year of thermal energy to EU district heating Equivalent to 4% of the EU's annual heat demand Represents a potential €9.6 billion/year in energy cost savings	215 TWh/year

Financial Projection



Team

Hasan AYARTÜRK

Founding General Manager / Board Member

- 30 years of R&D experience
- 19 years of R&D experience in multinational companies
- 150+ Patent Applications

Hüseyin KARAYAĞIZ

Board Member / Business Development

- 33+ Years of Product & Sales Experience
- 15+ years of sales experience in multinational companies
- 10+ years of Leading Angel Investor

Team

A total of 25+ people

- 3 A&G Engineer
- 6 Engineers (Electrical/Electronics, Mechanical)
- 9 Technicians & 6 Operations

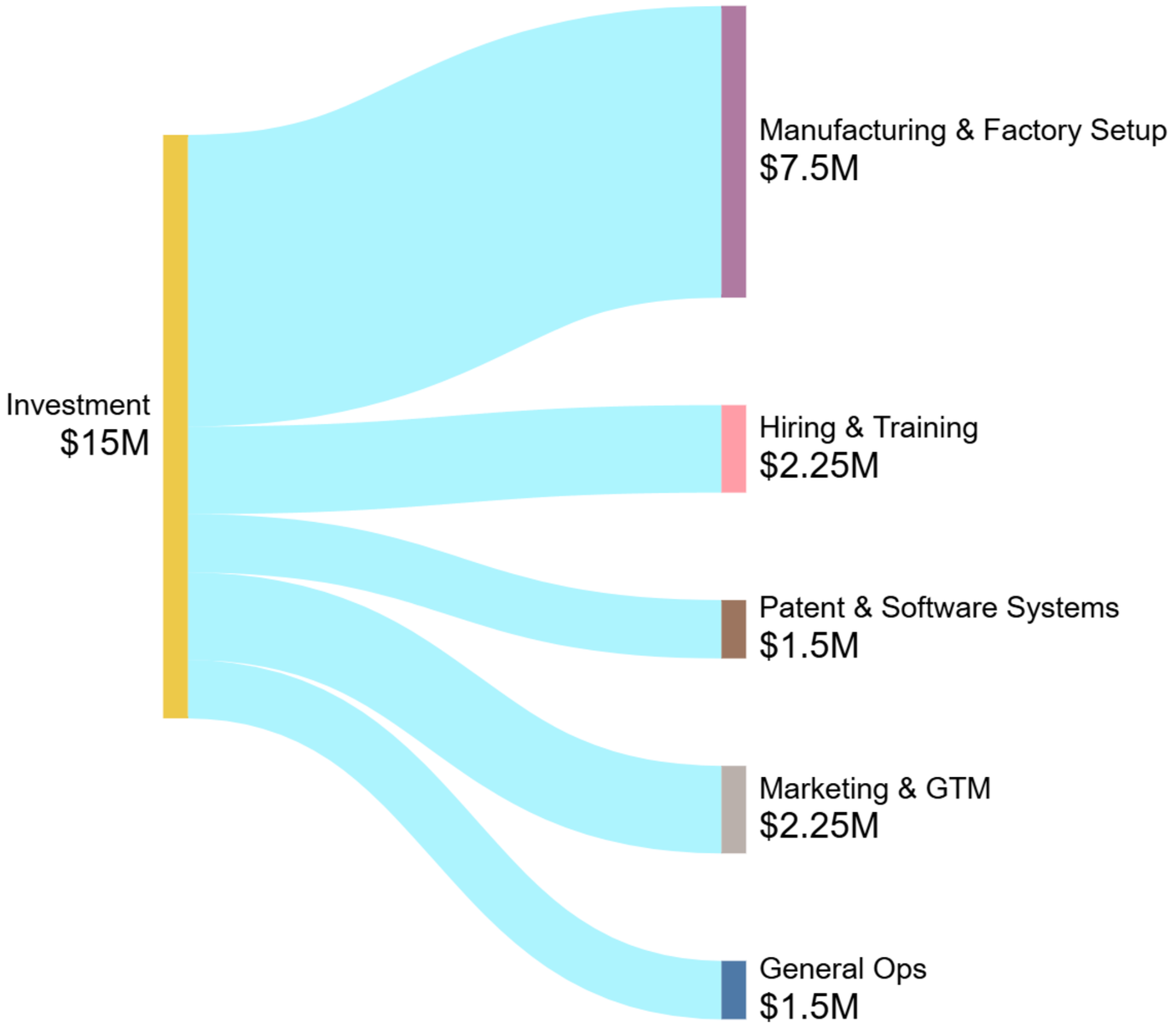
Funding Ask

Mass production of AWG &
Industrial product lines.

Open Middle East or Europe
Market Entry Office

Accelerate international
B2B sales

$15



Clean Energy from Air & Heat

www.repg.com.tr

RePG Energy

Let’s power a world of energy & water for all

hasan.ayarturk@repg.com.tr

+90 533 436 12

www.repg.com.tr

ITU Ayazaga Arı-4 Building
No:2/50/6 34467 Sariyer/Istanbul