

Reinventing the Energy Supply with

Autonomous, Green Power Generation



Eli Basson, Co-Founder & CEO



The world urgently needs green energy



Current Solutions – are inadequate Alternatives

The world thinks, existing polluting power stations and grid - are a must

✓ Grafenika delivers next-generation On-Campus Energy Supply

Our solution is clean, efficient, cheaper and avoids the need for Grid



Metric	Traditional Power	Grafenika Fuel Cell Generator
Avg. CO ₂ Pollution per kWh	<u>4 – 1,689 gr</u> ⁽¹⁾	0 gr
Initial cost (per kW)	<u>\$830 – 12,600</u> ⁽²⁾	\$500
Cost (per kWh)	<u>\$0.16 – 0.20</u> ⁽³⁾	\$0.18 – 0.25 ⁽⁴⁾

(1) [cowi.com](https://www.cowi.com) | (2) [DOE: Table 1-2 — Cost & Performance Summary Table](#) | (3) [Globalpetrolprices](#) | (4) H₂ price: \$4.0/kg

Introducing Grafenika's 3D Pre-Graphene



Deep Tech Technology created Novel Material



Graphene: Thinnest layer in nature - High conductivity, elasticity, flexibility and hardness



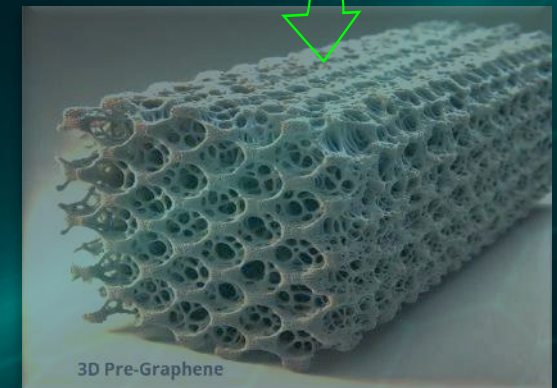
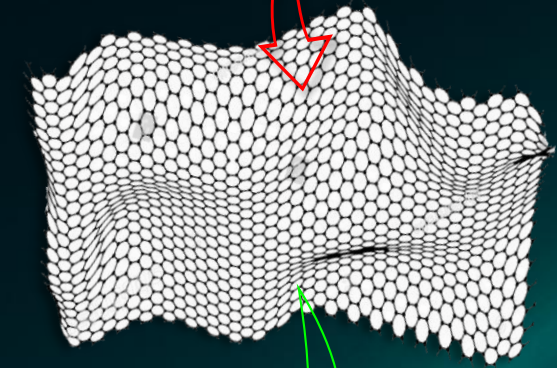
Patentable process created unique Pre-Graphene with 3D morphology



Combines graphene properties with enhanced characteristics:
conductivity, catalytic activity, reduced weight and volume while comprising **integrated current collector**



Graphite Powder



3D Pre-Graphene

Our Disruptive Fuel Cells: the Basis for Future Energy Sources

Revolutionizing existing Fuel Cells:



1. Novel 3D Material (Graphene family)



2. Cost-Effective (CAPEX reduction by 50-70%)



3. Better efficiency (OPEX improvement 15%)



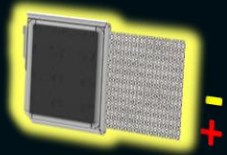
4. Higher Performance (x2) and Higher Endurance



5. Net Zero (ERP: 0.5 ton of CO2 per each 1.0 GWh)



The Products



1. Cells



2. Stacks



3. Systems



4. Power

⚡ The Customers:

1. B2B - Energy Suppliers:

Stacks and FC manufacturers, System integrators

2. B2B - Energy consumers:



Data & Logistics



Industrial



Residential



Hospitals



Universities



Defense

The Technology: Enables SMART, Scalable, Resilient Fuel Cell



Main Benefits:



Faster and easier fuel cell **assembly**



Use BMS: Identify defective cell and stack to bypass it



Quick cassette swap concept



Substantial cost-saving for our clients



Addressable Fuel Cell Markets

Explosive FC Market Growth

Revenue, 2024

Forecast, 2033

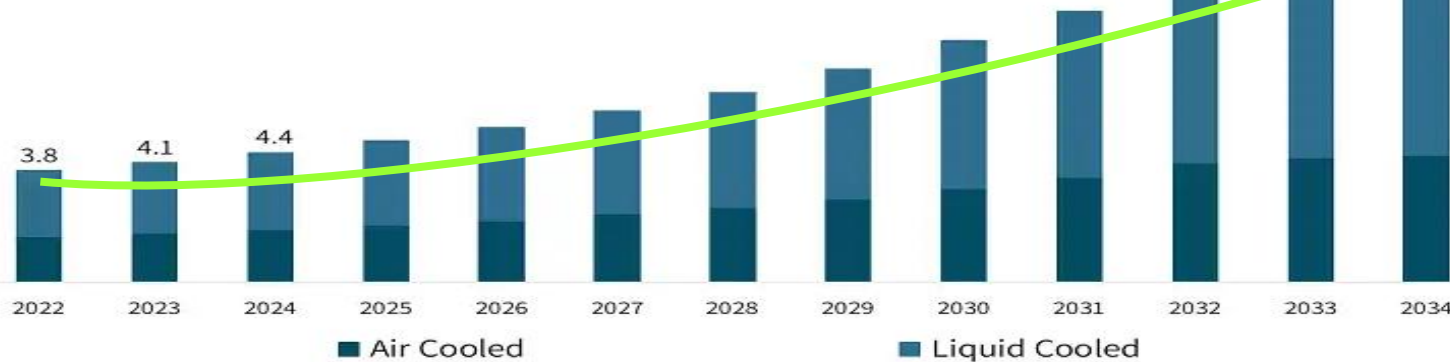
CAGR, 2024-2030

\$7.3B

\$34.5B

21.4%

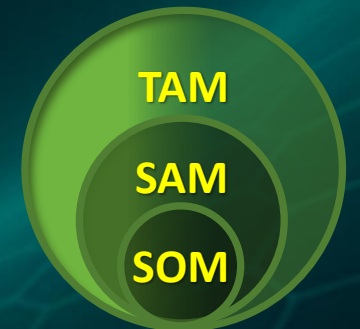
Fuel Cell Stack Market Size, Forecast, 2022 – 2034 (USD Billions)



By 2033: Total Addressable Fuel Cell Market: **\$34.5B**

Serviceable Available Stack Market: **\$11.4B**

Serviceable Obtained Stationary Market: **\$4.8B**



Grafenika is positioned to capture significant market share

Status and Timeline



TRL 4: proto-type

Technology Readiness Level 4 achieved



x3 times grants awards

By the Israeli Innovation Authority (IIA)



May-2025, 3rd Grant award

Project Total - \$2.3M. Matched - \$1.3M by the IIA



Collaborates with 3 universities

Protecting our IP!



Signed x4 LOI's for field pilots

Strategic partnerships in place

Go-to-Market



Phase 1 (2021-2025)

- ✓ Awarded x3 grants by the IIA, x4 LOI's, x3 universities cooperation
- ✓ Complete major R&D, proto-type (TRL4)



Phase 2 (2026)

- Patents applications (see Annex)
- Commercial pilot (MVP), Israel



Phase 3 (2027)

- Commercial pilot (MVP), USA
- Production line (1st) setup, **Zone A - Israel**
- **B2B**: Start sales to existing producers



Phase 4 (2028-2030)

- Full scale Production
- **B2C**: Start sell energy and dominate the Grid market

2021-2025
Foundation

2026
MVP

2027
Expansion

2028-2030
Scale

Projections and Milestones (us\$)

	2025	2026	2027	2028	2029	2030	2031	2032	Total
Milestones	TRL 4	TRL5-6	TRL6-7	TRL7-8	TRL9				
Round	SEED		A		B				
Investment	\$1,000,000		\$5,000,000		\$10,000,000				\$16,000,000
Grants: Preferred Fab+IIA+BIIRD	\$100,000	\$1,256,000	\$1,000,000	\$117,300	\$376,500	\$823,800	\$1,350,300	\$5,231,400	\$10,255,300
Total Revenues				\$1,000,000	\$8,470,000	\$20,550,000	\$42,370,000	\$79,940,000	\$152,330,000
Net Profit	(\$688,000)	(\$926,000)	(\$834,000)	(\$1,415,000)	\$111,300	\$3,777,000	\$10,700,800	\$24,824,600	\$35,550,700
Cash (end of Year)	\$323,000	\$210,000	\$4,807,600	\$2,381,900	\$9,891,200	\$9,697,500	\$13,426,600	\$16,052,600	

Note: Projections don't include future sales of energy

The Team



Multidisciplinary and talented team



Brings deep industry expertise



Proven track record across science, technology and business



Designed it, Building it and will Sell it



Mr. Eli Basson
co-Founder and CEO

Public Company Director (Israeli Center for Management), MSM (Lesley, USA) and BSc in Electrical Engineering (Technion, Israel). Former Senior Manager at Orbotech; VP Sales & Marketing at SuperCom and OTI with direct sales responsibility of over \$350M. Over 30 years of experience in high-tech including IPOs. Co-author of 5 commercialized patents.



PhD, Mr. Arie Meitav
Tech. Consultant

PhD Electrochemistry. Vast deep-tech experience in leading interdisciplinary R&D programs of electrochemical power sources. Author of 13 approved patents and numerous international publications. Thorough experience with managing R&D projects at large industrial companies, start-ups, and academy.



Mr. Mark Geller
co-Founder and VP Tech

MS.c systems engineer, Mr. Geller has co-invented several inventions (3 patents and several publications) and has a long and successful history of developing and bringing innovative products to market. Led the technological development for the industrial production of novel carbon nanomaterials for over 10 years.



PhD, Mrs. Meital Turgeman
Director of Electrodes R&D

PhD. Turgeman has over 10 years of experience in advanced materials research, intellectual property activities and publications. Extensive knowledge in developing products in the field of energy storage and production processes of the developed Pre-Graphene material.



Prof. Mr. Alex Schechter
Scientific Advisor

Prof. Schechter is a senior faculty member at Ariel University. Leading the fuel cell and electrochemistry laboratory in the chemistry department. Using deep-tech and striving to develop unconventional sources of clean and renewable energy.



PhD, Mr. Arik Raslin
Director of Fuel Cell R&D

PhD Raslin has over 6 years of experience in electrochemistry, electrocatalysis, electrocatalyst development and their utilization in fuel cells for industrial applications. Full control over the development and production processes of the developed Pre-Graphene material.

Raising \$1.0M Seed - Unlocking \$2.3M

Seed Investment	\$1.0 M
Approved IIA's matching grant	\$1.3 M
TOTAL	\$2.3 M



Method
SAFE

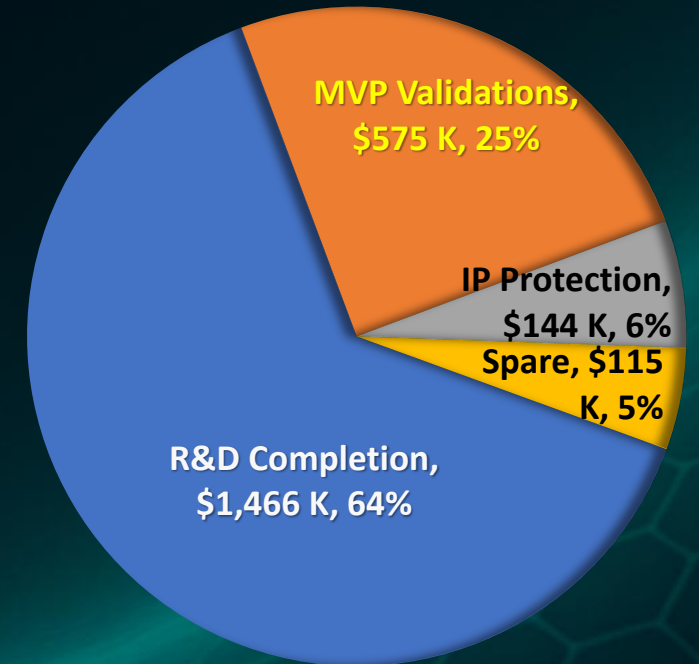


Expected ROI
x6–8
within 3 years



Achievement
TRL5-6
Commercial pilot

ALLOCATION OF FUNDS:



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