NEXT GENERATION MACHINERY

Clean
Practical
Affordable

Off-grid energy

Energy Investor Day

Haarlem (NL)

27-03-2025

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Electrification in (Dutch) construction market is in full swing, however:

How will this electrical equipment be charged in with zero emissions AND affordable?

The team

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Ruud Bakker

CEO / founder

- Entrepreneuring in sustainable energy solutions for heavy equipment since 2018
- Experienced (concept/project) engineer on multidisciplinaire projects
- Successfully realised multiple innovations and prototypes

Roy Wester

CTO / co-founder

Ing. Industrial Automation

- Proven successful entrepreneur (R2, since 2020, exit 2023)
- Background and education in Electrical engineering (MBO)
- Experienced software / electrical engineer (HBO, bachelor degree, hands-on and team manager)

Sietse Gerssen

CCO / co-founder

M.Sc TU Delft (Hydrodynamica)

- Managed several sales teams in technical companies in fabrication market
- Responsible for multiple successful market introductions of new technolofy and diversification with new product/market tailoring.

What is the problem?

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Worldwide reduction of CO2 and other emissions needed. Diesel engine will be phased out

What do we need to replace?
An ideal energy carrier that has proven itself for decades in providing off-grid energy

Advantages of diesel:

- ✓ Fluid / large energy density
- ✓ Negligible explosive risk
- ✓ Low fire risk
- ✓ Available and affordable

Are there any alternatives for the large amount of equipment in the Dutch construction market?

The challenge and need

For the Dutch construction sector

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Objectives from the Roadmap for Clean and Emission-Free Construction (Routekaart Schoon en Emissie-loos Bouwen) and laid down in the legal Dutch legal framework "clean air agreement" (schone lucht akkoord)

Challenges
This causes a direct and tangible problem for the construction industry (substitution for diesel as fuel in equipment such as vehicles and generators):
- Construction projects have come to a standstill due to exceedance of (nitrogenoxide/CO_2) emission standards, with recent court rulings by a.o. Council of State and courts (RvS and rechtbanken)

Need
There are initiatives from SEB and Zero Emission (ZE) tenders and as a result, there are more and more investments in electrical equipment, but:
- Project characteristics as well as grid congestion limits the ability to realize a grid connection for each project
- Many of the current technologies do not offer an (economically) sustainable solution to the problem

-> There will be a continuing and growing need for "off-grid" charging solutions, a selection of the current options:

- Diesel generator (on HVO100/biogas) — No long-term solution because, among other things, NOx emissions are a permanent problem with combustion engines
- Electric battery — Very good solution for buffering with a small grid connection, but logistically and economically a challenge if no connection is possible or practical.
- Hydrogen fuel cell — Clean solution in use, but logistically and economically very difficult to make profitable due to, among other things, the need for specialist personnel for high-pressure storage systems.

All these technologies have their specific disadvantage, whether it be limited sustainability, high costs, complex logistics and/or practical application

-> **There is a real and urgent need for a comprehensive solution to charge electrical equipment on locations without grid connection**

Current “solutions”?

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Mobile Batteries
- x Fluid / large energy density
- ✓ Negligible explosive risk
  Low fire risk
- x Available and affordable

Hydrogen fuelcell / engine
- x Fluid / large energy density
- x Negligible explosive risk
- ✓ Low fire risk
- x Available and affordable

Current alternatives for Diesel engine result in **logistical challenge** and related **cost**

Our solution

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Mobile Charging Unit based on a methanol fuel cell

Development based on existing similar small capacity technology already in operation

CLEAN: complies with Dutch law related to zero emission technology

- ✓ Net zero CO_2 emissions when using Bio- and/or E- methanol
- ✓ Zero NO_x emissions
- ✓ No soot and/or particulate matter emissions
- ✓ Silent

SAFE and PRACTICAL for user and environment:

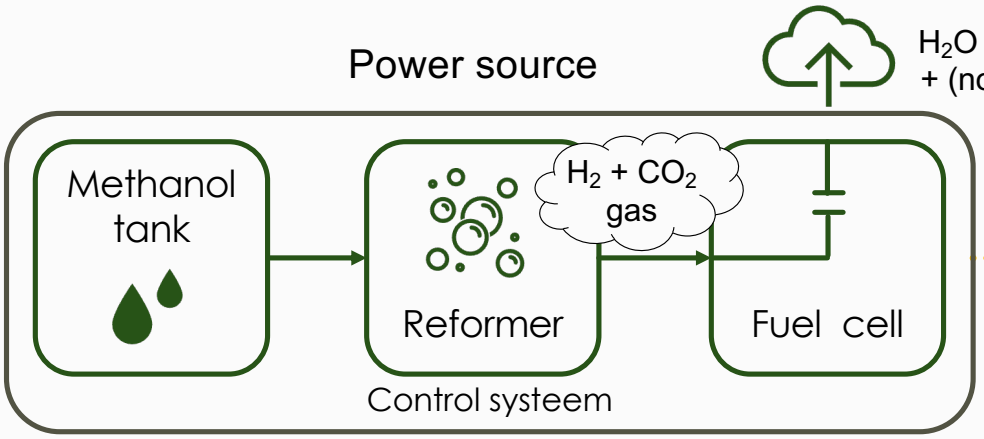
- ✓ Fluid at atmospheric conditions (=fill by hose)
- ✓ Separate fueltank for safe refill or exchange at location
- ✓ No risk of gas cloud development or permanent pollution
- ✓ No logistical or spatial challenges

Artist impression of NGM charging unit and 6000kWh fueltank

Our technology

Methanol fuel cell – integrated in mobile charging unit

Unique technology	**TRL**	**Ontwikkelaar / partner**	**Bescherming**
Reformer unit	5	confidential	Shared foreground IPR + ling term exclusivity
Fuel cell	7	confidential	Long term exclusivity, support and supply security
Charging interface	7	confidential	Long term exclusivity
Fuel supply and control system	6	NGM	Own design / IPR / protected (shielded) software



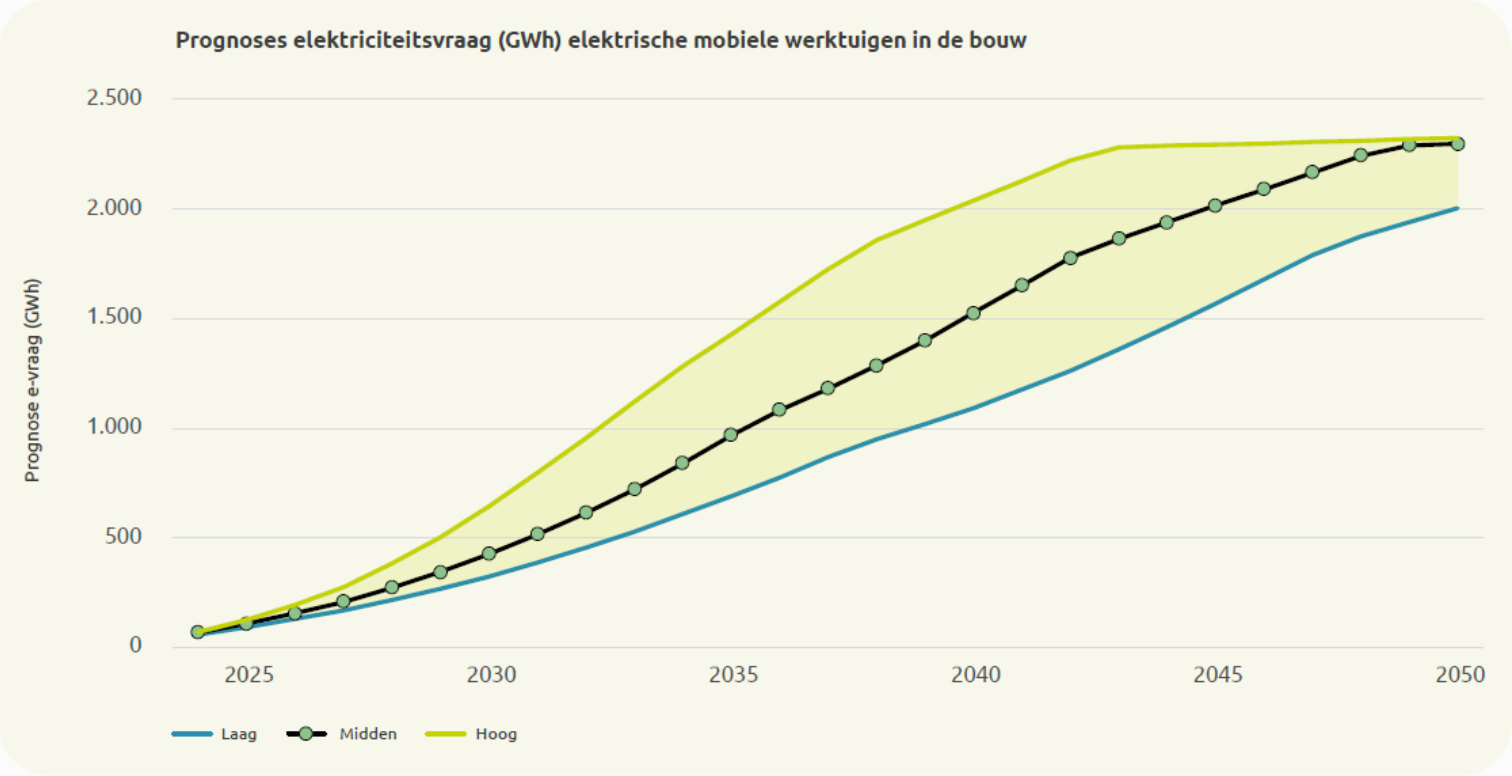
Applications

Supply of electricity
Charging power (DC)
General power (AC)

Integrated power source
Pump / vehicle / equipment etc.

Competition / alternatives

	Combustion engine (outside definition of ZE acc Dutch law)			Battery technology	Fuel cell (FC) technology		
	Diesel	HVO100 / (bio) Methanol	Bio (waste) (methane) gas	Li NMC / LFP // Sodium-ion	Hydrogen (compressed)	1st generation methanol FC	**NGM Methanol FC**
Cost €/kWh	~ 0,7	< 1	~ 1,3	> 1,5	2,3	> 2	**< 1**
Cost	++	+	+	- -	- -	- -	**+**
Zero Emission (acc. SEB/law)	x	x	x	✓	✓	✓	✓
logistics	++	++	+/-	-	- -	+	**+**
Fuel-/ resource availability	++	+	+	+	-	+	**+**
Circularity	-	+	+	+/-	+	+	**+**
Competition			POWERCRUMBS	Rent a Battery, ENS, Greener	WATERMELN, GENPOWER	Volta Energy	



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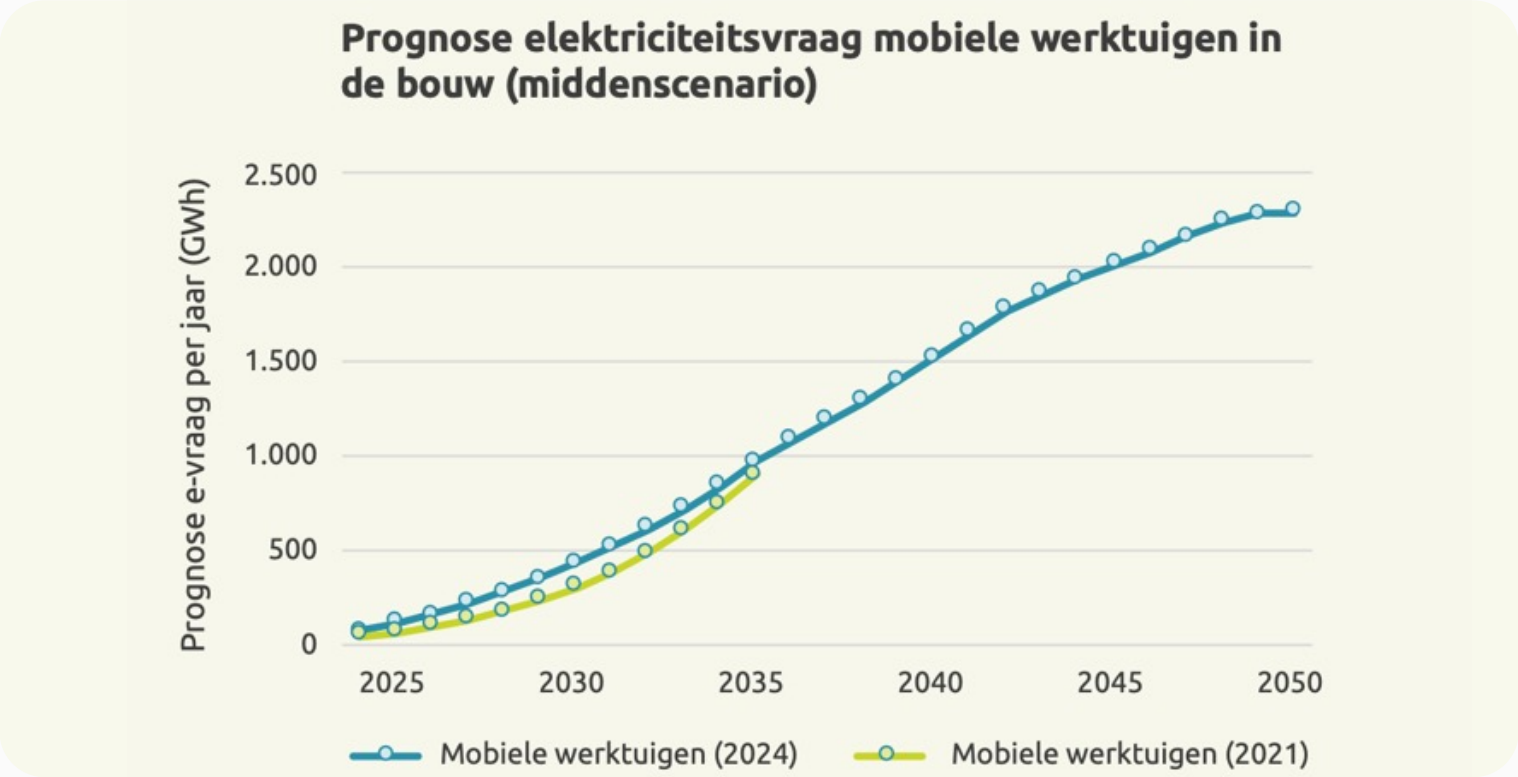
We focus specifically on the Dutch construction market with a urgent need and our geographic origin

Market – development (prognosis)

bron:



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Markt – development (historical)

bron:

Market – prognosis 2030

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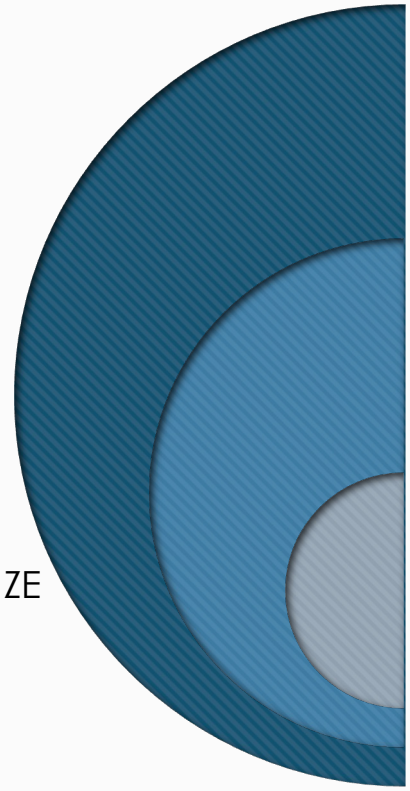
General market information

2024

150.000 nos. equipment
277.000 nos. incl vehicles

2050

100% of mobile construction equipment to be **electric** or ZE



TAM	Total required charging capacity to support electrification in The Netherlands in 2050: 2300 GWh	Estimated marketvolume € 2000 milion
SAM	required mobile charging solutions in The Netherlands in 2030: 160 GWh in 2030 ~ 40% of total required charging capacity	Estimated marketvolume € 400 milion
SOM	15% market share in mobile off-grid charging solutions 120 nos. 100kW mobile charging units up to 2030	Value € 66 miljoen

sources: SEB, NAL Nationale Agenda Laadinfrastructuur, Elaad nl, Rijksdienst voor Ondernemend Nederland, TNO

Business model

Total cost of ownership – client proposition

Our goal is to offer a product that can deliver off-grid energy at a competitive price level (€/kWh) compared to the traditional genset using bio diesel.

We have calculated the levelised cost of energy (LCoE), calculated from the Total Cost of Ownership (TCO)

We do consider that there will be a larger investment (CAPEX), therefore we will be targeting our marketing, business development and sales efforts specifically to:

- Large construction companies active in the Dutch market
- Construction equipment rental companies

In addition we have an active dialogue with banks that can offer lease constructions

prijsberekening methanol brandstofcel €/kWh		100kW min	100kW max		Diesel	HVO100
brandstof en verbruik	eenheid	bulk	klein gebruik			(+30%)
brandstof prijs	EUR/kg	€ 0,90	€ 1,50		1,59	2,07
soortelijk gewicht	kg/l	0,79			0,84	
energiedichtheid	kWh/kg	6,3			12,6	
verbruik	kWh/l	2			3	
efficiency	%	40%			28%	
logistiek + tank huur	EUR/kg	0,1			0,05	
brandstofkosten per kWh	EUR/kWh	€ 0,40	€ 0,63		€ 0,46	€ 0,59
vermogen en geleverde energie						
rated power	kW	100			100	
levensduur fuelcell / diesel	h	30000			30000	
onderhoudsinterval (delen BOP of Stack)	h	15000				
geproduceerd vermogen	kWh	3000000			3000000	
kosten en financiele aannames						
CAPEX total	EUR	€ 550.000			€ 75.000	
CAPEX met aftrek subsidies	EUR	€ 407.500				
Cost onderhoudsinterval (delen BOP of Stack)	EUR	€ 100.000				
OPEX / jaarlijks onderhoud	EUR/jaar			2%	€ 1.500	
rente	%	8%			8%	
verhuur marge (indicatie)	%	30%			30%	
kosten per geproduceerde energie						
draaidagen p/j	dag	250			250	
draaiuren p/d	h	10			10	
jaar tot aan einde leven fuelcell / afgeschreven diesel	jaar	12			12	
jaar tot aan refurbishment BOP	jaar	6				
aantal vervangingen fuelcell / refurbishments BOP	-	2				
levensduur voor user case	jaar	12			12	
gefinancierde CAPEX (obv annuiteiten berekening)	EUR	€ 734.844			€ 113.870	
CAPEX cost scenario afschrijving tot einde levensduur	EUR/kWh	€ 0,24			€ 0,04	
brandstof kosten	EUR/kWh	€ 0,40	€ 0,63		€ 0,46	€ 0,59
OPEX					€ 0,01	
totaal - kostprijs energie	EUR/kWh	**€ 0,64**	**€ 0,88**		**€ 0,50**	**€ 0,64**
prijs per kWh in de verhuur	EUR/kWh	**€ 0,91**			**€ 0,72**	**€ 0,91**

Our position in the value chain

Large construction and infra projects

Clients (governments)

Contractors

Subcontractors and rental companies

Suppliers

(equipment)

Sub-suppliers

(subsystems and components)

Traction

3,7kW unit

Commercial supply / integration into:

- ✓ Dewatering (framework agreement based on exclusivity)
- ✓ Zero Emission generator

Turnover realised 2024: ~ 100k

prognosis 2025: ~ 300k

100kW unit

Firm interest in

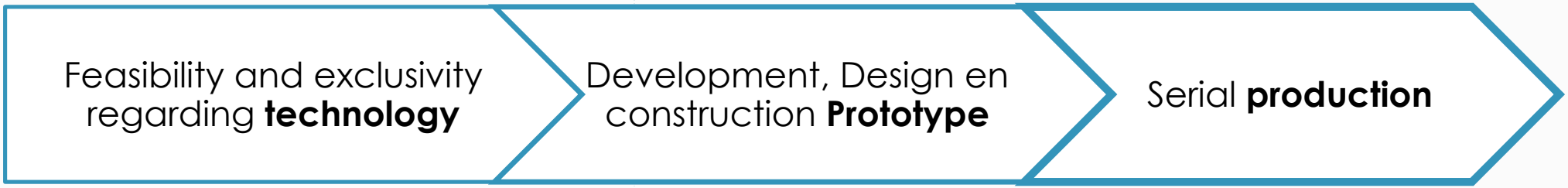
- ❑ Pilots from 2026 onwards
- ❑ Projects (supply) 2027 onwards

2026 onwards

Product development roadmap

100kW Methanol fuel cell – integrated in mobile charging unit

Completed | Work in progress



2024 / 2025

Feasibility studies

Exclusivity for key technology

2025 / 2026

Development and Engineering

Construction prototype

Pilot projects

2027 / 2028 and beyond

Construction 1st series

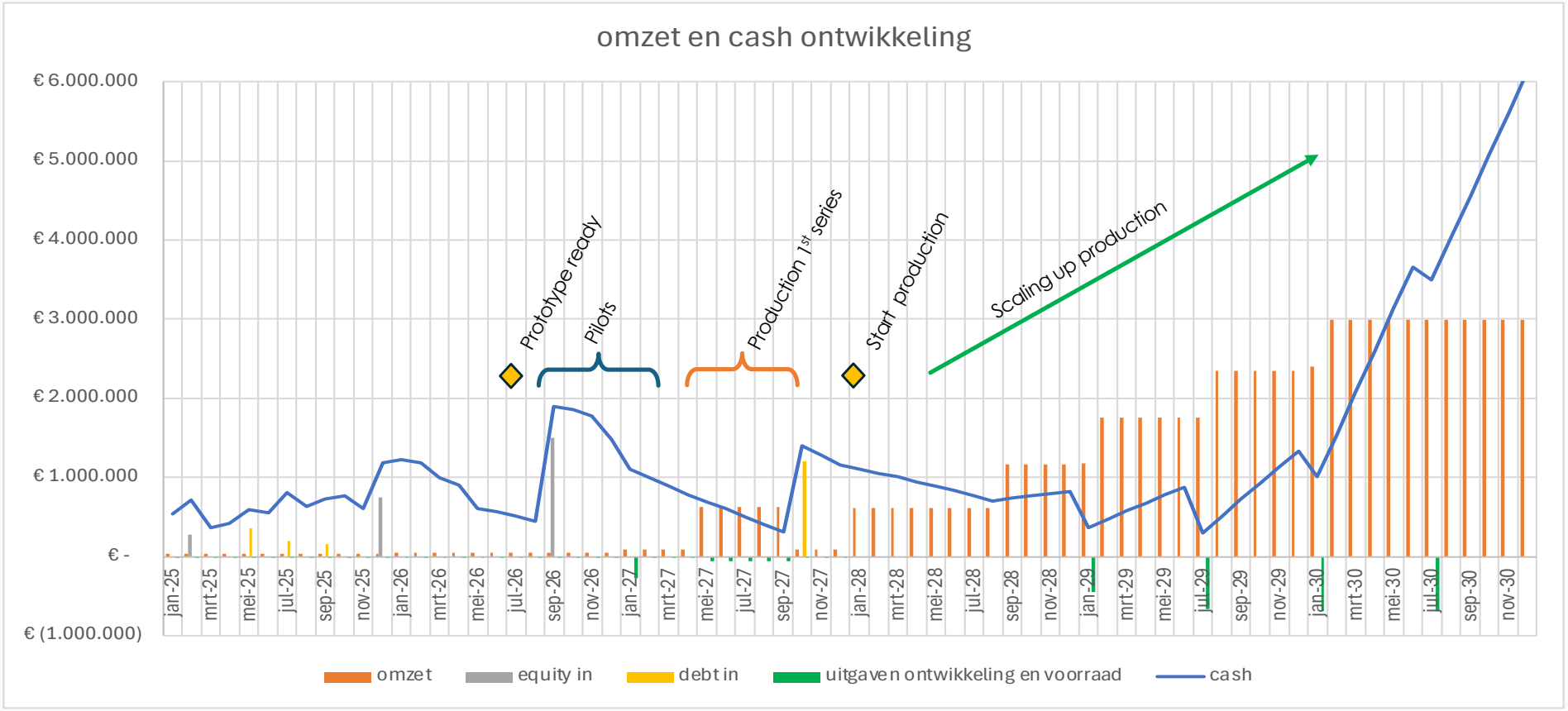
Establish production line

Scale up 15+ units p/y 2028 onwards

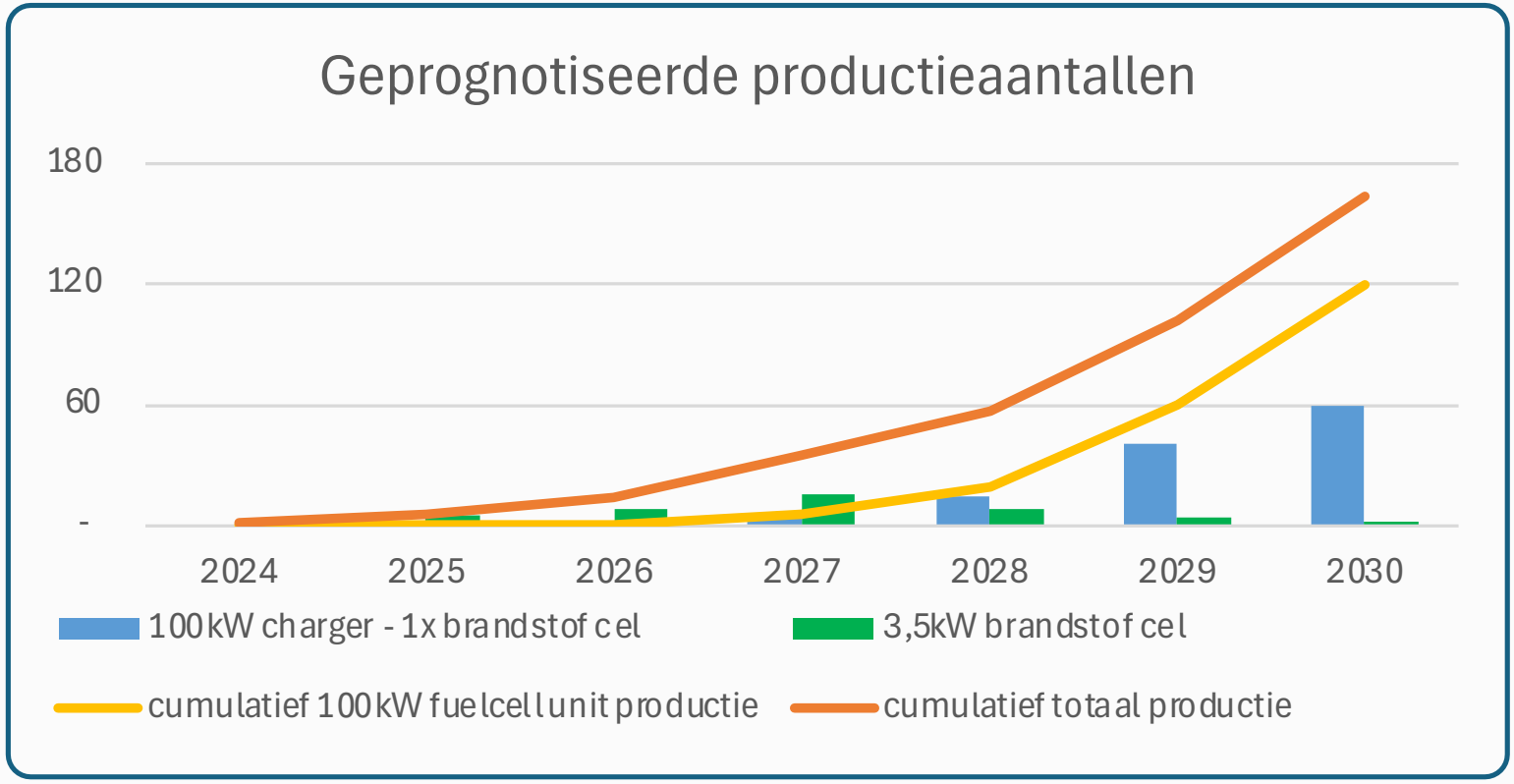
P&L prognosis

omzet	2024	2025	2026	2027	2028	2029	2030
netto omzet	€ 507.236	€ 836.083	€ 696.357	€ 3.736.068	€ 9.495.414	€ 23.375.421	€ 35.243.149
verkopen totaal	€ 312.971	€ 417.551	€ 492.012	€ 3.736.068	€ 9.495.414	€ 23.375.421	€ 35.243.149
3,5kW & other	€ 312.971	€ 417.551	€ 492.012	€ 1.013.544	€ 521.975	€ 268.817	€ 138.441
100kW products	€ -	€ -	€ -	€ 2.722.524	€ 8.973.438	€ 23.106.604	€ 35.104.708
subsidies	€ 194.265	€ 418.532	€ 204.345	€ -	€ -	€ -	€ -
Cost of Goods Sold	€ (145.563)	€ (309.902)	€ (399.225)	€ (3.110.300)	€ (6.226.159)	€ (16.284.198)	€ (24.226.471)
bruto winst	€ 361.673	€ 526.181	€ 297.132	€ 625.767	€ 3.269.255	€ 7.091.223	€ 11.016.677
kosten	2024	2025	2026	2027	2028	2029	2030
personeelskosten (indirect)	€ (69.306)	€ (67.873)	€ (71.244)	€ (321.325)	€ (656.656)	€ (1.098.127)	€ (1.415.909)
ontwikkeling R&D	€ -	€ (348.861)	€ (460.354)	€ (324.279)	€ (178.887)	€ (205.911)	€ (233.903)
marketing & sales	€ (9.595)	€ (106.914)	€ (112.758)	€ (206.316)	€ (323.007)	€ (411.823)	€ (467.805)
algemene kosten	€ (38.380)	€ (53.457)	€ (56.379)	€ (233.829)	€ (467.127)	€ (617.734)	€ (701.708)
operationele bedrijfskosten	€ (107.686)	€ (577.104)	€ (700.734)	€ (1.085.749)	€ (1.625.677)	€ (2.333.596)	€ (2.819.324)
EBITDA	€ 253.987	€ (50.924)	€ (403.602)	€ (459.982)	€ 1.643.578	€ 4.757.628	€ 8.197.353

Cash prognosis



Production numbers and turnover



Turnover from
methanol fuel cell units until 2030
€ 55,8 mio

Net cumulative cashflow
Until 2030
€ 5,9 mio

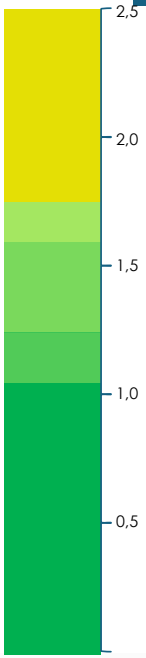
Annual turnover
> € 30.000.000
Production fully scaled up (2030+)

Business planning

Growth focus target:	Phase I development: *2025*	Phase II pilot: 2026	Phase III series 1 (Startup): 2027	Phase IV Scaling up: 2028
Markt en sales:	4x 3,7kW fuel cell	8x 3,7kW fuel cell 2-3x pilot 5-10 100kW LoI (pijplijn)	16x 3,7KW fuel cell 5x 100KW laders	8x 3,7kW fuel cell 16x 100kW laders
Team :	3 compagnons Growth to 4 FTE	3 compagnons 4 FTE	3 compagnons Growth to 7 FTE	3 compagnons Growth to 12 FTE
Product / Service:	3,7kW fuel cell Pilots 3,7kW BBA unit	3,7kW fuel cell Pilot 100kW unit	3,7kW fuel cell 100kW fuel cell & MCU	3,7kW fuel cell 100kW fuel cell & MCU
Operations:	Production & Service (3,7kW unit) Develop • Reformer • Fuel system • Charge interface	Production & Service (3,7kW unit) Develop • MCU (system) • Assembly prototype	Production & Service (3,7kW unit) Production 1st series (5 nos) Set up production Line and service organization	Production & Service 3,7kW unit Production & Service 100kW unit
Financiële resultaten:	Turnover €400,000 Secure funding : Debt €700,000 Equity €750,000 (pre-seed)	Turnover €500,000 Secure funding : Equity €1,500,000 (seed)	Turnover €2,700,000 Secure funding : Debt €1,200,000	Turnover €9,500,000 EBITDA positive

Funding

sources	In milions
ASK (equity)	**€ 0,75**
TBC (debt)	€ 0,15
INH (CLA)	€ 0,35
WIF (debt)	€ 0,20
Own investment (cash) Subsidies (SSEB and fliedlab)	€ 1,05



uses	In millions
Organization, overhead, BD & sales	€ 0,35
Charger unit design (engineering & testing)	€ 0,65
Reformer development and Investments in prototype (hardware)	€ 1,50
total	**€ 2,50**

ASK – investment proposition

Investments (equity) in 2025 and 2026, returns based on exit after 2032

IRR
14%

Cumulative Cashflow
(2025 – 2032)
> € 23 mio

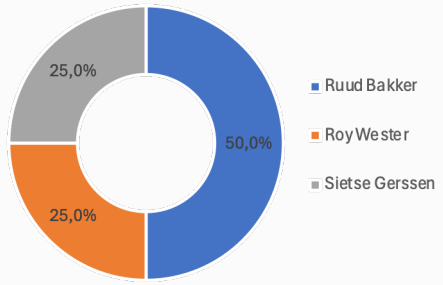
Value prognosis NGM
~ € 14 mio
(DCF discount rate 10% ROI 8y)

Pre-seed capital raise

2025
€ 750.000

for significant minority interest
in NGM group

huidig aandeelhouderschap



Seed capital raise
Intended

2026
~ € 1.500.000 equity
2027
~ € 1.200.000 debt

Why now?

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- ✓ Nitrogenoxide deadlock in Dutch sector makes the need for a solution extra urgent
- ✓ Our innovation contributes to a solution, not to a shift in the problem
- ✓ There is a concrete and growing demand from the market
- ✓ Now is the opportunity for mission-driven investor to get in early

A solution is only truly sustainable if it provides a profitable business model for the entire chain!