# THE mobile biomass granulation machine

June 2023







# Several challenges



- Import
- Indigenous production



The **EU** imports 60% of the energy it consumes, Switzerland 80%!

Biomass is an expensive residue.



The pellet production capacity of stationary plants is limited.



Yet biomass residues could supply 100% of household energy needs.

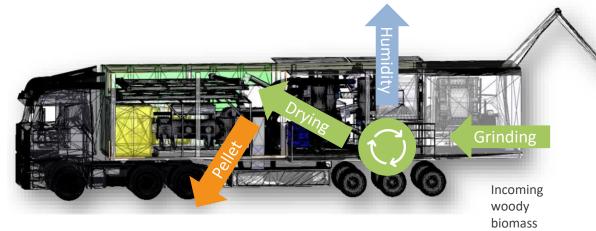




## A mobile factory



- A complete pelletising chain on a single trailer
- controls variation in the humidity of the raw material
- reuses part of the pellets produced to dry incoming wood residues



Pellet production ISO 17225

Fluidised-bed biomass drying (patented)

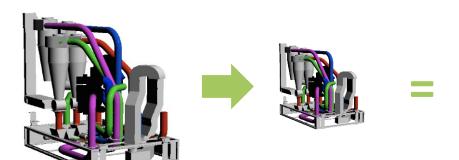




# Our patented technology

 $35 \, \mathrm{m}^3$ 

(5 m x 2.4 m x 2.6 m)



Patented **PROXIPEL** dryer

182 m<sup>3</sup>

(17.5 m x 2.6 m x 4.0 m)



Competitive dryers, **6x less efficient** 

At the same production capacity (1t/hour), PROXIPEL divides by 6 the volume needed to dry wood residues.







- Fresh wood
- Used wood
- Branches
- Vine beds
- Municipal road side cut
- Straw
- Mill dust
- Agricultural residues
- Agro-industrial residues
- etc.



# For many users

Solution user	Need
Forestry companies	Adding value to wood cuttings, marketing other products
Farmers and cooperatives	Adding value to an agricultural by-product
Municipalities	Processing waste, developing the local economy
Energy suppliers	Offering a 100% local and ecological product range
Composting and methanisation plants	Eliminating bulky waste and recycling it
Small and medium-sized sawmills	Turning sawdust into a high value-added product
Specialist waste treatment companies	Offer their customers an alternative to composting, market other products





# Removing constraints, boosting performance

Solution comparison	mparison PROXIPEL Stationary pelletising plant		Mobile pelletising unit	
Low Carbon Footprint				
Type of biomass processed				
Raw material moisture	10 à 50%	10 à 50%	10 à 20%	
Integrated grinding	YES	YES	NO	
Integrated dryer	YES (Patented)	YES	NO	
ISO 17225 compliance	YES (Guaranteed)	YES	NO	
Land footprint	0 m²	10 000 m²	0 m²	
Production capacity	1 t/hour	5 to 25t/hour	1 t/hour	
Investment required	CHF 0.9 MILLION	5-10 MCHF	CHF 0.8 MILLION	
Carbon footprint of pellets produced	12 g/kWh	45 g/kWh	12 g/kWh	











#### COMMANDE/OFFRE

Thermique > Pellets de bois > Acheter des pellets: Demander un devis et commander

En raison d'une pénurie exeptionnelle, nous ne pouvons pas accepter de nouvelles commandes pour le moment.



- > Commander du mazout de chauffage
- > Évaluation du marché du mazout
- > Evolution des prix du mazout
- > Changement aux pellets

- > Stations-service
- > Stations de recharge
- > TopShop
- > Infos sur les produits







## Our team

#### Management team



Richard Pfister, CEO, co-founder Serial entrepreneur, 3 viable start-ups created (>15 years experience)



Thibaud Marchais, CCO
Sales engineer, expert in building organizations and going abroad (>15 years' experience)



Jean-Yves Girod, CTO
Highly experienced mechanical engineer
(>30 years' experience)



Diana de Bernardy, Quality/CSR, co-founder Master's degree in environmental public relations (>15 years' experience)

### Our team

#### Strategic advice



François Vuille, Senior advisor & co-founder
Director of the Department of Energy, Canton of Vaud
Former Executive Director of the Energy Center, Ecole Polytechnique
Fédérale de Lausanne (EPFL)



Norbert Dischinger, Senior advisor (D)
European expert specialising in the energy, transport and building technology markets (>20 years' experience)



Philippe Dujardin, Senior advisor (F)
Expert in financial strategy and fundraising (>30 years' experience)





## The PROXIPEL offer (1)



Solutions for transforming wood waste into renewable fuel

#### A. SALES OF TRAILERS (900 kCHF)

For project developers, farmers, large local authorities, entrepreneurs, etc. By credit, leasing, etc.

#### **B. GREEN WASTE PROCESSING SERVICE**

Daily trailer hire, including operator and consumables

#### Proxipel adapts to its customers:

sale to customers interested in buying a mobile unit + pelletising service offer to others.







# The PROXIPEL offer (2)



Solutions for distributing the pellets produced, either by buyers of Proxipel units (1A) or by Proxipel's pelletising service (1B)

- **STORAGE**: silo, shed, big bag, etc.
- LOGISTICS: blower truck, portable blower, etc.
- COMMERCIALISATION OF PELLETS: marketplace access, provision of a buyer of last resort, material take-back, etc.



## Order book

Numerous expressions of interest in Switzerland, France and Belgium (2022 markets).

Local authorities very interested in the service.

Entrepreneurs through the purchase of units.

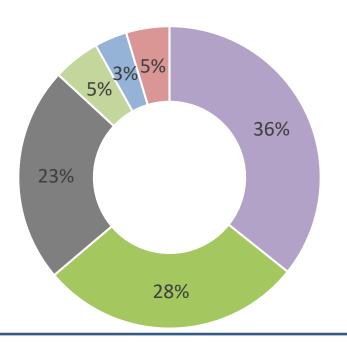
Order book	Units	SALES EXCLUDING VAT (CHF) Production	SALES EXCLUDING VAT (CHF) Operating
Confirmed orders of units	1	CHF 0.9 MILLION	
Pre-ordered units	10	CHF 9.0 MILLION	
Operating companies	2	CHF 1.8 MILLION	1.5 MCHF/year
Total	13	CHF 11.7 MILLION	





## What market for PROXIPEL?

#### Western Europe market



- Agriculture & Food (hay, Grain residuals, coffée bean paste...)
- Municipal bush and tree cuts
- Residuals from forest cuts
- Hard residuals from coposting
- Road side cut biomass
- Vineyard residuals





## What market for PROXIPEL?

"In France, 86% of waste is not collected or recycled. (FranceAgriMer)

Estimating the potential market	Volume	CA
Total untreated wood waste	300 Mt/year	
Wood waste accessible to the PROXIPEL solution (2% of the total)	6 Mt/year fleet of 3,000 trailers	
Mature trailer market (15-year lifespan)	200 units/year	For sale : CHF 180 MILLIONS

**Local authority sector** 

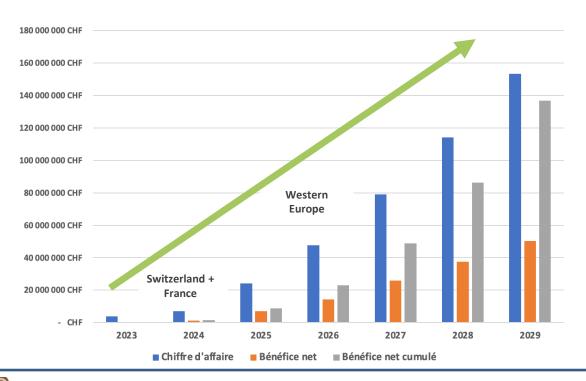
1 unit per 50,000 inhabitants







# Financial projections



#### Investments

- Investments secured until September 2023: CHF 5.1 million
- Current Fundraising 2023: CHF 2.0 million
- Minimum ticket: CHF 200 k

#### **Destination of funds 2023**

- Launch iof ndustrialisation
- Financing growth

#### 5 years from now (2028)

- Annual sales: CHF 114.1 million
- Annual net profit: CHF 37.6 million







## From idea to realisation

#### Our awards















2017	The French Ambassador's Prize
2018	Review: 50 Swiss start-ups to invest in
2020	Prix du 125 <sup>ème</sup> SEFA anniversary
2020	Seal of Excellence from the European Commission
2021	Solar Impulse Foundation
2021	Xylofutur certification
2022	Nyon Region Innovation Prize
2023	CHE 1 million guarantee from the canton of Vaud



## From idea to realisation

Our supporters

































