



by Robert W Jankowski, Andrzej Sumara
& Magda Radke

**Intelligent Biomass Gasification
for Energy Independence and
Carbon Credits**

GreenFlame

www.radke.priv.pl



GreenFlame – 10 Key Value Points



**Energy autonomy, CO₂ reduction, and new revenue –
in one scalable solution.**



Local Energy
Independence



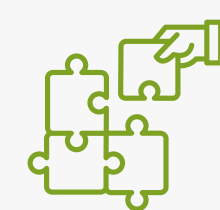
Waste-to-
Energy



Carbon Credit
Revenue



Biochar
Production



Regulatory
Compliance



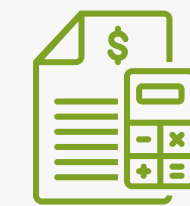
Decentralized
Scalability



Smart CO₂
Monitoring



Circular
Economy Model



New Business
for Farmers

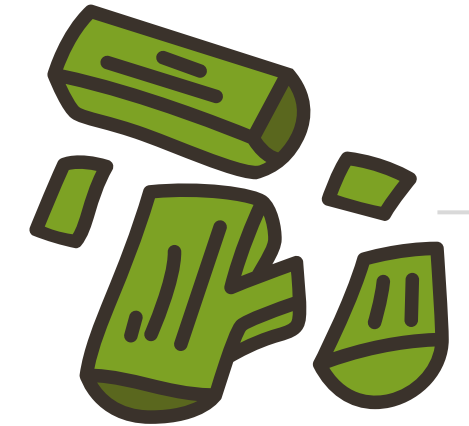


Climate Impact
at Local Scale

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The Problem



01

Wood Waste

Municipalities, sawmills, and farms generate vast amounts of woody biomass (wood chips).

02

Recycling with CO₂ emission

Current disposal methods (stockpiling, open burning) emit CO₂ and waste energy potential.

03

For small entities

No small-to-medium scale, decentralized solution to turn this biomass into value.

04

Decentralisation

Heavy energy dependence on centralized suppliers

05

Carbon credits

Carbon credit potential is unused by local actors (farms, municipalities).

06

Decarbonisation value

Pressure on carbon reductions and renewable energy use – most local entities lack practical tools to comply.

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Our Solution

GreenFlame is a smart, modular biomass
gasification system that:



01

Converts wood chips
into syngas (clean, local
energy)



02

Produces biochar
(carbon storage +
fertilizer input)

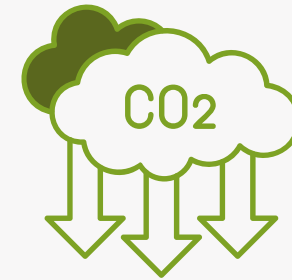


03

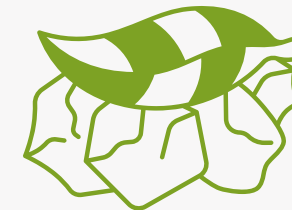
Enables users to
generate carbon credits

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Technology



Compact, low-emission gasification unit (TRL 6, moving to TRL 9).



Dual output: syngas + biochar.



Integrated CO₂ monitoring and credit calculation module.



Adaptable to local conditions and various biomass types (esp. fast-growing Paulownia hybrid Shang Tong)



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Market Opportunity



Poland:

2,477
municipalities

3,000+
sawmills

thousands of farms

EU:

>100 mln

tonnes of untapped
woody
biomass annually

**Carbon offset
market:**

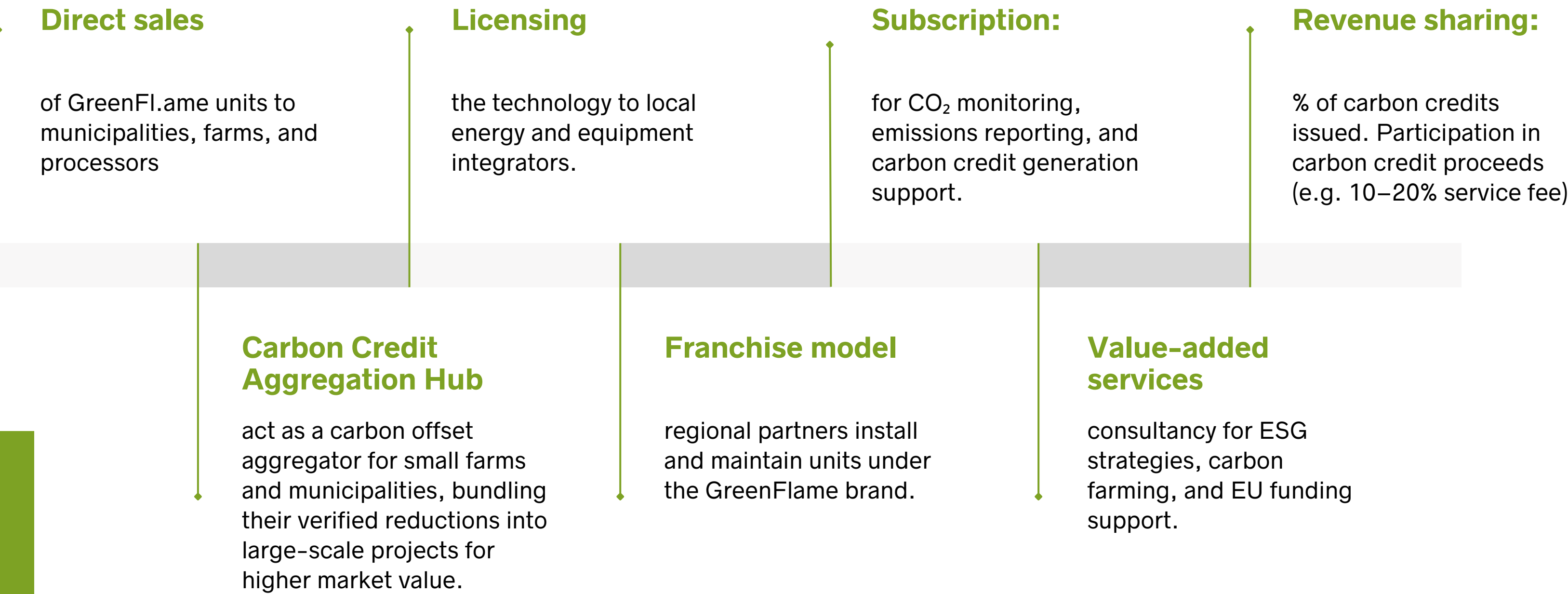
30%+
growing annually

(40–100 € per tCO₂)

Support from EU Green Deal, FENG, and carbon neutrality mandates.



Business Model





Traction



Functional prototype at TRL 6.



Positive initial performance tests.



First pilot partners.



SMART path PARP grant application.



Interest from climate-conscious companies in cleantech and agriculture.



Strong interest from municipalities.

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Competitive Landscape



Large biomass plants

Centralized, costly



We offer local & modular solution

Biochar startups

Only fertilizer



We combine energy + credits

Off-grid tech

Lacks carbon linkage



Full CO₂ reduction integration



GreenFlame uniquely combines local energy production with carbon credits, turning biomass waste into profit—where others offer only single-purpose solutions.



Thank You

Join us to ignite the future of decentralized, profitable climate tech.

What you gain as an investor:

- ✓ Entry into cleantech + agritech + carbon markets
- ✓ Shared revenue from hardware, carbon credits, and licensing
- ✓ Position in a fast-scaling, EU-aligned sector
- ✓ Impact you can measure – in CO₂ saved, energy produced, communities empowered

For more details & ticket sizes - Contact Us

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