Background & Needs of the Innovation

3Gt of CO$_2$e

Africa’s ports underperform as trade hubs

- **Inequality**: Energy access & ownership are very concentrated.
- **Dependency**: 300 Mt of fuels consumed by shipping annually.
- **Economy**: 2050’s infrastructure is built today.
Unique Selling Points

• Solving the issue of **sustainable feedstock supply** at scale.
• African-borne solution **maximising localisation**.
• Production and supply adjacent to **main trade routes** between Asia and Europe.
• Enabling the continued use of the established fossil **fuel infrastructure**, **carbon neutrally**.
Accelerate energy access for people of Africa and ensure a

**Just Energy Transition** to low carbon economies.

- Reduce emissions & health burden
- Improve GDP & trade balance
- Creating pull for deep sea trade
- Impact on the Labour market
# Comparison to other green energy solutions

<table>
<thead>
<tr>
<th></th>
<th>Safe to Humans &amp; Nature</th>
<th>No Competition with Food</th>
<th>Energy Density as blend-in fuel</th>
<th>Ready to Go</th>
<th>Unlimited Scalability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SeaH4</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Green H2</strong></td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Batteries</strong></td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
<td>?</td>
</tr>
<tr>
<td><strong>Ammonia</strong></td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>HVO</strong></td>
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<td>✗</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>Ethanol</strong></td>
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<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Lipid Extraction</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
<td>?</td>
</tr>
<tr>
<td><strong>Solar</strong></td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
<td>?</td>
</tr>
</tbody>
</table>

*SeaH4’s process is inherently different from Lipid extraction from micro-algae*
Transformative impact on SDGs

**Affordable & Clean Energy**
15k t of carbon neutral fuel/a

**Climate Action**
42k tons/a CO2e

**Life under Water**
13k t of dissolved CO2

**No Poverty**
enabling salaries for 1000ppl

**Good Health**
particle free, NOx and sulphur free

**Decent Work & Economic Growth**
spearheads for economic hubs & job creation

**Reduced Inequalities**
Designed for rural coastal communities

Pioneering socio-economic development in underdeveloped, low-to-no value natural areas.
Viability of cost

Cost forecast on renewable bunker fuels for shipping

Source: www.sea-LNG.org + SeaH4
## Profitability

<table>
<thead>
<tr>
<th></th>
<th>Jaques Saade</th>
<th>ValeMax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life time</td>
<td>14yrs</td>
<td>30yrs</td>
</tr>
<tr>
<td>Life time CO₂ savings</td>
<td>1.400.000t</td>
<td>2.100.000t</td>
</tr>
<tr>
<td>Life time CO₂ savings</td>
<td>133mn EUR</td>
<td>200mn EUR</td>
</tr>
<tr>
<td>Construction Cost</td>
<td>120mn EUR</td>
<td>105mn EUR</td>
</tr>
<tr>
<td>Annual Bunker Cost</td>
<td>33mn EUR</td>
<td>23mn EUR</td>
</tr>
</tbody>
</table>

- **Vessel Amortization via Carbon Credits:** 12yrs
- **Plant Amortization via Bunker Cost:** 10yrs
Geostrategic Context

Lake Victoria
Established Partners
Growth & Development Path

**PROTOTYPE PHASE**
2x Scientists & 6x management

**Outcome:**
IP | Detail design for next phase

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**PILOT PHASE A**
25x management & design

**Outcome:**
Site selection & procurement | EIA | Licenses & permits for pilot and full scale

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**PILOT PHASE B**
125x full staff range

**Outcome:**
First revenue | Launch of commercial products | Kickoff full scale plant installation | Industry validation

**Revenue:**
1t of CH₄ | 1t of CO₂ daily

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**FULL SCALE PRODUCTION**
700 - 1 000 full staff range

**Outcome:**
Achieving profitable operation

**Revenue:**
15k t/a LNG
13k t/a CO₂
42k t carbon savings/a

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**PAN-AFRICAN BRANCH OUT**
5x development team per country

**Outcome:**
Breaking ground for additional plants globally to accelerate scale up in MENA region

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2023

2024

2025

2027
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