

# Agsol on track to beat World Banks' projections by 5 years

MARKET INSIGHT BRIEF\_5

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**Agsol's solar milling system is set to beat the World Bank Group's 2019 forecast, reaching affordability targets five years ahead of the 2030 timeline.**

In the energy access sector, the term "Productive Use of Energy" (PUE) is now commonplace. However, when the World Bank released its landmark Productive Use Leveraging Solar Energy (PULSE) report in 2019, PUE was still an emerging concept.

The PULSE report explored the market for small-scale solar appliances that generate a "productive" outcome – either by income generation, improved labour efficiency or both. It highlighted that most people without access to modern energy are smallholder farmers, making agricultural value chains the most promising area for productive energy solutions.

Among the various PUE technologies, the report identified three with the highest potential for scale and impact: solar pumping, refrigeration, and agro-processing. It noted that while solar pumping and refrigeration were gaining maturity, solar agro-processing was in its infancy.



## Efficiency: the catalyst for affordability

Efficiency is the key to making solar milling affordable. By improving the efficiency we can significantly reduce both the size and cost of the solar system, in much the same way as efficient LED lights unlocked the viability of the solar lighting industry. Agsol is following a similar path, making huge strides in appliance efficiency to drive down costs and accelerating access for communities that need it most.

# Achieving affordability sooner than expected

## 2019

“The main driver of a relatively low serviceable market today is the high price of USD 1,625 per processor unit. For our projections, we assume a reduction in end prices of 35% by 2030.” (PULSE report, Page 23)

## 2024

Currently costing USD 1,200, in the next 12 months Agsol will reduce costs by a further 15% as we move into advanced mass manufacturing processes. **This will not only beat the PULSE report prediction by 5 years, but also represents a >30% cheaper alternative to a diesel mill.**

## 2019

“Neither the PULSE technologies themselves nor the markets for these appliances are yet mature. For the most part, PULSE appliances are still at an early product development stage and performance/ efficiency has not improved sufficiently for the technology to make sense in the mass market.” (PULSE report, Page 8)

## 2024

Over the last five years, Agsol has moved from R&D into commercialization. **The MicroMill is now over 2.5 times more efficient than its closest electric mill counterpart.** With negligible operating costs, profitability is more than doubled compared to diesel mills, allowing millers to pass on savings to deliver cheaper food outcomes to vulnerable communities.



## A growing market opportunity

Grain flour milling is widely recognized as a key opportunity for electrifying rural Africa. The World Bank study estimated a market potential of 937,000 units in Sub-Saharan Africa, while a March 2024 Cross Boundary publication reported the serviceable market for solar and electric mills is expanding, representing a \$2.5 billion opportunity. Today, more than half a billion people in SSA still depend on diesel mills to process their essential staple foods.

In preparation for growth, Agsol established a manufacturing facility in late 2023 capable of producing 500 units per month. In mid-2024 we shipped our first container of product to Kenya which is rapidly selling out. We have also forged strong distribution and financing partnerships in Kenya, ensuring our solutions reach those who need them most.

# Vision for a sustainable future

Creating a distributed network of solar-powered milling stations reduces diesel consumption, saves users time and money, and delivers healthier uncontaminated flour. Functioning as a vital anchor load, milling can expand tier 4 energy access for lower-income households and businesses. Our vision is to eradicate diesel-powered mills with clean tech alternatives, paving the way for a more sustainable and prosperous future.

Agsol's journey from vision to reality has not only met but exceeded the forecasts made in the 2019 PULSE report. **By achieving affordability and efficiency milestones ahead of schedule, we are driving a transformation in Sub-Saharan Africa's milling industry.** Our innovative solar-powered MicroMill is a testament to the power of renewable energy in creating a cleaner, more resilient, and low-carbon future.

## Citations:

- The Market Opportunity for Productive Use Leveraging Solar Energy (PULSE) in Sub-Saharan Africa: [Lighting Global and World Bank Group](#)
- Innovation Insight Electric grain milling – a USD \$2.5 billion opportunity across Sub-Saharan Africa (SSA): [CrossBoundary](#)