

# SUNSPOT™

Winner – Renewable  
Transformation Challenge 2019



<https://sunspotpv.com/>

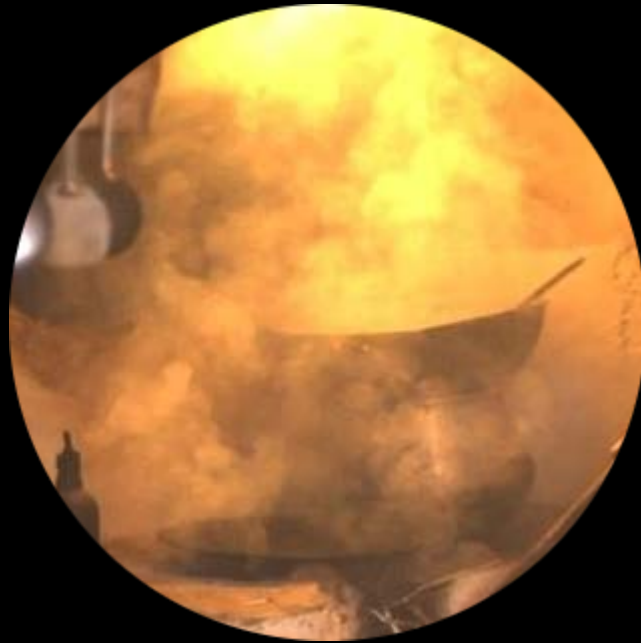


# The Problem



## Nearly half the world

continues to cook with wood, charcoal, and other biomass fuels, primarily over "three stone" fires



## Toxic emissions

from cooking fires are a leading cause of disease and death, *especially among women and children*



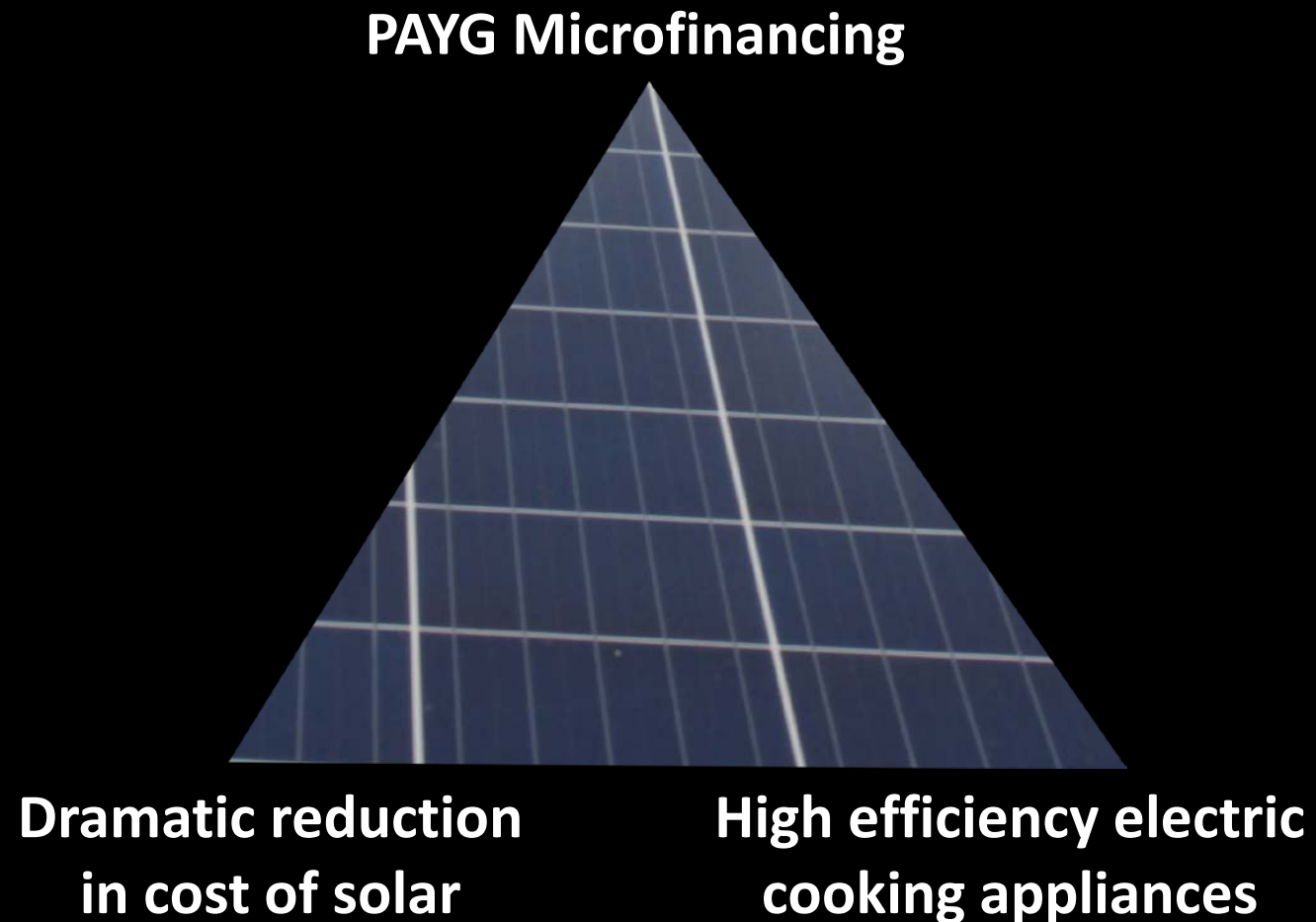
## Deforestation

and erosion of valuable cropland result from continued use of wood and charcoal for cooking

# The Solution

## SUNSPOT™ Solar Electric Cooking

- Electricity produced by low-cost PV modules
- Use of high efficiency consumer appliances such as induction cooktops and electric pressure cookers.
- Monthly payments using Pay-As-You-Go (PAYG) microfinancing



# The Opportunity

Three billion people cooking with biomass – 500 million six-person households.

More than 800 million people lack access to any electricity.



Agricultural co-ops are a natural partner in this type of development

Potential market is both rural and peri-urban, primarily in Sub-Saharan Africa, South and Southeast Asia and Central/South America.

# Product

SUNSPOT™ solar electric cooking system supplies energy to cook typical meals for a family of six plus electricity for lighting and mobile phone charging.



700 Wp PV, deep-cycle lead-carbon batteries and dedicated power/control electronics with PAYG compatibility, induction cooktop with starter set of pots.

# Benefits



## Improved health

of women and children most affected by cooking through elimination of toxic cookstove emissions.



## Reduced danger

of burns and house fires by getting rid of open flames.



## Increased Productivity

through improved health and reduced time collecting fuel and maintaining cooking fires.



## Less pressure

on local forests and consequent erosion of valuable croplands.

# Why Now?



The market is growing, and the need is great. Existing products have shown limited benefits.

- 1.2 million PAYG solar home systems sold in 2019, with a decline in 2020 due to CoVid issues. (Ref GOGLA)
- Increase in adoption of larger (50+ Wp) systems
- Increased adoption of non-lighting appliances
- First SUNSPOT pilot (10 systems) in Haiti coordinated with EarthSpark, funded by UK-DFID/MECS.
- Currently developing larger scale pilots (500+ systems) in Guatemala, Kenya and Philippines.
- Planning continues for scalable business rollout.



# Competitive Advantage

At scale, SUNSPOT™ will provide critical services such as clean cooking, lighting and mobile phone charging at a cost that is competitive with current expenditures.





# The SUNSPOT Team



**Doug Danley**

Co-Founder  
Technical, Vision



**Teresa Danley**

Co-Founder  
Consumer acceptance,  
Small business support



**Paul Carroll**

Engineering design,  
Business operations



**Vladimir Brunstein**

Power and control electronics

# User Experience



*“Across the board, participants were very excited about the electric cooking solutions. All participants responded that electric cooking saved them time compared to status quo cooking.”*

Pilot project in Haiti is confirming rapid acceptance and many benefits, but more pilots are needed to gain knowledge in different cultures.

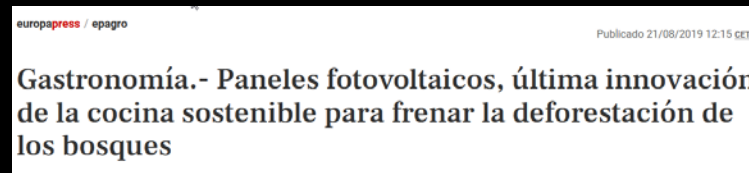
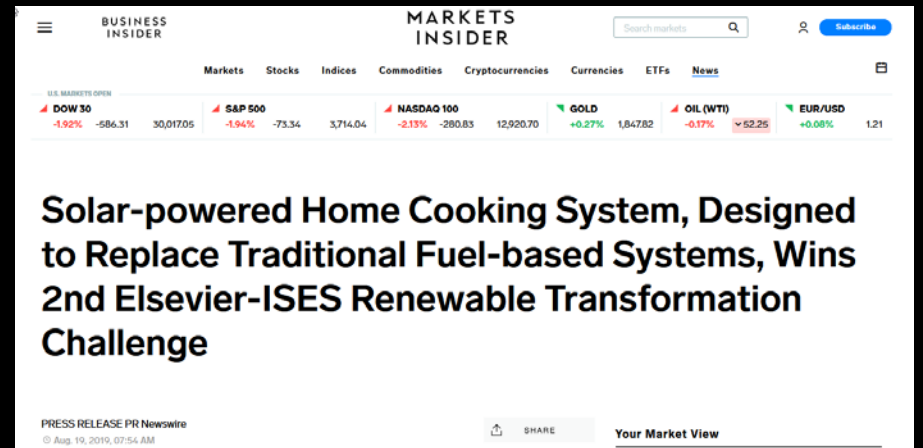


*“One participant who has weak health mentioned the benefits of not having to be exposed to the heat of the charcoal during cooking and that electric cooking is beneficial for her health. Another testimony of one participant was how the new cooking system was convenient for her when making a tea at night after she got sick.”*

# Awards / Press

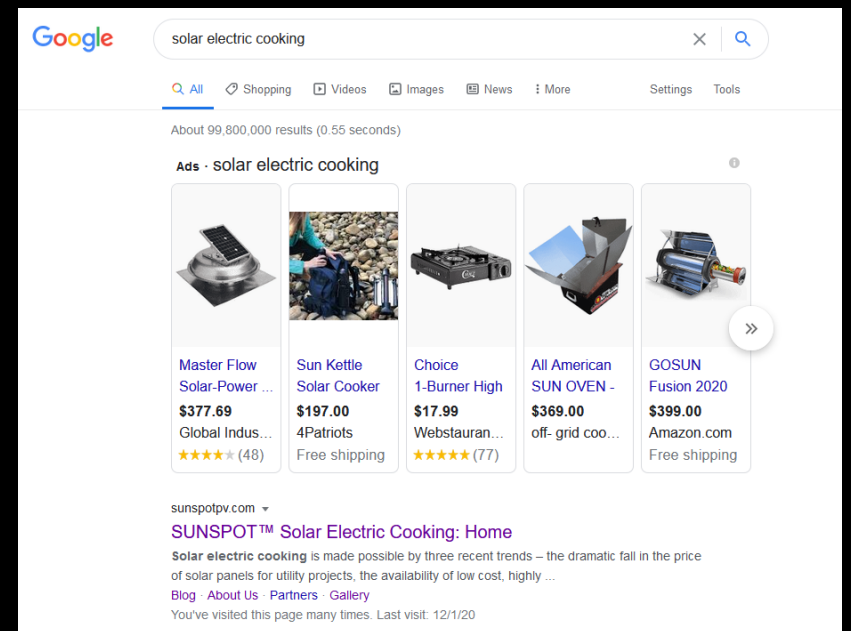


U.S. DEPARTMENT OF ENERGY



Photovoltaic panels, the latest innovation in sustainable cooking to halt deforestation of forests

by Karen Duque | 22/08/2019 | in Uncategorized | 134



**“Why do we do this?”**

“We choose to do [these] things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills...”

*John F. Kennedy 1962*

A woman in a teal shirt and a man in a plaid shirt are talking to a woman in a headscarf in a rural setting. The woman in the teal shirt is smiling and looking towards the woman in the headscarf. The man in the plaid shirt is also looking towards the woman in the headscarf. They are standing in front of a brick building. The background shows a dirt area with some yellow containers and a wooden bench.

# SUNSPOT™

## SOLAR ELECTRIC COOKING SYSTEM

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