

**Third CRS-Vatican Conference on Impact Investing –**  
*Scaling Investment in Service of Integral Human Development*

**Integral Ecology –**  
**Innovative Finance and Climate Change**

**Dr. Ellen Dorsey**, Wallace Global Fund

**Mr. Michael Rauenhorst**, Social Investment Managers and Advisors

**Ms. Radha Kuppalli**, New Forests

**Ms. Bená Burda**, Maggie's Organics, Clean Clothes Inc.



# Innovative Finance and Climate Change

Third CRS-Vatican Conference on Impact  
Investing

Radha Kuppalli  
Executive Director, Investor Services, New Forests  
10 July 2018

New Forests invests in sustainable and productive landscapes in Southeast Asia, Australia, New Zealand, and the United States.







The world's forests and forest soils store more carbon than can be found in the atmosphere.









More than 13 million people are employed in the formal forest sector, and more than 300 million people live in forests.









The amount of wood we take from forests and plantations each year may need to **triple by 2050** to meet the world's growing demand.





**ບໍລິສັດ ແມ່ຂອງ ປູກຕົ້ນໄມ້ ຈຳກັດ**  
**Mekong Timber Plantations**

ເລກລະຫັດວິສາຫະກິດ/Enterprise ID: 01-00008330 442 56 (A/1)

ເລກທີ/Enterprise No: 0024 /ຈທວ

ບ້ານ ສອງເສຍຸ ເມືອງ ຫົມກຸບ ແຂວງ ສຳມັວນ, ໂທ/Tel: 051 620049

Songhong Village, Hinboun District, Khammouane Province





Sand Bed No: 03

Species: Eucalyptus

Class Name: PC 3113

Planted Date: 05 November 2017

Number of Plants: 1,329

Date of Harvest: 23 November 2017





Private investment in forests is a substantial opportunity to support rural economies, reduce poverty, and provide gender equality benefits.











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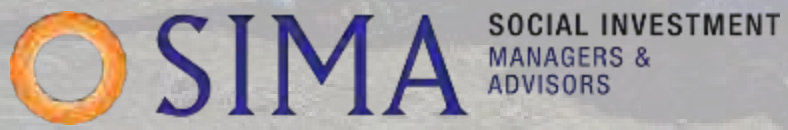
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## SIMA Off-Grid Solar and Financial Access Senior Debt Fund I, B.V.



# ENERGY POVERTY

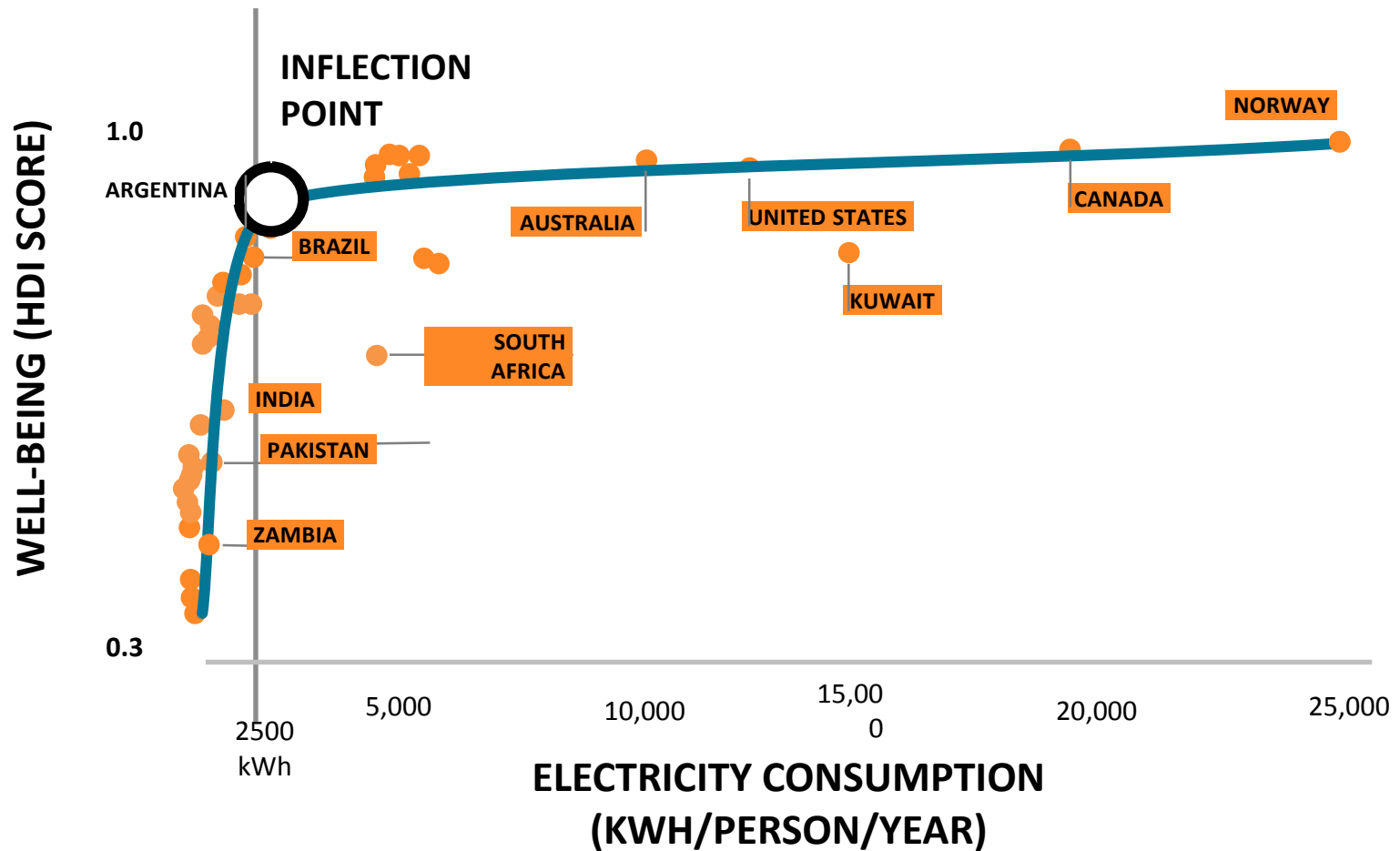
1.2 billion people in the world do not have electricity.

95% of these people live in Sub-Saharan Africa and Asia.



An image of Earth's city lights. The darkest areas are the least developed.

# HUMAN DEVELOPMENT INDEX AND ELECTRICITY



# OFF-GRID SOLAR EQUIPMENT AND COMPANIES

## PORTABLE SOLAR LIGHTS



\$5 – 60



0.5 – 3 Watt Solar Panel  
lithium-ion battery



Mobile charging  
on some models

Sample  
Companies



## SOLAR HOME SYSTEMS



\$100 – 1,000 made affordable through  
mobile Pay as You Go installments



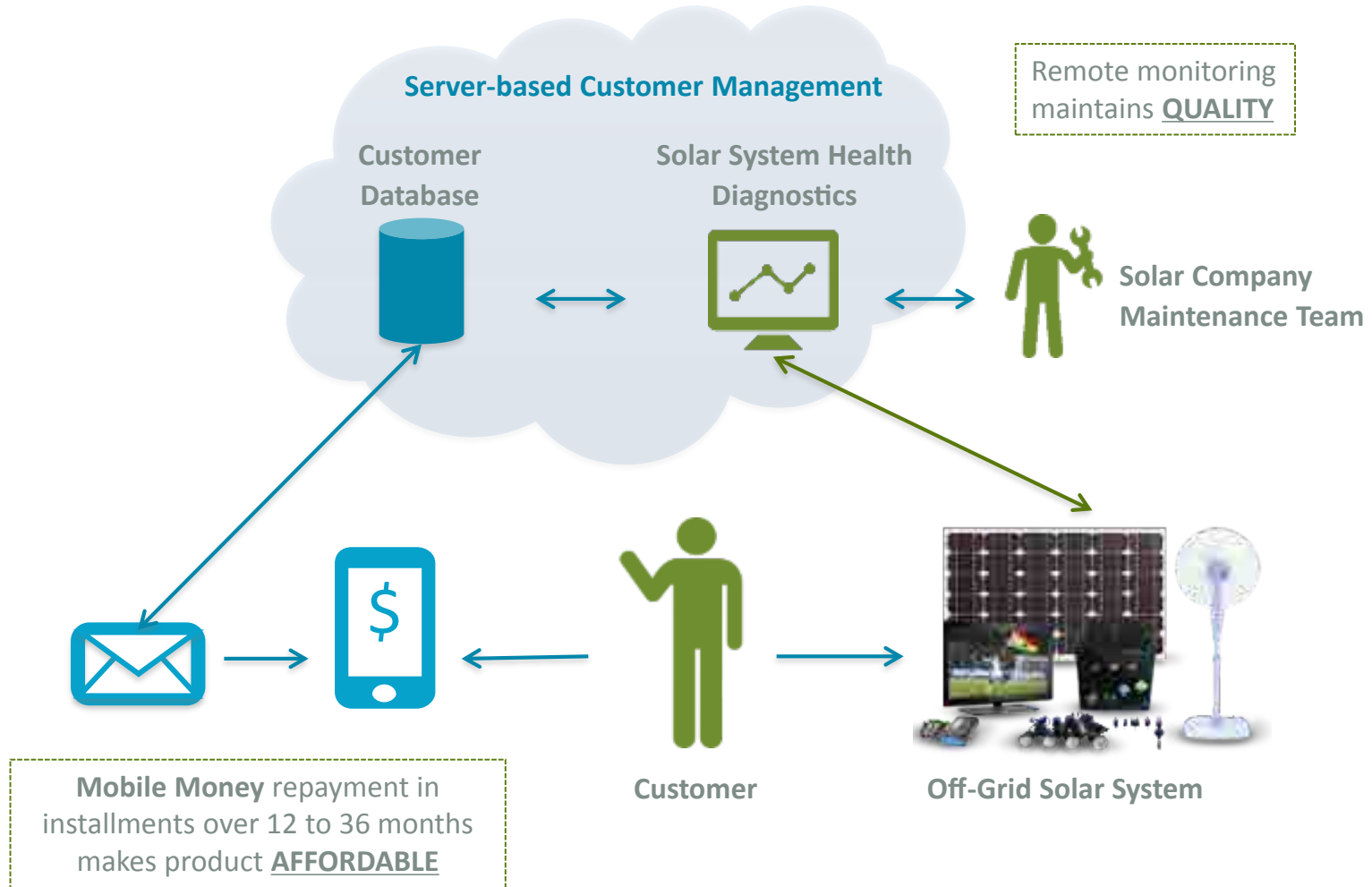
4 – 200 Watt Systems lithium-ion  
battery, typically



Multi-room: 4–10 LED lights, mobile  
charging, fridge, fans, TV



# TECHNOLOGY AND PAY-AS-YOU-GO (PAYG) MOBILE PAYMENTS





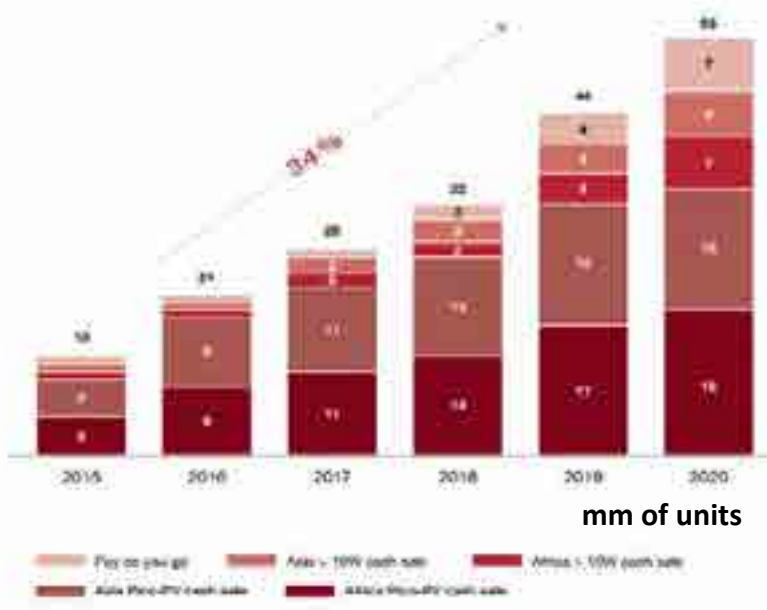
# FINANCING NEEDS TO GROW OFF-GRID SOLAR MARKET

By 2020:

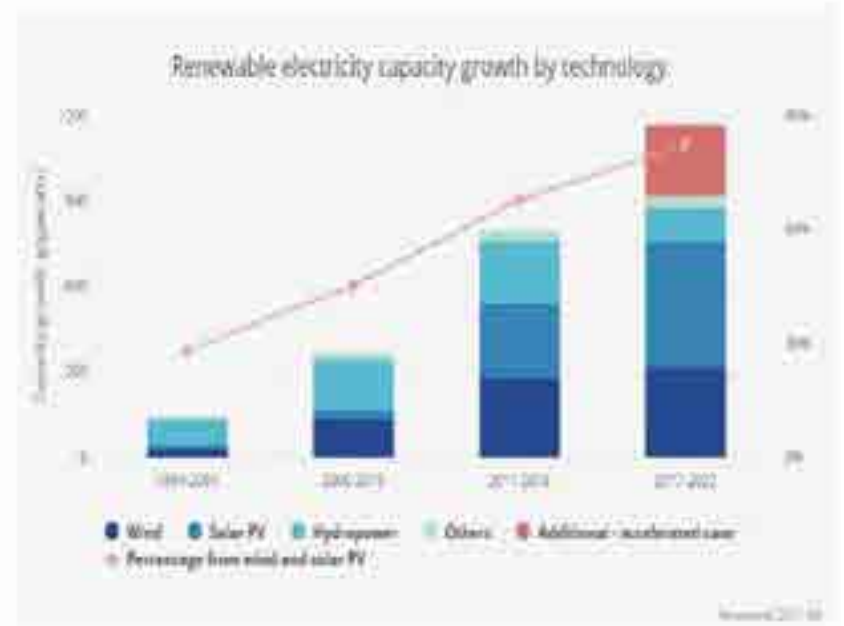
- \$3 Bn annual financing required by Off-Grid Solar companies
- 34% annual unit growth projected

From 2017-2022:

- Solar represents the largest annual capacity additions for renewables, above wind and hydro



Source: Bloomberg New Energy Finance



Source: International Energy Agency

# BLENDED FINANCE FUND STRUCTURE



A 4-year,  
US \$75 million  
Senior Debt Fund

Assets	Liabilities	Credit Protection (USD)	Credit Protection (% of Total Fund Size)	
30-50% Microfinance Institutions w/ solar asset backed micro-financing programs	<b>Super Senior Tranche</b> USD \$29.5 million Coupon: 3.35%	\$47.5M	63.4%	
50-70% Off-Grid Solar Companies	<b>Senior Tranche</b> Size: USD \$35.0 million Coupon: 5.35%	\$12.5M	16.7%	
	<b>Junior-A Tranche</b> Size: USD \$9 million Coupon: 7.35%	\$7.5M	10.7%	African Guarantee Fund is providing a <b>first loss guarantee</b> on the Junior tranches
	<b>Junior-B Tranche</b> Size: USD \$1.0 million Coupon: 1.75%	\$2.5M	4.0%	<b>USAID</b> enabled SIMA to add an additional \$1.0M Junior-B tranche
	<b>Catalytic Tranche</b> Size: USD \$0.5 million IRR: 20.19%	\$2.0M	2.7%	<b>Catalytic Credit Protection</b> = \$1.3M modeled losses (1.8%) + \$0.7M excess spread (0.9%)



# SIMA FUND I'S DIRECT SOCIAL IMPACT

Over 4 years, the SIMA Off-Grid Solar and Financial Access Senior Debt Fund I aims to:



Provide Electricity Access to over 1.25 mm beneficiaries



Reduce 4.6 million tons of CO2 emissions



Promulgate an industry Code of Conduct

SIMA Code of Conduct covers:

- Product quality (2 year+ warranties)
- Good customer service, and
- Value to the customer

# SOCIAL IMPACT FRAMEWORK: ALIGNMENT OF BUSINESS & SOCIAL GOALS



# ALIGNMENT WITH SUSTAINABLE DEVELOPMENT GOALS

*Off-Grid Solar effects 10 out of the 17 SDGs created by the United Nations.*

*Tracking metrics align with Global Off-Grid Lighting Association (GOGLA) and IRIS metrics of Global Impact Investors Network (GIIN)*

01	No Energy Poverty	Cost of Product-I Cost of Alternative Cost of Alternative
02	Good Health And Well Being	# of Households where Solar Products replaced harmful products
03	Improve Gender Inequality	# of Units Sold to Women
06	Sustainability Clean Water And Sanitation	# of Companies funded with covenants that promote responsible production
07	Affordable And Clean Energy	Units Sold x Energy Capacity of the Product

09	Industry Innovation & Infrastructure	# of Companies funded with covenants that promote responsible production
10	Reduced Inequalities	Average Household Size x # of Products Sold
12	Responsible Consumption & Production	# of Companies funded with covenants that promote responsible production
13	Climate Action	Units Sold x (Greenhouse Emissions of Products Replaced – Greenhouse Emissions of Product)
17	Partnerships For The Goals	# of Companies funded with covenants that promote responsible production

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## In search of a better Tortilla Chip

