

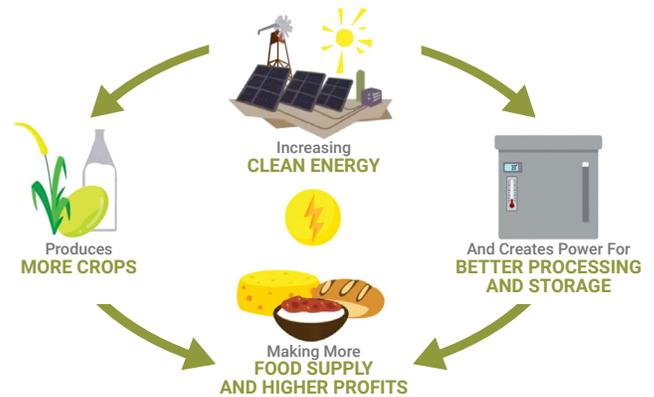
# POWERING AGRICULTURE:

AN ENERGY GRAND CHALLENGE FOR DEVELOPMENT



## MEETING AGRICULTURE'S NEED FOR CLEAN ENERGY TO FEED THE DEVELOPING WORLD

The United Nations Food and Agriculture Organization projects that by 2050 global food production will need to increase 70 percent over 2005–2007 levels to meet the demand of a growing world population expected to reach 9.6 billion people.



For food production to keep pace and feed the world, there will need to be an increase in agricultural production resulting in an increased demand for energy. Already the agri-food supply chain accounts for 30 percent of the world's energy consumption as reported by the International Renewable Energy Agency.

The negative consequences of this increased need for energy include a vulnerability to fluctuating energy prices that can negatively impact food production especially in the developing world, and a significant growth in greenhouse gas emissions within the agricultural sector from the use of primarily fossil fuels to generate the needed electricity.

### An Energy Grand Challenge

In 2012, **Powering Agriculture: An Energy Grand Challenge for Development** was launched by its Founding Partners—the United States Agency for International Development, the Government of Sweden, Duke Energy Corporation, the Government of Germany, and the Overseas Private Investment Corporation—to catalyze resources and focus attention on the lack of access by many farmers and agribusinesses in developing countries to reliable, affordable

and clean energy. This limits their ability to adopt modern agricultural practices, increase food production, improve efficiency of their operations and benefit from broad-based, low-carbon economic growth.

### Barriers to Growth

The Powering Agriculture Founding Partners recognize that many farming communities face substantial barriers in incorporating clean energy solutions into their operations. Often farmers are not aware of what technology is available, the technology that is available does not match the performance characteristics or price points required in emerging markets, or there is little appropriate financing to assist in paying the relatively high, up-front capital costs of new technology.

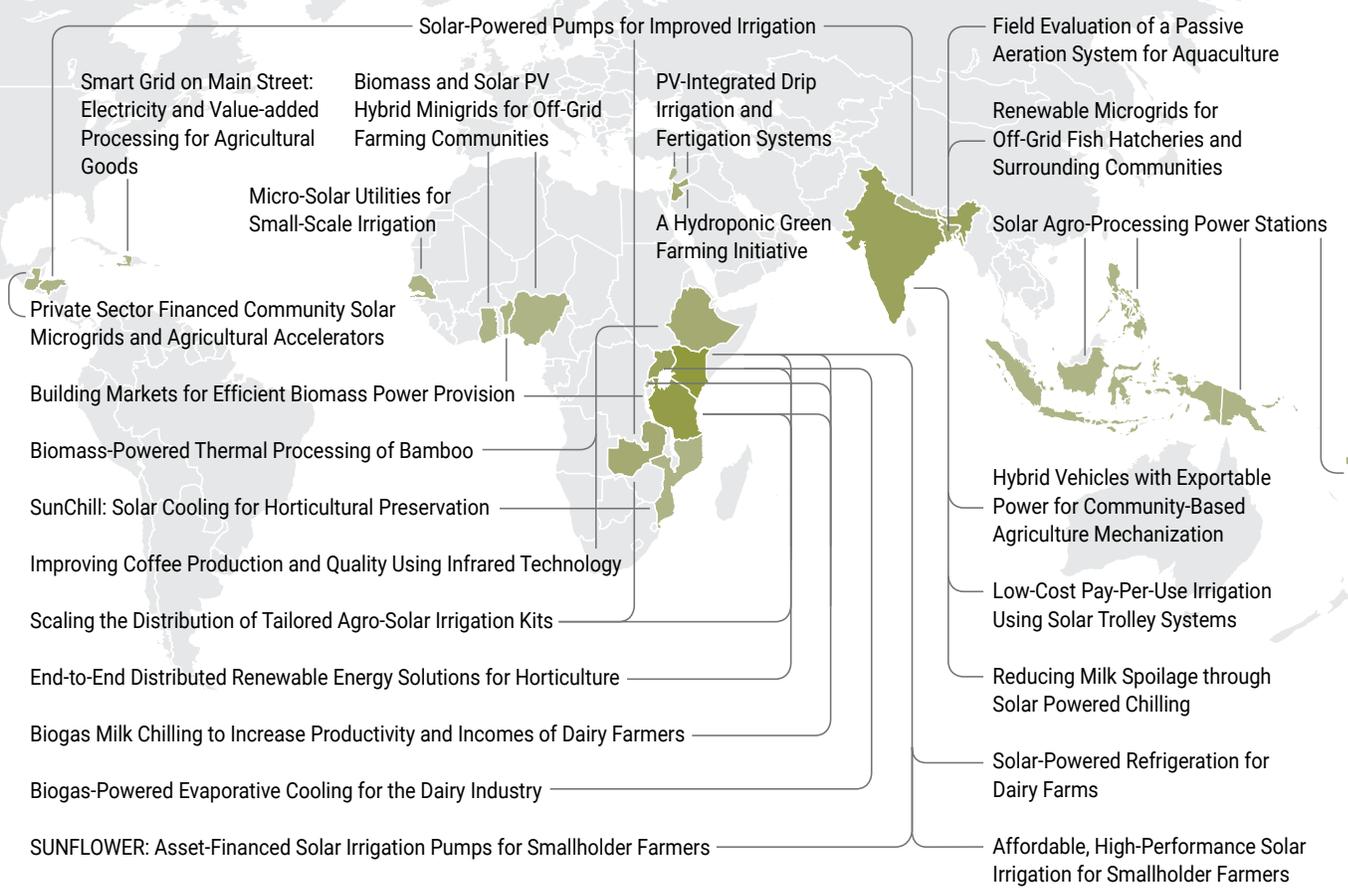
### Leveraging Funds for a Lasting Impact

**Powering Agriculture: An Energy Grand Challenge for Development** utilizes the financial and technical resources of its partners to promote new ideas and innovation at the point where clean energy and agriculture intersect—the clean energy/agriculture nexus.

**Powering Agriculture: An Energy Grand Challenge for Development** supports the design and expansion of sustainable business models that link clean energy enterprises with farmers and agribusinesses in developing countries. This is achieved by:

- 1** Providing small grants (\$500,000–\$2,000,000) to entities to design, pilot and deploy clean energy solutions to different points along the agricultural production cycle—from obtaining agri-inputs, planting, irrigation and harvesting to processing, transportation and storage.
- 2** Leveraging funds for a global financing facility to provide guarantees to encourage private sector equity and debt investments within the clean energy/agriculture space.
- 3** Identifying and supporting clean energy solutions that can be brought to commercial scale, and integrated within regional/national agriculture production and food security programs.
- 4** Hosting an online knowledge management platform to document lessons learned, promote effective technologies and business models, and foster continued engagement among stakeholders interested in exchanging ideas about the clean energy/agriculture nexus.

### Powering Agriculture's Current Clean Energy Solutions



### A New Approach to Solving Development Problems

**Powering Agriculture: An Energy Grand Challenge for Development** is the third in a series of six Grand Challenges for Development that USAID has initiated with international partners. The Grand Challenge for Development (GCD) model is designed to focus global attention and resources on specific, narrowly defined international development problems, and to promote innovative approaches solving them. GCDs encourage solutions that build on physical and social science

research and technological advancements, and aim to engage new actors that might otherwise not receive support through traditional international development programs. Importantly, the model supports solutions with the potential to achieve scale in low resource settings by, among other things, leveraging commercial investment and financing.

For more information, visit [PoweringAg.org](http://PoweringAg.org)