

Clean cooling technologies and market-approaches to scaling-up deployment

June 2020



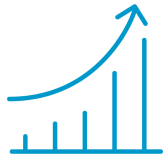
Our Goals

CLASP's Mission aims to achieve two broad goals:

1. Mitigate catastrophic CLIMATE change through appliance efficiency.
2. Increase ACCESS to energy services for the underserved.



Policy tools: instrumental to scale availability & accessibility of highly efficient cooling technologies



MEPS



Comparative Label



Endorsement Label



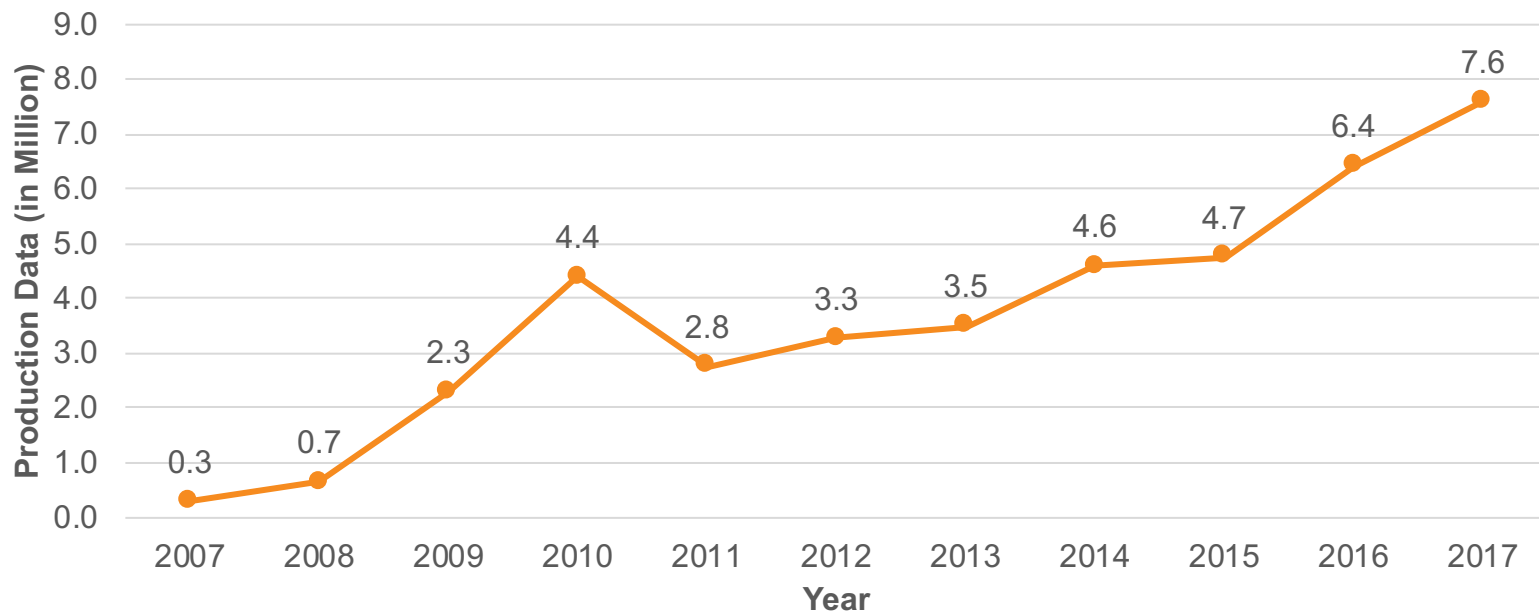
Bulk Procurement specification

India: how energy-efficiency policies transformed space cooling market



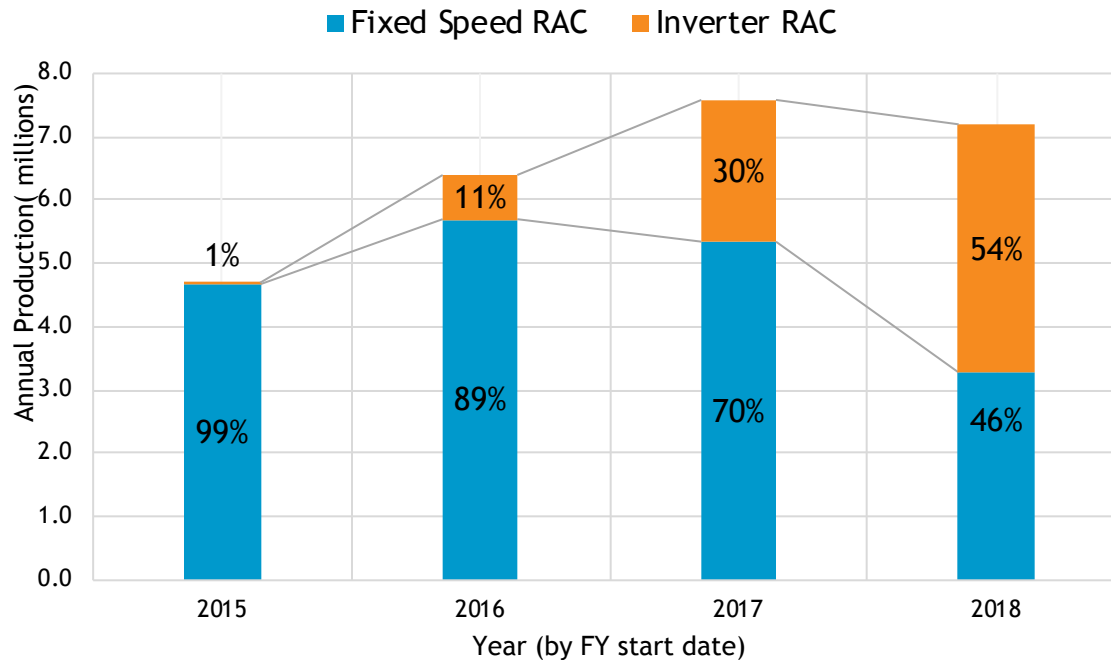
- Relatively low market-average efficiency (EER of 2.8 W/W) in 2011
- Low inverter market share (<1%) in 2011
- Influential and skeptical industry
- Rapidly growing market driving rapidly growth in electricity demand

India RAC Market Growth 2007-2017



India: energy-efficiency policies for room ACs scaled penetration of the highly efficient inverter technology

Market penetration of Inverter RAC, 2015 - 2018



Source: BEE

Energy-efficiency policies also support climate mitigation efforts:

- BEE has regulated nearly every cooling appliance on its market with impressive results
- Recent policies for all cooling products will avoid **215 MTCO₂ cumulatively by 2030**

Global LEAP Awards + RBF

1. Identify Best-In-Class Off-Grid Appliance & Productive Use Products

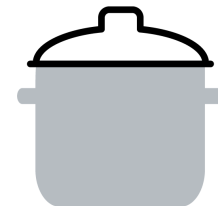
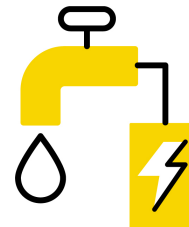
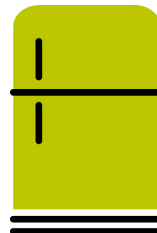
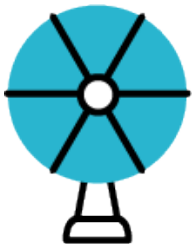


- Global LEAP competitions identify and promote leaders in early-stage product markets and encourage new entrants
- The Global LEAP testing process develops technical foundation for long-term market growth (e.g., test methods)

2. Bring Those Products To Market At Scale



- Results-based financing (RBF) reduces financial risks associated with large-scale procurement of Global LEAP products
- The financing catalyzes rapid market growth through new and expanded distribution channels
- Flexible working capital allows early movers to pilot new product types and distribution strategies



Outcomes at a Glance

Previous Rounds

Fans, TVs, Refrigerators (2017-19)

>\$2.9M

disbursed



31

participating
companies



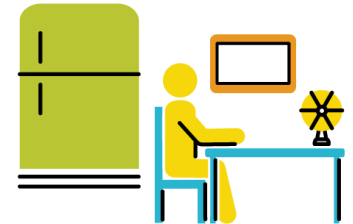
264,852

products sold



1,215,000

beneficiaries



Current Round

Refrigerators and Solar Water Pumps (2019-20)

>\$1.1M

allocated



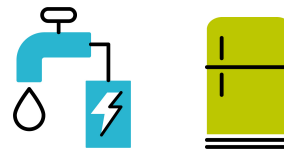
70

participating
companies



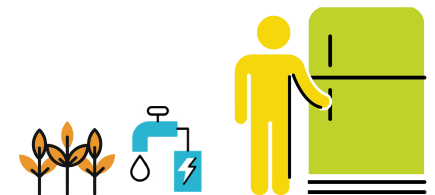
12,859

products
being sold



70,000

estimated
beneficiaries



Cooling efficiency innovation

Efficiency improvements between refrigeration products in the 1st round of the competition (2016-17) and the 2nd round.

Energy efficiency (EE, kWh/m2)	2019	2016-17	EE improvement
Finalists Average	0.0252	0.0285	12%
Winners Average	0.0142	0.0198	28%
Competition Average	0.0229	0.0260	12%



Global LEAP-RBF for Off-Grid Fans in Bangladesh

200,000+
best-in-class
off-grid fans

500,000+
beneficiaries

- Global LEAP administered two increasingly successful rounds of off-grid fan competitions in 2016 and 2017
- With support from EnDev, over \$1.5 million in incentives was allocated to support procurement of these best-in-class fans in Bangladesh



<https://globalleapawards.org/fans>



Impact of Global LEAP-RBF Fans in Bangladesh

- 94% - the fan **extended their productive time** by an average of **2 hours and 20 minutes each day**
- 92% - noticed an **improvement in the health of their family** reporting reductions in dehydration and perspiration
- 90% of customers surveyed powered their fan with a **new or pre-existing solar home system kit**.
- 91% - were satisfied with their purchase and **89% stated they would recommend a fan** to others

1,600
telephone
surveys



<https://efficiencyforaccess.org/updates/off-grid-fans-deliver-a-range-of-socio-economic-and-health-benefits-for-households-and-businesses-in-bangladesh>

Global LEAP Off-Grid Cold Chain Challenge (OGCCC)



An international competition to identify and promote the most energy-efficient, sustainable and cost-effective technologies that can meet the **cold storage requirements** for fresh fruits, vegetables and dairy products



Business Models

- Cooling as a Service (CaaS)
- Pay-as-you-store
- Leasing Models

<https://globalleapawards.org/ogccc>



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