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*Case studies of many of USICEF’s project developers are highlighted throughout the report.
SCALING-UP DISTRIBUTED SOLAR POWER: THE NEED FOR USICEF
India’s distributed renewable energy sector is an attractive market to invest in, and requires significant investment to meet national targets.

The Government of India plans to install 175 GW of renewable energy projects by 2022.

Despite India’s installed capacity rising six-fold to nearly 86 gigawatts in 2019, reaching the 2022 target still seems challenging.

While India has made strides in terms of utility scale installation, only one-third of distributed generation targets are expected to be met by 2022. (Source: JMK Research)

**Annual renewable energy installation trends in India**

<table>
<thead>
<tr>
<th>Year</th>
<th>Utility Scale (kW)</th>
<th>Rooftop (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>8301</td>
<td>715</td>
</tr>
<tr>
<td>2018</td>
<td>6721</td>
<td>1140</td>
</tr>
<tr>
<td>2019</td>
<td>6568</td>
<td>1836</td>
</tr>
</tbody>
</table>

Source: Bridge to India
India requires focused solutions to financing barriers in distributed renewable energy

<table>
<thead>
<tr>
<th>FINANCIAL BARRIERS</th>
<th>SOLUTIONS - MARKET NEEDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Limited information and validation on bankability and impact of business projects.</td>
<td>Portfolio preparation support</td>
</tr>
<tr>
<td>• Small ticket size investments leading to high transaction costs</td>
<td></td>
</tr>
<tr>
<td>• Lack of transaction structuring skills and legal robustness</td>
<td></td>
</tr>
<tr>
<td>• Resource assessment and credit quality of rooftop projects</td>
<td>Credit guarantee mechanism</td>
</tr>
<tr>
<td>• Execution abilities of DRE companies on proposed plans</td>
<td></td>
</tr>
<tr>
<td>• Lack of balance sheet strength and the inability to meet standard lending conditions such as collateral, debt, service coverage ratio etc.</td>
<td>Project financing through venture debt characteristics</td>
</tr>
</tbody>
</table>
WHAT IS USICEF & HOW DOES IT WORK?
The U.S.-India Clean Energy Finance (USICEF) initiative is India’s first project preparation and pipeline development facility to help promising distributed solar projects develop into viable investment opportunities and drive long-term debt financing.

USICEF is a critical step towards increasing access to reliable energy in underserved regions in India.
USICEF stems from a partnership between the Indian Ministry of New and Renewable Energy, the Overseas Private Investment Corporation (OPIC), and a consortium of foundations and investors.
How USICEF works: 5-step process

1. CALL FOR PROPOSALS
   The Project Developer applies for a USICEF grant for project preparation support.

2. SCREENING & SELECTION
   The application is evaluated by CPI, as the Program Manager, and the Advisory Committee.

3. SELECTION OF SERVICE PROVIDERS
   Upon approval, the Program Manager engages USICEF’s network of empaneled Service Providers to provide the relevant project support.

4. GRANT DISBURSEMENT
   Grant money is transferred to the Service Provider upon successful delivery of services.

5. ONGOING SUPPORT
   Project Developers receive project development support and become eligible for long-term financing from OPIC and other institutions.
USICEF’s three ingredients to success

**PROJECT PREPARATION**
Grant funded technical assistance helps prepare high quality investment grade project proposals to increase prospects of obtaining long-term debt financing.

**PROMISING & TRANSFORMATIVE PROJECTS**
Promising, actionable, catalytic, and financially sustainable projects reduce risks and barriers to investment in sustainable development.

**MOBILIZING FINANCE**
Enables a critical mass of projects to unlock access to capital from public and private sources which in turn will benefit disadvantaged communities in India.
USICEF IMPACT
HIGHLIGHTS: 2017-2020
Since 2017, USICEF has awarded grants to over 30 early-stage businesses for various project preparatory activities including legal, technical, and financial advisory.

GRANT Awardees
These early-stage businesses belong to six main sub-segments that USICEF targets

**SUPPORTED SUB-SEGMENTS**

- Solar Home Systems
- Rooftop solar (Commercial & industrial)
- Mini-grids
- Rooftop residential & institutional
- Small ground mounted solar projects
- Financial intermediaries
Debt Mobilization is expected to reach $225M by end of 2020.

18 out of 30 supported developers, till round 4, have successfully mobilized debt using USICEF grants.

The Program has achieved its debt mobilization target of 20x that translates to $200M mobilized in debt from 14 different international and domestic lenders.

Debt Mobilization is expected to reach $225M by end of 2020.
Potential USICEF Impact

- USD $5.1M Grant support committed
- 500 MW Capacity installed
- 660,000 MT P.A CO2 emissions avoided
- 17,500 New jobs
- 710,000 MWh p.a Electricity generated
- USD $250M Expected debt funding
Projects spread across 20 INDIAN STATES
OMC is the pioneer of its unique ABC business model, wherein we set up solar power plants with mini grids and bring energy access to remote rural locations with limited or no grid connectivity. We serve “A”nchor customers (telecom towers), small and medium rural “B”usinesses and rural “C”ommunities.

Our experience with USICEF has been very positive and encouraging, as they provided us with financial support enabling us to engage consultants for conducting due diligence for a proposed financial closure.

**PROGRESS TO DATE**

- 102 plants with mini grids on the ABC model
- 90 sites serving telecom customers
- Around 13.5 MW total installed capacity (conventional + renewable)
- 20,000 “B” and “C” customers; 206 “A” customers

“Our mission is ‘Power, Everywhere’ to bring clean, green, affordable energy access to the bottom of the pyramid. USICEF has been a valuable partner of OMC in our efforts to fuel growth. They provided us with timely catalytic support that enabled the same.”

Rohit Chandra
CEO, OMC Power
Frontier Markets is a social tech enterprise that focuses on connecting products and services to rural customers in India. It is an end-to-end commerce platform that provides last-mile products and services, delivered at the doorsteps of consumers in villages through an assisted commerce model run by rural women entrepreneurs called Saral Jeevan Sahelis. Solutions include: in clean energy, agri, home and mobile appliances, as well digital and essential services.

Our association with USICEF has proved to be a successful story and helped us to reach out to lenders and raise debt capital for our expansion activities.

**PROGRESS TO DATE**

- Sold 715,000 solar products to 600,000 households
- Supported 10,000 women entrepreneurs
- Provided 1.2+ million solutions in clean energy, agri, home and mobile appliances
- Provided digital and essential services to 500,000 customers in 2,000+ villages in India

“USICEF has been an important partner for Frontier Markets in its journey and helped us to further our mission of supporting rural women while addressing the electricity access challenges”

Ajaita Shah
Founder & CEO
candi was incorporated 2.5 years ago, with the intent of unlocking the potential of solar for SMEs which, until that time was a largely overlooked market, fiscally constrained and unable to readily embrace the transition to a sustainable and renewable future.

Equipped with a vision on how to streamline everything from contracts to credit screening for this sector, we initiated our journey in India with the invaluable support of USCIEF from very early on. Leveraging this assistance to realise our vision, candi now straddles two countries, has over 20 clients across almost 5MW and has successfully closed Series A as well as debt rounds with international investors.

**PROGRESS TO DATE**

- CO$_2$ mitigated: 2.6 Tons
- Clean kWhs generated: 2,586 kWh
- Direct or Indirect employment created: 41
- Clients signed on to solar: 28

“USCIEF was instrumental in allowing candi to focus on the building blocks of an investable/lendable company far earlier in its journey than would otherwise have been possible, ultimately accelerating candi’s growth and impact.”

Philippe Flamand, CEO, candi solar
HCT Sun had sought and received USICEF’s grant a couple of years back for strengthening its internal business process, with regards to financial parameters for our business model, technical standards, health and safety standards, credit analysis tools for our customer segment, and legal contracts for our projects.

Thanks to USICEF’s support, we could engage with the best consultants from across the country in these fields. Their support was especially helpful in our business operations since we were trying to introduce a concept to a largely uncharted area.

**PROGRESS TO DATE**

- Signed up over 6,600 kWp worth of projects
- ~ 2,700 kWp revenue generating projects
- 3,900 kWp in projects ready to come online by early 2021

“USICEF has been a huge help in accessing top tier consultants who helped us raise our standards to those of international companies with a lot more experience and a much larger portfolio.”

Ajaita Shah
Founder & CEO

“Ayeh Glickman
Founder & Director, HCT Sun
Media Coverage

ABC Live Alliance Business Standard

Business Line

Cleans Energy Solutions Center

DNA Electronics B2B.com

Energy.gov

gtm:

India Briefing

Insights Success

Mercom India

News Nation

PV Magazine
"For India’s clean energy transition, distributed solar energy is critical. USICEF has played a vital role in supporting rooftop solar developers through their most critical phase of project development and helping them scale up. The TCCL team is pleased to partner and finance many promising distributed rooftop solar projects through USICEF."

MANISH CHOUDHARY
Managing Director, TCCL

ELIZABETH L. LITTLEFIELD
Former President and CEO, OPIC

"The USICEF initiative is a critical step towards increasing access to energy in underserved regions in India. This public-private partnership presents the opportunity for OPIC to finance and deploy high-impact development projects that support underserved communities throughout India to help the country meet its energy goals."

Projects under USICEF benefit from the support of a robust USICEF network
With deep expertise in finance and policy, CPI is an analysis and advisory organization that works to improve the most important energy and land use practices around the world. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has six offices around the world in Brazil, Europe, Kenya, India, Indonesia, and the U.S.

Climate Policy Initiative, as the project manager:
• Manages USICEF
• Guides the selection process
• Develops partnerships with international and national lenders and facilitates debt for supported projects
• Convenes the committee meetings