INDIA

WATER CONSERVATION FUND FOR SOLAR IRRIGATION PUMPS (WCS-SIP)

OVERVIEW

<table>
<thead>
<tr>
<th>Country / Global implementation</th>
<th>India Lower Middle Income Country (LMIC)</th>
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<tbody>
<tr>
<td>Thematic area</td>
<td>Multi-sectoral</td>
</tr>
<tr>
<td>Project start date</td>
<td>Q3 2017</td>
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<tr>
<td>Funding source</td>
<td>Core</td>
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<tr>
<td>2017 budget</td>
<td>USD 283,615</td>
</tr>
<tr>
<td>% of budget disbursed</td>
<td>37%</td>
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RELEVANT SDGs

6. Clean Water and Sanitation
7. Affordable and Clean Energy
13. Climate Action

OVERALL OBJECTIVE

- Assess the business case for establishment of a Water Conservation Fund that will solarize irrigation schemes for farmers who use scarce groundwater sources.
- Create incentives for farmers to increase water use efficiency in irrigated agriculture.

RESULTS ACHIEVED IN 2017

- Developed and finalized a concept note on solar-irrigation shared with relevant stakeholders and partner Energy Service Company.
- Awaiting further commitment from stakeholders and Energy Service Company to implement project after onboarding of new GGGI country representative.
- Identified other potential project opportunities in irrigation, water conservation, and industrial use of water.

CONTEXT

At present, India spends over USD 6 billion on energy subsidies annually, and it is estimated that farmers pay only 13 percent of the true cost of electricity. Electricity subsidies have enabled farmers to access electricity at prices below the marginal cost of supply, thereby lowering the cost of irrigation and groundwater extraction. However, these benefits have come at an environmental cost through groundwater exploitation and a financial burden on distribution companies (DISCOMs).

By connecting solar-powered irrigation pumps to the grid and incentivizing farmers to evacuate surplus solar power and sell it back to the utilities, farmers are incentivized to not only use a cleaner form of energy for pumping, but to use the power more efficiently. This will benefit utilities as well since many utilities are under financial stress. To allow farmers to feed in to the grid they must first abstain for a certain period of time from their right being connected to the grid, which would be financially beneficial for the DISCOMs as each farmer entails a significant annual farm power subsidy burden.

HIGHLIGHTS

- Conducted a scoping mission and developed a concept note on solar irrigation scheme based on thorough tariff calculations.
- Shared project concept with relevant stakeholders and Energy Service Company to implement after onboarding of new country representative.
PARTNERS

LOCAL
- Ministry of Renewable Energy (MNRE)
- Energy Efficiency Services Limited (EESL)
- Indian research institutes

INTERNATIONAL
- International Water Management Institute (IWMI)

LESSONS LEARNED
• Given India’s complex structure of ministries and state governments, identifying an optimal entry point is critical. It was also challenging for GGGI to conduct project scoping without a physical presence on the ground. This has been addressed with GGGI’s new India Country Representative joining in late 2017.