



## Grid-Connected Rooftop Solar Program (P155007)

SOUTH ASIA | India | Energy & Extractives Global Practice | Requesting Unit: SACIN | Responsible Unit: ISAE1  
IBRD/IDA | Program-for-Results Financing | FY 2016 | Team Leader(s): Mani Khurana, Cecile Pot

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**Program Development Objectives**

Program Development Objective (from Program Appraisal Document)

The PDO is to increase installed capacity of Grid-connected Rooftop Solar Photovoltaic (GRPV) and to strengthen the capacity of relevant institutions for GRPV. The Program Environmental Objective (PEO) is to achieve reductions in GHG emissions through the displacement of thermal energy with solar energy.

**Overall Ratings**

Name	Previous Rating	Current Rating
Progress towards achievement of PDO	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Satisfactory
Overall Implementation Progress (IP)	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Satisfactory

**Implementation Status and Key Decisions**

As of February 2024, the State Bank of India (SBI) has cumulatively signed and sanctioned US\$515 million of loans to rooftop solar developers and end-consumers, directly mobilizing US\$219 million of equity. This financing is an estimated to support and installed capacity of 870.09 MW supported by the Program. The original Program is expected to close on June 28, 2024, while the additional financing for the residential sector, which was signed in December 2023, will run until November 2027.

**Data on Financial Performance****Disbursements (by loan)**

Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P155007	IBRD-86110	Effective	USD	500.00	500.00	0.00	500.00	0.00	100%
P155007	IBRD-94260	Not Effective	USD	150.00	150.00	0.00	0.00	150.00	0%
P155007	TF-A2023	Effective	USD	5.00	5.00	0.00	5.00	0.00	100%
P155007	TF-A2401	Effective	USD	120.00	120.00	0.00	100.00	20.00	83%
P160018	TF-A3753	Effective	USD	22.94	22.94	0.00	18.67	4.27	81%








**Key Dates (by loan)**

Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
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P155007	IBRD-86110	Effective	13-May-2016	30-Jun-2016	28-Sep-2016	30-Nov-2021	28-Jun-2024
P155007	IBRD-94260	Not Effective	28-Jun-2022	22-Dec-2023	--	30-Nov-2027	30-Nov-2027
P155007	TF-A2023	Effective	13-May-2016	30-Jun-2016	28-Sep-2016	30-Nov-2021	28-Jun-2024
P155007	TF-A2401	Effective	13-May-2016	30-Jun-2016	28-Sep-2016	30-Nov-2021	28-Jun-2024
P160018	TF-A3753	Effective	19-Jan-2017	19-Jan-2017	19-Jan-2017	30-Nov-2021	28-Jun-2024

**DLI Disbursement**

DLI ID	DLI Type	Description	Coc	DLI Amount	Achievement Status	Disbursed amount in Coc	Disbursement % for DLI
<b>Loan: TFA2023-001</b>							
1	Regular	Establishing GRPVs program at SBI	USD	5,000,000.00	Fully Achieved	5,000,000.00	 100 %
<b>Loan: IBRD86110-001</b>							
2	Regular	Agg amt loan for GRPVs power gen sch	USD	198,750,000.00	Partially Achieved	107,273,000.00	 54 %
3	Regular	MW solar PV rooftop ins commi	USD	300,000,000.00	Partially Achieved	294,442,750.00	 98 %
<b>Loan: TFA2401-001</b>							
2	Regular	Aggr amt for finan GRPV power gen sch	USD	100,000,000.00	Partially Achieved	76,957,000.00	 77 %
4	Regular	Sustainability of GRPV program	USD	20,000,000.00	Not Achieved	0.00	
<b>Loan: TFA3753-001</b>							
1	Regular	Tech assis for impl MNRE GRPV prg	USD	12,935,780.00	Partially Achieved	2,936,000.00	 23 %
2	Regular	Piloting New Business Models	USD	10,000,000.00	Fully Achieved	10,000,000.00	 100 %

**Program Action Plan**

<b>Action Description</b>	Monitor compliance with MNRE's Quality Assurance and Quality Control requirements, as basic standards applicable to the market.				
<b>Source</b>	<b>DLI#</b>	<b>Responsibility</b>	<b>Timing</b>	<b>Timing Value</b>	<b>Status</b>
Other		Client	Due Date	31-Dec-2019	Completed
<b>Completion Measurement</b>	SBI to (i) prepare and share report on the implementation of MNRE's QA/QC requirements with Bank during the mid-term review of the project; and (ii) share the report with MNRE				
<b>Comments</b>	In all the loan agreements between SBI and sub-borrower, there is standard clause for the borrower to ensure the quality standards established by MNRE/Gol.				



<b>Action Description</b>	Include the Grid Connected Solar Rooftop Program in the existing complaints handling mechanism of SBI.				
<b>Source</b>	<b>DLI#</b>	<b>Responsibility</b>	<b>Timing</b>	<b>Timing Value</b>	<b>Status</b>
Other		Client	Due Date	02-Apr-2018	Completed
<b>Completion Measurement</b>	Information on how to access the grievance mechanism for Grid Connected Solar Rooftop Program publicized on SBI's website				
<b>Comments</b>					

<b>Action Description</b>	Implement the procedures identified in the ESSA to manage environmental and social issues and risks.				
<b>Source</b>	<b>DLI#</b>	<b>Responsibility</b>	<b>Timing</b>	<b>Timing Value</b>	<b>Status</b>
Environmental and Social Systems		Client	Due Date	31-Jul-2023	Completed
<b>Completion Measurement</b>	SBI to share information with Bank during the first review mission of the program				
<b>Comments</b>	SBI has shared some information, however, the reporting of ESSA requirements needs to be strengthened—to be confirmed through mutually agreed actions.				

## Risks

### Systematic Operations Risk-rating Tool

Risk Category	Rating at Approval	Previous Rating	Current Rating
Political and Governance	<input type="checkbox"/> Low	<input type="checkbox"/> Low	<input type="checkbox"/> Low
Macroeconomic	<input type="checkbox"/> Low	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Sector Strategies and Policies	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Technical Design of Project or Program	<input type="checkbox"/> Substantial	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Institutional Capacity for Implementation and Sustainability	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Fiduciary	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Environment and Social	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Stakeholders	<input type="checkbox"/> Substantial	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Other	--	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate
Overall	<input type="checkbox"/> Substantial	<input type="checkbox"/> Moderate	<input type="checkbox"/> Moderate

## Results

### PDO Indicators by Objectives / Outcomes



Capacity of GRPV connected to the grid (Megawatt, Custom)				
▶ Capacity of GRPV connected to the grid (Megawatt, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	414.11	414.11	250.00
Date	30-Sep-2016	31-Aug-2023	27-Feb-2024	28-Jun-2024
Comments				

Reduction of Carbon emissions				
▶ GHG emissions (Metric tons/year, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	0.00	1,200,000.00
Date	19-Sep-2016	31-Aug-2023	27-Feb-2024	28-Jun-2024
Comments	PDO indicator pertaining to reductions of carbon emissions will be monitored at the end of the program. Moreover, since the carbon emission reduction is a function of the capacity of GRPV (MW) installed, it is expected that the GHG reduction would also be overachieved.			

**Intermediate Results Indicators by Results Areas**

Launch of Rooftop Solar PV program at SBI and development of internal procedures for the identification, risk assessment, appraisal and approval of rooftop solar projects.				
▶ Launch of Rooftop Solar PV program at SBI and development of internal procedures for the identification, risk assessment, appraisal and approval of rooftop solar projects (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	Done	Done	One time
Date	13-May-2016	31-Aug-2023	27-Feb-2024	28-Jun-2024
Comments				

Implementation of TA and capacity building program for discoms, SNAs, SERCs etc.				
▶ Implementation of TA and capacity building program for discoms, SNAs, SERCs etc. (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	On June 2, 2023, the Steering Committee extended the PMC contract until October 31, 2023.	TA completed	TA completed
Date	13-May-2016	31-Aug-2023	27-Feb-2024	28-Jun-2024



Comments	Year 1: Contract signed with consultant. Year 2: Phase 1 of TA completed. Year 3: Phase 2 of TA completed.
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Amount rooftop solar loans approved by SBI				
▶ Amount rooftop solar loans approved by SBI (Amount(USD), Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	425,000,000.00	515,000,000.00	625,000,000.00
Date	13-May-2016	31-Aug-2023	27-Feb-2024	28-Jun-2024
Comments				

Amount of additional equity financing from private sources mobilized by SBI				
▶ Amount of additional equity financing from private sources mobilized by SBI (Amount(USD), Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	180,200,000.00	219,000,000.00	265,000,000.00
Date	13-May-2016	31-Aug-2023	27-Feb-2024	28-Jun-2024
Comments				

Capacity (MW) of GRPV orders				
▶ Capacity (MW) of GRPV orders (Megawatt, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	606.48	870.09	600.00
Date	13-May-2016	31-Aug-2023	27-Feb-2024	28-Jun-2024
Comments				

Improved institutional capacity for GRPV				
▶ Sustainability of GRPV program at SBI (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No such green climate finance unit exists	Not yet due	Unit is in place and operational	Completed
Date	13-May-2016	31-Aug-2023	27-Feb-2024	28-Jun-2024
Comments	SBI has formed a green climate finance unit to finance green advances (measured outside of the existing grid-connected rooftop solar IBRD/Trust Fund resources) and aims to facilitate an estimated minimum of US\$100 million financing annually for green advances measures. The corresponding revised DLI Verification Protocol is: SBI has formed a Business Unit (BU) to finance climate change mitigation and			



adaptation measures. The BU is operational within the Program period and capitalized with adequate human resources. SBI has issued an internal circular approved by its Board for this BU. It has prepared a business plan following the Board's approval with an estimated minimum of US\$100 million financing annually for climate mitigation and adaptation measures until 2030. A Chief General Manager heads the BU, supported by one General Manager, three Deputy General Managers, and ten to twelve support officers. The BU will certify the achievement of the financing amount following the Annual and Sustainability reports published by SBI annually. For the purposes of this DLI, green advances mean loans provided by SBI for renewables such as solar photovoltaics, wind energy, and bioenergy among others, and the activities that are outside of the existing grid-connected rooftop solar IBRD/Trust fund resources. The above information will be made available by SBI to the Independent Verification Agency.

Capacity of rooftop solar installed and commissioned under the program (MW)

► Capacity of rooftop solar installed and commissioned under the program (MW) (Megawatt, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	414.11	414.11	500.00
Date	13-May-2016	31-Aug-2023	27-Feb-2024	28-Jun-2024
Comments				

Disbursement Linked Indicators

► DLI 1 DLI 1: Establishing a Rooftop Solar PV Program at the State Bank of India. (Intermediate Outcome, 5,000,000.00, 100%)

	Baseline	Actual (Previous)	Actual (Current)	till Nov 30, 2027
Value	0.00	5,000,000.00	5,000,000.00	5,000,000.00
Date	13-May-2016	31-Aug-2023	27-Feb-2024	--
Comments				

► DLI 2 DLI 2: Technical assistance to key stakeholders for the implementation of MNRE's GRPV program (Intermediate Outcome, 13,000,000.00, 67%)

	Baseline	Actual (Previous)	Actual (Current)	till Nov 30, 2027
Value	0.00	2,936,000.00	8,660,000.00	13,000,000.00
Date	13-May-2016	31-Aug-2023	27-Feb-2024	--
Comments	The latest figures are picked from the Client Connect portal; previously reported figures included advance.			

► DLI 3 DL3: Aggregate amounts of loans signed by SBI for the financing of solar (PV) rooftop power generation schemes. (Intermediate Outcome, 298,750,000.00, 0%)

	Baseline	Actual (Previous)	Actual (Current)	till Nov 30, 2027
Value	0.00	172,290,000.00	220,560,000.00	298,750,000.00



Date	13-May-2016	31-Aug-2023	27-Feb-2024	--
<b>Comments</b>				

<b>► DLI 4 DLI 4: Piloting new business models (Outcome, 10,000,000.00, 0%)</b>				
	Baseline	Actual (Previous)	Actual (Current)	till Nov 30, 2027
Value	0.00	10,000,000.00	10,000,000.00	10,000,000.00
Date	13-May-2016	30-Jun-2023	27-Feb-2024	--
<b>Comments</b>				

<b>► DLI 5 DLI 5: Megawatts of solar (PV) rooftop power generation installed and commissioned under SBI financing (Output, 300,000,000.00, 115%)</b>				
	Baseline	Actual (Previous)	Actual (Current)	till Nov 30, 2027
Value	0.00	271,456,000.00	294,440,000.00	300,000,000.00
Date	13-May-2016	31-Aug-2023	27-Feb-2024	--
<b>Comments</b>	The latest figures are picked from the Client Connect portal; previously reported figures included advance.			

<b>► DLI 6 Sustainability of GRPV program at SBI (Outcome, 20,000,000.00, 0%)</b>				
	Baseline	Actual (Previous)	Actual (Current)	till Nov 30, 2027
Value	No such green climate finance unit exists	Not yet due	Unit is in place and operational	--
Date	13-May-2016	31-Aug-2023	27-Feb-2024	--
<b>Comments</b>				

<b>► DLI 7 Aggregate amounts of sub-loan agreements signed by SBI for the financing of solar (PV) rooftop systems in the residential sector, of which at least 50 percent should be for system sizes up to 10 kW (Intermediate Outcome, 115,500,000.00, 0%)</b>				
	Baseline	Actual (Previous)	Actual (Current)	till Nov 30, 2027
Value	0.00	0.00	0.00	--
Date	--	31-Aug-2023	27-Feb-2024	--
<b>Comments</b>				

<b>► DLI 8 Megawatts of solar (PV) rooftop systems installed, commissioned, and connected to the grid in the residential sector (Intermediate Outcome, 49,500,000.00, 0%)</b>				
	Baseline	Actual (Previous)	Actual (Current)	till Nov 30, 2027



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Value	0.00	0.00	0.00	--
Date	--	31-Aug-2023	27-Feb-2024	--
<b>Comments</b>				