

## **Half-Yearly Report (February 2017-August 2017) on warranty expired battery collection and new battery distribution under IDCOL's SHS program**

*(Based on IDCOL Inspection)*

Infrastructure Development Company Limited (IDCOL) promotes dissemination of Solar Home Systems (SHS) in the rural areas of Bangladesh under its Renewable Energy Program with the financial support from different development partners. IDCOL started the program in January 2003. At present, IDCOL implements the program through 56 partner organizations (POs).

One of the major equipment used in the SHS is the lead acid battery. Generally, the warranty for lead acid battery is 5 (five) years, but the life time may vary due to different usage pattern or other operational issues. Collection of these warranty expired and damaged batteries are very important for ensuring proper recycling and preventing environmental hazards.

IDCOL has developed a monitoring system for getting the status of collection and recycling lead acid batteries by the partner organizations (POs).

From February 2017-August 2017, IDCOL inspected 6,655 SHSs with warranty expired batteries (5 Years old). Out of which, 95.42% systems the battery were not replaced. It was observed during inspection that among the not-replaced batteries- 84% were functioning well, 8% were not in good condition but still functioning and 7% were not functioning due to the total damage, systems return and system not found (Table 1 and 2). Remaining 4.6% of expired batteries were replaced by the POs and other organization (Table 3). From table 4, it was observed that 79.4% of the warranty expired batteries were collected by the POs and non POs.

Half-yearly (February 2017-August 2017) summary tables are given below:

**Table 1: Report on Inspection of Warranty Expired Battery For the period of August 2016-February 2017**

	GS	RSF	BRAC	SRIZONY	UBOMUS	BRIDGE	IDF	TMSS	PDBF	AVA	INGEN	CMES	Total
Number of SHS Inspected	5916	303	8	7	321	42	17	2	14	5	2	18	6655
Battery Replaced (PO/Other)	264	14	1	0	16	5	3	0	0	0	0	2	305
Battery Not Replaced	5652	289	7	7	305	37	14	2	14	5	2	16	6350
<b>SHSs with Battery not Replaced (%)</b>	<b>96%</b>	<b>95%</b>	<b>88%</b>	<b>100%</b>	<b>95%</b>	<b>88%</b>	<b>82%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>89%</b>	<b>95.42%</b>

**Table 2: Total Battery are not Replaced:**

	GS	RSF	BRAC	SRIZONY	UBOMUS	BRIDGE	IDF	TMSS	PDBF	AVA	INGEN	CMES	Total	%
Battery in Good Condition	4821	231	4	6	219	33	12	2	7	5	1	7	5348	<b>84%</b>
Battery in Bad Condition (Functional)	397	46	2	1	75	4	2	0	2	0	0	3	532	<b>8%</b>
Battery in Bad Condition (Non-Functional)	191	8	1	0	11	0	0	0	0	0	0	2	213	<b>7%</b>
System Return	44	2	0	0	0	0	0	0	4	0	0	1	51	
System not Found	199	2	0	0	0	0	0	0	1	0	1	3	206	
<b>Total</b>	<b>5652</b>	<b>289</b>	<b>7</b>	<b>7</b>	<b>305</b>	<b>37</b>	<b>14</b>	<b>2</b>	<b>14</b>	<b>5</b>	<b>2</b>	<b>16</b>	<b>6350</b>	

**Table 3: Total Expired- Battery Replaced:**

	GS	RSF	BRAC	SRIZONY	UBOMUS	BRIDGE	IDF	TMSS	PDBF	AVA	INGEN	CMES	Total
Replaced by POs	84	5	0	0	5	4	0	0	0	0	0	0	97
Replaced by Non-PO	180	9	1	0	11	1	3	0	0	0	0	2	207
<b>Total</b>	<b>264</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>16</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>305</b>

**Table 4: Warranty expired batteries collected by POs and non POs:**

	GS	RSF	BRAC	SRIZONY	UBOMUS	BRIDGE	IDF	TMSS	PDBF	AVA	INGEN	CMES	Total	%
Old Battery Collected by POs	64	5	0	0	5	3	0	0	0	0	0	0	77	<b>79.4%</b>
Old Battery Collected by Non POs	126	8	1	0	4	1	0	0	0	0	0	2	142	
<b>Total</b>	<b>190</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>219</b>	

