



Hebei Rural Renewable Energy Development Project (P132873)

EAST ASIA AND PACIFIC | China | Environment, Natural Resources & the Blue Economy Global Practice | IBRD/IDA | Investment Project Financing | FY 2015 | Seq No: 12 | ARCHIVED on 23-Dec-2020 | ISR44516 |

Implementing Agencies: People's Republic of China, Hebei Provincial Agriculture Department

Key Dates

Key Project Dates

Bank Approval Date: 13-Mar-2015

Effectiveness Date: 29-Jun-2015

Planned Mid Term Review Date: 28-Feb-2018

Actual Mid-Term Review Date: 09-Apr-2018

Original Closing Date: 31-Dec-2020

Revised Closing Date: 31-Dec-2021

Project Development Objectives

Project Development Objective (from Project Appraisal Document)

The Project Development Objective (PDO) is to demonstrate sustainable biogas production and utilization to reduce environmental pollution and supply clean energy in rural areas of Hebei Province.

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

Components Table

Name

Large-scale biogas facilities management and renewable energy supply:(Cost \$132.10 M)
Technical support, project management and monitoring:(Cost \$5.80 M)

Overall Ratings

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

Implementation Status and Key Decisions

In general, project implementation has progressed well over the past year. Three biogas production facilities have now been installed and operationalized, while two other facilities are in the late stages of construction. The project technical design has been improved through the recent project restructuring, with a view to adapt to changing market needs and to increase subproject productivity. From trial operation, around 7.95 million cubic meters of biogas have been produced by the project by October 31, 2020, with around 77,020 ton of livestock waste and around 35,040 ton of crop residue having been treated and converted to gas; and around 5,837 households have been given access to the use of biogas for cooking and heating. As the implementation progress of subprojects has been uneven and some procurement is still in the bidding process, there is a need to speed-up the relevant procurement and construction work. With the strong joint efforts of the project agencies and subproject companies, it is expected that all the project construction work will be completed in June 2021 and that the biogas facility will reach the full production capacity by the end of 2021 before the project is scheduled to close.



Risks

Systematic Operations Risk-rating Tool

Risk Category	Rating at Approval	Previous Rating	Current Rating
Political and Governance	--	☐ Low	☐ Low
Macroeconomic	--	☐ Low	☐ Low
Sector Strategies and Policies	--	☐ Moderate	☐ Moderate
Technical Design of Project or Program	--	☐ Moderate	☐ Moderate
Institutional Capacity for Implementation and Sustainability	--	☐ Moderate	☐ Moderate
Fiduciary	--	☐ Moderate	☐ Moderate
Environment and Social	--	☐ Moderate	☐ Moderate
Stakeholders	--	☐ Moderate	☐ Moderate
Other	--	--	--
Overall	--	☐ Moderate	☐ Moderate

Results

PDO Indicators by Objectives / Outcomes

Stable Biogas Production and supply by the project

► Amount of project-supplied biogas used by final users annually (Cubic Meter(m3), Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	21,839,621.00	7,950,270.00	37,000,000.00
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021

Comments:

The value reported in the last ISR was incorrect. This was caused by misinterpretation of the outcome indicator definitions; the actual gas supply quantity was mistaken for the design capacity of the gas production, however, the biogas facilities operation is in the early trial stage and its actual gas production is lower than the designed full-loading gas production.

Reduction of Pollution

► CO2 emission reduction by the project annually (Metric ton, Custom)



	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	32,759.00	22,972.00	55,780.00
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021
Comments:	The value reported in the last ISR was incorrect. This was caused by misinterpretation of the outcome indicator definitions; the actual gas supply quantity was mistaken for the design capacity of the gas production, however, the biogas facilities operation is in the early trial stage and its actual gas production is lower than the designed full-loading gas production. Accordingly, the previously estimated CO2 emission reduction (from the use of gas replacing coal) was incorrect.			

Increased Biogas access to Rural Residents

► Number of rural resident households who can access biogas supply under the project (Number, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	2,750.00	5,837.00	47,570.00
Date	31-Dec-2014	31-May-2020	31-Dec-2020	31-Dec-2021

Intermediate Results Indicators by Components

Large-scale biogas facilities management and renewable energy supply

► Cumulative length of main biogas distribution pipeline system establishment (Kilometers, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	164.00	164.00	164.00
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021

► Annual generation capacity of renewable energy (Cubic Meter(m3), Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	21,839,621.00	7,950,270.00	37,000,000.00
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021

Comments: The value reported in the last ISR was incorrect. This was caused by misinterpretation of the outcome indicator definitions; the actual gas supply quantity was mistaken for the design capacity of the gas production, however, the biogas facilities operation is in the early trial stage and its actual gas production is lower than the designed full-loading gas production.

► Crop residue treated by the project annually (Metric ton, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
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Value	0.00	30,522.00	35,040.00	101,530.00
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021
► Livestock manure treated by the project annually (Metric ton, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	75,110.00	77,020.00	402,960.00
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021
► CNG produced by the project annually (Cubic Meter(m3), Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	0.00	3.20
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021
Comments:	To take account of changing demand, the biogas users have been extended to include electricity generation for power grid, therefore this new relevant indicator was added during the restructuring. The data will be available after receiving the next project monitoring report by February 28, 2020			
► Electricity generated by the use of biogas (Gigawatt-hour (GWh), Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	5.40	6.30	26.70
Date	31-Jan-2015	31-May-2020	31-Oct-2020	31-Dec-2021

Technical support, project management and monitoring				
► Client days of training provided (number) (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	1,950.00	2,476.00	1,800.00
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2020
□ Client days of training provided - Female (number) (Number, Custom Breakdown)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	430.00	630.00	630.00
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021



► Cumulative numbers of laboratories built at biogas plant level (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3.00	3.00	5.00
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021
► M&E system put into operation (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	31-Dec-2014	31-May-2020	31-Oct-2020	31-Dec-2021
► Cumulative Number of guidelines and regulations prepared and put into use (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	2.00	2.00	2.00
Date	31-May-2015	31-May-2020	31-Oct-2020	31-Dec-2020
► Percentage of beneficiaries satisfied with the benefits from biogas use and bio-fertilizer supply (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	0.00	90.00
Date	31-Jan-2016	31-May-2020	31-Oct-2020	31-Dec-2021
Comments:	This is a newly added indicator during restructuring, aiming to capture feedback from project beneficiaries on the access to biogas and the use of bio-fertilizers, as well as to monitor their engagement in project implementation. Its monitoring has been included in the project social impact monitoring plan, which will be carried out on a semi-annual basis through surveys administered by the social expert team. The data will be available by March 31, 2021.			

Performance-Based Conditions

Data on Financial Performance

Disbursements (by loan)

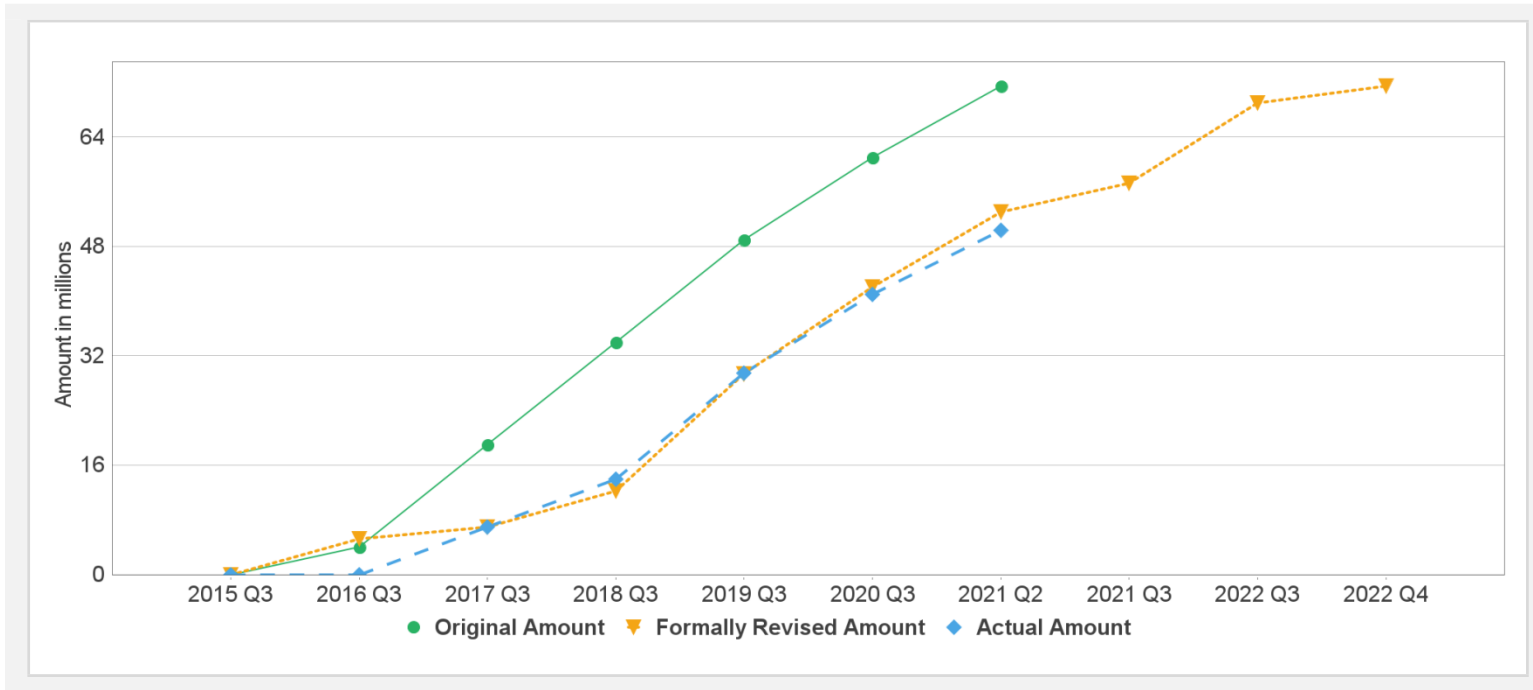
Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P132873	IBRD-84760	Effective	USD	71.50	71.50	0.00	54.11	17.39	76%

Key Dates (by loan)



Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P132873	IBRD-84760	Effective	13-Mar-2015	16-Apr-2015	29-Jun-2015	31-Dec-2020	31-Dec-2021

Cumulative Disbursements



PBC Disbursement

PBC ID	PBC Type	Description	Coc	PBC Amount	Achievement Status	Disbursed amount in Coc	Disbursement % for PBC
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Restructuring History

Level 2 Approved on 04-Jun-2020

Related Project(s)

There are no related projects.