

**[APPROVAL BY MAIL]: BANGLADESH: POWER SYSTEM EFFICIENCY IMPROVEMENT  
PROJECT – ADDITIONAL FINANCING- OFF GRID SOLAR PV: SOLAR IRRIGATION  
(ADB)(SREP)- XSREBD064A**

**ASIAN DEVELOPMENT BANK RESPONSE TO COMMENTS FROM UNITED KINGDOM**

(1) The project aims to displace diesel-powered irrigation pumps in Bangladesh with efficient solar-powered pumps. As stated in the proposal, farmers will trade-in used diesel gensets to access the project. The updated Environmental Management Plan will include measures for proper disposal of decommissioned / recycling of diesel gensets which will be collected and processed in a licensed facility for recycling of parts and disposal of industrial wastes.

(2) Based on studies, Bangladesh has 1.3 million diesel pumps, which use one million tons of diesel annually worth \$900 million (about 1200 million liters per year at unit cost of about \$0.75/Liter). The figures in the SREP cover sheet have been revised.

(3) Introduction of solar irrigation pumps has been influencing the agricultural sector worldwide since last decade. As mentioned, irrigation is just one part of a large agricultural-based food production system. It is a valuable input that highly affects farming productivity, particularly important in Bangladesh where almost half of the country's population is directly involved. Farmers in off grid areas find a positive alternative solution to the expensive diesel based irrigation pump with a more sustainable and affordable solar-powered irrigation pumps. In many similar projects in other countries (and initial deployment in Bangladesh), replacement of diesel pumps has resulted in positive economic and environmental impacts.

The project's public awareness program under capacity building component aims to educate farmers on the benefits of solar-based irrigation and to change their perception on use of diesel due to its negative effects. The project is considered instrumental with high potential of transforming farmers' attitude towards use of diesel. It could catalyze change in the entire agriculture production value chain or at least minimize diesel use in other parts of the food chain production.

(4) Many farmers in Bangladesh are in off-grid areas, they have limited knowledge due to their minimum education, and they have low income. Access to electricity facilitates access to information and improves communication channel thereby increasing farmers' potential to gain more knowledge and technical efficiency. Technology innovations and opportunities have to reach these poor, small farming rural communities in order to promote agricultural productivity and rural growth. Improved and modern communication system can help farmers to easily link with other farm technicians and co-farmers to seek technical advice on various farming concerns, including different agricultural machineries used for planting, harvesting, and post harvest facilities which are not necessarily be limited to diesel-run machines. In particular, post-harvest processing could utilize electric machinery.

As explained above (response to Q3), irrigation is just one part of the large agricultural production chain and it is agreeable that a holistic approach is necessary to maximize diesel savings.

There is potential scope for diesel reductions in farm-to-market transport activities but there has not been another investment opportunity for SREP co-financing identified in this part of the value chain. The government is interested in reducing diesel consumption in agriculture and other sectors, given that Bangladesh has almost zero domestic diesel production. It is important to note that other segments of the value chain may not represent opportunities consistent with all SREP investment criteria.