

CAPACITY STRENGTHENING AND KNOWLEDGE SHARING

A. Background

1. The cleaner fuel switch investment program (2019–2030) which aims to establish county-based distributed cleaner fuel supply which targets to outreach 4.5 million customers in 80 of the less developed and geographically scattered counties for accelerating a fuel switch from coal to natural gas and biogas in industry and commercial, and household energy use. Since June 2018, the cleaner fuel switch investment program has already reached 307,078 customers.

2. Scope of the overall cleaner fuel switch program was expanded in 2019, in consultation with Asian Development Bank (ADB), to effectively achieve the outreach target towards 2030. Expanded scope involves (i) development of biogas using abundant agriculture waste, which would otherwise be burned for cleaner fuel diversification in the province, (ii) cleaner fuel awareness program with particular attention on women, who are the major drivers for change in traditional fuel use, and (iii) institutional and capacity enhancement of the program implementing agencies in finance, fiduciary and safeguards, and information management, for sustainable implementation of overall program.

3. **Staging approach for learning and doing.** Physical investment in the overall cleaner fuel switch program adopts the staging approach to gradually outreach population in the targeted counties for learning by doing. The proposed result-based lending (RBL) program supports the initial stage of overall program to build comprehensive capacity and knowledge by developing county-based gas distribution network, piloting advance biogas production technology, stimulating cleaner fuel use on the ground, and demonstrating unique business model with private sector involvement in gas service delivery, towards achieving overall program target while providing sustainable service delivery beyond 2030.

4. **Institutional and capacity enhancement.** The RBL program will also support institutional and capacity enhancement for sustainable overall program implementation which is one of the output level disbursement linked indicators (DLIs). It addresses the identified institutional and organizational weakness of the overall program: (i) development of the integrated enterprise resource planning and management system, comprised of customer service management, construction and purchase control, safety monitoring, human resources management, and financial management by 2020; (ii) strengthen regulation in financial and credit risk and in environment and social safeguard management by 2019, (iii) strengthen fund raising planning and unlock an access to commercial financing by 2021, and (iv) increasing staffing for the overall program implementation, with gender balance target to increase share of women staff from 15% in 2018 to 30% by 2022.

5. **Integrated enterprise resource planning and management system.** The Management Information System (MIS) in place under the Henan Yu-Tian New Energy Co. Ltd. (YTNE) a project company being responsible for day-to-day operations is comprised of separate independent systems and there is no integrated function to comprehensively control customer management, financial management, procurement and construction, operation and maintenance, and safety. As the overall investment program coverage expands towards 2030, integrated MIS for integral information collection, data storage and management, and data analysis from myriad of activities under the program is essential for real time performance monitoring, resource allocation, and early detection of implementation bottleneck to make early management decision, and to take timely action for smooth implementation of the program. The RBL program supports

to upgrade the existing MIS into the integrated enterprise resource planning (ERP) system, which is one of the output level disbursement-linked indicator (DLI) scheduled to be achieved by the end of 2020. It will be comprised of decision-making system which gathers all necessary real time information from lower layer systems for quick performance monitoring and early actions. The lower layer system is comprised of customer management system, financial and human resource management system, engineering and construction system, operation and maintenance system, and safety monitoring system, linking each other to supply needy real time data for the decision-making system.

6. Regulation in financial and risk management and fund raising planning. Zhongyuan Yuzi Investment Holding Group (ZYIG), a provincial government owned investment arm, is the primary implementing agency and directly controls YTNE, the project company with 60% of stake. Corporate mandate of ZYIG is to finance housing and associated basic infrastructure for urban and rural development in Henan province. Since financial soundness of ZYIG is crucial to sustainably raise commercial debt and equity financing for overall program implementation, the proposed RBL program support the development of financial and risk management regulation for enhancing corporate governance, which is as one of the output level DLIs to be achieved by the end 2019. It includes credit portfolio quality monitoring and asset clarification, investment appraisal guideline, credit risk control policy, and loan loss provision policy, to maintain financial soundness. Implementation of such regulation will also be supported through (i) improved corporate governance structure by engaging professional external board of directors, and (ii) enhanced management decision making mechanism by setting up specialized committees under the board for investment decision risk management. These are also in the program action plan of the proposed RBL program to be achieved by the end 2020. Such regulatory and institutional infrastructure will be a basis to develop fund raising plan (one of intended results under DLI 8) to mobilize CNY915 million of commercial financing by 2022 for continuous implementation of overall program (DLI 3).

7. Environment and social safeguard regulation. Environment and social safeguard technical guideline which fills the gap with ADB's safeguard policy principle for implementation of activities under the proposed RBL program. It includes environment and social safeguard assessment procedures, environment management plan and resettlement plan templates, grievance mechanism, and monitoring, reporting, and information disclosure. The guideline is to be adopted as YTNE's corporate policy by 2019 (one of intended results under DLI 8), which is applicable not only to the proposed RBL but to overall program implementation towards 2030.

8. Gender balance sensitive staffing and training. Sustainable implementation of the overall program, one of the results under DLI 8 aims to gradually increase number of staff under YTNE to 300 by 2022, while increasing gender balance in staffing from 15% in 2018 to 30% in 2022. Trainings of financial management, procurement and anti-corruption, and environment and social safeguard for the staff will also be provided to enhance capacity for overall program implementation.

9. Impact assessment and knowledge dissemination. The RBL program adopts unique approach, which involves (i) private sector involvement, (ii) technology leap-frog using dry anaerobic fermentation technology for biogas production, and (iii) gender focused cleaner fuel use campaign program, for gas delivery to the population in semi-urban and rural areas. Lesson learned and experience upon successful completion of the RBL program will be valuable reference for the other provinces facing the similar problem in cleaner fuel switching outside of urban city centers and other countries seeking a sustainable business model for air quality

improvement. To this end, ZYIG and YTNE will conduct, in cooperation with ADB, an impact evaluation study in 2024 to assess time-series changes in energy use behavior among populations, factors of such changes, and impacts of cleaner fuel switch upon the beneficiaries.¹

10. Progress and achievement of DLIs under the RBL program is to be disclosed on quarterly basis through ZYIG and YTNE website accessible to the public and the customers a major stakeholder of the program, which allows the customer to monitor the program performance. In addition, progress and achievement of target indicators (such as gas connection and consumption, biogas production, and awareness campaign) in the overall program from 2024 will be continuously disclosed for transparent performance monitoring and feedback from the customers. Results of customer satisfactory survey and actions to improve gas delivery services will also be disclosed on ZYIG and YTNE website. Since ZYIG and YTNE has no information disclosure policy for the overall program, adopting information disclosure policy for this purpose by 2019 is included as one of the program action plans.

¹ ADB shared practices and approaches from past and ongoing projects for air pollution reduction in the greater BTH region with other provinces in the PRC and other countries in 2018. Similar activities will continue for this program and other ongoing projects on air quality improvement.