

Sector Study, EE Benchmarking and Assessment of energy saving potential in the Aquaculture Processing Industry

Terms of Reference

I. BACKGROUND

Vietnam Business Council for Sustainable Development (VBCSD) under Vietnam Chamber of Commerce and Industry in collaboration with WWF-Vietnam is starting a new 2-year project: “Demonstrating the economic, environmental and social benefits of Sustainable Energy to corporates and financial institutions in Vietnam” (Sustainable Energy for Corporate Sectors) from FY17-FY19. The project will be operational nationwide, with focus on the business hubs in Hanoi, Ho Chi Minh City and the Mekong Delta, with regional dissemination of results to Greater Mekong countries. The main objectives of the project include:

- (i) by 2018 Sustainable Energy & Energy Efficiency (EE) visions are developed for selected sectors based on two pilot studies. Two selected sectors are: Forestry/Wood processing and Aquaculture. The results will be disseminated within and outside the sectors;
- (ii) by 2018 energy investors are aware of potential adverse environmental impacts and the involved investment risks. In collaboration with selected financial institution (FI) investment guidelines will be developed and disseminated to the FI sector and to WWF in the Amazon.

II. OBJECTIVES

The objective of this consultancy assignment is to assist in evaluating the EE potential and establishment of EE benchmarking for the aquaculture processing industry in Vietnam.

III. SCOPE OF WORK

The assignment involves assisting Ministry of Industry and Trade (MOIT) in developing energy efficiency benchmarking and advising the MOIT on cost-effective energy efficiency measures and technologies to improve energy efficiency in the aquaculture processing industry by different sub-sectors, including Shrimp and Catfish.

The implementation of benchmarking for industrial sector is under World Bank program - Vietnam EE Financing for industrial enterprises. In the previous stage, an EE benchmarking report for food sector is available. Consultant shall take full use of the database and findings from the previous study provided by WWF and VBCSD.

Task I. Sector Study & Survey

13. The Consultant will conduct a sector-wide survey of energy consumption of the aquaculture processing industry by sub-sectors to better understand the current situation (typical products, structure, ownership, and enterprise types, any use of industrial refrigeration); energy consumption status; and expected future directions, including expansion and upgrade plans. The

survey will also identify typical energy-intensive end-use processes and equipment in both large enterprises and SMEs in the aquaculture processing industry by different sub-sectors as mentioned above. The survey is expected to cover plants whose combined output shall represent at least 50% of total output - of each sub-sector.

Deliverable 1. Sector Survey Report and data entry file

Task II. Preliminary Energy Audit for the Aquaculture Sector

1. Further data collection shall require visiting the selected factories and spending several days of discussions on site with some selected aquaculture processing enterprises.
2. The Consultant will submit to VBCSD a draft preliminary audit plan and the list of potential facilities (at least 20 companies) for the preliminary audit, which shall be based on an agreed methodology. In its technical proposal for the assignment, the Consultant should explain the fundamental methodological approach and scope of the preliminary audit to estimate energy consumption patterns and trends. The preliminary audit plan shall include the list of information to be collected, the measurement and calculation methods for energy consumption, analysis to be carried out, and the reporting format. In conjunction with the energy work, the approach shall provide for special review of the type of industrial refrigeration equipment in use and the refrigerants used.
3. The Consultant will carry out the preliminary energy audits and assessment of the refrigeration technologies, in the agreed facilities, based on the agreed methodology and following the agreed Preliminary Audit Plan. Should there be problems in implementing the audit in one or more of the agreed facilities, the Consultant should inform VBCSD to find ways to address the situation or agree on an alternative facility.
4. The Consultant shall prepare a consolidated report combining the findings of all preliminary audits performed. In addition, the Consultants shall submit to VBCSD individual preliminary audit reports, comments provided by staff of each facility, relevant raw data and calculations, as supporting documentation. The consolidated report should include also the comparative assessment between the different facilities and the estimated share of each facility in the aquaculture processing industry output in Vietnam. The initial representative weight of each audited facility will be shared with the industry association and the mother-corporation for their comments and inputs, to develop the best possible estimate of the sector.

Deliverable 2. Consolidated preliminary audit report

Task III. Development of Methodology for EE Benchmarking, and Implementation of EE Benchmarking for the Aquaculture Processing Industry

1. This task involves a proposal of methodology to be used in the energy efficiency benchmarking exercise that will be carried out by the Consultant.
2. This task also includes a benchmarking exercise to identify opportunities for energy efficiency in the aquaculture processing industry, based on comparison of enterprises with comparable scale, processes and overall EE performance. Attention should be paid to not only processes, but product and equipment for more accurate benchmarking of industries reliant on refrigeration and cooling. The Consultant shall perform the calculation of the benchmarks using the final version of the benchmarking methodology and the data for the industrial facilities for which the preliminary audits were performed. If, during the calculation, it becomes evident that some of the required data had not been gathered earlier, the Consultants will get in touch with the relevant enterprise to fill the data gap.
2. The Consultant will prepare a benchmarking report reflecting the results of the benchmarking effort.

Deliverable 3. Methodology for energy efficiency benchmarking and the EE benchmarking report in selected subsectors of the aquaculture processing industry

Task IV. Assessment of Energy Saving in the Aquaculture Processing Industry

Consolidating the data/information acquired during the sector survey, the preliminary audits, and the benchmarking effort for the selected subsectors, and taking into account feedback from MOIT, VBCSD and WWF, the Consultant will complete its assessment of the estimated energy efficiency savings potential in the aquaculture processing industry. The assessment shall also consider the equivalent CO₂ emission reduction potential from improvement of energy efficiency and from replacement of high-GWP and ozone depleting substances.

Deliverable 4. Final report on assessment of energy saving in the aquaculture processing industry. Final report should be submitted in both English and Vietnamese versions.

IV. DELIVERABLES AND INDICATIVE TIMETABLE

Deliverables		Indicative deadline for deliverables
Deliverable 1.	Sector Review & Methodology for Energy Efficiency Benchmarking	31 Oct 2017
Deliverable 2.	Survey Report completed & Consolidated preliminary audit report	30 Dec 2017
Deliverable 3.	EE Benchmarking Report in Selected Subsectors of the Aquaculture Processing Industry	30 Jan 2018
Deliverable 4.	Final report on Assessment of Energy Saving in the Aquaculture	10 eb 2018

V. PROPOSAL REQUIRED

- (1) Profile of service provider
- (2) Proposal package in English or Vietnamese with proposed methodology, workplan, activities, timeframe and budget included.
- (3) CV of team leaders and members.
- (4) Deadline for proposal submission: **01 Oct 2017**
- (5) The Proposals shall be submitted in one outer sealed envelope. The sealed envelope shall be clearly marked “Sector Study, EE Benchmarking and Assessment of energy saving potential in the Aquaculture Processing Industry” and shall be addressed to:

Mr. Nguyen Thanh Trung

Vietnam Business Council for Sustainable Development

Vietnam Chamber of Commerce and Industry

4th Floor, VCCI Building, No.9 Dao Duy Anh Str, Dong Da Dist, Hanoi, Vietnam

Mobile: 0945223333

E-mail: trungnt@vcci.com.vn