



Government of the People's Republic of Bangladesh
 Office of the Project Director
 "Establishment of Premix Kernel Machine with
 Laboratory and Construction of Infrastructure
 to ensure nutrition in Food Grains" Project
 Directorate General of Food
 Khaddya Bhawan, 16 Abdul Goni Road, Dhaka-1000.
www.dgfood.gov.bd



Memo No.13.01.0000.362.49.010.20-25

Date: 03-11-2020

**REQUEST FOR EXPRESSION OF INTEREST (REOI) FOR
 SELECTION OF CONSULTING FIRM TO CONDUCT**

Initial Environmental Examination (IEE), Environmental Impact Assessment (EIA) and Detail Architectural, Structural, Electro-Mechanical, Plumbing & Sewerage Design & Drawing & Supervision Services for 'Establishment of Premix Kernel Machine with Laboratory and Construction of related Infrastructure to Ensure Nutrition in Food Grains Project' as a complete Plant.

1.	Ministry/Division	Ministry of Food
2.	Implementing Agency	Directorate General of Food
3.	Procuring Entity Name	Project Director Establishment of Premix Kernel Machine with Laboratory and Construction of related Infrastructure to Ensure Nutrition in Food Grains Project
4.	Project Code	224306600
5.	Expression of Interest For Selection of	Consulting Firm (National)
6.	Budget and Source of Funds	Government Development Budget GoB
7.	REOI Ref. No.& Date	13.01.0000.362.49.010.20-25, Date: 03-11-2020
8.	Procurement Method/ Procurement Sub-Method	Selection under Fixed Budget (FB)
9.	Project Name	Establishment of Premix Kernel Machine with Laboratory and Construction of related Infrastructure to Ensure Nutrition in Food Grains
10.	Request for Expression of Interest (REOI) for Selection of Services From	Reputed/Established Consulting Firms for Providing Consultancy Services to Initial Environmental Examination (IEE) to Obtain Site Clearance Certificate (SCC), Environmental Impact Assessment (EIA) to Obtain Environmental Clearance Certificate (ECC) and Detail Architectural, Structural, Electro-Mechanical, Plumbing & Sewerage Drawing, Bill of Quantities (BoQs), Preparation of Tender Documents etc. & Supervision Consultancy Services for the Project of 'Establishment of Premix Kernel Machine with Laboratory and Construction of related Infrastructure to Ensure Nutrition in Food Grains' as a complete Plant.
11.	Location of the project	Silo campus at Narayanganj.
12.	REOI Closing Date and Time	16-11-2020 on 3.30 PM (BST)
13.	Brief Description of Service	<p>Directorate General of Food under the Ministry of Food has been implementing IEE, EIA and Architectural, Structural, Electro-Mechanical, Plumbing & Sewerage Drawing, BoQs etc. & Supervision Services for 'Establishment of a new Plant like Premix Kernel Machine with Laboratory and Construction of Infrastructure to Ensure Nutrition in Food Grains' funded from Government Development Budget. The project area at Narayanganj Silo Campus, Siddhiganj, Narayanganj. The Duration of the Assignment will be 12 months. The major scope of services are as follows-</p> <ul style="list-style-type: none"> • Prepare a Master Plan with Detailed Lay Out and Architectural Plan for New Premix Kernel Machine with its related Infrastructure to Ensure Nutrition in Food Grains attached with existing Narayanganj Silo Campus; • Establishment Premix Kernel Machine with the capacity of 400KG per hour; • Establishment of a laboratory with modern equipment for testing food; - • Establishment of a new office building cum-laboratory with 05 storied foundations with 1200 (400x3) square meter area; • Establishment of a new factory building with 600 square meter area; • Establishment of a Store/Silo/warehouse with a capacity of 400 metric ton for the preservation of raw materials like Rice/wheat/corn etc.; • Supervision Consultancy Services includes Civil, Electro-Mechanical, Erection, Commissioning and Performance standards of production, inspection & QA services of the turn key Project as a whole • IEE to Obtain SCC and EIA to obtain ECC from Department of Environment (DoE); <p>The detailed Terms of Reference (TOR) for the assignment can be found in the following address and website: www.dgfood.gov.bd or Hard copy of the TOR Documents can be collected with a written permission from PD as a qualified Consulting Firm as specified in Eligibility of Consulting Firm.</p>
14.	Eligibility of Consulting Firm-Experience, Resources and Delivery Capacity Required	<p>The Directorate General of Food now invites eligible Consulting Firms ('Consultants') to indicate their interest in providing the services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the services. Minimum eligibility criteria of the consulting firm-</p> <ol style="list-style-type: none"> 1. Experience related to IEE, EIA, Environmental Management Plan (EMP) and Architectural, Structural, Electro-Mechanical, Plumbing & Sewerage Drawing, BoQs, Estimates and Preparing all Tender documents as per PPR etc. & Supervision Services of a complete project like food industry/Cement industry/poultry feed attached with Packaging plant and jetties. 2. Experience in other similar works/assignments of typical complete industry. (include nature, name of project, total cost, total input in terms of staff-month, employer, location & services provided) 3. General and overall experiences of the firm 4. Availability of key professional staffs, logistics 5. Legal Documents like Registration of the consulting firm (Legal trade License, Registrar of Joint Stock Companies and Firms (RJSC), Firm's brochure) 6. Updated TAX, VAT and BIN (with up-to-date monthly VAT return Printed copy) certificate 7. Voter ID of authorized Person 8. Bank solvency showing managerial and financial capacity in/c. turn-over. 9. Audited financial reports for last three years. 10. Age of the firm (At least 12 years).
15.	Name, Designation, Address and Contact Details of Official Inviting EOI	Md. Humayun Kabir, Project Director (Joint Secretary), "Establishment of Premix Kernel Machine with Laboratory and Construction of Infrastructure to ensure nutrition in Food Grains" Project, Directorate General of Food, Room No-329, 16 Abdul Goni Road, Dhaka-1000.
<p>No association/joint venture/and or sub consultancy is required to conduct the services. The consulting firms will be selected as per PPA-2006 & PPR-2008. Further information can be obtained at the address below during office hours. Short listed firms will be qualify for participate in RFP of the said consulting services.</p> <p>The Procuring Entity reserves the right to accept or reject all EOIs.</p>		

03-11-2020
 (Md. Humayun Kabir)

TERMS OF REFERENCE (TOR)
FOR DESIGN AND DRAWING OF PREMIX KERNEL PRODUCTION MACHINE
ALONG WITH KERNEL STORAGE & OFFICE BUILDING WITH ANCILLARY FACILITIES

1. Background

Bangladesh is one of the most populous countries in the world. The Government of Bangladesh is working relentlessly to ensure food security for this huge population by achieving self-sufficiency in food production, especially in granular food production. This has ensured access to food for people of all walks of life. Over the past decade, the number of malnourished people has been steadily declining as a result of various government initiatives in the field of nutrition. The election manifesto of the present government has mentioned the importance of ensuring nutritious and safe food. The issue of nutrition security has also been seriously considered in the implementation of the Seventh Five-Year Plan and the United Nations Sustainable Development Goals (SDGs).

In this context, the project has been taken up as part of the expansion and strengthening of rice fortification activities at the government level. Rice fortification is the process of enriching food i.e. adding micronutrients (essential trace elements and vitamins) to the diet. According to the World Health Organization (WHO) and the Food and Agriculture Organization of the United Nations (FAO), fortification is "an essential micronutrient that mixes with food to ensure nutritional quality in food. The six nutrients in fortified rice are vitamin A, B1, Vitamin B12, folic acid, Iron (Ferric Pyrophosphate) and Zinc (zinc oxide) etc.

Technical process: First the broken rice is crushed. The premix material is then weighed and mixed with vitamins, folic acid and zinc. Preconditioning and mixing is then done at a temperature of 70-80° Celsius. It is then transported with the help of Screw Conveyor and heated in a Hot Extruder at a temperature of 80-110° for 30 seconds. Later the roller becomes dryer and is transported to the final drying section. The test is then taken to the cooling room through a metal detector and filled in a poly bag. The fortified kernels are then mixed with boiled rice in the ratio of 100: 1. The fortified rice is then bagged and kept in a dry and cool place.

Under the project, a fortified kernel production machine with a capacity of 400 kg per hour will be set up. Rice Fortification Program WFP has undertaken the distribution of nutritious rice in 16 Upazilas under the School Mill Program under the Ministry of Primary and Mass Education. WFP is providing technical assistance to the Department of Food for the production and distribution of nutritious rice. With the technical support of WFP, there are already 3 Fortified Kernel manufacturing companies operating in the country with an annual production capacity of 1200 MT. When WFP cut off the supply of nutritious rice and technical assistance to the Food Department, the Food Department took the initiative to produce fortified kernels under its own management. In addition, as the number of private fortified kernel manufacturers is less, they provide kernels to the Food Department through tenders at higher profits. This created a monopoly situation and cost/Pay the government more money. A balanced diet is the key to good health. Dietary malnutrition causes the spread of various diseases. It also impairs physical and mental development and reduces efficiency. Nutritional status among women has improved slightly but serious problems still exist in adolescent girls. Bangladeshi children, especially those suffering from micronutrient deficiencies (such as vitamin A, Iron, Iodine and Zinc) are suffering from a wide range of problems. The Sustainable Development Goals (SDG-1 & SDG-2) include the commitment to achieve No Poverty & Zero Hunger and paragraph 3 of the Seventh Five-Year Plan Goal-14.3, to ensure balanced nutrition with adequate nutrition to ensure nutrition for all.



Goal 2.1 of SDG's Goal 2 calls for an end to hunger by 2030 by ensuring safe, nutritious and adequate food for all people, especially the vulnerable, the poor and children. There are 6 (six) micronutrient deficiencies in the diet of a large population of the country. In Bangladesh, 36% of children under the age of 5 years are stunted, 33% underweight and 14% wasting (source: HNPSIP). According to ICDDR'B, 41% of children less than 5 years of age are stunted, 36% underweight and 16% wasting. At present reproductive age is 39.90%, non-pregnant & non-lactating anemia is 26% and non-pregnant & non-lactating zinc deficiency is 57.30% and vitamin B-12 deficiency is 23% (source: WFP). According to the Bangladesh Population and Health Survey (2014), 36.1 percent of children under the age of 5 are stunted.

According to the National Micronutrients Status Survey (NMSS), zinc deficiency is 44.6% among Per-school age children, 51.3% of anemia and 42.4% of women aged 15-49. At present, the Department of Food is distributing limited amount of nutrients in the VGD sector in 2013 and in food-friendly programs from 2016 onwards. To see the positive effects on malnutrition, ICDDR's B, a health research organization funded by the United Nations World Food Program, conducted a study from December 2014 to February 2017. In this study, a total of 10 upazilas (Kaliganj, Gazipur Sadar, Tungipara, Kashiani, Dakop, Koyra, Sharankhola, Morelganj, Shyamnagar and Kaliganj) of 5 districts of Bangladesh (Gazipur, Gopalganj, Khulna, Bagerhat and Satkhira) are covered under VGD program. The study found that one year of nutrition improved VGD women's vitamin-A deficiency, anemia and zinc deficiency. In the study, anemia decreased by 4.8%, zinc deficiency by 6% and vitamin A deficiency by 2.5%. Note that taking vitamin-A, B, zinc and iron has also reduced the rate of illness. Under the social security program of the government, in order to increase the availability of nutritious food among the extremely poor people, the government will distribute / supply quality nutritious food. As a result, the project will contribute to the reduction of micronutrient deficit.

The supply of nutritious rice to a large population will contribute to reducing the malnutrition rate of the poor and disadvantaged people as described in Goal 2 of 2.1 the SDGs.

In order to ensure food aid and nutrition for the poor people in the rural areas of the country, "Food Friendly Program Policy 2017" was formulated in 2017 in the government food distribution system. Under the social safety net, in the food-friendly program sector, 30 (50) lakh poor families are being distributed 30 kg of rice at the rate of 10/- (ten) kg per month for 5 (five) months of the year in rural areas. In addition, the VGD program is providing 30 kg of rice per card free of cost to one million families throughout the year. Distributed among the extremely poor and needy, this rice generally provides food security to satisfy their hunger, but does not solve the nutritional problem. According to SDG-2, the government has undertaken various programs to improve the nutrition of the people as it has an obligation to eradicate nutritional problems as well as food security. The Second Country Investment Plan (CIP-2) has also been formulated for this purpose. The food grain based programs of the Ministry of Food and the Ministry of Women and Children Affairs have taken initiative to distribute the food-friendly and VGD rice in fortified phases respectively. Nutritious rice is being distributed instead of rice. Currently the Department of Food does not have its own Premix Kernel production machine. Only 3 companies at private level in Bangladesh produce Kernel are Igloo, Masafi and Star food. Their total production capacity is only 1200 MT, which is less than the demand and the price is too high. Besides, with the recent approval of School Mill Policy 2019, school mills have been introduced in 16 Upazilas of the country and the Ministry of Primary and Mass Education has sent a letter to the Ministry of Food to ensure nutrition for school mills. The kernels have to be procured from the institution at the government's expense and a lot of government money is spent on it. Lack of production of its own Premix Kernel is hampering the distribution of nutritious rice among the extremely poor and malnourished families. Rice fortification can be introduced in the food distribution system if the existing Premix Kernel production system exists. The proposed 400 kg kernel production machine/factory can produce 1920 tons of kernels per year in 2 (two) shifts in a day per year. In the VGD sector, the following factors are contributing to the nutritional problems:

Upazilas and 816 MT of kernels will be required annually. The food-friendly program will require 970 MT of kernels a year to distribute nutritious rice in 13 Upazilas. On the occasion of Bangabandhu's birth centenary in 2020, the Ministry of Food has undertaken the task of distributing nutritious rice in 100 Upazilas in the food-friendly program sector. The Ministry of Women and Children Affairs will also distribute nutritious rice under the VGD program. Due to the increase in government activities for distribution of nutritious rice, about 2000 MT of kernels will be required in 2020. In addition, a total of 11,000 MT of kernels will be required to convert all distributed rice in the food-friendly program and VGD sector into nutritious rice. But at present this kernel is produced only 3 companies in Bangladesh are Igloo, Masafi and Star food products. And their total production capacity is only 1200 MT, which is much less than the demand and the price is too high. In the project proposed by the Ministry of Food, it will be possible to produce about 1000 MT of kernels per year through the Factory with a production capacity of 400 kg kernels per hour, which is only 8.69% of the total demand.

Premix Kernel is currently being procured by the Food Department through tender for distribution of nutritious rice at government expense. Therefore, an initiative has been taken to set up a Premix Kernel production Factory/machine to distribute nutritious rice under the VGD sector and food-friendly program to the working poor. According to HIES and Election Manifesto-2018, at present the Ultra Poor People of the country is 11.3% (Source: BBS and Election Manifesto-2018). There is a rationale for the Department of Food to adopt the proposed project to ensure nutritional value in food by targeting such Ultra Poor People. The project proposed by the Food Department is being adopted as a pilot project. If the aims and objectives of the project are implemented, the government has plans to take up more such projects in different strategic places of the country in phases. If the goals and objectives of this project are achieved, more similar projects will be taken up for the development of nutrition of the people. There is no possibility of regional inequality at present. 1 (one) acre of land will be required for implementation of the project and no land will have to be acquired.

In this connection the '**Establishment of Premix Kernel Machine with Laboratory and Construction of Infrastructure to Ensure Nutrition in Food Grains Project**' was taken by the Ministry of Food with the Government own development budget at a cost of BDT 6677.80 lakh. The project is implementing by Directorate General of Food at Narayanganj Silo campus of Dhaka Division in Siddhorgang of Narayanganj during 01 January, 2020 to 31 December, 2021.

2. Project Goal and Objective of the Project

The overall goal of the project is to reduce the malnutrition of the poor by consuming nutritious rice under the social security net program. The objective of the project is to increase the capacity of the government to produce quality nutritious rice in order to increase the availability of nutritious food among the poor. The specific objectives of the project are to-

1. Augment of the nutritional value of rice by adding micronutrients through fortification;
2. Abatement of the outbreak of malnutrition and build a healthy and strong nation;
3. Inclusion in all delivery system of public food distribution and ensuring national nutritional value through increasing the production of Premix Kernel;
4. Establishment of a Premix Kernel with a capacity of 400KG per hour.

3. Main Component of the Project

The main components of the project are-

1. Establishment of a Premix Kernel Production Machine with the capacity of 400KG per hour; (Production of Kernel to be 1920 M/Ton per year with 2-shift factory Production/running) In future target Production of Kernel to be 11100 M/Ton per year and it would be expand in 1:100 ratio & modification each year up-to 1110000 M/Ton per year.

2. Importing raw material of Kernel production (including Macronutrient- Vitamin A, B1, B12, Folic Acid, Iron& Zinc) from abroad;
3. Establishment of a laboratory with modern equipment for testing food;
4. Establishment of a 3 storied new office building cum laboratory with 05 storied foundations;
5. Establishment of a new factory building with 600 square meter area (*with suitable area L-30m, W-20m & Ht.-9.15m);
6. Establishment of a Store/Silo/warehouse with a capacity of 400 metric ton for the preservation of raw materials.

4. Objective of the Assignment

The objective of this consultancy is to conduct Initial Environmental Examination (IEE) to obtain IEE approval to achieve SCC followed by Environmental Impact Assessment (EIA) to obtain Environmental Clearance Certificate (ECC) from Department of Environment (DoE) etc. and all Infrastructural establishments of Premix Kernel factory related Detailed Architectural, Structural, Electro-Mechanical, Plumbing & Sewerage Drawing, Bill of Quantities (BoQs), Estimates and Preparing all Tender documents as per PPA-2006 and PPR-2008 etc. & Supervision Services for above mentioned project as a whole.

5. Consultant's Responsibilities/Scope of Works

The Consultant's scope of services shall include, but not limited to the issues given in following.

Detail Tasks under the IEE and EIA

This IEE and EIA require identification of potential environmental issues associated with the project and appropriate mitigation measures to minimize the environmental impacts. The broad scope of the IEE and EIA are:

1. **Establishment of detail environmental and social baseline condition based on required primary survey/secondary investigation in respect of-**
 - i. Physical Environment: Geology, Topography, Geomorphology, Soil, Land Use, Meteorology, Hydrology and Morphology, Seismic Survey Activities;
 - ii. Biological Environment: Habitat, Aquatic Life and Fisheries, Terrestrial Habitats and Fauna
 - iii. Environmental Quality: Air, Water, Soil, Sediment and Noise
 - iv. Fisheries: Fishing Activities, Fishing Communities, Commercial Important Species, Fishing Resources, Commercial Factors
2. **Socio-Economic Environment would include, inter alia following-**
 - i. Population: Demographic Profile and Ethnic Composition;
 - ii. Settlement and Housing;
 - iii. Traffic and Transport;
 - iv. Public Utilities: Water Supply, Sanitation and Solid Waste;
 - v. Economy and Employment: Employment Structure and Cultural Issues;
3. **Identification and Evaluation of Potential Impacts**
 - i. Identification and Assessment of positive and negative impacts likely to be from the project
4. **Management Plan/Procedures**
 - i. Provide an Environmental Management plan (EMP) with mitigation measures according to identified impacts;
 - ii. Prepare an Environmental Monitoring Plan including monitoring and mitigation budget.
5. **Consultation with Stakeholders**
 - i. Ensure that the consultation with interest and relevant parties and general public will take place;
 - ii. Their views received from consultation will be taken into account in planning and execution of the project.
6. Alternative Analysis of the project;
7. Prepare a disaster management plan for the project;
8. Topographical survey of the selected project sites;

9. Produce an IEE and EIA reports in accordance with the DoE's guideline and the national regulations of the government to achieve SCC followed by ECC;
10. Assist Directorate General of Food for obtaining location/site/environmental clearance from DoE;
11. Any other tasks as per requirement of the client.

Detail Tasks under all Infrastructural establishments of Premix Kernel factory related Detailed Architectural, Structural & its related ancillaries all Design, Drawing and Supervision

The Consultant's scope of services shall include, but not limited to the issues given in following.

1. Design of Premix Kernel Production Machine(As per DPP's given guide line & flow chart all civil foundation and related services);
2. Determine the capacity of the Kernel Production and all other electro mechanical equipment(As per DPP's given guide line for preparing its Tender Documents);
3. Design and drawing of Kernel Storage building and office building as per requirement;
4. Design, drawing and specification of the machinery and equipment to be used in Kernel machine and lab equipment(As per DPP's given guide line for preparing its Tender Documents);
5. Prepare all tender documents, details Bill of Quantity (BoQ) and verify and recommendations of running and final bill with format and different progress report/format as per requirement of PD/Directorate General of Food;
6. Supervision of civil works and erection of equipment and machinery and commissioning works of the total plant. The civil engineering part of the silo system (if required by client) will comprise the following and the consultant will be responsible for the detail engineering design and construction supervision.
 - i. Pile casting and making of the pile cap
 - ii. Construction of foundation on the pile cap
 - iii. Construction of ancillary buildings/structures.

The electro-mechanical part of the Kernel Machine & Lab Equipment will comprise the following:

- i. Supervision of Installation of electro-mechanical equipment of the Kernel Production Machine as per DPP's guide line.
- ii. Supervision of Installation of the Laboratory Equipment for testing various parameters of food grains as per DPP's guide line.

The contractor selected for the proposed project will be solely responsible for supplying and installation of the electro-mechanical equipment. The consultant will coordinate with the contractor, client and other concerned organizations for smooth progress of the works.

7. The scope of the services provided by the Consultant shall include all the services required from the Engineer as to be outlined and defined in the Contract Agreement (CA) between the Works Contractor the Employer (the Client), except those duties retained by the client and specifically identified as such in the CA. The client shall, prior to commencement of work by the Consultant designate in writing that the Consultant shall have the authority of the Engineer with respect to CA and that he will have the required authority to discharge those duties as defined in CA and as generally described hereinafter. In the text to follow, the Consultant shall be referred to as "The Engineer/Consultant".
8. As 'the Engineer' the consultant shall administer all the works contracts (Civil, Mechanical, Electrical etc.), make engineering decisions, be responsible for quality assurance, provide general guidance and furnish timely response to the contractors in all matters relating to the works and ensure that all clauses of the CA.
9. The Consultant shall comply with the requirements for the Engineer of CA and in particular, the requirement to obtain the specific approval of the Client in writing before taking any actions requiring such prior approval.

10. The services to be provided by the Engineer/Consultant shall be carried out by qualified project engineers, site engineers and technologist who are competent in the general type of work required under Contract and who are competent and experienced in their own specific assignment or position on the project.

11. The services to be provided by the Consultant shall also cover the following:

- i. The proposed project of the Premix Kernel Production factory's Final design would be knowhow relating to Rice Mills, Malting Plant, Boiler, Dryer and Processing Plant, weighing & conveying Systems, Electro-Mechanical equipment given by the manufacturer to be checked and approved by the consultant;
- ii. Project Management, Administration & Planning and evaluation services of the contract and other technical support;
- iii. Supervision of Construction, Installation & Commissioning including Testing and Inspection. In this connection, a site office is to be provided in the project premises.

Overall Project Management, Administration & Planning

The management administration and project planning of the Works shall be under the direction of the Project Director and shall be carried out by qualified engineering specialists and office support staff. The tasks shall consist of but not limited to the following:

- a) The control and approval of the Quality Assurance System and Procedure prepared by the Contractor, based on the Contractor's schedule, as well as establishment of a detailed and computerized Construction Scheduling and Cost Control System;
- b) The establishment and monitoring the implementation of guidance for undertaken by the Contractor in accordance with the requirements as set out in CA/Contract Document;
- c) Convening of weekly working meetings with the Contractor which shall include the senior personnel of both the Contractor and the Engineer/Consultant. These meetings will be held to, discuss the day-to-day construction activities to review the progress of the Work, and to resolve any problem, including changes to the work plan, supply of materials, quality control and compliance with the specifications. The Client may attend the weekly meetings and the Engineer/Consultant shall take minutes of the meetings and provide copies to the Contractor and the Client;
- d) Convening of monthly progress review meetings with the Contractor and the Client;
- e) The attendance and participation of the Engineer/Consultant in any periodic meetings called by the Client involving the Financing Agencies and others, including the Contractor;
- f) Provision of timely notification and documentation of any changes or conditions that may have an impact on the project schedule and/or budget, and including recommendations on the relevant measures that could be taken to mitigate any negative impact, also these think need to include in their respective contract documents;
- g) Reviewing and processing for submission to the Client for his approval all contract documentation with respect to interim(any Bill/Running bill)and final payment certificates;
- h) Preparation of the Certificate of Completion for the Work or any significant part or parts thereof as provided for under CA from Contractors;
- i) Management and co-ordination of the takeover initiatives, review and turnover of operation and maintenance manuals submitted by the Contractor and/or individual suppliers;
- j) Review and turnover of the Contractor's "as built drawings";
- k) Preparation of detailed monthly reports, including charts, describing the construction activity, progress of the work including the supply of materials being- manufactured or produced current costs and cost projection for completion, problems solved and current problems that remain unresolved, and any matters of an urgent nature requiring a decision by the Client and/or Financing Agencies;
- l) Initial preparation of a detailed project schedule in bar chart form and critical path showing all of the major activities and the critical links with the activities for the implementation of the whole Project with each part of contractors;
- m) Periodic and regular updating of the project schedule to monitor the actual vs. planned progress of the work and the inclusion of these updated schedules in the monthly reports;

- n) Providing timely notification to the Client(if required by Client) of any necessary actions with regards to the Client's duties and obligation in relation to permit, customs arrangements, approvals, relations with other agencies, co-ordination of commonly used facilities, provision of the Site and associated facilities and any contractual commitment on the part of the Client to provide transport services to the Contractor under the terms of the Contract;
- o) Advise the Client the adequacy of the Contractor's insurance policies, performance bonds, indemnities and ownership or rights to construction plant and equipment required for the Contract as per CPTU's standards Tender documents appropriate for the project works;
- p) Advising the Client on possible ways to accelerate the scheduled completion of the work and/or reduce costs where appropriate and in a manner consistent with the overall contractual arrangement between the parties to provide the same type of advice to the Contractor;
- q) Monitoring the Contractor's activities to ensure that there is full compliance with the overall contract requirements for protection of the environment including waste management and to maintain a proper record of such activity for inclusion in the monthly reports followed by an approved EMP;
- r) The handling of construction disputes under terms of the Contract;
- s) Advising the Client(if required) for arrange foreign training/study tour for Client management for capacity building on the international practice of construction, operation, management & maintenance as per DPP's Guide Line;
- t) Advising the Client(if required) for arrange local training for Client staff for capacity building on the international practice of construction, operation & maintenance;
- u) Carrying out any other duties required under CA and
- v) Commissioning of the Premix Kernel Production Factory and the Plant as a whole.

Technical Support

The Consultant shall provide sufficient qualified staff and man-months to carry out the necessary technical support for the proper execution of CA/assignment. The Project manager of the each Contract of works/supply/erectors shall work under the direction of the Project Director and the tasks to not shall include but not limited to the following:

- a) Review of Contractor's designs and drawings;
- b) Review Contractor's supply drawings for Silo/ware-house/storage system;
- c) Review of Contractor's proposed design modifications (including related specifications) for the execution of the Work if client directed;
- d) Provide the necessary technical input with respect to the Engineer's review of the Contractor's proposed construction methodology, including erection procedures and sequences;
- e) Monitor the site conditions and providing the necessary technical input with respect to any changed conditions;
- f) Make recommendations to the Client with respect to design changes or modifications which could accelerate the completion of the work and/or result in cost savings within contract agreements;
- g) Provide the necessary technical input with respect to the Engineer's review of the O & M manuals submitted by the Contractor and Others;
- h) Provide the necessary technical input with respect to testing and commissioning of the factory performance/work; and
- i) Preparation of maintenance manuals of the proposed factory establishment.

Supervision of Construction, Installation & Commission including Testing& Inspection services

The Consultant shall provide the necessary field staff/resource persons, including office support staff, for the direct supervision of the proposed establishment of the factories appointed Contractors under CA, including all required field and laboratory testing as per contract document, inspection and supervision. The staff shall be under the direction of the Project Director and the tasks to be carried out shall include but not limited to the following:

- a) The establishment of the basic survey control and the carrying out of all necessary control and check surveys, including the surveys for quality determination which are the responsibility of the Engineer/consultant under the terms of the CA/contract agreement with consulting firm;

- b) Carrying out of all necessary inspection and testing of materials, equipment and machinery are to be used for the plant as per contract agreement set-fourth of each contract;
- c) Site inspections, review of test results and execution of independent testing to ensure satisfactory performance of the Contractor and the execution of the Project in accordance with the CA/contract agreement with consulting firm;
- d) and sound engineering practices;
- e) Checking and testing of sources of materials, equipment and machinery proposed for use in the temporary and permanent Works;
- f) The supervision and monitoring of the Contractor's adherence to the environmental provisions of the CA/contract agreement with consulting firm;
- g) The review and approval of all construction methods and procedures, including specific erection methods and sequences;
- h) Checking of working drawings/as built drawing produced or submitted by the each of Contractor as necessary for Installation of equipment machinery as well as the proper execution of the temporary and permanent Works/plant;
- i) Checking of construction and erection schemes/proposals proposed by the Contractor to be implemented in the execution of the CA/contract agreement with consulting firm;
- j) The interim measurements, checking and recording of the interim measurements of quantities of the works completed to assess and issue appropriate interim payment in accordance with CA/contract agreement with consulting firm as well as to assess progress achieved;
- k) Supervision of all site investigations undertaken by the Contractors, either as required under the Terms of the CA/contract agreement with consulting firm or as otherwise necessitated for the proper installation of equipment machinery and execution of the Works;
- l) Issuing of all necessary instructions to the Contractor/supplier as required under the terms of the CA/contract agreement with consulting firm;
- m) Issuing of all necessary instructions with respect to emergency measures and protection of the Works & goods;
- n) Evaluation and determination with respect to any changed conditions such as foundation conditions, the suitability of designated materials or the optimization of the design;
- o) Acceptance or rejection of the work or any part thereof as constructed by the Contractor in accordance with CA/contract agreement with consulting firm;
- p) The issuing of instructions to the Contractor with respect to the carrying out of on-site or all-site tests and the recording of the same, including the supervision and verification of such tests;
- q) Detailed recording of all construction activity and test results;
- r) Preparation and submission of Project Completion Report along with completion drawing within three months of the completion of the works from all contractors.

Implementation Arrangements

- a) The consultants will work closely with the DG Food's Project Implementation Unit/PD's office and coordinate their work with other relevant units of DG Food, Ministry of Food local administration and relevant Ministries and agencies. The consultant will establish their office in Dhaka and the field at convenient location from DG Food offices to whom they will be reporting on a day to day basis;
- b) After the inception stage the Consultants shall prepare a detailed schedule and task-flow diagram, which depicts the interrelationship of various tasks in the assignment which lead to the completion works and mechanism of coordination with the client and other related entities. This would be kept and update throughout the Project duration;
- c) Consultants have to formulate specific objective of the assignments, action plan, targeted results in terms of Specific, Measurable, Achievable, Realistic, Time-bound and Sustainable (SMARTS). The targeted result must coincide with the corresponding set objective. The action plan shall be in three columns that shall include a time frame column and be represented in CPM chart;
- d) Director General of Food/PD would be representative of the client and designated as Head of the Project Implementation Unit (PIU) to coordinate all interfaces with the Consultants. Head of PIU with support from the Director IDTS would also assist the Consultants in resolving various administrative issues which may arise during the enter period of project implementation. The Consultants' Project Manager will be expected to be readily available during project implementation.

e) The Consultants shall be responsible for all aspects of performance of services as set forth in the preceding sections of this TOR. DG Food would be responsible for providing the existing data and information including all reports prepared so far for the project.

6. Duration of Service

Considering the activities proposed herein and the logical sequence, a total of 18 months period is estimated for the works.

7. The Consultant's Team and Qualifications

The proposed services under these Terms of Reference shall be carried out by using a consulting firm (Consultant) having 12 years' experience in Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) including Environmental Management Plan (EMP), environmental and social safeguards/risk analysis and management, stakeholder engagement. The Consultant should have experience in the fields of architectural planning and design, engineering survey, cost estimation and preparation of bid documents etc. in Food industry/Cement industry/poultry feed attached with Packaging plant and jetty.

Qualifications and Responsibilities of Key Personnel

Position	Academic Qualification	Professional Experience	Desirable Specific Experience
Team Leader	<ul style="list-style-type: none"> Master's Degree in Civil /Mechanical Engineering or equivalent 	25 Years	<ul style="list-style-type: none"> Have work experience in a multidisciplinary team in conducting IEE, EIA, EMP,design, construction, monitoring and supervision of civil engineering related works with a complete Typical Factory/Food manufacturers Establishment; Must have experience as Team Leader in works of similar nature and complexity; Lead the stakeholder's engagement process and getting SCC, ECC from DoE; Liaison and communication with DoE and other concerned agencies; Report and presentation preparation etc.
Environmental Expert (Also act as a Team Leader)	<ul style="list-style-type: none"> Master's Degree in Environmental Science/Civil and Environmental Engineering or equivalent 	15 Years	<ul style="list-style-type: none"> Have work experience in a multidisciplinary team in conducting IEE, EIA, EMP related works; Must have experience as a Environmental Specialist in works of similar nature and complexity; Supervise environmental and social safeguard compliance specially the occupational health and safety aspect during construction and Covid-19 obligations; Assist to Team Leader to lead the stakeholder's engagement process and getting SCC, ECC from DoE; Assist to report and presentation preparation etc.
Social Specialist	<ul style="list-style-type: none"> M.Sc in Sociology/Economics or equivalent 	10 Years	<ul style="list-style-type: none"> Have work experience in design and carrying out IEE, EIA, SIA, SMP related works that would impact on social and economic components of the project area; Previous experience on Social Impact Assessment compliance and relevant Govt. and social safeguard issues including Covid-19 obligations; Assist to Team Leader in report and presentation preparation etc.

Position	Academic Qualification	Professional Experience	Desirable Specific Experience
Civil/Foundation Engineer	<ul style="list-style-type: none"> Graduate in Civil Engineering Master's in Civil/Structural Engineering will be given preference 	10 Years	<ul style="list-style-type: none"> Have work experience as Civil/ Structural Engineer for design and construction of buildings; Work experience as Civil/Structural Engineer in at least 2 works of similar nature and complexity; Construction site management and supervision of civil works; Have good understanding of current BNBC, building construction rule etc to perform the duties efficiently and effectively.
Nutrition Specialist/ expert	<ul style="list-style-type: none"> Master's in Chemistry/ Nutrition will be given preference 	10 Years	<ul style="list-style-type: none"> Have work experience as Nutritionist for testing and inspection of Good Manufacturing practice of food industry like rice, kernel & food fortification/food process industry;
Architect	<ul style="list-style-type: none"> Graduate in Architecture Master's in Architecture will be given preference 	10 Years	<ul style="list-style-type: none"> Have work experience as Architect/ designer in design and construction of buildings; Work experience as Architect Engineer in at least 2 works of similar nature and complexity; Monitoring and Supervision of construction work to ensure design; Assist the Team Leader to prepare the report and presentation etc.
Electrical Engineer	<ul style="list-style-type: none"> Graduate in Electrical Engineering Masters in Electrical Engineering will be given preference 	10 Years	<ul style="list-style-type: none"> Have experience as Electrical Engineer with experiences in the design and supervision of building electrification; Work experience as Architect Engineer in at least 2 works of similar nature and complexity; Preparation of specifications and cost estimate; Erection, commissioning and installation of machineries equipment of a typical industry with site management and supervision of Electrical works; ; Assist the Team Leader to prepare the report and presentation etc.
Mechanical Engineer	<ul style="list-style-type: none"> Graduate in Mechanical Engineering Masters in Mechanical Engineering will be given preference 	10 Years	<ul style="list-style-type: none"> Have experience as Mechanical Engineer with experiences on metallurgical intervention; Work experience as Mechanical Engineer in at least 2 works of similar nature and complexity; Preparation of specification, schedule of item of works, bill of quantities and cost estimate for all works with testing and Inspection of performance to run a factory; Erection, commissioning and installation of machineries equipment of a typical industry with site management and supervision of mechanical works; Assist the Team Leader to prepare the report and presentation etc.

Position	Academic Qualification	Professional Experience	Desirable Specific Experience
Plumbing and Sanitation Engineer	<ul style="list-style-type: none"> Graduate in Civil/Sanitation Engineering Masters in Civil/Sanitation Engineering will be given preference 	08 Years	<ul style="list-style-type: none"> Formulate and prepare design method and design analysis of Sanitary and Plumbing elements of the project; Responsible for plumbing and sanitary lining of proposed works; Preparation of specification, schedule of item of works, bill of quantities and cost estimate of works; Preparation of tender documents, pre-qualification of tenders for all plumbing & sanitary works; Preparation different progress report format; Construction site management and supervision of Plumbing and Sanitation works; Assist the Team Leader to prepare the report and presentation etc.
Procurement and Contract Specialist	<ul style="list-style-type: none"> Graduate in Civil Engineering, Law, Management or relevant subject 	08 Years	<ul style="list-style-type: none"> Should have relevant experience with the specialization in procurement/ contract management related works; Handle procurement and contract management of similar activities including experience of handling variation of orders and contracts, claims of contractors and their appropriate disposal.
Auto CAD Operator/Drafts man	<ul style="list-style-type: none"> Graduate in Architecture 	05 Years	<ul style="list-style-type: none"> Preparation of entire architecture, structural, electrical, sanitary and plumbing works final checking of design, drawing and documentation under the guidance team leader; Designed plans using computer-aided design and drafting (CADD) software; Any other tasks related to architectural structural, electrical plans rough sketches and specifications.
Quantity Surveyor/Estimator	<ul style="list-style-type: none"> Graduate in Civil Engineer 	05 Years	<ul style="list-style-type: none"> Work experience as a Quantity Surveyor/Estimator in analyzing various rate for construction, estimating quantities and prepare cost estimate of the building; Construction supervision of multi storied buildings.
Computer Operators	<ul style="list-style-type: none"> Graduate in any Field 		<ul style="list-style-type: none"> Work experience as an Engineering computer composing like estimating, preparation of BoQs, Tender Document, report writings etc.

8. Implementation Schedule and Reporting Requirements

The Consulting Firm will be submitted the all relevant design, drawing, Estimate/BoQs, Preparation of all tender documents for the proposed project within 10(ten) Months after signing the contract agreement and site supervision up-to Trail run approx. Next 8 Months.



IEE Report

The draft IEE report shall be prepared in accordance with the Environmental Conservation Act, 1995, the Environmental Conservation Rules, 1997 and guidelines for Bangladesh National Building Code (BNBC), 2015. The consultant must submit the draft IEE report within 50 days from the date of signing contract. After having comments on the draft report from Directorate General of Food, the consultant will be allowed 10 days to submit the final report. Four (04) sets of hard copies of each report shall be submitted by the consulting firm.

Site Clearance Certificate for implementation of the project shall require to be obtained from the DoE by submitting the final report and other necessary papers as required within next 30 days from the date of submission of the IEE final report by the consultants. The Directorate General of Food as deemed necessary will assist the consultant in obtaining DoE Site Clearance Certificate (SCC). All govt. fees, AIT, VAT are to be paid by the Consultant in obtaining DoE Site Clearance Certificate.

EIA Report (if required)

The draft EIA report shall be prepared in accordance with the Environmental Conservation Act, 1995, the Environmental Conservation Rules, 1997 and guidelines for Bangladesh National Building Code (BNBC), 2015. The consultant must submit the draft EIA report within 120 days from the date of signing contract. After having comments on the draft report from Directorate General of Food, the consultant will be allowed 20 days to submit the final report. Four (04) sets of hard copies of each report shall be submitted by the consulting firm.

Environmental Clearance Certificate for implementation of the project shall require to be obtained from the DoE by submitting the final report and other necessary papers as required within next 40 days from the date of submission of the EIA final report by the consultants. The Directorate General of Food as deemed necessary will assist the consultant in obtaining DoE Environmental Clearance Certificate (ECC). All govt. fees, AIT, VAT are to be paid by the Consultant in obtaining DoE Site Clearance Certificate.

Detailed Works of all Infrastructural establishments of Premix Kernel factory related Detailed Architectural, Structural & its related ancillaries all Design, Drawing and Supervision

The consultants should complete the EIA study within a period of 04 months. The deliverable of the assignment shall include the following:

SN	Report	Submission (after contact signing)	Copies
1.	Submission of Draft IEE/EIA Report	1.5 months	5
2.	Final IEE/EIA Report Submission	2 months	
3.	Environmental Clearance Certificate (ECC)	1 months after approval of IEE/EIA Report	

The consultant shall submit simultaneously the draft and final Architectural and Engineering , BOQ/ Estimate, Tender Documents & monthly progress reports with the following documents/Reports to PD/DG Food



Submission (after contact signing)			
• Site Survey & Layout Plan of the site: by one month	=	3 Sets	
• Preliminary Architectural and Engineering Design/Drawing: by 2(Two)month	=	2 Sets	
• Final Architectural and Engineering Design/Drawing: by One month	=	3 Sets	
• Flow Diagram of the building/factory/and position of Kernel Machine layout/Process flow diagram/set-up of the equipment and machinery foundation & Factory Super structure as per DPP's Guide Line : by 1(one) month	=	3 Sets	
• Final Electrical and electro-mechanical Design/Drawing: by 2(Two) month	=	2 Sets	
• Detail Cost Estimate- Civil Works, Equipment & Machinery as per DPP's Guide Line: by1(one) month	=	3 Sets	
• Tender Documents with Technical Specifications & Quantities: by 1(one) month	=	10 Sets	
• Certification of Contractor's Bill Format: by 15 days	=	2 Sets	
• Monthly Progress Report: by of each Month	=	2 Sets	
• List of Laboratory equipment with specifications and its estimated costs as per DPP's Guide Line: by..... month	=	2 Sets	
• Draft Preparation of all Tender Documents: by 2(Two) month	=	2 Sets	
• Final Preparation of all Tender Documents : by 18 month	=	5 Sets	
• Site Supervision of all relevant Civil work, Electro-Mechanical work, Installation, Erection & Commissioning work of Pre-Mix Kernel Machine up to Trail Run with report	=	3 set	

9. Facilities and Equipment

To be provided by the Consultant

During the study, the Consultant shall provide all the facilities for their staff/consultants and other logistical requirements on their own to fulfill their obligations. These will also include support staff and office facilities, office equipment and supplies, required equipment and materials for field data collection, vehicles, and communications as required. The Consultant will set out the phase wise requirements in the technical proposal and provide the financial cost estimates for these in their financial proposal.

To be provided by the PD/Directorate General of Food

The client will provide the Consultant with all available studies and reports and data relevant to the services. The client will provide information required for the study and provide assistance where the Consultant, for the purpose of executing these services, needs to coordinate with other Government agencies, and non-government agencies. The client will also participate in all stakeholder consultation events related to the environmental and social assessments, with the technical and logistical support of the consultant as required and relevant data and information for establishment of proposed Premix Kernel Production factory as per guide line of DPP.

**CONSULTANCY SERVICES FOR ALL INFRASTRUCTURAL ESTABLISHMENTS OF
PREMIX KERNEL FACTORY RELATED DETAILED ARCHITECTURAL, STRUCTURAL
& ITS RELATED ANCILLARIES ALL DESIGN, DRAWING AND SUPERVISION**

Man- Month

SL No.	Position	Rate	Man -Month	Amount
A. PROFESSIONALS				
1	Team Leader/ also Environmental Expert.		18	
2	Social Expert		1	
3	Civil/ Foundation engineer		6	
4	Nutrition Specialist/expert		2	
5	Architect		3	
6	Electric Engineer		6	
7	Mechanical Engineer		6	
8	Plumbing & Sanitary Engineer		1	
9	Quantity Surveyor/ Estimators		3	
10	AutoCad Operators		4	
11	Computer Operators		18	
12	Procurement and Contract Specialist		4	
A. Staff Remuneration		Sub Total A =	69	

B. REIMBURSABLE EXPENSES			
		Total (A+B) :	

Grand-Total (Including VAT, AIT, Fees etc. as per Govt. Rules) :
In words :



Reimbursable Expenses

SN	Description	Unit (Day)	Unit Cost	Quantity	Total Cost (BDT)
A. Per-diem allowances					
1	Team Leader/ also Environmental Expert.	6		1	
2	Social Expert	6		1	
3	Civil/ Foundation engineer	6		1	
4	Nutrition Specialist/expert	6		1	
5	Architect	6		1	
6	Electric Engineer	6		1	
7	Mechanical Engineer	6		1	
8	Plumbing & Sanitary Engineer	6		1	
9	Quantity Surveyor/ Estimators	6		1	
Sub-Total					
B. Travel Expenses					
		Trips	-	-	-
1	Team Leader	20		1	
2	Environmental Engineer	2		1	
3	Civil Engr.	18		1	
	Architect	5		1	
4	Plumbing & Sanitary Engineer	6		1	
Sub-Total					
C. Others Cost					
1	Communication Costs Between One Site to others (within District)		Lumpsum		
2	Documentations		Lumpsum		
3	Stationeries		Lumpsum		
4	Public Consultation Meeting (2nos)		Lumpsum		
6	Drafting, Reproduction of reports, Printing		Lumpsum		
7	Government Fee (Schedule-13; Regulation 7(5), 8(2) SRO No-355/2010); As per DoE Clearance Fee=Tk. 4,00,000		At Actual		
8	Office rent, Clerical assistance		Lumpsum		
Sub-Total :					
Total Reimbursable (A+B+C) :					

