



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE (TOR)

For the provision of services for undertaking in-depth and tailored policy review of the biogas policy to support sustainable expansion of biogas use across industrial sectors in Cambodia
UNIDO Project No. 120118

1. BACKGROUND INFORMATION

The United Nations Industrial Development Organization (UNIDO) is implementing a Global Environment Facility (GEF) funded project under the GEF-5 cycle entitled “Reduction of GHG emission through Promotion of Commercial Biogas Plants”. The project is being implemented in collaboration with the Cambodian Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries. The GEF-5 project aims at promoting investment in biogas based rural electricity enterprises at commercial pig farms for increasing rural electrification in Cambodia.

The objective of this project is to promote investments in biogas based rural electricity enterprises (REE) for increasing rural electrification in Cambodia. The proposed intervention will enable swine farms to utilize animal manure produced in the sector to generate energy, while also offsetting greenhouse gases (GHG) emissions through the displacement of diesel fuel-based energy systems. The project has the target to install 1 MW cumulative capacity throughout the project period. Several swine farms in Cambodia have been identified where these biogas-based power generation plants can be constructed and installed.

In addition, the project expects to remove the existing barriers (awareness, technical capacity, enabling environment for investments of biogas projects) that currently limit the deployment and utilization of abundant agricultural waste to generate energy, thereby increasing the share of national income and improving the livelihoods of the population at large.

2. OBJECTIVE OF THE TERMS OF REFERENCE

The objective of this Terms of Reference is to procure services to provide support for a policy review for establishing an enabling environment for a rapid uptake of biogas technologies in Cambodia. Incentive policies for biogas technologies increase their effectiveness by having in place mechanisms which ensure that supported technologies and systems deliver as intended.

The assignment will strengthen the national capacities by integrating quality assurance standards and instruments to support renewables deployment. The Contractor is expected to lead consultations with major stakeholders, i.e. policy-makers, enterprises, animal farms and relevant industrial associations, and is to deliver the services and work in close consultations with UNIDO and BTIC.

3. SCOPE OF WORK

The contractor will provide support to the national institutions and agencies with the biogas policy review. Targeted policy recommendations will be developed for supportive instruments and regulatory measures to provide a sustainable and stimulating investment environment for expansion of biogas technology applications across industrial sectors in Cambodia. The policy, regulatory support schemes and quality infrastructure improvements will target industrial sectors providing biogas and seek to drive the consumer market (through regulations and incentives) for the demand of biogas as an energy source.

The proposed activities which are divided in **two Work Packages** are listed below:

Main tasks	Deliverables	Expected Timeline ¹
<p>1. Work package 1: Review the existing biogas policy and develop recommendations for a new biogas policy including</p> <ul style="list-style-type: none"> • Stakeholder mapping and assessment: Assess the capacities and the responsibilities of the relevant institutions and policy mechanisms supporting biogas energy including the information (name, address etc.) and also consider social/gender dimensions of: <ul style="list-style-type: none"> ○ BTIC ○ biogas and (renewable) energy associations ○ associations and NGOs, e.g. that work on agricultural waste management ○ biogas industry (e.g. equipment producers) ○ laboratories e.g. for organic waste test and bio-energy equipment calibration ○ academia, e.g. training programmes in universities, institutes and research centres for designing and engineering of bio-energy systems • Review of documents (e.g. national biogas programme of Cambodia and other countries) and data to identify gaps of the current regulatory framework in Cambodia and general state-of-the-art for biogas promotion. • Presentation of a Strategic Plan to conduct the biogas policy review for approval from GDAHP and PMU. Present, discuss and advance the development of market-based finance mechanisms; technical innovation; medium-scale biogas plants; big-scale biogas plants; and productive use of biogas. • Conduct the policy review and develop recommendations for the national biogas policy for Cambodia to promote sustainable and inclusive development of biogas energy in the country. 	<ul style="list-style-type: none"> - Agreed conceptual document containing methodology, key stakeholders and flexible workplan for consultancy - Biogas policy review report including recommendations for a gender-responsive biogas policy (draft both Khmer and English biogas policy and draft policy instruments for implementation of the policy) 	<p>Draft conceptual document available July 2020</p> <p>Draft Biogas policy review report September 2020 (Both Khmer and English Versions)</p> <p>Final Biogas policy review report October 2020 (Both Khmer and English Versions)</p>

¹ NOTE: The activities are to be developed in parallel

<p><u>Recommendations</u> should consider and be based on:</p> <ul style="list-style-type: none"> • Both secondary data (desk study) and primary data (interviews and focus group meetings with stakeholders in Cambodia). Interviews and consultations with NBP/GDAHP, BTIC, other grantees S-RET management team and other relevant stakeholders. • Lessons learnt in Cambodia • Lessons learnt from neighboring countries or success biogas markets globally • Assessment of the national biogas energy registration procedure (flowchart); • Listing and evaluation of the legal framework, policies, programs, strategies and action plans related to energy production from Biogas and industrial/factory agricultural waste management; • Identification of common linkages with other projects in Cambodia; • Consideration of social and gender dimensions. <p>Recommendations should include:</p> <ul style="list-style-type: none"> • Specific amendments or draft biogas policy to be integrated in the reviewed document with the main aim to ensure a sustainable expansion of bio-energy use and sustainable agricultural waste management; including possible policy instruments that promote investment in biogas • Considerations of gender equality; aiming at a gender-responsive biogas policy. • Suggestions for incentives and tax exemptions schemes, e.g. grid feed-in (tariffs), import tax exemption on biogas energy equipment 		
<p>2. WORK PACKAGE 2: Assist the GDAHP and propose recommendations on improving the Biogas Energy Quality Infrastructure</p> <ul style="list-style-type: none"> • Assess the existing quality infrastructure on biogas energy technologies, including; testing, certification, accreditation, standardization and training mechanisms (bodies) • Prepare and conduct surveys to identify ways to strengthen the quality infrastructure related to bio-energy technologies and give specific recommendations • Prepare recommendations for policy makers on developing a national quality infrastructure for biogas energy technologies to support national biogas energy markets. This quality infrastructure includes the institutional network and the legal framework which regulates and implements standards on biogas energy technologies and provides evidence of its achievement 	<ul style="list-style-type: none"> - Assessment report on existing biogas quality infrastructure - Recommendations to strengthen the quality infrastructure related to biogas energy technologies - 2-5 page summary of recommendations for policy makers on developing a national quality infrastructure for biogas energy technologies to support national biogas energy markets. 	<p>September 2020</p>

<p>(metrology, testing, certification, inspections, accreditation, and quality management systems). This should include the recommendation of relevant standards and a certification scheme based on a review of international equipment standards, standards in use in neighboring countries, and a comparison of the quality infrastructure between Cambodia and its neighbours.</p>		
<p>3. Work Package 3: Capacity building</p> <ul style="list-style-type: none"> • Provide formal and informal training to BTIC staff, NBP/ GDAH and other stakeholders (e.g. Ministry of Environment, Ministry of Agriculture Forestry and fisheries, Ministry of Mines and Energy) to review the existing and develop a new biogas policy • Develop training material that are gender-responsive 	<ul style="list-style-type: none"> - training material that are gender-responsive - training reports 	<p>continuous</p>
<p>4. Other activities, e.g.</p> <ul style="list-style-type: none"> • Assess the biogas market development and availability of biogas feedstock in specific agro-industries (e.g. livestock sector, starch processing, palm oil production, ethanol production, rubber production) • Assess the (captive) energy demand for specific agro-industries (e.g. livestock sector, starch processing, palm oil production, ethanol production, rubber production) • Provide inputs/ recommendations on possible financial tools to ensure a conducive policy/ regulatory environment • Summarize progress in reports and support project monitoring/ reporting 	<ul style="list-style-type: none"> - Assessment report on biogas market development and biogas feedstock availability in specific agro-industries - Weekly/monthly progress reports 	<p>December 2020</p> <p>continuous</p>

4. DELIVERABLES AND GENERAL TIME SCHEDULE

All the deliverables listed below are expected to be submitted to UNIDO no later than 6 months² after the contract is awarded:

1. **Inception report** (no later than 2 weeks after the contract is awarded) confirming the methodology and detailed work plan;
2. **Progress Report 1** on the activities completed under
 - WORK PACKAGE 1;
 - WORK PACKAGE 2;
3. **Progress Report 2**
 - highlighting the results of the activities of Work Package 1 and Work Package 2 reports;
 - activities completed under WORK PACKAGE 3;
4. **Final Report** including any recommendations received from UNIDO on the Draft Final Report. The Final Report shall also include recommendations and lessons learnt for UNIDO to consider in future projects.

² The bidders may propose a different time-schedule with clear justification and rationale

The proposal should include;

- CVs of the assigned personnel
- Methodology, suggested time schedule and work plan: It should include proposed timeline with clear milestones and sufficient detail to show the understanding, competencies and compliance with the requirements of this ToR, steps to carry out the proposed assignment should also describe.

5. PERSONNEL

The assignment needs a multi-disciplinary team of international and/or national experts with strong expertise in the areas of policy review and formulation, and in particular in sustainable energy policies. The Contractor can be a national or international entity. Please note that a consortium of international and national expertise is preferred.

The team must:

- consist of at least 1 international expert overseeing the process and leading the writing of the policy review documents (legal, sustainable energy/environment expert, economic expert, development expert etc.) with extensive experience in writing policy documents
- consist of at least 1 national expert that possessed adequate language capabilities to liaise with key stakeholders in Cambodia and to collect national level data and information (background: energy/environment/resource efficiency, good knowledge of the political / institutional framework, etc.)
- It is encouraged for the proposed team to be gender-balanced and all team members should be gender-aware.

All the experts assigned to this project by the contractor must possess the following skills and qualifications:

- University degree in the field of environment management, energy policies, sustainable energy, energy economy or relevant fields
- At least 3 years of experience in policy review and formulation in the field of renewable energy and sustainable waste management in agro-industrial sectors
- Demonstrated experience in technical cooperation projects with international donors is an advantage. This may be proven by providing, title of the assignment, client for whom the assignment was carried out, timeline, team, outputs/results. Track record of similar assignments in Cambodia or in the region is an advantage
- Strong knowledge of policy, technical, financial and managerial aspects of implementation of renewable energy projects in agro-industry in Cambodia or in the region
- Familiarity with GEF project requirements is an advantage

The CVs of the respective experts assigned to this project by the Contractor must be provided at the time of proposal submission.

6. SUPERVISION AND REPORTING

- The contractor will report to the UNIDO assigned personnel.
- Regular meetings and Skype call between UNIDO and the contractor will be organised to discuss progress and outstanding issues (when required through teleconferencing and potentially other means)

- A kick-off meeting will be organised at the early stage in the assignment with the national and international experts and UNIDO (time and place to be agreed upon after the award of the contract)

7. EVALUATION CRITERIA

- Compliance with the requirements of the terms of reference
- Proven track record in policy review and policy formulation in the energy sector
- Strong logical reasoning and argument building skills
- Project team experience as outlined in section 5 of the ToR concerning “personnel”
- The total amount of the contract for provision of services shall not exceed 30,000 USD.

Criteria		Maximum score
The team has demonstrated technical expertise in	At least 3 years of experience in policy review and formulation in the field of renewable energy and sustainable waste management in agro-industrial sectors	5
	Demonstrated experience in technical cooperation projects with international donors	5
	Strong knowledge of policy, technical, financial and managerial aspects of implementation of renewable energy projects in agro-industry in Cambodia or in the region	5
	Facilitating stakeholder consultations (conducting interviews, meetings and workshops) as part of the policy review process	5
	Social inclusiveness (such as gender mainstreaming, women and youth empowerment)	3
	Environmental and social safeguards	3
The team has adequate operational capacity	Number of qualified experts	- (no. of experts)
	Qualification of experts in the team	5
	Adequate language skills to conduct national stakeholder consultations and data collection national levels	5
	Excellent writing and editing skills (English)	5

8. LANGUAGE REQUIREMENTS

The experts will be required to be fluent in English. All written material submitted to UNIDO should be of such quality that no additional technical editing is required. At least one member of the experts’ team (or the national expert to be hired) has to be fluent in the Khmer language (please specify in the proposal)