



INDIVIDUAL CONSULTANT PROCUREMENT NOTICE

National Consultant - Assessment of Alternative Energy to Replace Liquefied Petroleum Gas (LPG) in Nepal

Reference No.: UNDP/PN/28/2021

Date: 04 October 2021

Country: NEPAL

Description of the assignment: As per the attached Terms of Reference (ToR) – Annex 1.

Project/Unit name: Accelerating Implementation of Sustainable Development Goals in Nepal

No. of Consultant: 1 (one)

Period of assignment/services (if applicable): 45 days within a time frame of 60 days

Proposal should be submitted by email to **procurement.np@undp.org** not later than **1730 hours (Nepal Standard Time) on 20 October 2021** mentioning reference No. **UNDP/PN/28/2021 – National Consultant - Assessment of Alternative Energy to Replace Liquefied Petroleum Gas (LPG) in Nepal**.

Any request for clarification must be sent in writing, or by standard electronic communication to the e-mail: query.procurement.np@undp.org mentioning Procurement Notice Ref: **UNDP/PN/28/2021 - National Consultant - Assessment of Alternative Energy to Replace Liquefied Petroleum Gas (LPG) in Nepal** before five days of the deadline of submission. The procurement unit will respond in writing, including an explanation of the query without identifying the source of inquiry, to all consultants or via bulletin published on the UNDP website: <http://www.np.undp.org/content/nepal/en/home/operations/procurement.html>. Inquiries received after the above date and time shall not be entertained.

1. BACKGROUND

The Constitution of Nepal has provisioned a policy of a reliable and affordable energy to meet the basic needs through the development of alternative energy. The 15th plan of Nepal also has the vision to promote alternative energy use. To this end, the Plan has adopted the strategy to reduce the use of Liquid Petroleum Gas (LPG) ; it can be promoted with the promotion of other alternative energies. To address the national goal of creation of healthy and balanced environment through reducing emission, major programs have been identified i.e., Biogas program and others.

Nepal does not produce LPG and its consumption is entirely dependent on import, which contributes to increase our trade deficit. LPG import has been increasing every year; in FY 2076/77, LPG import reached 449,063 Metric Ton, which means that Government of Nepal has spent around Rs. 45 billion on import of LPG. Hence, LPG needs to be replaced with other clean energy sources that are self-sustaining resources for Nepal. Hence the overall objective of this study is to complement towards the

goal of using clean energy by assessing and identifying alternative sources of energy in replacement of LPG.

2. SCOPE OF WORK, RESPONSIBILITIES AND DESCRIPTION OF THE PROPOSED ANALYTICAL WORK

For detailed information, please refer to the Terms of Reference – ToR (Annex 1)

3. REQUIREMENTS FOR EXPERIENCE AND QUALIFICATIONS

I. Academic Qualifications:

- Master's Degree (Preferably Ph. D degree) in Engineering, Economics, Management/Business Administration, Development Studies, or environment Science.

II. Years of experience:

- S/he should have at least 7 years of experiences in the research related to clean energy, energy sources/sectors and subjects related to this assignment,
- Priority will be given to the person having prior work experience in sectors of alternative energy sources,
- Proven good record of writing high level policy papers and policy report in English language,
- Proven experience in leading project or of dealing with senior government officials for development of high-level policy analysis.

III. Competencies:

- Excellent oral and written skills in English and Nepali with exceptional writing, communication and presentation skills.
- Ready to work independently, under tight deadlines

4. DOCUMENTS TO BE INCLUDED WHEN SUBMITTING THE PROPOSALS.

Interested individual consultants must submit the following documents/information to demonstrate their qualifications:

- Offeror's Letter to UNDP Confirming Interest and Availability for the Individual Contractor (IC) Assignment
- **Financial Proposal**
- A cover letter with a brief presentation of your consultancy explaining your suitability for the work;
- A brief methodology on how you will approach and conduct the work
- Personal CV including past experience in similar projects and at least 3 references

Note:

- Applicants of 65 years or more require full medical examination and statement of fitness to work to engage in the consultancy.
- The candidate has to be an independent consultant (If the candidate is engaged with any organization, the organization employing the candidate will be issued with a Reimbursable Loan Agreement (RLA) to release the employee for the consultancy with UNDP.)

- Due to sheer number of applicants, the procurement unit will contact only competitively selected consultant.

5. FINANCIAL PROPOSAL

- **Lump sum contracts**

The financial proposal shall specify a total lump sum amount, and payment terms around specific and measurable (qualitative and quantitative) deliverables (i.e. whether payments fall in installments or upon completion of the entire contract). Payments are based upon output, i.e. upon delivery of the services specified in the TOR. In order to assist the requesting unit in the comparison of financial proposals, the financial proposal will include a breakdown of this lump sum amount.

6. EVALUATION

Individual consultants will be evaluated based on the following methodologies:

Cumulative analysis

When using this weighted scoring method, the award of the contract should be made to the individual consultant whose offer has been evaluated and determined as:

a) responsive/compliant/acceptable, and

b) Having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation.

** Technical Criteria weight; 70%*

** Financial Criteria weight; 30%*

Only candidates obtaining a minimum of 49 points in technical evaluation would be considered for the Financial Evaluation

Criteria	Weight	Max. Point
<u>Technical:</u>	70%	70
<u>Educational Qualification:</u> Master's Degree (Preferably Ph. D degree) in Engineering, Economics, Management/Business Administration, Development Studies, or environment Science	20%	20
<u>Relevant Experience:-</u> At least 7 years of experiences in the research related to clean energy, energy sources/sectors and subjects related to this assignment	15%	15
Priority will be given to the person having prior work experience in sectors of alternative energy sources	15%	15

Proven experience in leading project or of dealing with senior government officials for development of high-level policy analysis	10%	10
Excellent oral and written skills in English and Nepali with exceptional writing, communication and presentation skills	10%	10
<u>Financial</u>	30%	30

Contract will be awarded to the technically qualified consultant who obtains the highest combined scores (financial and technical). The points for the Financial Proposal will be allocated as per the following formula:

$$\frac{\text{Lowest Bid Offered} *}{\text{Bid of the Consultant}} \times 30$$

* “Lowest Bid Offered” refers to the lowest price offered by Offerors scoring at least 70% points in technical evaluation.

ANNEX

ANNEX 1- TERMS OF REFERENCES (TOR)

ANNEX 2- INDIVIDUAL CONSULTANT GENERAL TERMS AND CONDITIONS

Terms of Reference (TOR)

Assessment of Alternative Energy to Replace Liquefied Petroleum Gas (LPG) in Nepal

Type:	Individual National Consultant
Location:	Kathmandu, Nepal
Project:	Accelerating Implementation of Sustainable Development Goals in Nepal
Starting Date:	October 2021
Reporting:	Chief of Division - Infrastructure and Production Division
Duration:	45 person days within a time frame of 60 days

BACKGROUND

The Constitution of Nepal has provisioned a policy of a reliable and affordable energy to meet the basic needs through the development of alternative energy. The 15th plan of Nepal also has the vision to promote alternative energy use. To this end, the Plan has adopted the strategy to reduce the use of Liquid Petroleum Gas (LPG)¹; it can be promoted with the promotion of biogas by establishing domestic and institutional plants in collaboration with farmers, business community, cooperatives involved in agriculture and livestock farming, and local governments and schools. Promoting solar energy and other alternative sources of energy is also the priority area of this Plan.

Energy production by Anaerobic Fermentation is specifically important for providing access to energy in areas where modern, reliable, and adequate energy services are not available. Hence, to mainstream the energy sector into the development process and to enhance access to energy services in rural and urban areas, it is necessary to work in tandem with local governments to enhance and adopt alternative energy development mechanism.

Government of Nepal has adopted the strategy to promote the development and multipurpose use of energy as an important part of the energy supply system by expanding alternative/ renewable energy. The current 15th plan has the strategy to prioritize establishment of bio-gas plants from solid waste management where a high amount of waste is collected through budget and program for local infrastructure

To address the national goal of creation of healthy and balanced environment through reducing emission, major programs have been identified i.e., Biogas program and others. During the 15th plan period of 2019/20- 2023/24, this program has targeted to install 200,000 household biogas plant, 500,000 improved cooking stoves and gasifiers (heat and electricity technology) and 500 high-capacity biogas plants. Household bio-gas plants program has been allocated as part of Renewable Energy. Moreover, Community and Institutional as well as urban and commercial biogas plants are planned to be established. As of FY 2018/19, there are 425,511 domestic biogas

¹ LPG is prepared by refining petroleum or "wet" natural gas, and is almost entirely derived from fossil fuel sources, being manufactured during the refining of petroleum (crude oil), or extracted from petroleum or natural gas streams as they emerge from the ground.

plants and 247 large biogas plants (Alternative Energy Promotion Center, Annual Report, 2018/19).

RATIONALE

During current 15th plan period, Greenhouse gas emissions is aimed to be reduced and clean energy would gradually replace mineral energy eventually limiting its consumption to 50 percent. In accordance with Paris Agreement, Nepal aims to achieve net-zero greenhouse gas emission by 2050 (Second Nationally Determined Contribution, 2020).

Energy is very crucial for economic growth as it provides infrastructure/input for development. Nepal has potential in producing hydroelectricity; both private and public sectors are engaged in this sector. As of 2019/20, power generation licenses are being issued for a number of projects with a total capacity of 24,724 MW. Government of Nepal has also been exploring to promote other alternative energy sources such as bio-gas, solar, wind energy etc.

One of the indicators of SDG 7 is to reduce proportion of population with primary reliance on clean fuels and technology; within this indicator, Government of Nepal has targeted to increase percent of population using LPG for cooking and heating to 39 percent in 2030, and existing population share for it in 2015 is 18 percent. In SDG, LPG has been identified as source of clean energy. However, Nepal does not produce LPG and its consumption is entirely dependent on import, which contributes to increase our trade deficit. LPG import has been increasing every year; it increased by 15.93 percent in FY 2075/76 and by 4.5 percent in FY 2076/77. In FY 2076/77, LPG import reached 449,063 Metric Ton, which means that Government of Nepal has spent around Rs. 45 billion on import of LPG. Hence, LPG needs to be replaced with other clean energy sources that are self-sustaining resources for Nepal.

To reduce the trade gap and to promote use of clean energy, one of the measures is to replace the LPG use by other energy sources, tapping into other the available potential energy sources. Moreover, this will help to increase government revenue and ensure regular availability of energy supplies from domestic resources. In this backdrop, Government of Nepal has emphasized promoting alternative energy and clean energy generation mechanism since the 5th Plan (1975-1980).

Moreover, Government of Nepal has planned to reduce import of petroleum products, gas, and coal by increasing electricity production and providing concessions for using electronic equipment² (as stated in 15th plan). The replacement of LPG by other alternative energy sources will help to achieve the SDG 7, 8 and 17. Therefore, Government of Nepal has strategy to adopt the concept of green development and promote clean energy to mitigate climate change. To complement this strategy, this study aims to provide input for finding alternative energy sources for use in domestic purpose in addition to electricity through assessment of alternative energy sources in replacement of LPG in Nepal.

² As stated on policies regarding Foreign Trade, Balance of Payments and Foreign Exchange stated in 15th plan.

OBJECTIVES OF THE ASSIGNMENT

The overall objective of this study is to complement towards the goal of using clean energy by assessing and identifying alternative sources of energy in replacement of LPG.

The specific objectives of this study are:

- a) Assess the present status of various energy sources and consumption pattern in Nepal including that of LPG,
- b) Identify alternative sources of energy in replacement of LPG for domestic purpose (eg cooking and heating),
- c) Analyze using cost benefit analysis or other methodology for comparison between use of LPG and other energy sources, and
- d) Recommend suitable energy sources based on demand and supply analysis as well.

SCOPE OF WORK

The Scope of this study are following:

- a) Assess the existing energy consumption pattern by households for domestic purpose,
- b) Identify demand, supply and shortage or surplus of LPG and their annual growth trend and identify total demand of alternative energy source required in replacement of LPG
 - assessment of total consumption of LPG from households (demand) and identify amount and sources of supply of LPG;
- c) Conduct the cost benefit analysis of different sources of energy based on availability and application of legal compliance such as tax and other policies;
- d) Identify interventions necessary for promoting alternative sources of energy
 - review of international practices and case studies for alternative energy sources used for different purposes
- e) Provide recommendations for formulating laws/policies promoting use of clean energy and other renewable energy sources that can be replaced for LPG;
- f) Provide recommendation to promote the production and use of alternative energy sources.

METHODOLOGY

The consultant will follow, but not limited to, the following methodology to complete the assignment

- i. Desk study of the relevant literatures
 - To stock take the existing government laws and policies to promote clean energy; and renewable energy policies applied to private sectors involved in business of alternative energy production
 - International literatures to document best practices relevant to Nepalese context for use of clean energy and renewable energy
- ii. Stakeholder consultation with relevant government organizations such as for Ministry of Energy, Water Resource and Irrigation, Nepal Electricity Authority (NEA), Alternative Energy Promotion Center (AEPC) and other programs/projects related to clean energy and renewable energy.

- iii. Consultation meetings with private sectors involved in different kinds of energy sectors for demand and supply analysis and to understand legal compliances and other conditions related to supply of energy to market.
- iv. Consultation meetings with other relevant stakeholders including National Planning Commission relevant division and other relevant line ministries and experts
- v. Conduct surveys/studies as required by the assignment,
- vi. Preparation of draft reports and Presentation of draft reports in the consultation meeting with relevant stakeholders organized by the NPC to seek feedbacks,
- vii. Finalize the reports incorporating the relevant suggestions/feedbacks received from consultation meeting and submission to the NPC.

DELIVERABLES AND PAYMENT SCHEDULE

The payment schedule of this assignment will be as follows:

Deliverables	Condition	Payment Schedule
i. Inception Report: with detailed study methodology and content of the assignment to be submitted within a week (7 days) of contract signing	Acceptance of the Inception Report by NPC/AISN	20 % payment upon acceptance of the report.
ii. Submission of first draft of the report within 45 days of contract signing.	Acceptance of draft report by NPC/AISN	40 % payment upon acceptance of the draft report.
iii. Sharing of study findings in the consultation meeting (organized by NPC/AISN project) within 50 days	None	None
iv. Submission of final report after incorporating comments received during consultation meeting within 60 days of contract signing.	Approval of Draft Report by NPC/AISN	40 % payment upon acceptance of the final guidance.

COMPETENCIES AND EXPERIENCES

Required qualification and experience of the consultant is given below:

- Master's Degree (Preferably Ph. D degree) in Engineering, Economics, Management/Business Administration, Development Studies, or environment Science,
- S/he should have at least 7 years of experiences in the research related to clean energy, energy sources/sectors and subjects related to this assignment,
- Priority will be given to the person having prior work experience in sectors of alternative energy sources,
- Proven good record of writing high level policy papers and policy report in English language,
- Proven experience in leading project or of dealing with senior government officials for development of high-level policy analysis,

Competencies

- Excellent oral and written skills in English and Nepali with exceptional writing, communication and presentation skills.

- Ready to work independently, under tight deadlines;

WORKING ARRANGEMENTS

The consultant will work under the direct supervision of National Project Director (NPD) in close collaboration with AISN project³ team and UNDP Country Office to administer the task in producing deliverables. The consultant will work under the overall guidance of Hon. Vice-Chairman of National Planning Commission, and Chief of Division - Infrastructure and Production Division of the National Planning Commission while accomplishing this assignment. The consultant in implementing the activities under its scope, shall demonstrate synergies with relevant government agencies and UNDP and adopt strategy in a complete collection of information and analysis from all stakeholders' perspectives.

The consultant will be responsible for his/her own working station (i.e. laptop, internet, phone, printer/scanner etc. and must have access to a reliable internet connection).

9. ESTIMATED COST

The estimated budget should be included in the Request for Proposal (RFP) comprising the cost of specialist support (such as financial specialist or energy expert) and all other expenses required to accomplish the assignment.

10. EVALUATION METHOD

Applicants will be evaluated on the basis of educational qualification and his/her past work experience in the relevant field, demonstrated experience in undertaking similar types of assignments in the government or in other development agencies. Proven experience of working with government will be a strong asset.

³ AISN is a joint project of NPC and UNDP which is implemented under the National Implementation Modality (NIM). This consultancy is supported by AISN project funded by UNDP Nepal and European Union (EU).

**OFFEROR'S LETTER TO UNDP
CONFIRMING INTEREST AND AVAILABILITY
FOR THE INDIVIDUAL CONTRACTOR (IC) ASSIGNMENT**

UNDP/PN/28/2021 : National Consultant - Assessment of Alternative Energy to Replace Liquefied Petroleum Gas (LPG) in Nepal

Date _____

United Nations Development Programme
UN House
Pulchowk,
Lalitpur, Nepal

Dear Sir/Madam:

I hereby declare that:

I have read, understood and hereby accept the Terms of Reference describing the duties and responsibilities of **National Consultant - Assessment of Alternative Energy to Replace Liquefied Petroleum Gas (LPG) in Nepal**.

I have also read, understood and hereby accept UNDP's General Conditions of Contract for the Services of the Individual Contractors;

- A) I hereby propose my services and I confirm my interest in performing the assignment through the submission of my CV which I have duly signed and attached hereto as Annex 1;
- B) In compliance with the requirements of the Terms of Reference, I hereby confirm that I am available for the entire duration of the assignment, and I shall perform the services in the manner described in my proposed approach/methodology which I have attached hereto as Annex 3.
- C) I hereby propose to complete the services based on the following payment rate:
- ☐
- ☐ A total lump sum of *[state amount in words and in numbers, indicating exact currency]*, payable in the manner described in the Terms of Reference.
- D) For your evaluation, the breakdown of the abovementioned all-inclusive amount is attached hereto as Annex 2;
- E) I recognize that the payment of the abovementioned amounts due to me shall be based on my delivery of outputs within the timeframe specified in the TOR, which shall be subject to UNDP's review, acceptance and payment certification procedures;
- F) This offer shall remain valid for a total period of _____ days [*minimum of 90 days*] after the submission deadline;

G) I confirm that I have no first degree relative (mother, father, son, daughter, spouse/partner, brother or sister) currently employed with any UN agency or office *[disclose the name of the relative, the UN office employing the relative, and the relationship if, any such relationship exists];*

H) If I am selected for this assignment, I shall *[please check the appropriate box]:*

- ☐ Sign an Individual Contract with UNDP;
- ☐ Request my employer *[state name of company/organization/institution]* to sign with UNDP a Reimbursable Loan Agreement (RLA), for and on my behalf. The contact person and details of my employer for this purpose are as follows:
-

I) I hereby confirm that *[check all that applies]:*

- ☐ At the time of this submission, I have no active Individual Contract or any form of engagement with any Business Unit of UNDP;
- ☐ I am currently engaged with UNDP and/or other entities for the following work:

Assignment	Contract Type	UNDP Business Unit / Name of Institution/Company	Contract Duration	Contract Amount

- ☐ I am also anticipating conclusion of the following work from UNDP and/or other entities for which I have submitted a proposal:

Assignment	Contract Type	Name of Institution/ Company	Contract Duration	Contract Amount

J) I fully understand and recognize that UNDP is not bound to accept this proposal, and I also understand and accept that I shall bear all costs associated with its preparation and submission and that UNDP will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the selection process.

K) **If you are a former staff member of the United Nations recently separated, please add this section to your letter:** I hereby confirm that I have complied with the minimum break in service required before I can be eligible for an Individual Contract.

L) I also fully understand that, if I am engaged as an Individual Contractor, I have no expectations nor entitlements whatsoever to be re-instated or re-employed as a staff member.

M) Are any of your relatives employed by UNDP, any other UN organization or any other public international organization?

YES ☐ NO ☐ If the answer is "yes", give the following information:

Name	Relationship	Name of International Organization

O) Do you have any objections to our making enquiries of your present employer?

YES ☐ NO ☐

P) Are you now, or have you ever been a permanent civil servant in your government's employ?

YES ☐ NO ☐ If answer is "yes", WHEN?

Q) REFERENCES: List three persons, not related to you, who are familiar with your character and qualifications.

Full Name	Full Address	Business or Occupation

R) Have you been arrested, indicted, or summoned into court as a defendant in a criminal proceeding, or convicted, fined or imprisoned for the violation of any law (excluding minor traffic violations)?

YES ☐ NO ☐ If "yes", give full particulars of each case in an attached statement.

I certify that the statements made by me in answer to the foregoing questions are true, complete and correct to the best of my knowledge and belief. I understand that any misrepresentation or material omission made on a Personal History form or other document requested by the Organization may result in the termination of the service contract or special services agreement without notice.

DATE: _____

SIGNATURE: _____

NB. You will be requested to supply documentary evidence which support the statements you have made above. Do not, however, send any documentary evidence until you have been asked to do so and, in any event, do not submit the original texts of references or testimonials unless they have been obtained for the sole use of UNDP.

Annexes *[please check all that applies]:*

- ☐ CV shall include Education/Qualification, Professional Certification, Employment Records /Experience
- ☐ Breakdown of Costs Supporting the Final All-Inclusive Price as per Template
- ☐ Brief Description of Approach to Work

BREAKDOWN OF COSTS⁴
SUPPORTING THE ALL-INCLUSIVE FINANCIAL PROPOSAL

A) Breakdown of Cost by Components:

Cost Components	Quantity	Unit Cost (NPR)	Total for the Contract Duration (NPR)
I. Personnel Costs			
Professional Fees	45 days		
Life Insurance			
Medical Insurance			
Communications			
II. Travel⁵ Expenses to Join duty station			
Round Trip Airfares to and from duty station	NA	NA	
Living Allowance	NA	NA	
Travel Insurance	NA	NA	
Terminal Expenses	NA	NA	
Others (pls. specify)	NA	NA	
III. Duty Travel**			
Round Trip Airfares	NA	NA	
Living Allowance	NA	NA	
Travel Insurance	NA	NA	
Terminal Expenses	NA	NA	
Others (pls. specify)	NA	NA	
Others (pls specify):			
Total			

⁴ The costs should only cover the requirements identified in the Terms of Reference (TOR)

⁵ Travel expenses are not required if the consultant will be working from home.

B) **Breakdown of Cost by Deliverables***

Deliverables	Percentage of Total Price (Weight for payment)	Amount in NPR.
Upon submission and approval of the inception report	20%	
Upon submission and approval of draft report	40%	
Upon Submission and approval of final report	40%	
TOTAL IN NEPALESE RUPEES		

**Basis for payment tranches*