**Request for Proposals (RFP):**

**LONGITUDINAL STUDY ON THE DRIVERS OF ELECTRICITY CONSUMPTION IN SRI LANKA**

12 July 2023



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**LONGITUDINAL STUDY ON THE DRIVERS OF ELECTRICITY CONSUMPTION IN SRI LANKA**

LIRNE*asia* is a regional, non-profit digital policy and regulation think tank. Its mission is “Catalyzing policy change through research to improve people’s lives in the emerging Asia Pacific by facilitating their use of hard and soft infrastructures through the use of knowledge, information and technology.”

This Request for Proposal (RFP) invites technical and financial proposals from research organizations to undertake the work described herein. A detailed description of the project is provided in the RFP to assist the Bidders in obtaining an understanding of the objectives of the project and to facilitate responsive proposals.

Proposals for the project must be *received* by LIRNE*asia* by **1200 hrs** **Sri Lanka time on 24th July 2023**. Proposals (including technical and financial proposals) must be emailed to **[info@lirneasia.net](mailto:info@lirneasia.net)** with the subject header “**<FIRM NAME> - PROPOSAL FOR A LONGITUDINAL STUDY ON THE DRIVERS OF ELECTRICITY CONSUMPTION IN SRI LANKA**” in PDF **and** an edit-enabled version (e.g., in Microsoft Word) version. In the event of any discrepancy between the PDFs and the editable version, the PDFs shall govern.

Short-listed bidders will be notified by **31st July 2023.**

Proposals received by LIRNE*asia* after the deadline may be rejected. LIRNE*asia* reserves the right to accept or reject any or all proposals without assigning any reason whatsoever. LIRNE*asia* will evaluate the proposals, and our decision shall be final and will not be subject to any form of appeal.

This RFP contains the following sections and annexes:

|  |  |
| --- | --- |
| **Section 1** | Instructions to Bidders |
| **Section 2** | Project Description |
| **Section 3** | Scope of Work |
| **Annex 1** | Technical Proposal Template |
| **Annex 2** | Financial Proposal Template |
| **Annex 3** | Contract Template |

**1.0 INSTRUCTIONS TO BIDDERS**

* 1. **INTRODUCTION**
     1. **Definition of Terms**

Unless otherwise specified, the following terms used in this document have the following meanings:

* *Authorized Entity* or *Consultant* means the firm that is signatory to the contract in case of successfully winning the evaluation process. The Client will entertain invoices from and make payments to the Authorized Entity. In case of multiple organizations joining together to bid for the RFP, one firm should be clearly designated as the Authorized Entity. The Authorized Entity or Consultant will be the primary point of contact for the Client.
* *Bidder* means the firm that files an application in response to this RFP; this Entity will be the single point of contact with the Client for the RFP process and handle subsequent negotiations leading to contracting should the bid be successful. In the case of multiple organizations combining to submit an application in response to this RFP, the single point of contact with LIRNE*asia* for the RFP process, and to handle subsequent negotiating leading to contracting should the bid be successful, will be the Authorized Entity.
* *Client* means LIRNE*asia* or another party contracted by LIRNE*asia* to manage the Study.
* *Collaborating Entity* means the collaborating firm(s) that the Bidder enters into a partnership with, for the purpose of conducting the study.
* *Proposal* means a set of a technical proposal and associated financial proposal submitted in response to this RFP.
* *RFP* means Request for Proposals.
* *The Study/Current Study* refers to the study which is the subject of this RFP: *Longitudinal Study on the drivers of Electricity Consumption in Sri Lanka.*

**1.1.2 Scope of Work**

The Clienthas issued this RFP to invite Proposals from potential Bidders to conduct a *Longitudinal Study on the Drivers of Electricity Consumption in Sri Lanka* as described in Section 3.0 of this RFP.

**1.1.3 Cost of Preparation of Bids and Liability**

The Bidder shall bear all costs associated with preparation and submission of the bid as specified in this RFP, regardless of the conduct or outcome of the proposal evaluation. The Client shall have no obligation to any Bidder to reimburse any costs incurred in preparing the proposals, whatever the result. Submission of a proposal in response to this RFP by a bidder will be interpreted by the Client as the Bidder’s acceptance of this condition.

## 1.1.4 Clarifications

Requests for clarifications of specific items of this RFP shall be directed by e-mail to [**info@lirneasia.net**](mailto:info@lirneasia.net)**,** with the subject header “**<FIRM NAME> - CLARIFICATION - A LONGITUDINAL STUDY ON THE DRIVERS OF ELECTRICITY CONSUMPTION IN SRI LANKA**”. The Client will respond to all such requests by email. Both the clarification/questions and responses will be sent by email to all bidders and kept for records.

At any time prior to the deadline for the submission of the application, the Client may amend the RFP for any reason. All Bidders will be notified in writing (i.e., via email) of the amendments and all Bidders will be bound by the amendments. Bidders are required to acknowledge receipt of any amendment within one business day of such receipt by email. The Client will assume that the information contained in any amendment is taken into account in the Bidder Proposal.

# 1.2 PREPARATION OF THE PROPOSAL

**1.2.1 General**

Bidders are advised to examine all terms and instructions included in the RFP while preparing their Proposals. Failure to provide all the requested information will be at the Bidder’s own risk and may result in the rejection of its Proposal.

Each Proposal shall consist of 2 components: 1) the technical proposal; and 2) the Financial Proposal.

**1.2.2 Technical Proposal**

The Bidder’s Technical Proposal shall be submitted in the Technical Proposal Template provided with this RFP (Annex 1). Page limits indicated in the template must be strictly adhered to, as the evaluation committee will be instructed to stop reading below the indicated page or paragraph limit.

As part of the Technical Proposal Template, the Bidder must submit a scanned copy of the current (valid) Business Registration Certificate of the Authorized Entity in Sri Lanka as well as that of the Collaborating Entity/entities (as applicable).

Also, as a part of the Technical Proposal, Bidders should include any suggested revisions to the template of the Contract that the Client will issue to the winning Bidder, provided in Annex 3. Bidders should carefully review it and clearly mark any sections which it does not agree with and/or suggested changes (i.e., exact language). All these should be provided as tracked changes in an MS Word format version of the Contract and sent as an Annex to the Technical Proposal. Non-submission of comments or suggested edits will be interpreted as the Bidder accepting the terms of the sample contract, which will form the basis of the Consultant’s contract with the Client.

Any assumptions made by the Bidder in the formulation of its Technical Proposal should be clearly stated.

**1.2.3 Financial Proposal**

The Financial Proposal shall consist of the following documents:

1. A covering letter signed by the Bidder, clearly indicating the validity of the Proposal for a minimum of 8 weeks from submission; and
2. Costs for the Study as per the Financial Proposal Template provided in Annex 2. All costs should be provided in Sri Lankan Rupees (LKR) and shall be inclusive of all taxes, duties, fees and other impositions as may be levied under the prevalent laws of the respective country where the Authorized Entity is registered. Payments shall be made in LKR and the Client shall not be responsible for any currency fluctuations in the Consultant’s foreign currency denominated costs during the study. Any assumptions made by the Bidder in the formulation of its Financial Proposal should be clearly stated.

The Client will strictly not entertain any price revisions during evaluation.

**1.2.4** **Format and Submission of Proposal**

Bidders should prepare their bids in the format provided in this RFP. Bidders should electronically submit the proposal including both the Technical and Financial Proposals in PDF [portable document format] **and** an edit-enabled version (e.g., in Microsoft Word) version. In the event of any discrepancy between the PDFs and the editable version, the PDFs shall govern. Proposed changes to the template Contract shall be submitted as tracked changes in MS Word Format version of the Contract and sent as an Annex to the Technical Proposal.

**1.2.5 Validity of Proposal**

The Proposal (both Technical and Financial) must be valid for a minimum period of 8 weeks from the date of submission of the proposal. The Client will make every effort to complete negotiations within this period.

**1.2.6 Confidentiality of Proposal**

If a Bidder believes that any portion of the Proposal is to be treated in confidence, it shall identify such information clearly in the Proposal. The Client will make every effort to treat such documents in confidence to the extent possible and necessary, consistent with an open and transparent evaluation process.

# 1.3 EVALUATION OF PROPOSALS

Evaluation of proposals and selection of the winning proposal will be based on the Client’s assessment of both the submitted Technical and Financial Proposals.

The following table provides an indicative marking scheme for the evaluation of the Bidder’s proposals.

**Table 1. Indicative marking scheme**

|  |  |
| --- | --- |
|  | **Single bid marking scheme** |
| 1. Bidder and Collaborating Entity (if applicable) profiles | 5 |
| 1. Relevant experience of the Bidder and Collaborating Entity (if applicable) in previously having carried out survey work that targeted the same populations (as specified in Section 3) | 10 |
| 1. Demonstrated ability of proposed team to carry out the work (including demonstrated understanding of the Client Methodology and or pros/cons; recommended revisions/improvements (if any)) | 5 |
| 1. Proposed project team with weighting toward Team Leader’s competencies, followed by the Field Manager’s experience and competencies | 10 |
| 1. Field strength of the Bidder (or the Collaborating Entity if the latter is to undertake the fieldwork) and field strategy (e.g., training plan, supervision of field staff, etc) | 10 |
| 1. Quality control measures that will be employed by the Consultant to ensure highest quality data are obtained, including measures in place to deal with data loss risks (e.g., power/device/system failures) on and off-field | 10 |
| 1. Contingency plans (Methodology B) for sudden disruptions to fieldwork | 5 |
| 1. Ability to complete final deliverables within ideal timeframe provided | 5 |
| 1. Quoted cost | 40 |
| Total | 100 |

Relevant experience counts as:

* Longitudinal surveys of any nature where the same set of households / respondents are interviewed throughout several waves (minimum 2-3 waves with 3-4 months’ gaps)
* Studies where the utility usage of households (such as electricity, water etc.) is measured
* Studies where respondents are contacted based on a list provided by client
* Surveys targeting households, particularly of varying socioeconomic backgrounds
* Ability to quickly adapt to changing ground conditions and ensure project objectives are met
* Sufficient experience in conducting CAPI-based surveys on a large scale

The Client’s decision will not be subject to appeal.

**1.4 NEGOTIATIONS**

Prior to the expiration period of Proposal validity, the Client will invite the selected Bidder for final negotiations. The aim of the negotiation shall be to reach agreement on all points, and initialize a draft contract to be finalized by the conclusion of negotiations. Changes agreed upon will then be reflected in the Financial Proposal, using proposed unit rates. If a successful negotiation is not possible with the selected Bidder, the next evaluated Bidder will be invited for negotiation, and so on.

# 1.5 AWARD OF CONTRACT

On the basis of the Financial Proposal and subsequent negotiations, the final contract will be agreed upon as a lump sum contract in Sri Lankan Rupees (LKR) with intermediate payments tied to the Client’s acceptance of specific deliverables.

As already stated, the Contract template that the Client will issue to the Consultant is provided in Annex 3. Bidders should carefully review it and clearly mark any sections that it does not agree with suggested changes (exact language) provided as tracked changes in MS Word Format as an Annex to the Technical Proposal.

**The selected Bidder is expected to commence the Study within a week of signing the Contract. Therefore, providing input on the Contract at this stage is essential.**

**2.0 PROJECT DESCRIPTION**

**2.1 BACKGROUND**

The Client is a regional, non-profit digital policy and regulation think tank. Over the past fifteen years it has conducted high-quality, mixed-methods, research in digital access, labor, energy, education, agriculture, health, disasters, and disability and disseminate them to decision makers (policy makers, regulators, service providers, civil society, and the media). Since 2012, the client has also been one of the few organizations in the Global South conducting data science research for the public good.

The Client is engaging in a project which combines electricity consumption data (for 20 months) with a longitudinal survey done among households on the drivers of electricity consumption. In this project, the Client will be working with Lanka Electricity Company (LECO). The households will be selected from the database of LECO customers.

**2.2 THE NEED**

In 2021, the share of electricity accounted for more than 1/5th of global energy consumption[[1]](#footnote-2). A significant portion of end users of electricity consists of residential consumers, often surpassing other types of users in developing countries. For example, the domestic consumption accounted for 37% of the final electricity consumption of Sri Lanka in 2018[[2]](#footnote-3), while the comparable global figure was only 26.9%[[3]](#footnote-4). It has been estimated that in 2050, the global household demand for electricity will be twice the figure recorded in 2010[[4]](#footnote-5). To cater to this demand, while reducing Green House Gas (GHG) emitted from burning fossil fuels, it is essential that cleaner sources of energy are introduced while improving energy efficiency through reduced energy waste and better appliances.

To this end, electricity providers around the world are experimenting with a variety of techniques, including those related to better demand management. However, effective demand management requires access to a diverse and integrated set of data. In addition to detailed information on electricity consumption, consumer insights on the drivers, behaviors and attitudes of consumers around domestic electricity consumption are also crucial. However, it is currently difficult to find datasets that have adequate coverage, data quality, and clear documentation. Accessibility to such datasets is crucial in developing methods and techniques that will lead to reliable insights, better products and policy changes that will have a transformative impact on the residential energy sector.

The Sri Lankan Context:

By 2020, 100% of the Sri Lankan population had access to electricity[[5]](#footnote-6). While the country was historically dependent on hydro as its primary source of generation, it is now heavily reliant on thermal power with the use of coal and oil[[6]](#footnote-7). Given that Sri Lanka needs to import both coal and oil, a currency which was depreciating steadily (LKR) meant that the cost of generation has risen over the years when using thermal power, particularly during the peak hours. As such, the country needs to switch consumption away from the peak times. However, a lack of data on real time consumption has made it difficult to introduce time of use tariffs to shift peak time electricity. However, over the last 5 years the Lanka Electricity Company (LECO), has initiated a project to install residential smart meters, as a green initiative. This has resulted in setting the conditions necessary for enabling demand side management by using behavioral nudges[[7]](#footnote-8).

Sri Lanka also underwent a major economic crisis in the recent past. The lack of foreign exchange to import the necessary oil and coal to generate electricity resulted in load shedding which at times was extended up to 13 hours a day[[8]](#footnote-9). Given that electricity is critical for the economy, the load shedding further exacerbated the economic crisis. As such, the need to manage the increasing generation costs through effective demand management is ever more crucial.

* 1. **OBJECTIVES OF THE STUDY**

The specific objective of The Longitudinal Study (i.e., this consultancy) is to collect data on electricity consumption habits including appliance ownership among a sample of LECO customers at three different time periods.

This data will be collected by means of face-to-face surveys conducted using CAPI and according to the methodology elaborated in this RFP.

The detailed methodology is presented in Section 3.2.

The data collected will be combined with the electricity consumption data from LECO to build a two-part dataset consisting of electricity consumption data and drivers of consumption at household level which will enable experimentation with behavioral nudges and other solutions that would help in better managing the electricity demand and consumption by households.

**3.0 SCOPE OF WORK**

This section details the scope of the work to be conducted by the Consultant, including the proposed methodology that the Bidder should consider in its Proposal.

* 1. **TARGET POPULATION AND DEFINITIONS**

The target populations of the Study are Households (customers of LECO).

**Table 2. Definitions for certain terms used in this RFP**

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Household | For this project, the household will be defined as the area or the space within the housing unit covered by the electricity meter. This could be the full household or a part of the household, where the rest of the household has a separate electricity meter. A household may include not only members of the family such as husband, wife and children but also others such as relatives, boarders, domestic helpers/staff etc. who live with the family. |
| Household member | As defined by national census definitions. |
| Head of Household or suitable alternative | A head of a household is a person who economically supports or manages the household or, for reasons of age or respect, is considered as head by members of the household, or declares himself as head of a household. The head of a household could be male or female. In the absence of the Household Head, a suitable alternative household respondent could be a household member who is knowledgeable about household characteristics as well as electricity consumption etc. |

* 1. **SURVEY METHODOLOGY**

The method proposed for the project (Client Methodology) is explained below.

* + 1. **Methodology**

A longitudinal survey including 3 waves of data collection over a period of 13 months will be carried out as explained below. This is to capture the temporal changes of consumer behavior and consumption patterns in the selected households.

Wave 1: During the initial visit, the household respondents will be informed that they are being included in a longitudinal study and that they will be interviewed for another two waves of the survey within the next year and their consent will be taken for participation in the survey.

The following information will be collected in the Wave 1 survey:

* List of household members including their demographics and their staying habits at home
* Housing characteristics
* A list of all the rooms/ areas in the household including information related to lighting, AC etc.
* List of electrical appliances and usage

Wave 2 & 3: During the follow-up visits, any changes to the information captured in Wave 1 will be captured. i.e.; the respondent will be questioned on whether any of the above-mentioned characteristics have changed since the previous wave. If any characteristics have changed, the enumerator needs to record the information on the existing state of the household. Apart from the changes to information captured in Wave 1, Wave 2 and Wave 3 will also capture the following information.

Wave 2:

* Details of electrical appliances at home

Wave 3:

* Electricity billing and payment habits
* Other information on electricity consumption habits

All three waves of the longitudinal survey will be conducted face-to-face (in-person). CAPI devices will be used to capture survey data. *(Note: It is compulsory to use tabs or equipment which has a screen size of at least 7”)*

* + 1. **Sampling**

The households have been selected using stratified random sampling using the LECO customer database as the sampling frame.

The contact details will be shared with the successful bidder after signing the contract.

Replacement procedure: The enumerators will be instructed to visit the selected households three different times in the day and collect the data. In case of a refusal or non-availability of respondents after three attempts, that household will be replaced with another randomly selected household provided by the client.

It is understood that a limited number of households might not be possible to enumerate three times (attrition). To compensate for attrition, the number of households will need to be oversampled in the first wave so that the expected total usable sample at the end of the third wave will be 4,000 households.

In their proposals, Bidders shall raise any specific concerns about the Client Methodology detailed above, assess the pros and cons of the same in the current country context, and if absolutely necessary, justify any suggested deviations.

* + 1. **Sample Size**

Households

The final sample size expected (on completion of Wave 3) is **4,000** households. This will be split as follows:

SMART METERED households: **2,000**

NON-SMART METERED households: **2,000**

However, to achieve the above, the bidder is expected to sample **2,250** each from NON-SMART METERED households SMART METERED households in Wave 1 (to take into account any attrition), hence a total sample of **4,500** households.

Geographic coverage: the LECO customers will be spread across the Western coastal belt of the country.

**Final sample by LECO area:**

|  |  |  |  |
| --- | --- | --- | --- |
| **LECO Area** | **Non smart metered** | **Smart metered** | **Total** |
| Kelaniya | 358 | 110 | 468 |
| Moratuwa | 279 | 1,113 | 1,392 |
| Kalutara | 332 | 95 | 427 |
| Nugegoda | 286 | 224 | 510 |
| Galle | 275 | 123 | 398 |
| Kotte | 258 | 274 | 532 |
| Negombo | 212 | 61 | 273 |
| **Total** | **2,000** | **2,000** | **4,000** |

* + 1. **Weighting**

Data will be weighted based on selection probabilities. The client will allocate the weights.

* + 1. **Contingency plan / alternative method of conducting the fieldwork in the case of unexpected disruptions to fieldwork**

The Bidder must discuss the contingency plans for unexpected disruptions to fieldwork or other situations preventing fieldwork (i.e., face-to-face data collection) from being conducted after fieldwork has already commenced. This includes the possibility of further government-imposed lockdowns, significant surges in the spread of COVID-19 or other restrictions where the Client and Consultant mutually agree to stop/pause field work. The Bidder should discuss how the remaining sample can be achieved whilst maintaining the best level of quality and precision of the survey. The Bidder must discuss how the study objective will be achieved in terms of representativeness and the precision. The Bidder must also discuss the implications on timelines, questionnaire content and the cost of this methodology in the proposal as well. This, along with other relevant factors should be discussed as “Methodology B” in the relevant section in the technical proposal document.

* 1. **TASKS**

This section details the tasks that would be expected of the Consultant selected for the Study.

* + 1. **Study and sample design and method**
  1. As mentioned in Section 3.2, the client will share the list of customers drawn from the LECO database of customers.~~.~~
     1. Technical Proposals shall include a discussion of any concerns about applying the Client Methodology, assess the pros and cons of the same in the current country context, and if absolutely necessary justify any suggested deviations. Bidders should note that the Client’s main requirement is a longitudinal survey among the randomly selected sample of LECO customers.
     2. In the event that the sample must be re-drawn (e.g., if the sample size were to be altered or the methodology were to be changed), the Client will re-draw the sample.
  2. The Consultant shall provide a finalized fieldwork schedule along with location details to the Client as early as possible.
     1. **Research Instrument Finalization**

Separate “Research Instruments” (survey questionnaire/s, screener, consent forms, etc.) are being prepared by the Client for the survey. The survey questionnaire includes modules to assess the household membership, electricity consumption and electrical appliance ownership and usage.

1. The Consultant shall work with the Client to localize, finalize and format the Research Instruments using its expertise and experience. The Consultant will complete the final scripting of the Research Instruments and convert them into CAPI/field-ready format. Once finalized, the Consultant shall translate the Research Instruments into local languages and dialects where appropriate; the Consultant shall ensure that the translated versions are checked for consistency and to ensure that the meanings have been correctly translated; to the best of its capabilities, the Client will have local language translations checked in parallel for consistency. The Consultant shall inform the Client in advance of the specific languages that will be used (if more than the national language) to allow the latter to identify appropriate researchers from its network for translation checking.
2. The translated Research Instruments shall each be pilot-tested among a total of 20 households in both urban and rural locations, ensuring a range of income/socioeconomic groups are also covered. The pilot testing shall be conducted at an appropriate point in time to be determined by the Consultant. Based on the pilot tests, the Consultant will prepare a short report on how the Research Instruments are working and indicating what changes are required (“**Report of Pilot Tests**”). If relevant, the Consultant will propose changes in the Research Instruments and will facilitate the raw pilot data to the Client, who may reserve the right to include any change in the Research Instruments. The Consultant will forward the finalized, formatted English language versions of the Research Instruments, as well as the local language versions to the Client and obtain approval prior to engaging in fieldwork.
   * 1. **Collection, Entry and Processing of Data**
   1. The Consultant will recruit qualified respondents and administer the Research Instruments in local languages and dialects.
   2. Data collection should be undertaken through face-to-face interviews with the relevant respondent in the respective local language/s and dialects in each geographical area as appropriate.
   3. The capture of data shall be done by electronic (CAPI) means. *(Note: It is compulsory to use tabs or equipment which has a screen size of at least 7”).* The Bidder should clearly indicate previous experience with the same, and what electronic survey platform is used. The Bidder is required to enable the Client access to monitor the data collection process ideally through an observer account on the survey platform in use; if not feasible, the Consultant must provide the Client with daily reports on fieldwork completion by location, including GIS locations indicated on a map. The ability to monitor the data collection by location process in real time is important, and the inability to do so will be a distinct disadvantage to the Bidder in the evaluation of their proposal.
   4. The Bidder shall also clearly detail what strategies are in place to avoid data loss in the event of power loss, device failure/loss, and any other foreseeable risks that may affect data quality.
   5. The Consultant shall be expected to obtain all necessary local permissions and authorizations to conduct field work in selected areas. The Client will assist through the provision of written request letters/letters of support for the Study if necessary, but the Consultant shall hold primary responsibility for obtaining necessary permissions. In this regard, the expected time taken for this process should be incorporated into the timeline that the Consultant provides. Any concerns on this or anticipated problems should be clearly stated by Bidders in their proposals.
   6. The fieldwork shall be conducted by field personnel who have undergone training in Basic Code of conduct of Field Personnel, health and safety guidelines on how to conduct a survey safely during a pandemic and CAPI System, specific to the Research Instruments being used in this Study. The Client may participate in the local training session.
   7. The total interview time is expected to last approximately 45 minutes.
   8. The Consultant holds the responsibility in adhering to the privacy requirements in the ethics of survey research, taking and sharing photographs, and handling respondent identification and contact information.
   9. Prior to the commencement of an interview, the respondent shall be informed of the items listed under Condition 6 in the General Contract (See Annex 3 for template contract), with written consent obtained from the respondent to (1) proceed with the interview; (2) be photographed [if applicable]; and (3) be contacted again for further research. If the respondent is unable to physically sign the consent form for any reason, alternative methods of obtaining proof of consent may be discussed and used as long as the Client approves. This informed consent will be recorded and included as three/four (as appropriate) separate variables in the respective datasets resulting from the surveys. Respondents who refuse to be photographed may still be interviewed, provided consent to conduct the interview is given (but no photographs may be taken).
   10. After obtaining consent to re-contact has been obtained as specified in 3.3.3.(i), Respondents’ primary contact information will be recorded, along with sufficient alternative which may be used in the event that the respondent cannot be reached through the primary contact information. Contact information shall be treated as strictly confidential by the Consultant, and provided to the Client in a separate database/spreadsheet along with the respective respondent ID numbers, “Respondent Contact Information Database”). Upon completion of the final deliverables of the Contract, the Consultant shall not retain in their database (electronic or paper-based) any personally identifiable information of any respondent. Furthermore, this contact data is to be treated as highly confidential, and is not to be shared with any third party or non-project Consultant staff at any point in time, other than designated Client staff. The Client may choose to enact a non-disclosure agreement to this effect.
   11. The Consultant will ensure a response rate according to the parameters set out in Section 3.3.5.
   12. If the enumerator fails to reach the relevant respondent on a first visit, the enumerator shall consult with other members of the household/staff or neighbors about the time availability household respondent. A minimum of three (3) attempts must be made (at different times of day, or based on an appointment) to reach the target respondent before the household/business can be replaced with a random selection from the list of houses (applying the predetermined sampling interval).
   13. In the event that a selected household cannot be enumerated (for example due to inaccessibility or security concerns), a random replacement household will be provided by the Client. The reason for household replacement should be clearly indicated in writing to the Client. **The Consultant may not replace a household at its own discretion.**
   14. The Consultant will capture a sample of the fieldwork process (one photographs per household per wave) via high quality digital photographs sufficient to communicate visually an understanding of the research subjects, and his/her surroundings/ context by the Client (“Field Photographs”). The Field Photographs must be clearly labeled to enable identification of the survey location, if possible, with GPS tags included. Written consent to take photographs must be obtained from respondents before they are photographed.
   15. During all stages of data collection, the Consultant shall keep the Client informed about progress and discuss any problems that are being encountered. **No deviations from the agreed sampling methodologies or other elements of the research design will be accepted unless the Client has authorized them in writing**. Such deviations must be documented (with justifications) in the final Methodology Note (See Section 3.3.7).
   16. The Client may accompany the Consultant’s fieldwork team/s at any given moment at a location to be decided by the Client, with no more than 24 hours' notice, in order to conduct, monitor and supervise the data collection processes. The Consultant will be expected to:
       1. Provide logistical support and coordination to enable this. Where additional costs are incurred, the Consultant will be reimbursed by the Client upon provision of original invoices.
   17. The Consultant shall enter and clean the datasets in SPSS format, with all variable names, labels and codes given in English, with the relevant question numbers clearly indicated. The consultant shall provide 3 separate datasets for the 3 waves with a unique identifier for each household.
       * 1. Additional data captured through electronic means should also be provided in the final datasets, including but not limited to: start time, end time, date, GPS coordinates, interviewer ID.
   18. After the Consultant hands over the Datasets the Consultant will assist the Client with queries on the data and methodological details; the Consultant shall remedy any problems that subsequently arise with regard to the datasets as soon as possible.
       1. **Coordination**
   19. The Consultant core project team proposed in the Consultant proposal should remain the same for the duration of the project. In the event that changes to the Consultant project team become necessary, the Consultant will inform the Client of any changes to the Consultant team in writing with justification before any such changes are made. The Consultant will take sufficient actions to ensure continuity in the project and avoid interruptions or delays in the delivery of the Services.
   20. The Consultant’s project leader assigned to the Study shall be a permanent employee of the firm leading the bid and handling contracting (i.e. of the Authorized Entity) and shall not be replaced or removed from this role for the entire duration of the Study without explicit authorization of the Client. This employee shall be the Client’s primary contact person for the full duration of the Study.
   21. In the case where data collection is to be carried out by the Collaborating Entity, the Consultant shall coordinate the data collection and entry with its Collaborating Entity, and liaise with them to ensure consistency in all aspects of the study and adherence to all applicable quality control measures at all times. The Consultant shall be the **single** point of contact for the Client.
   22. The Consultant will work with the Collaborating Entity to quickly resolve any problems that arise.

* 1. The Consultant should keep the Client informed of the general progress on survey implementation at a minimum of weekly updates, daily during the fieldwork period.
     1. **Quality and Penalty Clause**

1. The Consultant will ensure consistency in implementation and quality control across fieldwork areas, including where fieldwork is to be conducted by a Collaborating Entity or any other contracted (third party) staff. The Consultant will be expected to deploy its own quality control mechanisms beyond those stipulated by the Client; such mechanisms should be elaborated on in the Bidder’s Technical Proposal in the relevant space provided.
2. Unless specific allowance from the Client, the Consultancy will not be considered to be complete if the percentage of target sample achieved (Response Rate) is below 95%. Penalties for final survey response rates below 95% as per Table 3. If the Bidder has concerns about the Response Rate, they should indicate in their bids, indicating a feasible response rate that they can commit to. The Consultant is expected to share the raw data used for calculating the response rate in the Methodology Note (See Section 3.3.7).

1. Interviews will be discarded in case there are fatal errors in the fieldwork. These fatal errors primarily include not following the instructions in the questionnaire and screener, or not following the sampling procedures (sampling from the given list). The Consultant is expected to provide replacement interviews as directed by the Client, for the discarded ones. The number of discarded and replacement interviews shall be provided to the Client in the Methodology Note (See Section 3.3.7).
2. While it is expected that the Consultant performs a sufficient number of back-checks of interviews, the Client will also perform a number of random back-checks of its own, as such the Consultant is required to comply with this and provide the necessary information for this as specified in Section 3.3.3 (the Respondent Contact Information Database). The Consultant is therefore expected to provide the first 50% of the Respondent Contact Information Database at the 50% data collection point and the balance at 100% data collection in a timely manner (for all three waves separately), The Consultant shall ensure relevant consent for data collection and use is obtained and recorded from respondents upon interview, as specified in Section 3.3.3.(i). Access to the selected respondent’s data shall be made available to the Client for verification. Consultant is also expected to audio record the full interview as a quality control measure.
3. There will be penalties attached to the contract between the Consultant and the Client that will be applied in the event of any of the occurrences given in Table 3. Penalties shall be applied where the relevant lapse in quality has occurred, and the penalty shall be calculated based on the Cost as per the Contract between the Consultant and the Client.

The Client will conduct checks to observe whether the Consultant’s field team is adhering to health and safety guidelines agreed upon in the Contract between the Consultant and the Client. non-compliance will constitute grounds for penalties to be applied as specified in Table 3.

**Table 3: Penalties for lapses in quality**

|  |  |
| --- | --- |
| **Trigger** | **Penalty**  **(% of Cost as per Contract)** |
| Delayed delivery of any percentage of total Datasets in excess of 10 business days from agreed deadline | 1 % per day delayed |
| Any unjustified non-compliance of data quality protocols is discovered (e.g., failure to conduct double data entry [where applicable], visit less than three times un-contacted households, lack of rigorous behavior of the enumerators in the data collection process, especially with regard to selection procedures, lack of adherence to replacement procedures, etc.) | 30 |
| Missing values exceeding 5% | 20 |
| Falsification of data | 30 |
| Response rate\* (number of completed interviews/total selected households) between 97-99% | 2.5 |
| Response rate\* (number of completed interviews/total selected households) between 95-97% | 5 |

* + 1. **Initial Data Analysis and Top-line Presentation**
  1. The Consultant shall perform an initial data analysis constituting descriptive statistics and cross tabulations. The main objective of this analysis will be to identify the main trends in the data and to ensure the quality of the data collected.
  2. The Consultant will be expected to make a top-line presentation (“Top-line Presentation”) based on this initial data analysis to the Client, to take place within 14 days of the completion of data cleaning and processing. The Top-line Presentation need not be comprehensive, but shall be compiled based on weighted data. The contents of the Top-line Presentation will be worked out in advance, in consultation with the Client.
  3. Once the Datasets has been handed over to the Client, and the Top-line Presentation has been done and related slide set (in editable format) has been handed over to the Client, the Consultant’s role in the rest of the analysis will be limited to responding to queries that the Client has on the data, as well as methodology.
     1. **Methodology Note**
  4. After the completion of fieldwork, a detailed write-up of the research methodology that was implemented shall be provided by the Consultant (“Methodology Note”). All primary data (e.g. population and demographic data at different stratifications) should be provided here.
  5. The Methodology Note shall describe any problems encountered in the implementation of the study and what remedial actions were taken. The Methodology Note shall describe any deviations in the methodology that was undertaken, the justifications for the same and implications on the data.
  6. The Methodology Note shall contain details on the quality metrics for the three waves separately, *including but not limited to* the following:
  7. Survey response rates (with raw data),
  8. missing values rates,
  9. number of replacement interviews due to fatal errors (along with LECO area-wise distribution of same),
  10. number of replacement interviews due to non-contactability of respondent (along with LECO area-wise distribution of same)
  11. Number of back-checked interviews.
  12. The Methodology Note will also provide a detailed list of locations where respondents were surveyed as well as the number of respondents sampled in that particular location. Where possible, the locations should be indicated on a map. In addition, the Client may require GPS coordinates of respondents. This can be done using commonly available GPS-capable phones or other technologies chosen by the Consultant.
  13. **Health and safety precautions and procedures**

The Client expects the Consultant to follow basic health and safety guidelines issued by the government and local authorities throughout the project duration, i.e., throughout all activities. Proposals by the Bidders should contain information about the health and safety precautions being deployed by the Consultant.

* 1. **DELIVERABLES**

The following deliverables shall be made as part of the contract:

1. Report of Pilot Tests
2. Finalized, translated, field-ready Research Instruments (English and local language versions)
3. Data collection (as detailed in previous sections, adhering to response rate > 95 %), entry and cleaning.
4. Finalized, cleaned Dataset (including consent variables (see Section 3.3.3)
5. Top-line Presentation
6. Methodology note (including section on quality metrics and health and safety measures taken (see Section 3.3.7))
7. Field Photographs (1 per household per wave)
8. Assistance with queries on data and methodology
   1. **TIMELINE & PAYMENT SCHEDULE**

Bidders shall provide an estimated timeline for the Study with estimated completion dates, given in weeks from signing of the contract. Any special considerations (e.g., local festive periods which might affect consumption patterns, or the research process itself) should be clearly indicated.

The ideal completion date for the Study (and all associated tasks and deliverables) shall be by 30th of June 2024, however if there are any unforeseen issues which arise, timelines will be mutually adjusted accordingly.

The following is the payment schedule for the Study.

**Table 4. Payment schedule**

|  |  |  |  |
| --- | --- | --- | --- |
| **Phase** | **Deliverables/milestone** | **Ideal completion date based on current knowledge** | **Payment amount (% of contract value)** |
|  | Signing of contract | 9 August 2023 | 30% |
| Wave 1: | 1. Report of Pilot Tests 2. Finalized, translated, field-ready Research Instruments (English and local language versions) 3. Data collection (as detailed in previous sections, adhering to response rate > 95 %), entry and cleaning. 4. Respondent Contact Information Database 5. Top-line Presentation – Wave 1 | 28 October 2023 | 15% |
| Wave 2: | 1. Finalized, translated, field-ready Research Instruments (English and local language versions) 2. Data collection (as detailed in previous sections, adhering to response rate > 95 %), entry and cleaning. 3. Respondent Contact Information Database 4. Top-line Presentation – Wave 2 | 7 February 2024 | 15% |
| Wave 3: | 1. Finalized, translated, field-ready Research Instruments (English and local language versions) 2. Data collection (as detailed in previous sections, adhering to response rate > 95 %), entry and cleaning. 3. Respondent Contact Information Database 4. Top-line Presentation – Wave 3 | 21 June 2024 | 15% |
|  | 1. Methodology notes (including section on quality metrics and health and safety measures taken (see Section 3.3.7)) 2. Field Photographs (minimum 1 per household per wave) (see Section 3.3.3(n)) | 30 June 2024 | 25% |
|  | Assistance with queries on data and methodology | Although all final payments will have been made to the Consultant by this point, it is expected that the Consultant will continue to work with the Client by responding to queries if any thereafter. | |

All payments are subject to the deliverables being approved for quality and content, and maybe thus altered, or withheld accordingly.

The Client shall make payments no later than 14 days of receiving invoice from the consultant. The consultant shall raise invoice only upon the Client approving a given deliverable(s).

1. "Share of electricity in total final energy consumption", *Yearbook.enerdata.net*, 2022. [Online]. Available: https://yearbook.enerdata.net/electricity/share-electricity-final-consumption.html. [Accessed: 16- Jul- 2022] [↑](#footnote-ref-2)
2. Sri Lanka Sustainable Energy Authority, "Sri Lanka Energy Balance 2019 An Analysis of Energy Sector Performance", Sri Lanka Sustainable Energy Authority, 2022 [↑](#footnote-ref-3)
3. "World electricity final consumption by sector, 2018 – Charts – Data & Statistics - IEA", *IEA*, 2020. [Online]. Available: https://www.iea.org/data-and-statistics/charts/world-electricity-final-consumption-by-sector-2018. [Accessed: 16- Jul- 2022]. [↑](#footnote-ref-4)
4. D. Larcher and J. M. Tarascon, "Towards greener and more sustainable batteries for electrical energy storage", *Nature chemistry*, vol. 7, no. 1, pp. 19-29, 2015. Available: https://www.nature.com/articles/nchem.2085). [Accessed 16 July 2022]. [↑](#footnote-ref-5)
5. "Access to electricity (% of population) - Sri Lanka | Data", *data.worldbank.org*. [Online]. Available: https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=LK. [Accessed: 16- Jul- 2022]. [↑](#footnote-ref-6)
6. "Sri Lanka - Countries & Regions - IEA", *IEA*. [Online]. Available: https://www.iea.org/countries/sri-lanka. [Accessed: 16- Jul- 2022]. [↑](#footnote-ref-7)
7. R. Thaler and C. Sunstein, *Nudge*. New York: Penguin Books, 2009. [↑](#footnote-ref-8)
8. "Demand Management Schedule", *CEB*. [Online]. Available: https://cebcare.ceb.lk/Incognito/DemandMgmtSchedule. [Accessed: 16- Jul- 2022] [↑](#footnote-ref-9)