

Terms of Reference

Consultancy and Data Collection Services for the Household Survey on Heating Systems in the Kyrgyz Republic

I. Background

Given the cold climate and long heating season (lasting 4-6 months per year), access to reliable and efficient heat supply is critical for the well-being of the population in the Kyrgyz Republic. However, in urban areas alone, around 20-25% of residential and public heat demand remains unmet every year due to insufficient and unreliable heat and electricity supply in winter. This share is likely to be much higher in rural areas. Only about 17% of all urban households have access to centralized heat supply, mainly concentrated in Bishkek. The remaining urban households rely on electricity for heating (26%), or solid fuel fired stoves (55%). In rural areas, due to lack of access to centralized heat and reliable electricity supply, more than 80% of the households use coal or wood fired stoves.

The quality and efficiency of solid fuel fired stoves in use are poor, often with detrimental health, social and environmental impacts. The majority of stoves are produced locally in small workshops and are not subject to any norms and standards. Imported equipment is certified by Kyrgyzstandard largely based on manufacturer certificates without due consideration of efficiency, emission or other quality standards. As a result, the use of inefficient stoves causes higher fuel use and household expenditures compared to more efficient models, often results in insufficient comfort levels in buildings and may cause negative health impacts due to indoor/ambient air pollution. As indicated above, 55% of all urban and more than 80% of all rural households rely on solid fuel fired stoves as their primary heating source. The use of electricity, the second most commonly used primary heating source (26% of all urban households), is also not a sustainable solution given the country's severe and recurrent winter power shortages. Largely due to the use of electricity for heating purposes, electricity consumption during winter months in 2012 and 2013 were between 80 and 96% higher than in summer.

A recent urban heating assessment conducted by the Bank shows that replacement of inefficient individual heating technologies by more efficient models is an economically viable option to improve heat supply services, and can bring substantial benefits in terms of fuel (cost) savings and improved indoor comfort levels (e.g. indoor temperature and air pollution).

The World Bank is conducting a market assessment to develop and implement an investment program aimed at incentivizing households currently using inefficient and/or polluting individual heating technologies (e.g. coal fired stoves, electric heaters) to switch to more efficient models to heat their homes (e.g. advanced solid fuel fired stoves with better combustion efficiency, gas heaters, etc.).

As a first step for the market assessment, sound baseline information on the current heat consumption patterns, related technologies and fuels in use, motivations of customers to consider switching to more efficient models and other relevant baseline data for designing such a program will be needed; this includes, but is not limited to: individual heating technologies currently in use disaggregated by type and fuels in use, share/number of households using different individual heating types, average heat consumption data, typical fuel expenditures, etc.

For this purpose, the World Bank plans to hire a company to conduct a representative survey of households in urban and rural areas in the Kyrgyz Republic.

II. Objective of the Assignment

The objective of this assignment is to conduct a face-to-face household survey representative for urban and rural areas to help inform the design of an investment program for efficient heating technologies for households. As part of the survey, questions that would need to be evaluated include (but are not limited to) what type of individual heating technologies and fuels households currently use, how much they spend for heating, how satisfied they are with the performance of their heating stove, and what their motivation and approach would be to switch to more efficient models.

The questionnaire will mainly consist of closed-ended questions focusing on detailed questions and is estimated to take around 45-60 minutes to complete.

The World Bank is seeking the services of a consultant company ('the consultant') that is qualified and has demonstrated sufficient experience in conducting household surveys in the Kyrgyz Republic. The Consultant is expected to organize and implement a nationally-representative household survey in the Kyrgyz Republic as outlined below. Computer-Assisted Personal Interviewing (CAPI) should be used as main surveying technique, allowing for instant data transfer and proper quality check at the early stages of data collection. Observations should be also geo-referenced.

III. Scope and Activities

A household survey is expected to be carried out in the Kyrgyz Republic by means of face-to-face interviews, using CAPI to register all responses. The total sample size should be representative at country level and at three strata levels: (i) Bishkek city; (ii) Urban areas (excluding Bishkek); and (iii) Rural areas. The sampling activity should be designed in a way to generate the necessary sample sizes per cluster to conduct statistically robust analyses with levels of precision at a minimum of 7.5% precision for 90% confidence intervals for estimates of population proportions (percentages)/prevalence of all variables asked as proportions (percentages).

The following activities are envisaged in under this consultancy service:

Activity 0: Detailed Work Program

Prior to implementation the Consultant should provide a Detailed Work Program (**Milestone 1**). The Detailed Work Program should include, among other things, a detailed timeline for the development and staging of all activities and a description of adopting CAPI for survey administration. The Consultant should propose in the Detailed Work Program its plan for pretesting the questionnaire, sampling, piloting, conducting field data collection, logistics details, survey management, transfer of data and the mechanism of ensuring data quality. The World Bank team will provide the Consultant with the draft questionnaire to be used, which will be modified by the Consultant to meet the local context.

Activity 1: Preparation for Household Survey Implementation

Experience shows that high quality household surveys require substantial effort and resources allocated to the preparation and logistics before the fieldwork for the project begins. Bidding Consultants are encouraged to take into consideration the following activities in the costing and planning of their proposals and developing their Detailed Work program:

Adapting the questionnaire to the local context and programming it into CAPI format. The draft questionnaires in English and Russian will be provided to the Consultant by the World Bank team. It is intended that before beginning the field work, all parties, including the Consultant, should be confident

that the surveys will achieve its objectives and are feasible within the budget estimated to conduct the surveys. The company is to adapt the questionnaire into the local context and program it in a timely manner into the CAPI format. The final version of the questionnaires with all required formatting, coding scheme, and appropriate filter, skip logic/patterns, as they will be used in the actual interviews will have to be authorized by the WBG Task Manager.

Training for Supervisors and Enumerators for the Pilot Study. The Consultant must have a well-developed plan to thoroughly train their field supervisors, enumerators, and the data entry staff on the questionnaire and survey procedures. Every survey enumerator must completely understand the questions and purpose of the survey. Enumerators must also be able to interpret all questions consistently, and ask all questions in the prescribed manner. When it is possible, representatives of the World Bank Group will monitor the training and provide technical advice.

Piloting the questionnaire. Immediately after the training and before the surveys are launched, the Consultant must pilot the questionnaires on a selection of 10-15 households. The purpose of piloting is to ensure that the translation is correct and that the questions are appropriately phrased for the local environment. In addition, these interviews must be timed to ascertain the length of implementing the questionnaire. The Consultant must immediately report any issues that arise as a result of piloting to the World Bank team. Any adjustments to the questionnaire should be shared with the World Bank team and approved before launching of the survey activities.

Provide training to supervisors and interviewers. The Consultant should train interviewers, supervisors and data entry operators to make sure that they understand and are capable of carrying out the activities for the purposes of this project. Training should take place after the questionnaire has been adjusted. Interviewers and supervisors must assist to all training sessions in order to be able to start carrying out the survey. In addition, the Consultant should identify a quality control process, including multiple filters, to be used during data collection and data entering to assure quality. The final questionnaire should be programmed into the CAPI devices. The training on the use of CAPI devices should be part of overall training.

Key Staff Turnover. It is important that the selected Consultant puts in place mechanisms to guarantee low rotation of key personnel. Consultants are encouraged to demonstrate in their proposals that they will be able to preserve the core team throughout the duration of field work, which could be up to 2 months.

Knowledge transfer. In case any person involved in the Survey project has to be permanently or temporarily replaced during the duration of the study, the Consultant should inform the World Bank team no later than 7 business days after the change and furthermore ensure sound knowledge transfer and training. In case of replacement of key personnel, i.e., project coordinators, regional supervisor, IT manager or sub-contractor, the proposed replacement must be approved first by the World Bank team. If necessary, the World Bank team may request re-training of the Consultant's staff involved in the project.

The use of Global Positioning System (GPS) to conduct fieldwork is required. As previously mentioned, the household survey will be geo-referenced meaning that for each observation (household) the Consultant/interviewer should input longitude and latitude data. The data could be collected by GPS unit before the interview or location of the household could be recorded on a map and latter transformed to GPS coordinates.

Activity 2: Implementation of a Heating System Survey

The Consultant should – after receiving a No Objection by the World Bank team to the submitted plan and methodology – proceed to carry out the household survey based on the successful completion of actions and conditions outlined and approved by the World Bank in Activity 1.

The Survey will be carried out by means of face-to-face interviews with each selected household from the sample. The household survey should be conducted in a CAPI (Computer Assisted personal Interviewing) format with possibility of geo-referencing.

Each of the interviewers should have a CAPI device which allows recording/inputting accurately household responses and GPS coordinates. In addition, the quality control mechanism – agreed upon in Activity 1 - should be put in place to assess whether interviewers are correctly carrying out the household survey and put in place repairing measures to review and correct any mistakes.

Data entry and data quality checks will take place concurrently with the survey. This allows the survey manager along with World Bank team (who should have access to data server) to identify any inconsistencies in how questions are being asked and interpreted or other errors before the survey is completed. Data will be entered into a database using a data entry program that automatically checks for logical consistency and skip patterns and non-eligible or out of range variables. The Consultant must check for the presence of outliers. The Consultant will flag the outliers and re-check the information with the appropriate household (e.g. revisit the household). All values in the survey that are 0 will be entered as 0 and not left blank. Responses such as “don’t know”, “refuse to answer”, “not applicable” etc. should be appropriately coded.

The Consultant will provide the collected data at any time following a request by the World Bank team and at four predefined stages during the data gathering/entry process for consistency check and quality control. The first set will be delivered after ten percent (10%) of the total number of interviews have been completed and entered into a data base. The second set will be delivered after fifty percent (50%) of the total number of interviews has been completed and the third set should be shared after seventy percent (70%) of data was collected. The final set will be delivered after completion of one hundred percent (100%) of the interviews. The World Bank team may request more frequent data updates in addition to the four main deliveries. The team also reserves the right to check the data and provide feedback to the Consultant on any errors or inconsistencies.

The cleaned survey data will be delivered to the World Bank Group in STATA electronic format. In case the Consultant prefers to submit data in alternative formats, this should first be approved by the World Bank Task Managers. The final format of each variable in the data set will follow the guidelines defined by the Task Managers. The World Bank will retain full and sole ownership of all datasets and information collected during the assignment. The Consultant and any of its sub-contractors will not retain any information or data from this survey in physical or electronic form.

Once the survey task has been completed, the Consultant is responsible for submission of clean, English labeled dataset in STATA/SPSS format via email and on CDs. The Consultant should ensure that all household data was correctly uploaded.

At the specific request of the task team leader the Company will produce the series of the tables and estimate the requested indicators, relevant for the subject study.

Concurrently with data collection, the Consultant will prepare an interim report and at the end of the survey will prepare a final report that describes the data collection exercise, including a description of the

methodology for data collection, sample frame and sampling design, all codes, sampling biases introduced in the survey implementation (i.e. refusals, etc.), weights and other pertinent information for data analysis. The report will cover observations/experiences arising from the survey including survey design, observations of the pilot, survey implementation, and data quality.

IV. Confidentiality and Data Ownership

The Consultant will protect the confidentiality of households and individuals participating in the survey at all stages. All data is confidential and the property of the World Bank Group. Its sole purpose is for research and is not for commercial use. The Consultant will turn over all data, questionnaires and other material to the World Bank Group and will not retain any information or material after the survey data collection has ended. The Consultant will provide the names and addresses of participating households to the World Bank Group in order to facilitate future surveys. The names of participating households will not be released by the Consultant to any other party for any reason.

V. Timeline and deliverables

It is expected that the total time for the Consultant to complete all activities will be 13 weeks from the signature of the contract. The Consultant should not start the Household Survey without prior approval (by the World Bank) of the adapted questionnaire and training of the field team.

In accordance with the scope of work outlined in Section III, the Consultant:

1. Will adapt questionnaires to local context and into local languages.
2. Will confirm with the World Bank team any necessary or suggested changes on the questionnaires based on the results of the survey pretest and/or pilot.
3. Will program questionnaires into tablets and other portable computers.
4. Will train its enumerators on the use of CAPI and understanding the questionnaires.
5. Will pretest and pilot the surveys on 10-15 households prior to launching the surveys.
6. Will complete the surveys in face-to-face interviews using CAPI.
7. Will provide weekly Progress Reports that include response rates differentiating between refusals and any problems with the sampling frame, data collection and quality control in a format approved by the World Bank team. Regular Progress Reports should also include Staffing Reports noting any changes in staffing including managers, supervisors and enumerators.
8. Will enter the data into an electronic database using a method that automatically restricts out of range variables, checks for inconsistencies, does not allow missing fields where they are not appropriate, and ensures the accuracy of the entered data.
9. Will provide the survey data to the World Bank team, for quality control checks at any time by request of the team and when the following milestones are reached: ten percent (10%) of the overall number of interviews; and again when fifty percent (50%) of the overall survey sample has been completed and the third set should be shared after seventy percent (70%) of data was collected. The final set will be delivered after completion of one hundred percent (100%) of the interviews.
10. Will clean the data after data entry.
11. Will provide the World Bank team with a clean labelled database which should contain correctly appointed variable labels, variable descriptions, value labels, and spelling in English. The database will be in the STATA electronic database format. The database will contain all variables included in the questionnaires. It will also include weights, projection factors and any other data necessary to conduct quantified tabulation. Each household should have a unique numeric identifier.

12. Will provide the WBG, a second database for the Survey including the location information of each interviewed household: name, address, GPS coordinates. Each household will have a unique alpha code identifier.
13. Will provide a brief report on the call-backs/revisits (at least 10 per cent (10%) of the completed interviews should be verified).
14. Will provide a key relating each unique numeric code from the data sets of the interviews with the alpha code from the location data set.
15. Will prepare Final Report describing all codes, sampling biases introduced in the survey implementation and other pertinent information for researchers. The report will cover observations/experiences arising from the survey and the methodology employed. Any data removed in the “cleaning” process will also be reported. This Final Report will include a set of descriptive statistics, which will then be used as an appendix to the analytical reports prepared using this database.

All deliverables, reports and materials pertinent to the survey and the subject study should be provided in English language, unless otherwise specifically instructed.

Milestones	Description	Timeline from the date of signing a contract
1	Detailed Work Program approved	End of Week 1
2	Questionnaire adapted, approved by the Bank and piloted/tested	End of Week 4
3	Training and programming into tablets	End of Week 6
4	Start of household survey	Beginning of Week 6
5	Third of household survey data is collected	End of Week 8
6	Two third of household survey data is collected	End of Week 10
7	Submit final/clean, English labeled dataset (in STATA) and Final Implementation Report	End of Week 13

VI. Team requirements

The Consultant should work in close coordination with the World Bank team. The team proposed by the Consulting firm should be composed of the following specialists:

- (i) Survey coordinator: a professional with an advanced degree in social sciences, statistics or economics having at least coordinated 2 Household Surveys (of similar scope) in the past two years. The Survey coordinator should also have experience managing teams and field studies. He/she will be the direct responsible of the Household Survey and should be guarantor of the quality of the process and results.
- (ii) Supervisors (at least one per 10 enumerators): a professional with a degree in social sciences having participated in at least 3 household surveys or market research studies in the past 5 years, and with demonstrated experience managing field activities. The main responsibility of these professionals will be to supervise field activities and data collection.
- (iii) Interviewers/enumerators: the number of interviewers can be determined by the Consulting firm.
- (iv) Data entry and cleaning specialist: the number can be determined by the Consulting firm.
- (v) Information technology personnel: to support proper functioning of tablets and transmission devices.

VII. Form of payment

This will be a lump-sum contract with 10% of the amount to be paid upon signing of the contract, 50% to be paid upon the receipt and approval of **Detailed Work Program**, and the remaining 40% to be paid upon satisfactory completion of the assignment (See above for deliverables). The consultancy is expected to begin in mid-November 2015 and end no later than February 28, 2016. All deliverables including cleaned and translated databases, and technical notes on implementation should be submitted no later than February 1, 2016.

VIII. Preparation of Proposal in response to call

The Consulting firm is required to submit a Technical Proposal and Financial Proposal.

The Technical Proposal must include the following:

- A description of the consultants and experience of assignments of similar nature
- Outline the composition of the team: A resume of each consulting team member with a description of their experience in similar consultancies (3 pages per CV max).
- A list of clients with a description of the work that has been undertaken by the Consulting firm.
- Evidence of capacity and commitment to conduct household survey in CAPI format
- Description of proposed sampling frame

The financial proposal must cover all costs necessary to carry out the successful completion of the assignment. It must include a general breakdown of the costs, specifying the cost items and if it is proposed to include the gratitude for sampled households.

IX. Supervision

The Consultant will report to Kathrin Hofer - WB Task Manager. The primary contact points are: in Bishkek- Zamir Chargynov (zchargynov@worldbank.org), and in Washington DC- Aibek Baibagysh uulu (abaibagyshuulu@worldbank.org). All written correspondence should be copied to all aforementioned World Bank team members.