

Online Resources for Integrating Gender into Energy Operations

TERMS OF REFERENCE - TEMPLATE

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[Project Name, Country]
Rural Electrification IMPACT SURVEY and ANALYSIS
TORs for a LOCAL Consultant

1. BACKGROUND OF ASSIGNMENT

1.1. Rural electrification in [COUNTRY]

1.2. Gender and poverty impacts in rural electrification

Electrification generally benefits residential households. Women represent at least half of rural consumers, and often more than half of the rural poor, performing a wide range of work for which energy of one form is a critical input. Women are largely responsible for household activities that are highly dependent on the availability of clean and reliable sources of fuel, including collecting fuel-wood for cooking, obtaining water for drinking and cleaning, preparing meals, taking care of children, and other activities essential for the family. These activities consume most of their time. The reliable supply of electricity will reduce the need to switch to more polluting and health damaging alternative fuels (e.g. fuel-wood, kerosene) the activities. In addition, women are often also responsible for a significant portion of income-generating activities in rural households. The income-generating activities of women tend to depend on high-quality sources of energy as well. Women are also responsible for paying the bills, which is of interest to power companies and their outreach to consumers. Although these activities are of great importance, women are often marginalized within both the household and the community. There is potential for improving women's productivity in these types of enterprises through equitably accessed and improved energy services. Poverty also has a considerable effect on rural electrification. As stated, connection rate has dramatically increased, so the initial capital cost of electricity connection may no longer be a barrier. However, the payment and the continuation of service may be a potential barrier, especially to the poor as prices increase and the use of electricity increases as well. Efficiency measures may help with cost, more targeted tariff/subsidy structures may be worth considering but more research needs to be done to understand the key barriers to the energy poor.

Unfortunately, neither many past studies nor the previous surveys under the aforesaid assignment have addressed gender issues or has deepened the analysis and potential actions on poverty.

1.3. Project context (*Example of background information regarding a project and its Impact assessment*)

With the understanding that gender and poverty issues are an important part of the development and implementation of rural energy projects, an assessment of social development-related impacts with focus on poverty and gender implications will be initiated under the [PROGRAM], a further effort of WB assistance to [COUNTRY] in the energy sector, through carrying out one more follow-up survey of the afore-said assignment. A Bank executed [NAME] grant will support the targeted gender and poverty assessment to identify needs and potential activities to improve the Power Corporations' provision of quality and reliable electricity services in an equitable way. The impact assessment will cover a survey to interview both men and women in the project areas, including selected rural communes with households receiving lifeline tariffs for the poor. The findings of this survey and assessment will be linked throughout the project where relevant and agreed, to help ensure that project implementation and project beneficiaries are equitably reaching and impacting both men and women and the poor. The impact assessment, planned to be carried out in [YEAR] as a part of the survey on the impact of rural electrification, will also provide inputs to future distribution projects.

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The basic components of the impact study are similar to the ones of previous [NUMER] surveys with particular focus on poverty and gender implications:

- (1) to survey electrified and non-electrified households;
- (2) summarize and analyze the data;
- (3) identify and quantify the benefits of rural electrification in [COUNTRY] in general and particularly assess impacts of rural energy projects towards gender; and
- (4) develop a time bound gender and poverty action plan for that can address some of the key issues raised during the survey and analysis.

Results identified by the study should help to address several development problems. Some of the key policies to be informed by the study are:

- identification of strategies for promoting more gender responsive energy policies; and
- analysis of gender mainstreaming in energy policy formulation and implementation of sustainable development.
- pricing policy and government subsidies to rural electrification;
- decision making related to national resource allocation;
- appropriate sizing and scale of rural electrification investments;

This Terms of Reference is for local consultants to carry out the survey and support the international consultant, which has been selected by the Bank to analyze the data using formal methods to obtain a comprehensive and in-depth assessment of the impacts of rural electrification, taking into account gender and poverty considerations.

2. OBJECTIVE

The objectives of this assignment are to:

1. Carry out a survey to provide background information, which will be used in mainstreaming gender in energy policy formulation and implementation of sustainable development and formulating policies related to pricing, subsidies, costs, benefits, and the scale of investments and resource allocation to rural electrification in [COUNTRY].
2. Ensure that the data collected in the survey are prepared for advanced analysis; (ii) provide for full participation of experts in the econometric modeling and analysis of rural electrification impacts in [COUNTRY], and (iii) provide clear lines of communication and responsibility for provision of additional information about detailed survey responses or interpretation of findings, as needed and as analytic models are fit and refined.

3. ORGANIZATION OF WORK

The assignment is to be carried out by a team of experts. It is expected that the team will consist of economic and social experts, preferably with experience in evaluating rural electrification policies.

The consulting team will work closely with and report to the World Bank.

4. SCOPE OF WORK

Expected output:

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The expected outputs of this assignment include:

1. A panel data set that contains reliable measures of socio-economic characteristics and energy use variables in [YEARS] for all communes and households in the study.
2. Quantitative estimates of the benefits of rural electrification.
3. Assessment of impacts of rural energy projects towards gender and identify strategies for promoting more gender responsive energy policies
4. Background information for determining appropriate electricity pricing policies and whether there is a need for subsidies.
5. Decision support regarding appropriate sizing of electrification projects.
6. Decision support for drawing objective conclusions about the economic efficiency of further rural electrification projects.
7. Analysis of gender mainstreaming in energy policy formulation and implementation of sustainable development.
8. Provision of timely responses to research queries and comment on results and contribute to and comment on reports and present findings when the analysis reaches a mature phase.

Activities:

The assignment consists of:

- (i) carrying out the survey;
- (ii) summarizing the survey data;
- (iii) quantifying the benefits of electrification in a way that informs the policy areas above; (iv) developing an action plan with recommendations of potential activities and options for follow up; and
- (v) supporting the international consultant during the research.

The surveys: (This is an Example provided, details of the survey will be tailored to each project/assignment)

All informants at the commune level [NUMBER] communes and in roughly [NUMBER] households included in the second round and the third round [YEAR and YEAR] should be re-surveyed in this final round. It is expected that as many as 5%-10% of the households surveyed in [YEAR] may not be available for re-survey due to migration, death, marriage and other fundamental demographic changes. This level of attrition is acceptable.

Since this will be the final round of the study, there is no need to select replacement households. Even though very few of the households in the sample will not be electrified, a proper comparative analysis of electrified to non-electrified households should be possible. In any event, selecting a fresh set of non-electrified households will not solve the problem of a small control group (non-electrified households) because any new replacement households will not have prior observations.

This final round should use the same instruments for key informants and for households as were used in [YEAR] and [YEAR] , with some minor modifications, taking into account gender considerations. The focus should be on quality supervision of enumerators in the field with particular attention to income (cash and total) and sources of electricity (grid, mini-grid, shared connections and other sources). Supervisors and enumerators should know the prior responses that each household gave to key questions before each interview begins. Key sections include, but are not limited to: income (cash and total); time spent reading and education level achieved (for each family member), family time spent on household activities and sources of electricity. The final round

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provides an opportunity for the survey team to review prior responses to key questions from [YEARS] to ensure that they are consistently reported and coded in the existing data set. Minor modifications to the survey instruments and key questions for quality control in the field have been made with several gender implications. It will be further discussed in detail with the World Bank team before and during the survey pre-test.

Analysis:

Based on the information collected in the surveys, the consultant will assess the following:

- Benefits of less expensive household lighting: by comparing the costs of lighting and lighting delivered in households with grid electricity to those without.
- Benefits of less expensive television and radio: by comparing the costs of and time spent listening to radio and watching television in households with grid electricity to those without.
- Impacts of electrification on farm income, wage income, total income and expenditures: by using multivariate methods to control for all observable factors that may influence income and expenditures and, thereby, isolate the effect of grid electrification.
- Impacts of electrification on income from home-based enterprises: by determining whether i) the share of households with home-based enterprises and ii) income from these activities increased after grid electrification relative to households that remain unconnected.
- Impacts of electrification on school attendance and/or grade level completed: by controlling for all observable factors that may influence school attendance and, thereby, isolate the effect of grid electrification.
- Impacts of electrification fractionated by men and women on various aspects such as employment, income, working time, leisure time, sharing of household activities, etc.
- Assessment whether the beneficiaries are equitably reaching and impacting both men and women and the poor by ensuring that the data reviews listed above are sex disaggregated when possible. Since analyzing these data sets with a focus on gender will be done for a first time in this review, the team should provide various cuts of the data to try to identify trends and findings that have gender differentiated impact or benefits.
- Changes in time spent reading by adults and by school-age children: by comparing how these measures changed over time in households with grid electricity to those without.
- Changes in time spent doing household work by women, men and children: by comparing how these measures changed over time in households with grid electricity to those without.
- Changes in time spent on entertainment and leisure by women, men and children: by comparing how these measures changed over time in households with grid electricity to those without.
- Changes in general attitudes before and after electrification.

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- Analysis of electrification impacts towards gender to make recommendations for mainstreaming gender in energy policy formulation and implementation of sustainable development.

For each of these assessments, key findings should be presented with supporting tables or figures that illustrate the effect of electrification and its significance. Some analyses may be illustrated by simply comparing means of households with and without electricity. Others will require multivariate analysis of cross-sectional observations. Finally, certain impacts will require multivariate panel or double-difference methods to compare how newly connected households changed relative to those that remain unconnected.

Support the international consultant:

- Deliver a household data set containing household responses from the survey.
- The consultant will be expected to comment on results and contribute to and comment on reports and present findings when the analysis reaches a mature phase.
- Timely responses to research queries will be essential to moving this research forward in advance of the following survey round. The output of this task will be unimpeded interchange within the research team during the analysis.

5. REPORTING AND SCHEDULE

The consultants will produce the following deliverables according to the schedule below. Intensive consultation with the World Bank during implementation will be expected. The final report should be acceptable to the World Bank.

All reports will be in [LOCAL LANGUAGE] and English.

- Inception report: 3 months after commencing the assignment
- Complete panel data set including enumerator's manuals, codebooks and household and commune-level responses from [YEARS]: 6 months after commencing the assignment.
- Draft report: 6 months after commencing the assignment
- Workshop: upon the submission of the draft report.
- Final report: the final report should be submitted within 30 days after receipt of comments on the draft report from the World Bank.

6. CONSULTANT QUALIFICATION REQUIREMENTS

The work requires an experienced team of experts with broad and deep expertise in social and economic fields. Experience with project evaluation, impact analysis and rural electrification will be most relevant.

It is expected that the national experts should have the following expertise:

- Strong backgrounds in sociology and economics; with experience on gender and poverty issues
- Proven experience in successfully implementing field surveys and analyzing survey data;

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- Knowledge of rural electrification policies, practices and power sector reform in [COUNTRY].