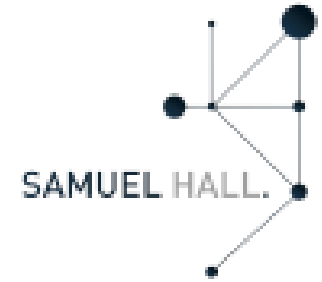# Household and Enterprise survey under the Afghanistan Energy Project

Research objectives

Energy usage and consumption patterns

How much energy do households and enterprises use, and for what?
What is the source of energy / electricity in different locations, and for different demographics?
How reliable is it? What alternatives are there, what arbitrage is used to decide between them?
How do energy consumption patterns vary over time and across demographics / socio-economic strata?
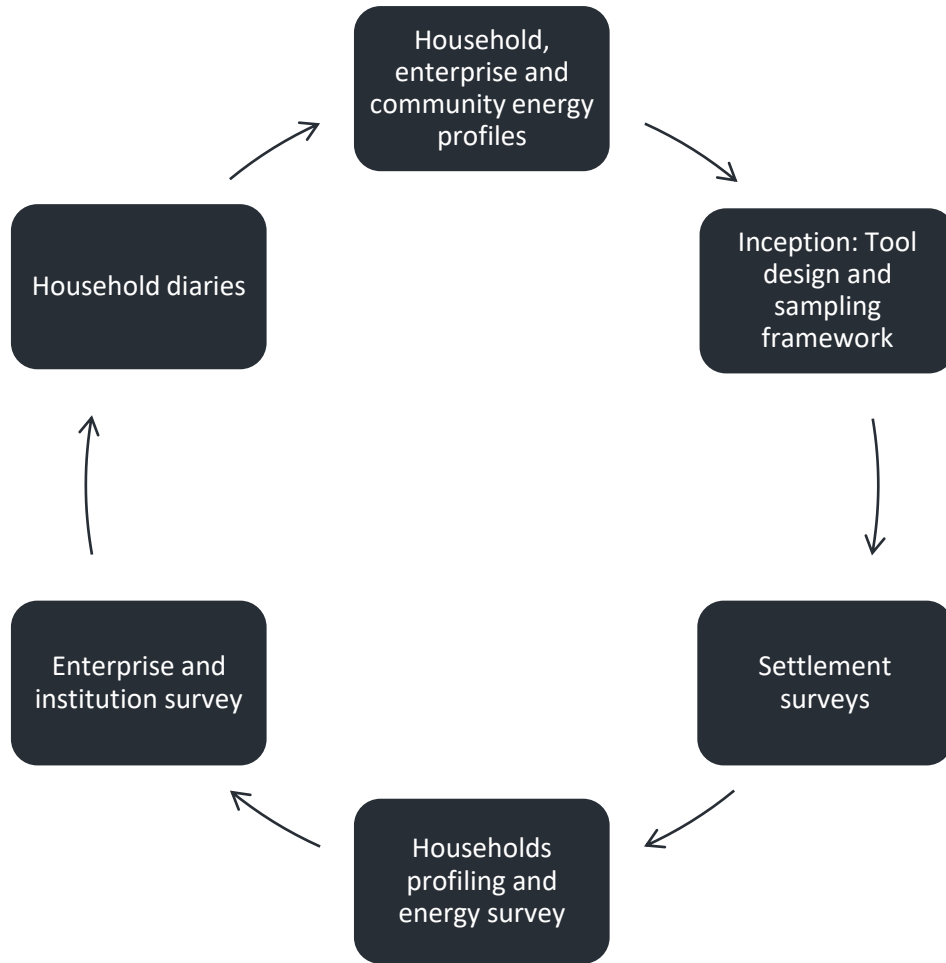(…)

Cost of energy, willingness to pay

What is the current cost of energy? How is it covered?
What is the willingness and ability to pay for improved energy provision?

Attitudes, social impact of energy access and consumption patterns

What is the impact, actual and perceived, of the quality of energy access on women and children's well-being?
What is the impact, actual and perceived, of the quality of energy access on health-related outcomes?
What is the impact, actual and perceived, of the quality of energy access on socio-economic patterns?

Methodology

Household, enterprise and community energy profiles → Inception: Tool design and sampling framework → Settlement surveys → Households profiling and energy survey → Enterprise and institution survey → Household diaries → (back to Household, enterprise and community energy profiles)

Electrification rates	Province
Highest	Kabul (pilot province)
Expected to grow	Samangan
Connection to the grid possible	Paktia
Connected to Iran	Herat
Off-grid solutions	Daykundi

Profiling

	Community profiles	Enterprise / institution surveys	Household surveys	Timeline
Kabul	6	50	600	November / December 2017
Samangan	6	50	600	December 2017
Paktia	6	50	600	December 2017
Daykundi	6	50	600	January 2018
Herat	6	50	600	January 2018
TOTAL	**30**	**250**	**3,000**	
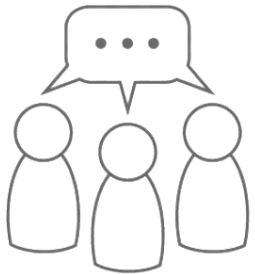
In addition, focus groups will be conducted in each province with male community (2) members, female community members (2) and CDC / shura members (2).

Profiling tools

Community profiling:

- Demographics
- Geography
- Assets and services
- Social dynamics and economy
- Sources and providers of energy

Focus groups:

- Household and home
- Energy supply and usage
- Preferences and attitudes
- Impact of energy on social relations

Detailed household / enterprise – institution quantitative questionnaire:

- Household roster / business profiling
- Information on household dwelling / building
- Different sources of electricity (grid, mini-grid, generator, pico-hydro, batteries, solar…)
- Energy usage (lighting, cooking, heating, appliances, machinery…)
- Expenses and willingness to pay
- Attitudes, practices and opinions

Diaries

Goal: Over the course of one year starting in March 2018, collect regular records on energy usage from a maximum number of businesses/enterprises and households profiled in phase 1.

Challenges:

- Attrition
- Incentives
- Illiteracy
- …

Over the course of twelve months, we will collect daily information for one week per month. We will use different methods in order to be able to triangulate information.

Diary methods

The following methods will be employed in parallel, targeting different subsets of the original sample over the course of 2018:

1. **Phone surveys:** The majority of household respondents in each province will be presented with a brief phone survey each evening for one week per month.
2. **Household scribe reporting**: A number of households in each province will nominate a (literate) scribe who will record, on a daily basis for one week per month, the responses to the questions of interest.
3. **Local ambassadors**: A number of selected households in each province will be monitored by a local energy data ambassador who will collect data covering one week per month using electronic data collection.
4. **Qualitative deep dives:** A number of households in each province will be targeted with a more qualitative approach, i.e. a monthly conversation during which they discuss the previous week's events, blackouts, energy usage and expenditure, etc.

Next steps

- Finalization of tools, enumerator training, piloting in Kabul province: November 2017
- Data collection (profiling stage) : December 2017 – March 2018
- First field report containing a summary of profiling results : April 2018
- Diary phase: March 2018 – March 2019, with regular update reports containing summary data
- Second field report containing a summary of diary phase results: April 2019
- Final presentation of results: May 2019

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