Attribute description for automated report – Rwanda Electricity

The Multi-Tier Framework (MTF) helps to measure the energy access taking into consideration seven attributes that can be categorized on Tiers from 0 to 5. Meaning that tier 0 is no access at all and tier 5 full access. The variables that measure the tiers change depending on the attributes.

From the data collected, the analysis of the attributes is as follows:

1. Capacity

This attribute corresponds to the power capacity of the household and is measured in Wh. In the case of [country], around [Highest %] of the household correspond to Tier [Tier number of the highest %]. This means that these households receive at least [Wh corresponding to the highest %] Wh of the power supply. Meanwhile [Lowest %] of the household are on Tier [Tier number of the lowest %], and receive at least [Wh corresponding to the lowest %] Wh of the power supply.

[Insert capacity graphs]

2. Availability

The availability relates to the hours of electricity supply that the household receives. For a better analysis the availability is measured per day hours (24/7), and evening hours (maximum of 4 hours).

In the case of per day hours, [Highest %] of the households belong to Tier [Tier number of the highest %].], and count at least [Number of hours of the Tier with highest %] hours. Looking at the other extreme, [Lowest %] of the household are on Tier [Tier number of the lowest %],], and have at least [Number of hours of the Tier with lowest %] hours of available electricity. The total average of the availability is of [Average daily hours of all the Tiers] hours.

In the evening, at least 4 hours of [% of Tier 4 and Tier 5] household can cover the evening availability. They correspond to Tier 4 and 5. On the other hand, [% of Tier 3] of the household have at least 3 hours of electricity in the evening; [% of Tier 2] households have at least 2 hours; [% of Tier 1] have at least 1 hour; and [% of Tier 0] have less than 1 hour of energy supply in the evening. The total average of the availability is of [Average evening hours of all the Tiers] hours.

[Insert availability graphs]

3. Reliability

This indicator was developed to know how many disruptions of energy supply does the household suffer, and the duration of it. For [country], we had discovered that [% of Tier 0,Tier 1, and Tier 2] of the household have more than 14 disruptions per week, and are categorized as Tier 0, Tier 1 and Tier 2. In case of the Tier 3, [% of Tier 3] of the household suffer at most 14 disruption or at most 3 disruption per week, but with a duration of more than 2 hours. [% of Tier 4] of households belong to Tier 4 in where more than 3 to 14 disruptions or less than 3 disruptions per week with a duration of more than 2 hours occurred. Finally, [% of Tier 5]

belong to Tier 5, in where at most 3 disruptions per week occurs with a total duration less than 2 hours.

[Insert reliability graphs]

4. Quality

The quality attribute refers to if the household had experienced voltage problems that damaged the appliances or its desired use. From Tier 0 to Tier 3 corresponds to a damage in the appliances, and [% of Tier 0, Tier 1, Tier 2, and Tier 3] of the household belongs to these Tiers. While [% of Tier 4 and Tier 5] correspond to Tier 4 and Tier 5, in where the voltage problems didn't affect the use of desired appliances.

[Insert quality graphs]

5. Affordability

For the case of [country], the information about affordability couldn't be collected.

6. Formality

This attribute relates to the payments of the electricity supply. [% of Tier 0, Tier 1, Tier 2, and Tier 3] of the households correspond to Tier 0 to Tier 3, that means that these households do not have bill payments for the use of electricity. The rest correspond to Tier 4 and Tier 5, where there is a bill paid, a prepaid card seller or an authorized representative.

[Insert formality graphs]

7. Health and Safety

Health and Safety relates to the accidents (serious or fatal) that could occur because of the electricity connection. From Tier 0 to Tier 3, [% of Tier 0, Tier 1, Tier 2, and Tier 3] of the households presented an accident and the rest of households categorized on Tier 4 and Tier 5 mentioned the absence of accidents.

[Insert health and safety graphs]