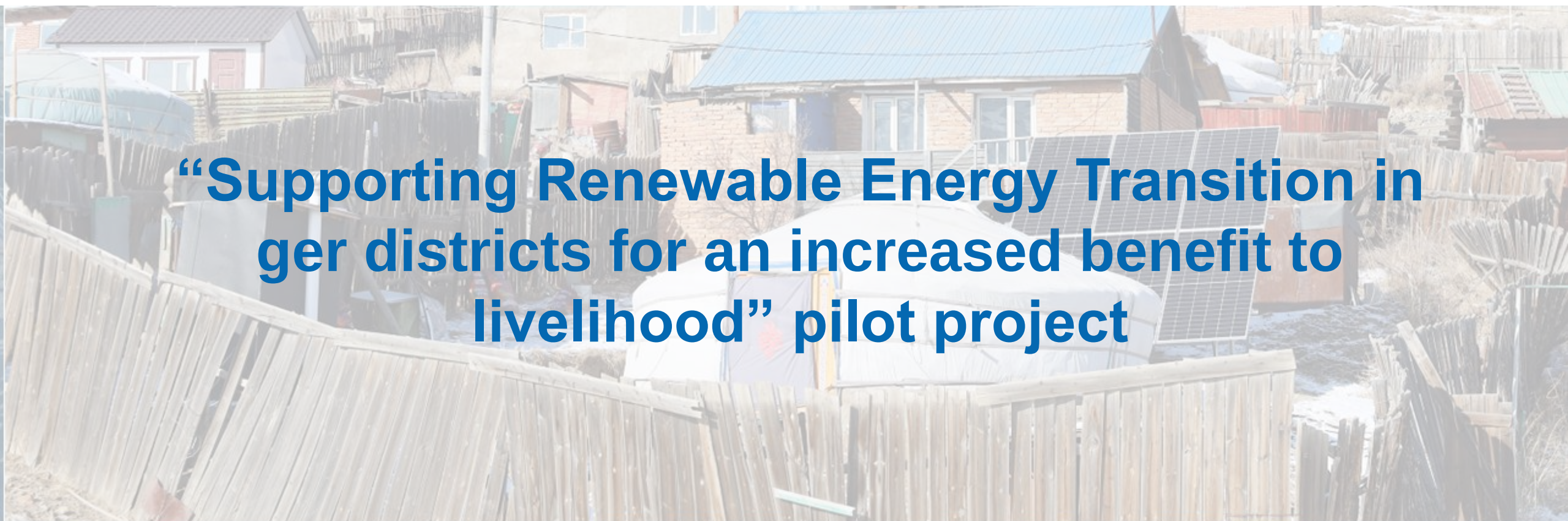
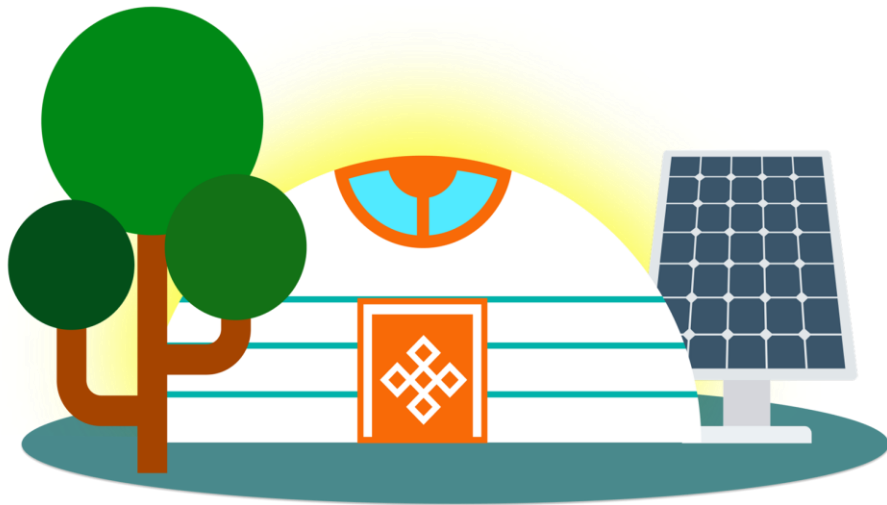


A photograph of a ger district in Mongolia. In the foreground, there is a wooden fence. Behind it, a white ger is visible. To the right of the ger, several solar panels are mounted on a structure. In the background, there are brick houses with blue roofs and more wooden fences. The text "Supporting Renewable Energy Transition in ger districts for an increased benefit to livelihood" is overlaid in blue.

“Supporting Renewable Energy Transition in ger districts for an increased benefit to livelihood” pilot project

HOUSEHOLD SELECTION CRITERIA (Jan - June)



GENERAL REQUIREMENTS:

- **Women-led** households
- Lives in a Ger
- Has land ownership certificates under their or direct family members name
- Has enough space to install the 6-8 solar panels
- Enthusiastic about switching to solar energy and electric heating
- Has plans to reside in the same location for 3-5 years
- Has a household electricity meter (or able to purchase a separate meter if selected)

CAPACITY-BUILDING TRAINING



“Community Field Visit Workshop”

Date: September 14 (UB)

Attendees: 14

Facilitator: GerHub, URECA



“Renewable energy and gender mainstreaming, women's participation and leadership”

Date: October 12 (UB); October 19 (ET)

Attendees: 26

Facilitator: Bolormaa M., Gender Specialist



GERHUB'S GER INSULATION PACKAGE



Door insulation



Air ventilation units



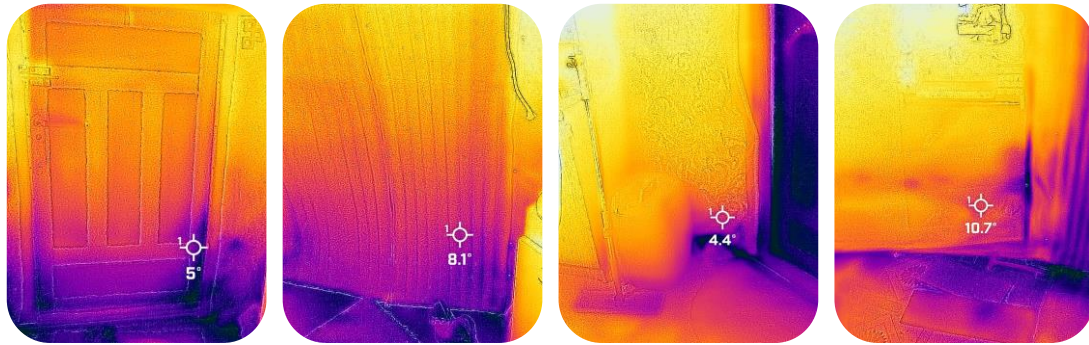
Skirt insulation



**Pre-made occlusal
insulation**

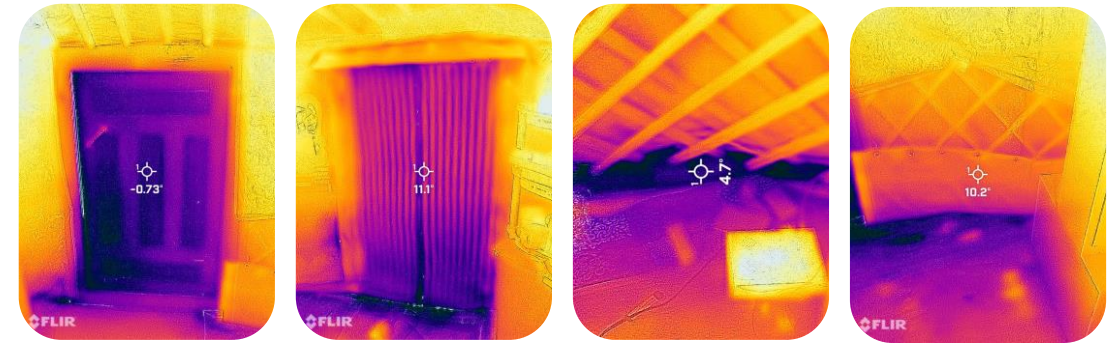
THERMAL IMAGING FOR EVALUATING THERMAL IMPROVEMENT

Household 1: Five-Walled Ger (Ms. Purevjav)



- **Door Section:** Temperature improvement of 11.83°C after insulation installation.
- **Skirt Section:** Temperature improvement of 5.5°C after insulation installation.

Household 2: Four-Walled Ger (Ms. Munkhdelger)



- **Door Section:** Temperature improvement of 3.1°C after insulation installation.
- **Skirt Section:** Temperature improvement of 6.3°C after insulation installation.

COMMUNITY CHAMPIONS

Women's Leadership on Community Impact:

The successful installation of solar panels and systems generated increased interest among neighboring households and initiated community-wide discussions on alternative energy sources, demonstrating a strong demand for clean energy in ger areas. Project participants frequently received inquiries from **curious community members**.

Ms. Gantuya and Ms. Tumentsetseg actively shared their experiences and promoted the benefits of switching to renewable energy within their community. They also participated in a roundtable discussion titled “**Just Energy Transition in Mongolia: Progress and Way Forward**,” hosted by UNDP Mongolia, where they shared key lessons from the renewable energy transition experience.

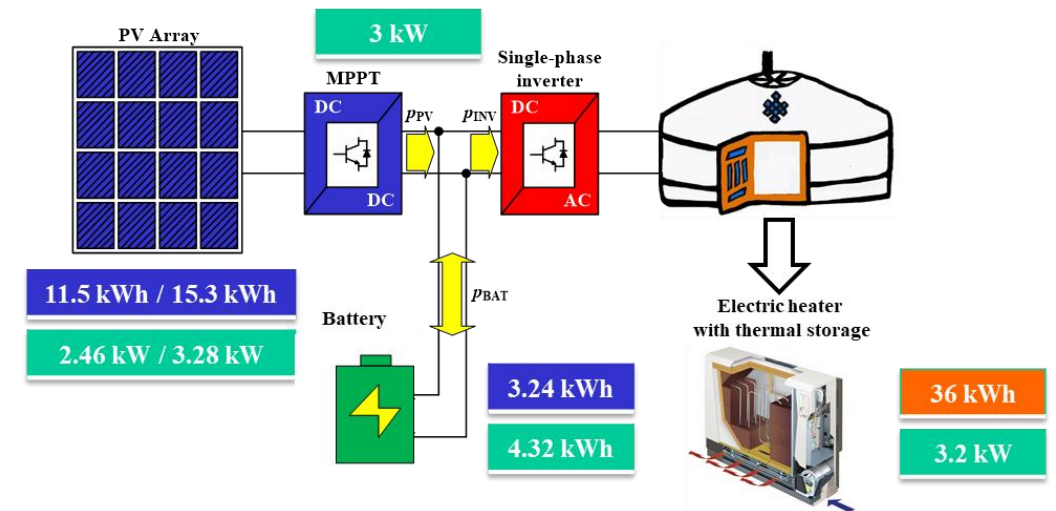


Photo by : UNDP Mongolia

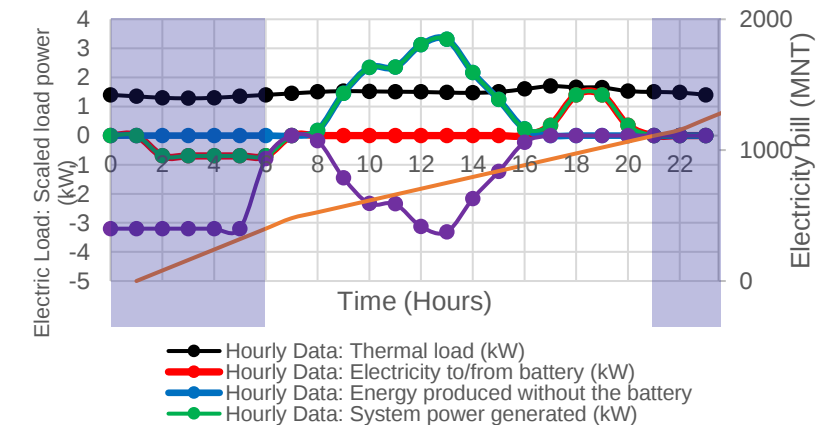
Technical Specifications

Technical specifications	UNDP Pilot Project	
	System "A"	System "B"
PV array	2.5 kW	3.3 kW
Inverter system	5 kW hybrid	5 kW hybrid
Battery storage	Lead-Acid Gel 48V, 90 Ah	Lead-Acid Gel 48V, 90 Ah
Electric heater	3 kW with 20 kWh heat storage	3 kW with 20 kWh heat storage
Dedicated application	Heating and electricity supply	Heating and electricity supply

- Design of the solar PV system in the UNDP pilot project.



- Operation graph of the PV system in the UNDP pilot project.

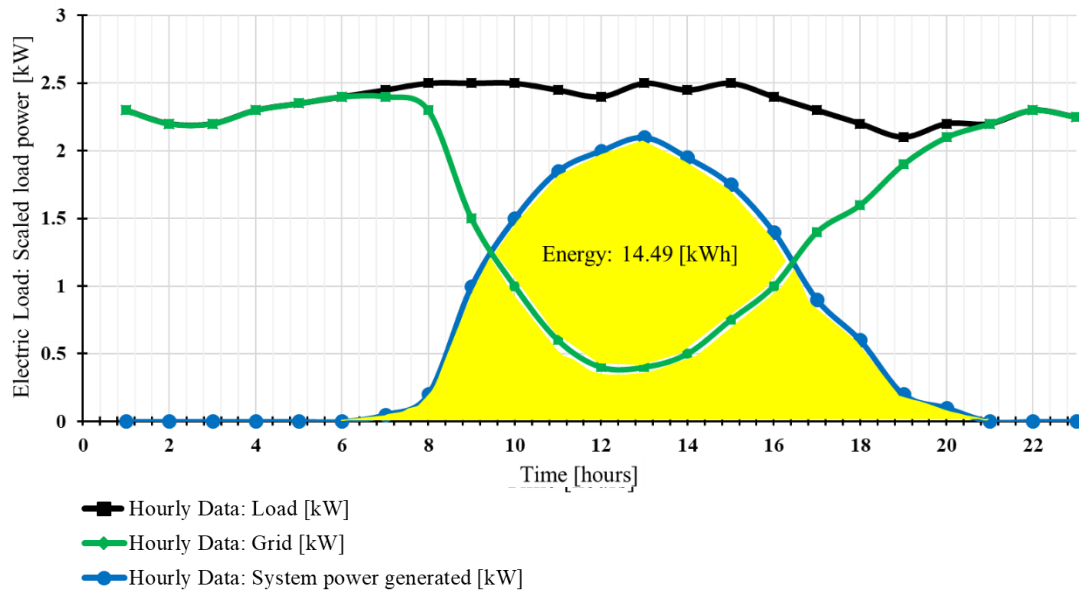


Equipment



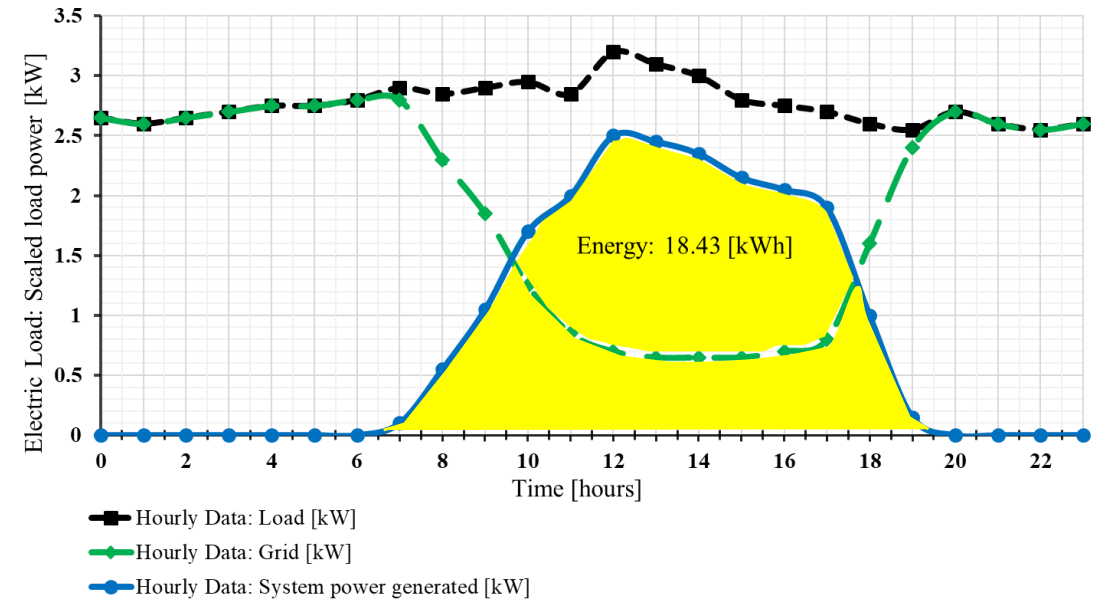
Performance Evaluation 1

■ Daily energy generation of solar PV system with **2.46 kW** PVs.



14.49 kWh (May, 2024)

■ Daily energy generation of solar PV system with **3.28 kW** PVs.



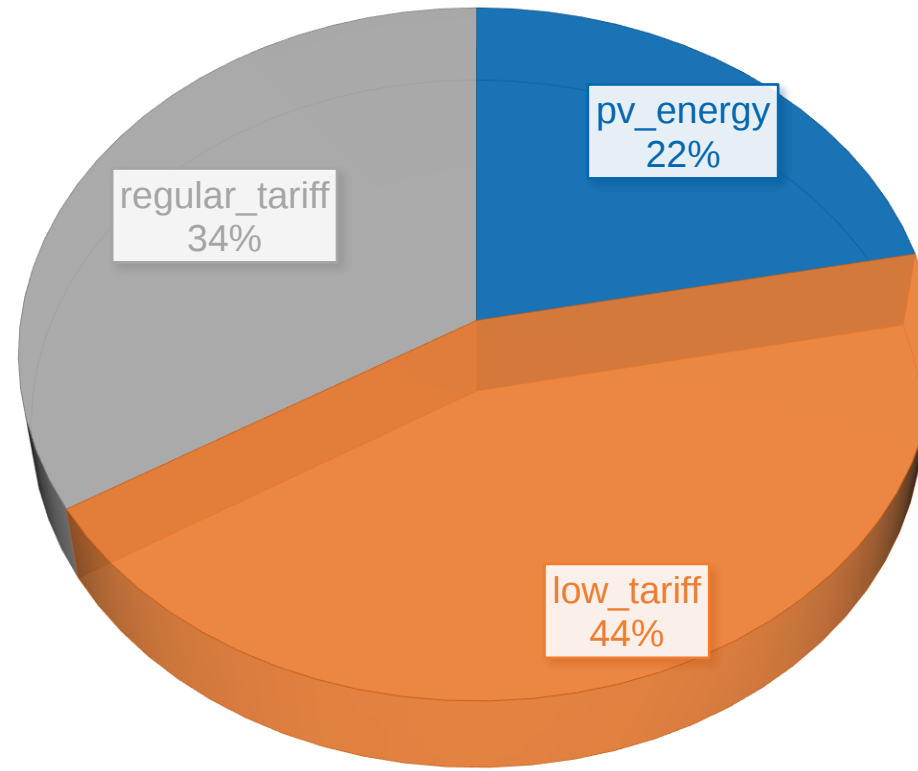
18.43 kWh (May, 2024)

Percentage of Heating Energy Supplied

Months	Energy Generation of Solar PV System with 2.46 kW				Energy Generation of Solar PV System with 3.28 kW			
	Monthly	Daily	Measured or Simulated	Supply percent	Monthly	Daily	Measured or Simulated	Supply percent
January	358.35	11.56	13.25	30%	480.9	15.51	17.80	49%
February	382	13.17	15.10	31%	515.1	17.76	20.38	57%
March	461.54	14.89	17.07	33%	621.1	20.04	22.99	64%
May	391.82	12.64	14.49	40%	526.6	16.99	19.49	54%
October	352.21	11.36	13.02	29%	473.7	15.28	17.53	49%
November	256.63	8.55	9.81	23%	347.4	11.58	13.29	37%
December	294.53	9.50	10.89	26%	395.1	12.75	14.63	41%

Results of Performance Evaluation 2

AVERAGE SUPPLIED ENERGY BY SOURCE TYPE





Solar Facility project

Date: 2025-2028

Area: Chingeltei district

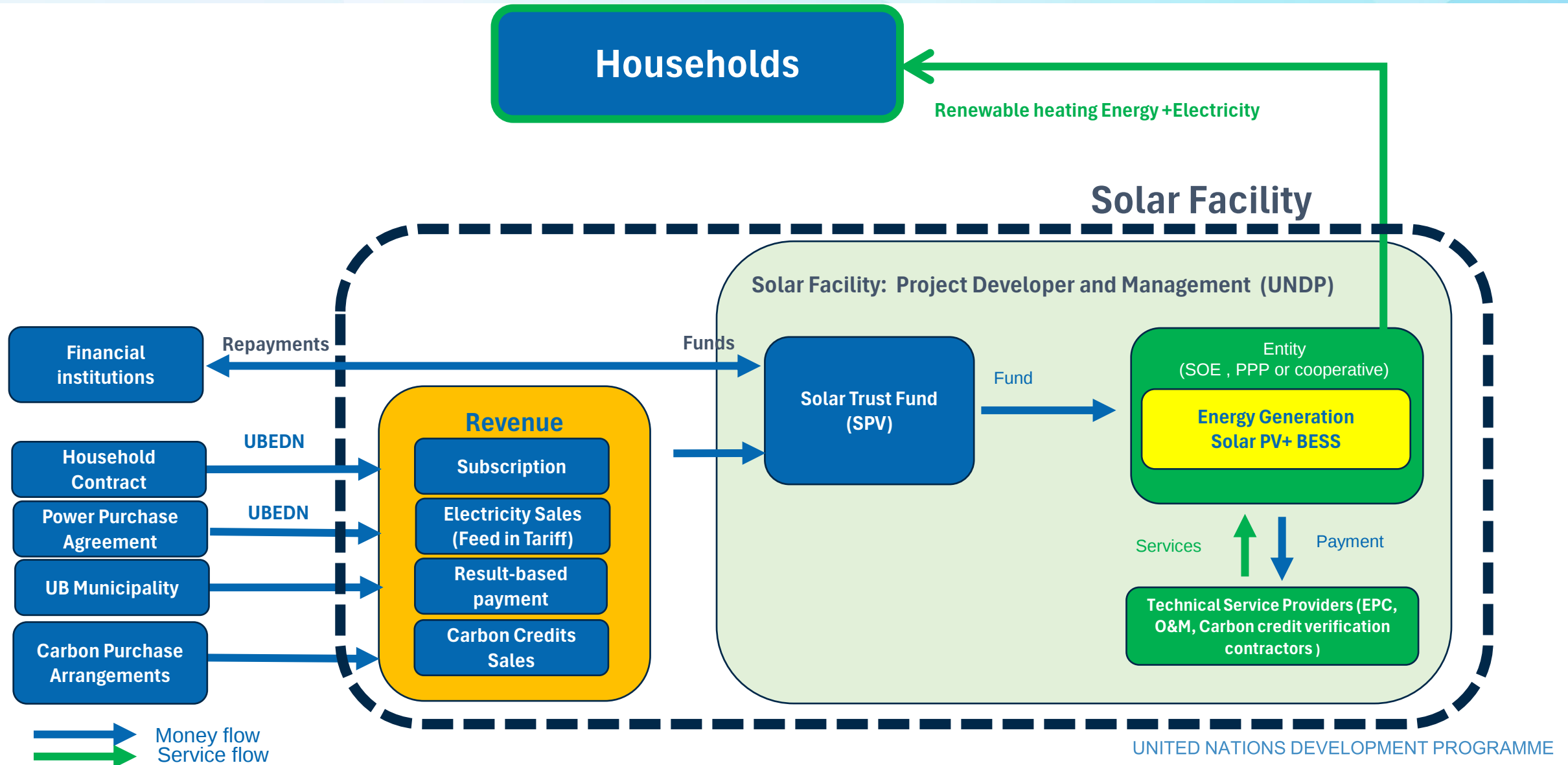
Households: 1000

Review of annual work plans



- **Output 1:** Increased number of households transitioning from coal-based heating to renewable energy, particularly in Ulaanbaatar's Ger districts.
- **Output 2:** Mobilized public and private sector funds from both local and international investors for renewable energy projects in Mongolia/Establish Coal to Solar Financial Mechanism.
- **Output 3:** Capacity to Create an Enabling Environment for Renewable Energy Investments.
- **Output 4:** Empowered communities with knowledge and skills to sustain and scale renewable energy practices.
- **Output 5:** Evaluate Overall Impact on Households and Ulaanbaatar Municipality

Business model: Transition phase



Thank you for your attention!

