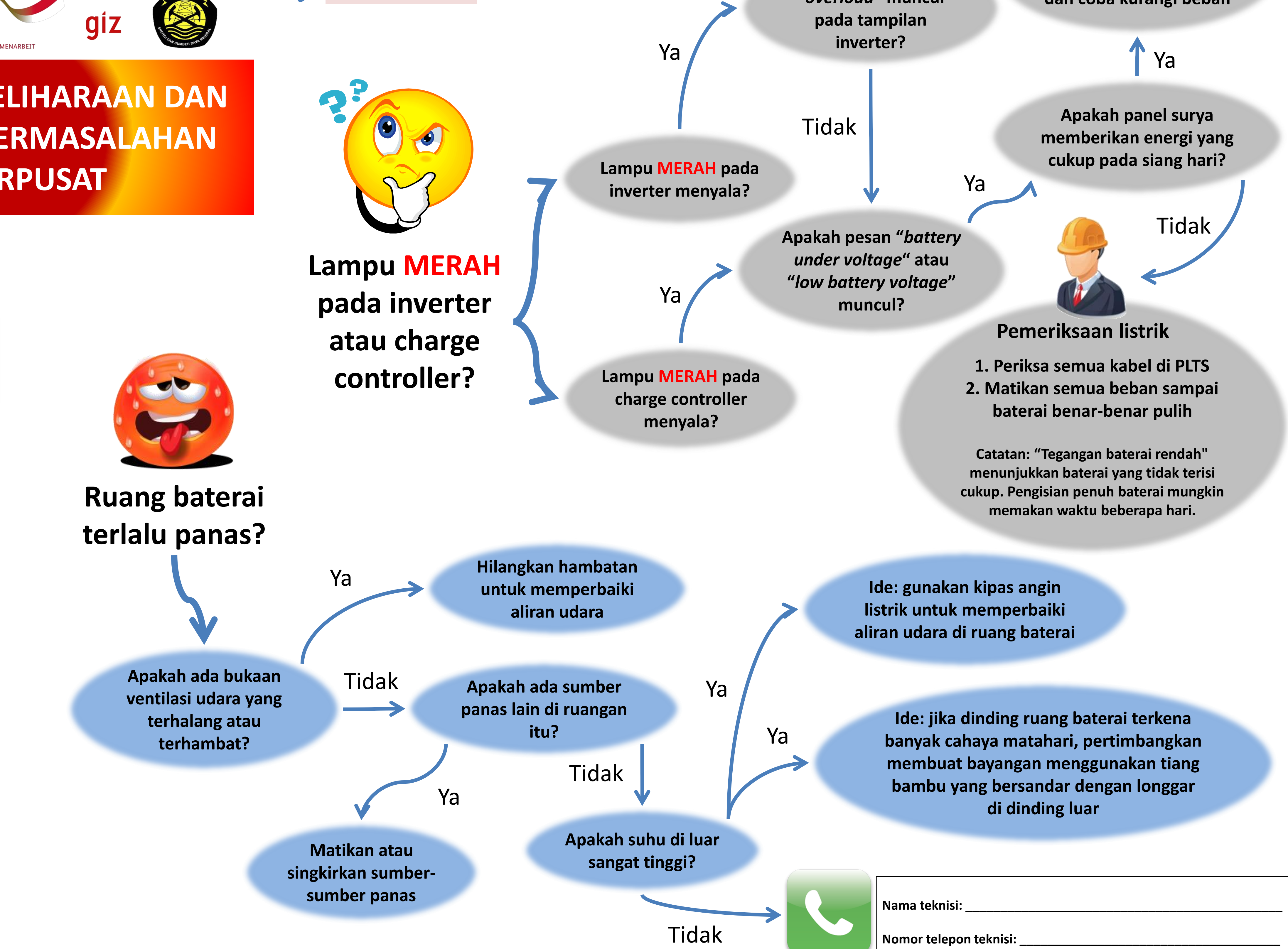
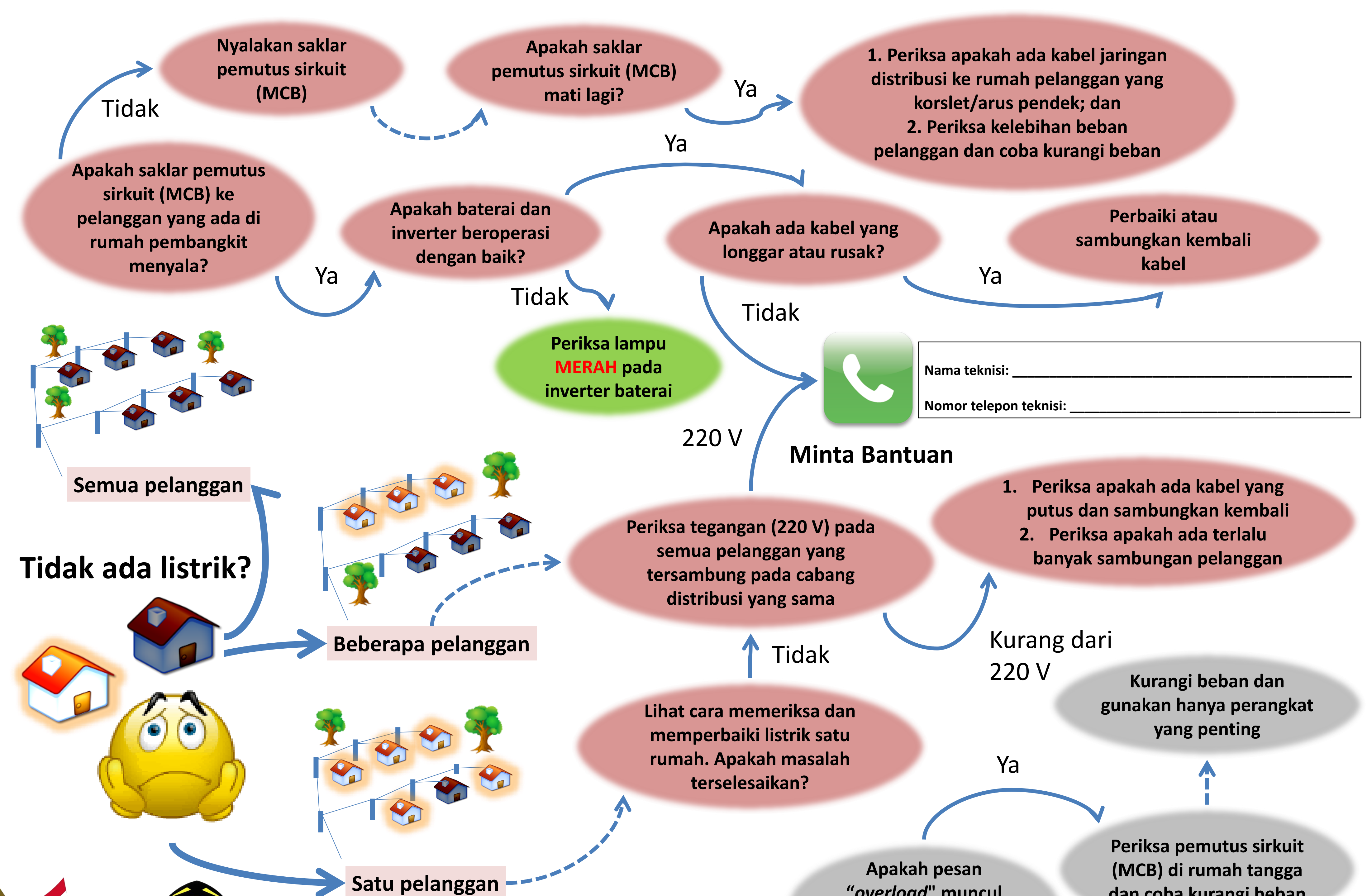




Kode lokasi PLTS:

Operator: _____ HP: _____

Ketua: _____ HP: _____

Jumlah sambungan: _____ KK

Kapasitas PLTS: _____ kWp

Total penyimpanan baterai: _____ kWh

Total kapasitas inverter: _____ kW

Tanggal komisioning: ____/____/____



PANDUAN PEMELIHARAAN DAN PEMECAHAN PERMASALAHAN PLTS TERPUSAT

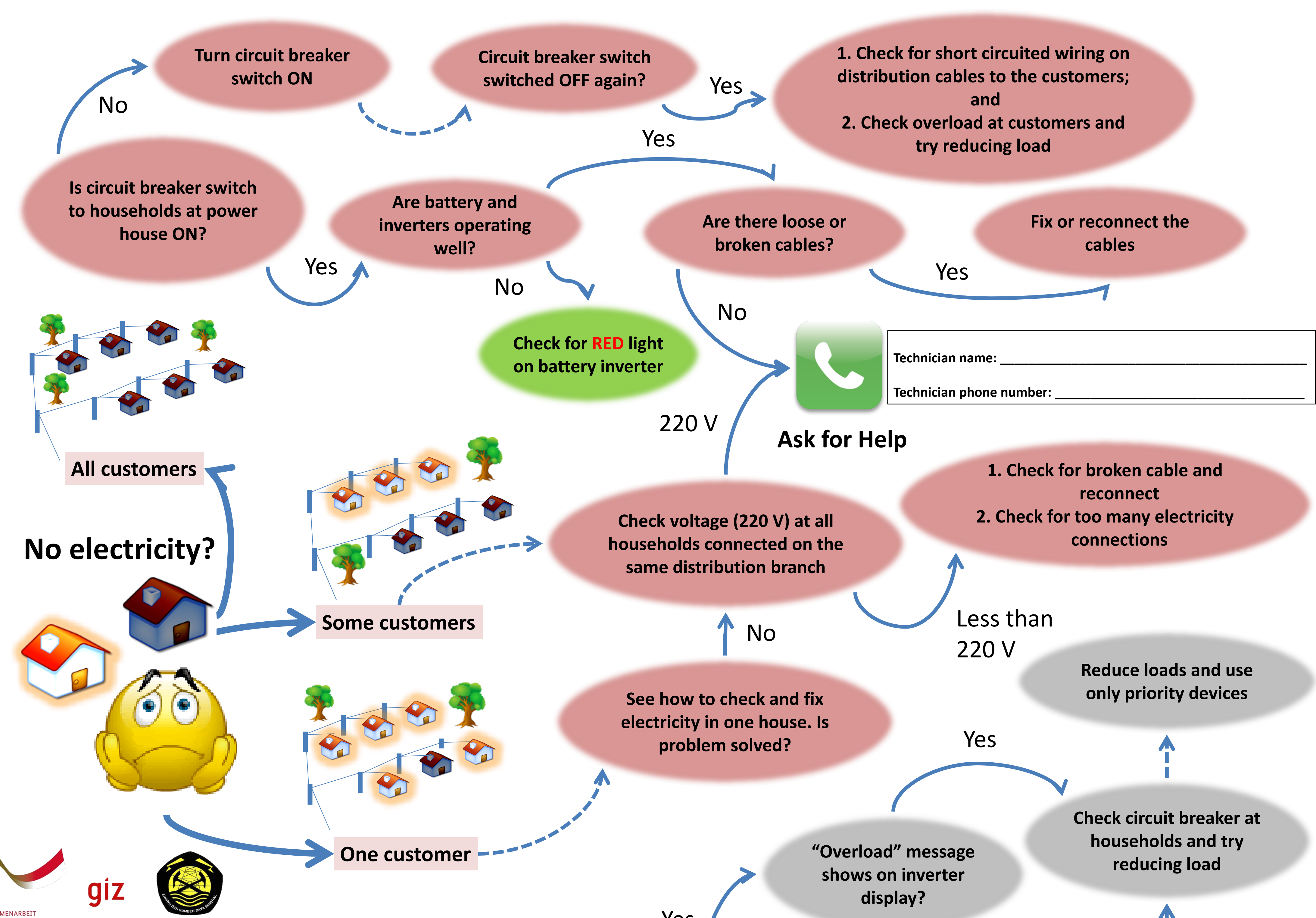
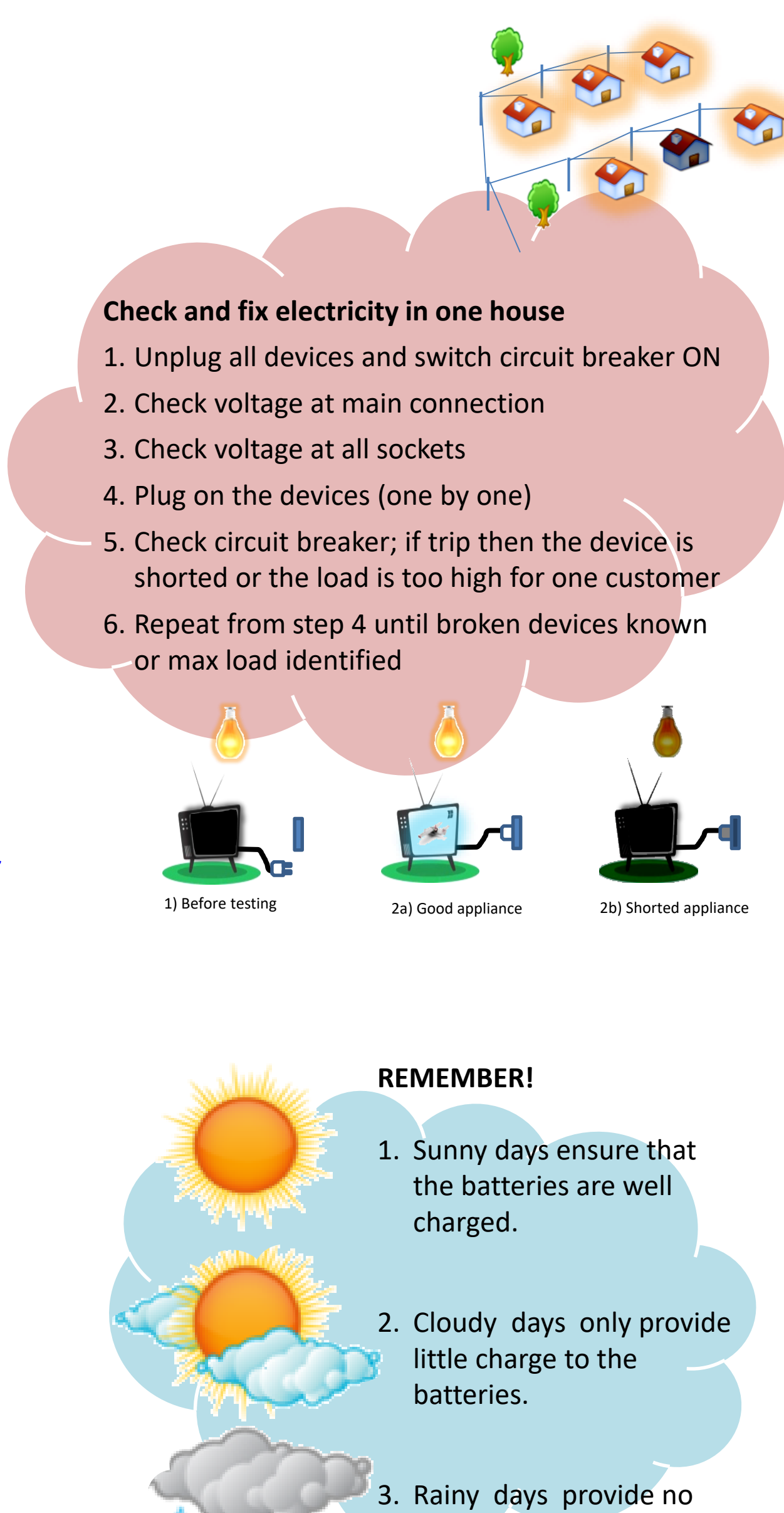
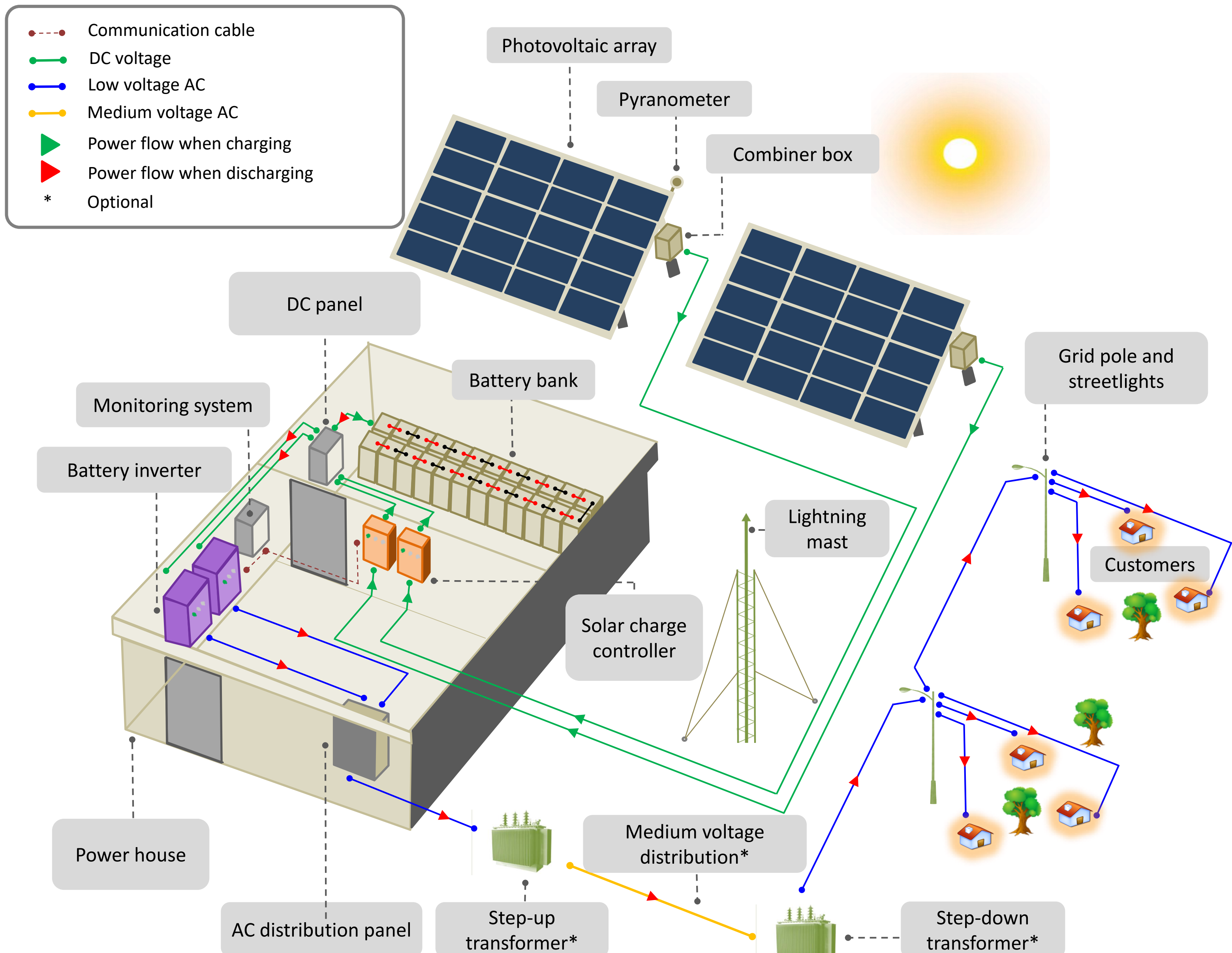


**Lampu MERAH
pada inverter
atau charge
controller?**



Ruang baterai terlalu panas?





Electrical check

GENERAL GUIDANCE FOR ELECTRICAL SAFETY

1. Wear appropriate safety gear and take precautions.
 - ⚠️ Never work with electric parts before system is completely off.
 - ⚠️ Use gloves and wear shoes when dealing with cables and electricity even if the problem seems small and turn off switches.
 - ⚠️ Solar modules are 'life' when sunlight is present. Take extreme care not to cause short circuits in DC circuits, by connecting wrong wires.
2. Use appropriate tools.
3. Only work on the solar cables early morning or late afternoon when sunshine is limited.
4. If operators cannot fix or find the problem by themselves, contact trained technician only.

PV mini-grid site code:

Operator: _____ HP: _____

Manager: _____ HP: _____

Number of connection: _____ HH

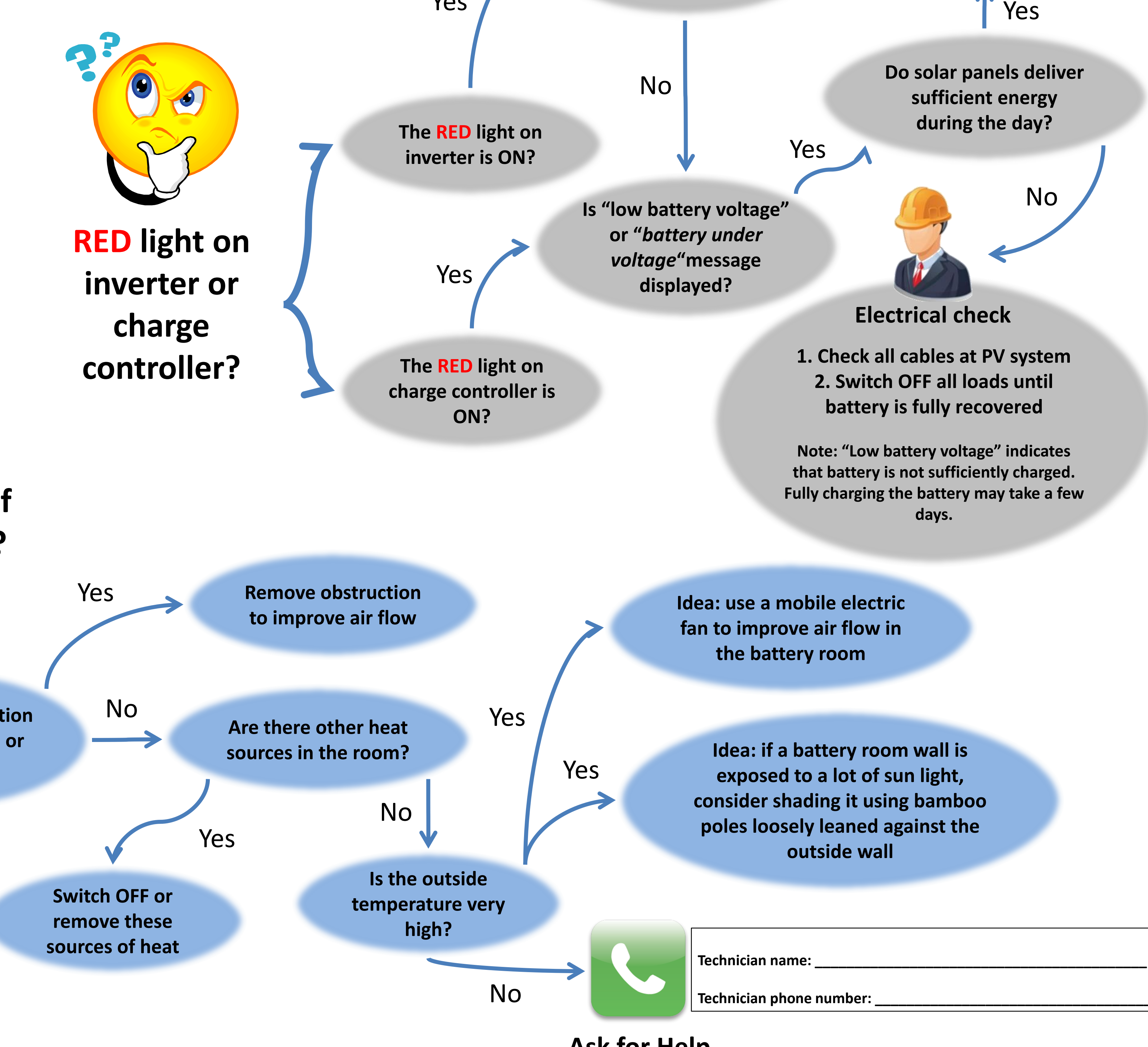
Total PV capacity: _____ kWp

Total battery storage: _____ kWh

Total inverter capacity: _____ kW

Commissioning date: ____/____/____

TROUBLESHOOTING AND MAINTENANCE GUIDE FOR PHOTOVOLTAIC (PV) MINI-GRID



Regular maintenance guide

(Weekly, monthly, and 6 monthly)

Notes:
SPD: Surge Protection Device
MCB: Miniature Circuit Breaker
AC: Alternating Current
DC: Direct Current

Frequency	Solar module	Battery	Combiner box	Distribution panel	Power house and distribution grid
Weekly	Check the cleanliness of solar modules surface Action: Clean the surface of solar modules with a brush or cloth. Only use water as a cleaning fluid.				
Monthly	Check shading on the solar modules Action: Remove tree branches or other objects that cause shadows.	Check if the battery terminals are protected by insulating materials, tight and not rusty Action: Cover battery terminals with strong insulators (e.g. plastic boxes, wooden boxes).	Check whether the cable connections in the combiner box are safe, dry, and clean Action: Tighten the loose connection and make sure that no cable insulation is damaged. Replace the terminal if there is a sign of burning or melting.	Check whether all MCBs or fuses on the DC distribution panel are still operating Action: Make sure the MCB is ON and replace the fuse if it burnt.	Check whether the fence is in good condition (can be locked, not corroded, sturdy, and no slit of livestock to enter) Action: Fix the damaged fence and always lock the generating house.
	Check whether each solar module is in good shape Action: Disconnect from the circuit and replace the damaged solar module. Replace when there is no sunlight.	Check if there is any electrolyte leak in the battery Action: Report if there is a leak in the battery. Be careful with corrosive chemicals!	Check MCB condition, fuse and SPD on combiner box Action: Make sure all MCBs are ON, the fuse is working properly and the SPD indicator is green. Replace fuses and SPD if needed. Report if MCB always returns OFF.	Check that all MCBs, fuses, and SPD on the AC distribution panel are still in good condition Action: Make sure MCB is ON, replace the fuse if it is burnt, and replace the SPD if it is red.	Check whether the street lights operate and are not blocked by the trees Action: Cut that trees or branches that have the potential to cover sunlight or damage the network.
	Check whether all bolts on the solar modules are firm and none is missing Action: Tighten all bolts and ensure all bolts are installed.	Check the temperature and voltage of each battery Action: Measure the battery temperature and voltage. Record and prepare a replacement battery if the temperature difference is greater than 5°C and the voltage difference is more than 0.3V.	Check if there is no hole in combiner box, no water or animal nest Action: Close all holes in the combiner box to avoid entry of animals and water. Make sure the door is locked.	Check all grounding systems are installed properly Action: Make sure all grounding systems (solar module structures, lightning rods, SPD, power house) are connected.	Check whether the grid poles stand firmly and perpendicularly Action: Fix the foundation of the grid poles. Be careful with the wire tension that may arise.
6 monthly				Check whether all cables including the distribution grid cables are in good condition Action: Look for scorching, melting, cable damage from animals. Fix the grid cable installation if it is too low.	Check whether the cable entrance to the power house is tightly closed or open Action: Close the open cable entrance to avoid the animal entering the power house.

Overheating of battery room?

Are any air ventilation openings blocked or obstructed?

Yes → Remove obstruction to improve air flow

No → Are there other heat sources in the room?

Yes → Switch OFF or remove these sources of heat

No → Is the outside temperature very high?

Yes → Idea: use a mobile electric fan to improve air flow in the battery room

No → Idea: if a battery room wall is exposed to a lot of sun light, consider shading it using bamboo poles loosely leaned against the outside wall

Ask for Help