

November 14th, Kathmandu

Dear Jacky,

On November 13th I've been to the Nuwakot project with some people from Jumla. In Jumla we also have the same kind of installation and because the people of Jumla were in Kathmandu for two meetings with the Unica Foundation we thought it would be interesting to show them project Nuwakot.

During this visit your staff was very helpful to provide information about the system and providing us drinks and food. During the same visit I checked the changes made by Lasersun in relation with my previous report from November 9th.



Informing the visitors from Jumla

The fourth installation has been build where Lasersun directly worked in an improved way.





On the following pages information about the improvement from Lasersun

Batteries



Old situation

As you can see the batteries are standing to low. They contain poison (also mentioned on the sticker on the batteries). Children can easily touch or open them with health risk as result.

Place them high or cover them



New situation

Placed on a more safe location



Old situation

The batteries are standing to the metal windowcloser. Because the sun burns onto the metal plate these where very hot, to hot to touch.

The temperature of the batteries was quite high. Their lifetime will be shortened and there is even a change of explosion!

Remove as soon as possible!

New situation

Not yet changed, to be informed by Umbrella



Wiring



Old situation

The connections of the wiring is not acceptable. The engineers connected them by hand and put tape on it, inside the building and outside. This tape will get loose within a few months with blank wires as result.

Risk outside low (12V): loose wires

Risk inside big (220V): blank wires + and – close to each other. Fire or electrocution as result.



Use regular joints for it.

This is a picture taken inside. You can see how close the + and – are next to each other. If the tapes are gone the risk is enormous.



New Situation

Rewired and more safe connection





Lighting arrestor

The lightning arrestor system is completely insufficient and needs replacement. Even one of the three systems lacked the lightning arrestor.



Old Situation

For a good lightning arrestor system you need a metal pole with a diameter of at least 1cm standing next to the solar panel, about 1 meter higher than the highest point of the solar system. This 'fork' is too small.

Also the cable is too small. This one also needs to be at least 1cm. The cable being used now is even smaller than a 12V cable. If lightning strikes at this moment the whole cable is gone and completely not functioning.



The isolation between the cable and the construction is too thin. If lightning would occur then it will electrify the metal construction.

Replace the whole lightning arrestor system



New Situation

Thicker wires have been used. Also the lightning arrestor has been placed on a better location.



As you see the installation has been improved. Still it's necessary to check the installation by your staff, 2 weeks after all the changes are executed.

I would like to ask to provide me both reports, the second to create by Lasersun and your internal report.

I was also very pleased that one of your staff people told me he understood the system and attention points a lot better after my first visit and report. It shows sustainability!

With kind regards,
Unica Foundation

Roy Voss
Project Manager