

# ECOLAPAGOS PROJECT REPORT

Thursday July 24<sup>th</sup>

Report of activities from Monday to Wednesday

## Monday

Arriving to Puerto Baquerizo, meeting with Allan.

Presentation of Allan at ElecGalapagos/Translation.

Arrangement of activities with ElecGalapagos engineers for next day

## Tuesday

Preliminary visit to the Planta de Luz in the morning.

Meeting with representatives of local Institutions in the afternoon.

Preparation of material and equipment for next day. I have bought an 8-port ethernet switch, 1 drill set, some screws and nuts (\$1.10 each screw – marine grade)

## Wednesday

The Planta de Luz has 7 generators. I had access to the hourly reports that they generate by hand. I also copy the plate of specifications that I found only in one of the generators. The generators are used from 50% up to 80% of their maximum capacity

No. 1: 600 KW at 480 Volts. Phases can sometimes go over 800 Amps.

No. 2: 600 KW at 480 Volts. Phases can sometimes go over 800 Amps.

No. 3: 150 KW at 225 Volts.

No. 4: 600 KW at 480 Volts.

No. 5: 150 KW at 225 Volts.

No. 6: 150 KW at 225 Volts. Very unfrequent use (less than once per month)

No. 7: 150 KW at 225 Volts. On maintenance (completely disassembled)

Veris sensors are installed in Generators 1, 2, 3, 4, 5

They have a local computer (old, pentium 2) where they are collecting data. They have a non-efficient database program but their intention is to automatize the collection of all this data. Who can build this local database???. I am going to at least, use that computer (or should I use the small one?) to be able to see the Acquisuite and also as a gateway to the wireless router (D-Link)

## Needs and recommendations

I suggest that the Veris in Generators 1, 2, and 4 would be changed for Sensors at 1600 Amps, unless no damage is caused by overcurrents less than 900 Amps for periods no longer than 1 hour.

I am thinking in installing the Acquisuite in the Panels room and send the Ethernet cable to the Computer Room. (I am attaching a croquis) For that, I would need Shielded Ethernet cable to protect the information from the electromagnetic noise generated by the diesel generators.

I need another package of Shielded RS-485 cable.

There is no line-of sight between the Planta de Luz and the ElecGalapagos office. I am figuring out how tall a poll must be installed at the Planta de Luz as well as at the Office to achive the line of sight. More information soon.

It would be really helpful to have the line-of-sight telescope. Please bring one.

Some Pictures:

Room 1.  
Generatos 6 to 4



Generator No. 7



Control for Generators 1, 2, 3,  
As you can notice, the control  
panel for generator 3 is smaller  
since it is more recent.



Control panel for generator 4  
(although it indicates generator  
No. 2 at the top) and No. 3  
again



Room 2, Generators 1 and 2  
At the top right you can see the  
Control Panels room



Control Panel for Generators  
5, 6, 7



Veris Sensors in the back of  
Generator No. 1



View from the top of the diesel  
containers. The front building  
is where the generators are.

At the bottom you can see the  
hill that overlooks the town.  
From this point only few  
locations are visible, none of  
them is the ElecGalapagos  
offices building.



This is all what is possible to  
see of the town from the tank



