

Report

project-trip to Ethiopia 3/6 - 14/20 February 2025

Dear all,

We are now back - thank God, safe and sound - from our trip to Ethiopia.

The travellers were (left to right):

Jürgen and Emil Mummert from Dresden, Jochen Hahn, Rüsseina, Andreas Zimmermann from Lupp (Lausitz), Jörg Tanneberger from Höfgen, Andreas Ritter from Siebenlehn, Uli Kretzschmar from Dresden,



We were able to realise most of our goals. The relative shortness of our stay in Tula certainly put us under a lot of pressure. In fact, we only had 4 ½ days for assembly work in Tula. For this very reason, we were glad that all the errands in Addis Ababa (especially 25 PV panels and cables) could be completed smoothly on the day of arrival, including a short visit to the Mekane Yesus headquarters, thanks to the help of our friends from the Wolde family.

Entering the country at customs was quite exciting. We didn't have any large devices in our suitcases, but lots of small electrical items (switches, sockets, LED lamps, circuit breakers, screws and presents for the school...). Luckily, we had everything so jumbled up in the suitcases that the customs employee seemed to lose track of everything at some point when unpacking almost all the suitcases. In addition, an accompanying letter from the Mekane Yesus Church may have had a positive effect, so that after about two hours of extreme tension we got everything through duty-free.

In Tula, we were then able to realise most of our goals. The systems in the two power houses were working, which was a great relief for us. Only the two (emergency) diesel generators could not be used due to a programming error, which led to a lack of energy during the rainy season with little sunshine.

Here is a brief overview of our activities:

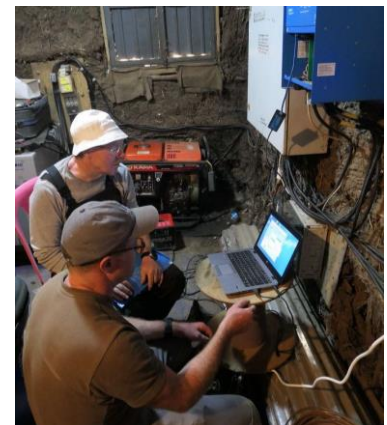
1. Installation of a balcony PV system on the school

In order to increase the energy capacity of our grid, the installation of a so-called balcony PV system on the roof of the school was planned. As a pole substructure had to be laboriously ‘carpentered’ onto the thin corrugated iron roof and the three inverters (1.6 KW each) required complex cabling, only half of the 24 PV panels could be put into operation due to a lack of time. However, everything worked well. Our electrical specialists Jörg Tanneberger and Andreas Ritter also installed lamps and sockets in the classroom below in exemplary fashion - a true model installation!



2. Programming the inverters

After a few tests, this went well so that the diesel generators could be used at times when the sun is weak. Special programming was also carried out to prevent uncontrolled overcharging of the batteries by the balcony PV systems.



3. Preparatory work for re-commissioning the wind turbine

In E-House I (main control centre), we were able to arrange the components in the control box in such a way that space was created for a wind control circuit. The control system itself could not yet be finalised, but will now be tested here in Rüsseina. The energy supply from the wind turbine will be of considerable importance for the higher reduction of energy at night, as the wind blows particularly strongly at night.



4. Structural stabilisation work on the solar roofs

As the solar roofs had been erected years ago using a fast-track construction method and unfortunately without diagonal bracing, reinforcements now had to be installed due to the imminent leaning of the 'buildings'. This was done by master carpenter Andreas Zimmermann. The sawing work proved to be extremely difficult. Dry eucalyptus wood is so hard and tough that saw blades (and even iron drills!) quickly become blunt.



5. Development of a maintenance concept for renewing masts.

As there is little awareness of the need for constant maintenance in near-natural populations (you can get anything from natural materials at any time), one of the main problems is the continuous replacement of desolate power poles. The condition of some sections is alarmingly bad: missing poles, leaning poles, pole stumps ... A 'test route' was therefore established with the village technicians for checking and replacing poles. It turned out that the replacement itself can be carried out very quickly and easily. The technicians replaced eight poles in one day. Thanks in part to a 'pole replacement bonus' that we offered, we now hope that the technicians will now renovate line after line.



6. Connection planning for huts not yet connected

Contrary to statements made last year, we have been informed that there is still a need for further network expansion. Firstly, around 18 huts in Tula still need to be connected. This includes 10 huts in the neighbouring municipality of Morsito, which are within sight of our electricity centre but have no electricity. This has caused quite a discussion in the community as to whether this is possible or not.



However, our approval is subject to the condition that there is a written declaration from the municipality of Morsito regarding the restriction to these 10 huts.

A greater challenge is the fact that the Tula district of Gambo Village, of which we were previously unaware (12 hut units), is located far away in the valley. Due to the great distance from the last existing power point (almost one

kilometre), we need to consider whether a small separate power supply could be installed down there, similar to the separate system we installed for one of the two churches in 2024 (which works very well).

7. Thoughts on a concept for school development/school partnership

We were able to exchange ideas with the school headmaster regarding a simple partnership between a school in Görlitz and the school in Tula. We had to make it clear that the actual aim of such a partnership could not be to simply 'procure supplies'. We expressed the idea of whether it might not be possible to establish some kind of craft and electrical engineering lessons in the school. However, this would require an appropriate teacher. The headmaster understood and wants to look around for a teacher from the town of Hossaina. Let's see what happens.



So that we would not come completely empty-handed, we were able to give the headmaster footballs, volleyballs with nets, pens and a class set of calculators, which the headmaster was very pleased about.

The lighting in some classrooms is now to be connected by the village technicians.

All in all, given the short time we spent in Tula, we can look back with gratitude on a very successful event. As always, we lived in a tent camp. Jürgen Mummert was in charge of the kitchen and catered for us wonderfully. Two traditional Ethiopian charcoal cookers served as cookers. To get eggs hard, they had to be cooked for 15 minutes - due to the altitude of 300 metres above sea level. The toilet could still be improved somewhat. We couldn't really make good use of the shower because the shower head had disappeared. In other words, we used very little water. This should be rectified next time, including a small shower water heater. All around us - always curious and cheerful children and every evening a small invitation to coffee in the traditional Ethiopian round hut in the company of people and animals.



Finally (!) Andreas Zimmermann was able to turn the wretched, bent, grinding 'farmyard gate' into what you could call a farmyard gate by means of proper hinges. The landlord was delighted.

Some of the group were able to travel south for two more days before returning home on 19/20 February.

What next?

As the wind turbine urgently needs to be put back into operation, we could travel to Tula with a small group in October to install the control system. If there are enough people, we might even be able to expand the PV system on the school.

Consumer behaviour remains a problem in Tula: in many huts, people simply leave the lights on at night until the morning. The resulting energy consumption is enormous. As we do not expect a fundamental change in consumer behaviour, we will provide for an automatic switch-off between 11.00 pm and 6.00 am. This could also be installed in October.

We would like to thank everyone who contributed to the planning, financing and realisation of the campaign.

Best wishes from Jochen.

