



The Challenge

Mr and Mrs Furer are an adventurous couple that loves to travel and to discover different countries around the world aboard their van "The Pepamobil". Traditionally, a combination of the vehicle's 24 volt, 220 volt and gas is used to provide power in vehicles. Mr Furer started out with a system combining solar panels with a gas generator and 120l gas tank. However, the gas tank had some problems



Bruno Furer

with the height and temperature when they travelled in South America. Mr Furer started to think of a new improved system. This new system would have to work continuously 24/7, whatever the environment. The truck would visit places up to 5.000 meters above sea level with temperatures from -25°C up to +40°C and humidity up to 95%.

System components

Solar modules:	600 W 24 V Siemens
Batteries:	Sonnenschein 2 Volt Zellen 450 Ah
Inverter/Chargers:	Studer, 1 Compact, HPC 4400-24
Solar charge controller:	Mid Nite MPPT
Other:	Wingenerator Super Wind

The Solution

The mobile hybrid system is completely running on 220V with a small battery bank. It powers a refrigerator, a freezer, an induction hob, an oven, a water pump, lights and other loads. The procurement of household appliances becomes easier and a lot cheaper when all appliances are 220V. The network is more stable than the one from the socket (!).

The system includes solar panels, MPPT solar charge controllers, an inverter/charger and batteries. Additional energy comes from a windturbine.

Why Studer

After having looked at various products on the market such as an Australian system and Mastervolt, they opted for Studer. Decisive for Mr Furer was the HP-Compact inverter/charger's adjustable charge detection system (1-20W) that allows the

smallest energy consumption and ensures a long life of the battery. Another important factor was that the product is entirely manufactured in Switzerland.

Project outcome

The Pepamobil has, so far, been confronted with the climate of the following countries without any problem: Morocco, South Africa, Namibia, Botswana, Mozambique, Zimbabwe, USA, Canada, Mexico, El Salvador, Honduras, Nicaragua, Guatemala, Belize, Yucatan, Costa Rica, Panama, Columbia, Venezuela, Ecuador, Peru, Paraguay Bolivia, Argentina, Chile, Brasil, Franz Guyana, Surinam, Guyana, and Europa.

Mr and Mrs Furer are pleased to have gained independence from gas, 110V and a 220V grid connection. Almost every country has its own gas connections and rules on how to refuel gas cylinders. With gas the power fluctuated between 95-220 volts making it hard for their electronics to follow. The battery based system provide them with a very stable and secure power supply. Also, they no longer have to worry about gas replacement or if there will be enough energy during their travels, making them more comfortable and less stressful.

After ten years their chosen system is still working very well; they never have had to eat cold food...

The Company

Bruno Furer. Renate Furer /Switzerland

For more information please contact:

Studer Innotec SA

www.studer-innotec.com / info@studer-innotec.com

Studer Contact: **Eric WERFELI**

Bruno Furer

www.pepamobil.ch / bruno.furer@gmail.com