

Independent thermo electric hybrid system connected to the national grid

VILLA AND 2 APARTMENTS - energy independent beneficiaries



The beneficiary has a new house under construction at the location Caciulata, Valcea county where there is electricity network and three phase electricity branching network provided by CEZ Oltenia.

Renewable energy: solar thermal and photovoltaic; geothermal heat.

For use of these energies, it was built a solar thermal collector system with pressurized collecting tubes to which we can add:

For thermal energy:

- The thermal solar system for heating intake, which is assisted by a water supply line using geothermal heat supplied by a local company.

For electricity:

- A 7.30 kWp PV generator connected to the national grid and electricity storage and smart energy management SUNNY HOME MANAGER, AC .

29 photovoltaic panels supplying electricity to two-phase solar inverters were mounted on the roof of the villa.

For energy storage gel batteries storage system have been used, and for optimizing production and

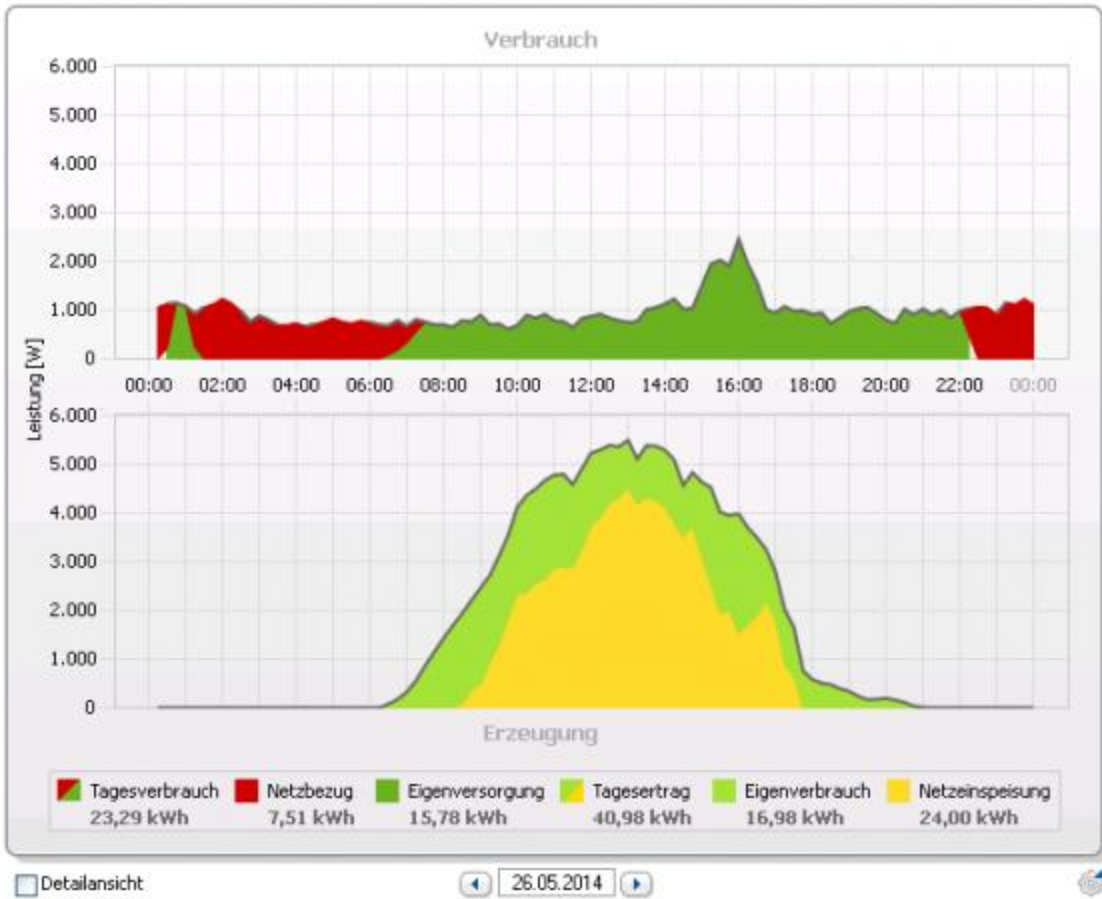
consumption a smart manager connected to the internet had been used. All system parameters are monitored "on-line" by Sunny-portal in Germany.

The plant is in operation since September 2013 and is functioning as designed.

M Holding International Inc Ltd. SRL

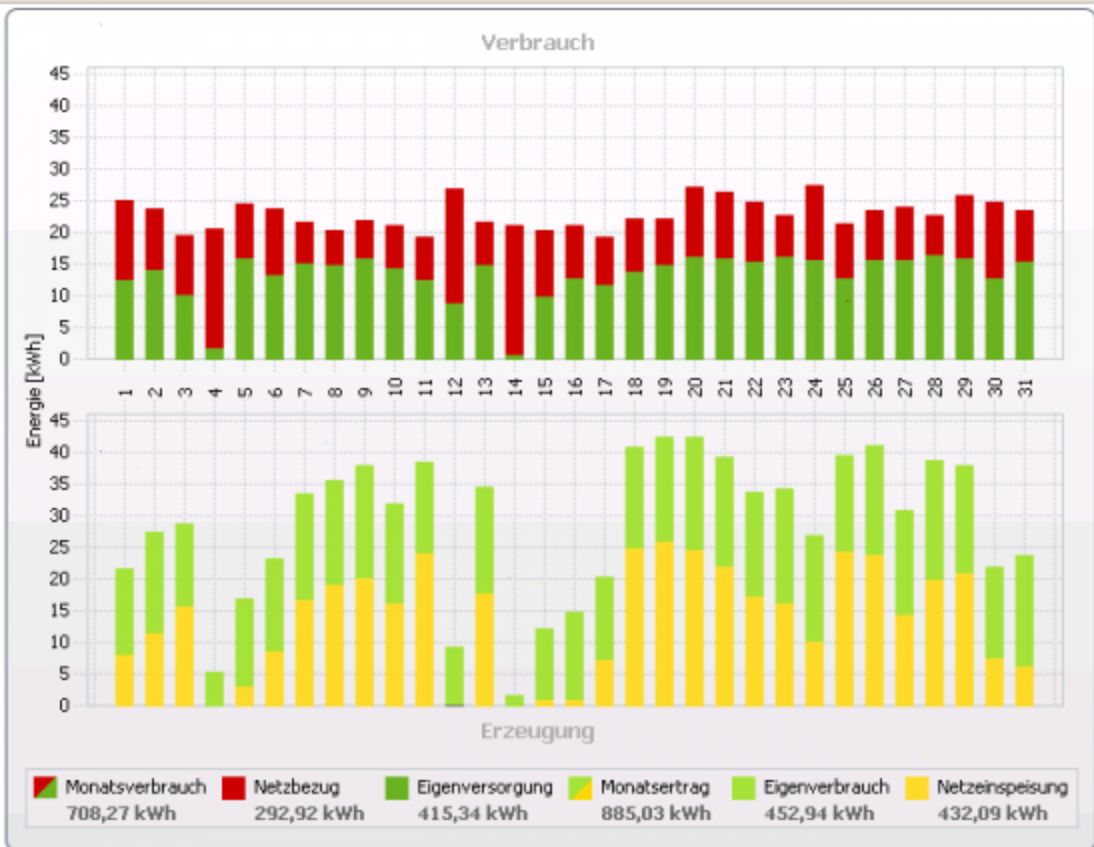
Dipl. Ing. Marian-Gheorghe Marcu





▼ Bilanz

| | | | | | |
|---------------|-----------------|------------------|----------------------|-----------------|------------------|
| | Tagesverbrauch | 23,29 kWh | | Tagesertrag | 40,98 kWh |
| | Netzbezug | 7,51 kWh | | Eigenverbrauch | 16,98 kWh |
| | Eigenversorgung | 15,78 kWh | | Netzeinspeisung | 24,00 kWh |
| Autarkiequote | | 68 % | Eigenverbrauchsquote | | 41 % |



Detailansicht

Mai 2014



▼ Bilanz

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Monatsverbrauch | 708,27 kWh | Monatsertrag | 885,03 kWh |
| Netzbezug | 292,92 kWh | Eigenverbrauch | 452,94 kWh |
| Eigenversorgung | 415,34 kWh | Netzeinspeisung | 432,09 kWh |
| Autarkiequote | 59 % | Eigenverbrauchsquote | 51 % |