



Federal Ministry
for Economic Affairs
and Energy

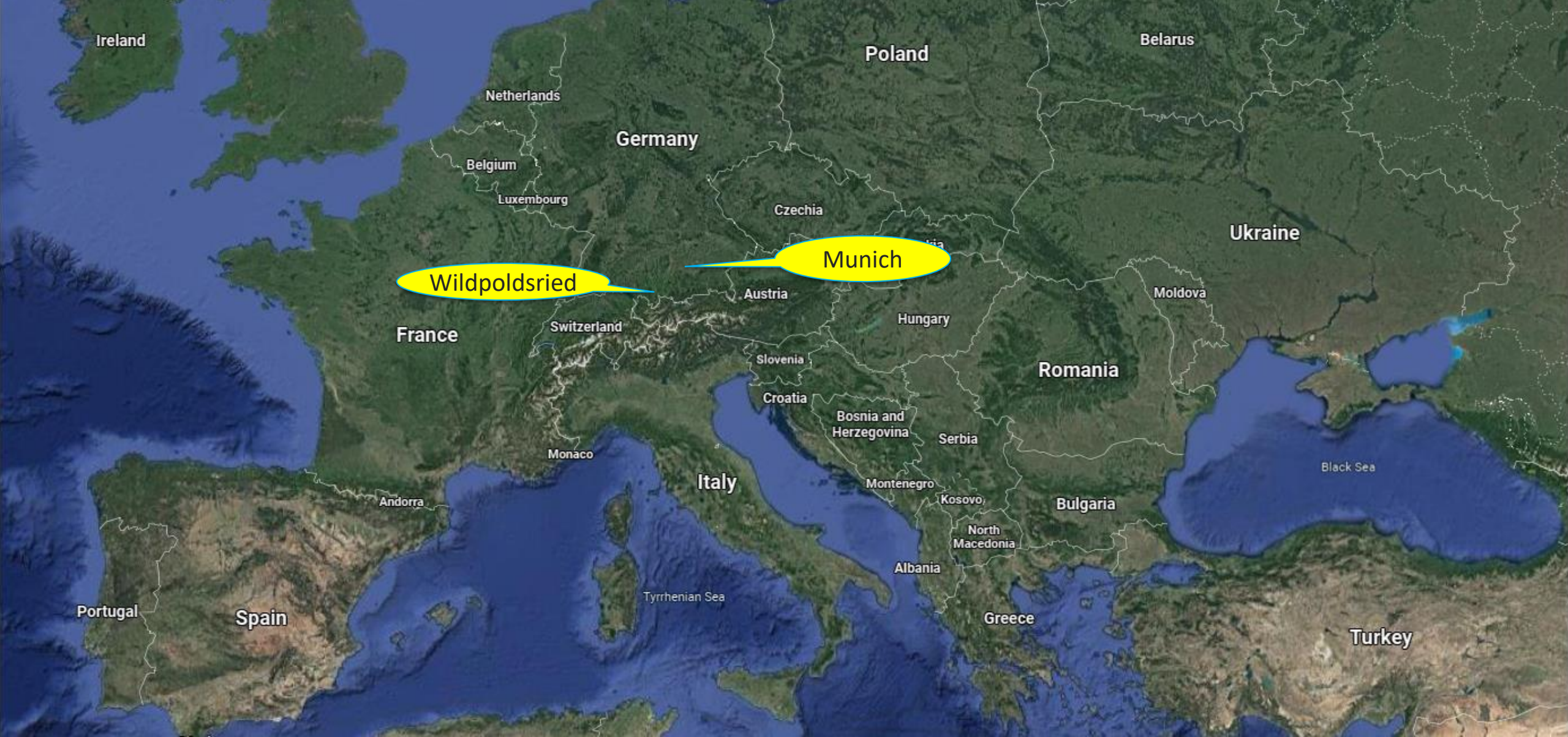


MITTELSTAND
GLOBAL
ENERGY SOLUTIONS
MADE IN GERMANY

The energy village of Wildpoldsried champion of the European Energy Award

2. Major
Günter Mögele
23.11.2021





In the middle of Europe

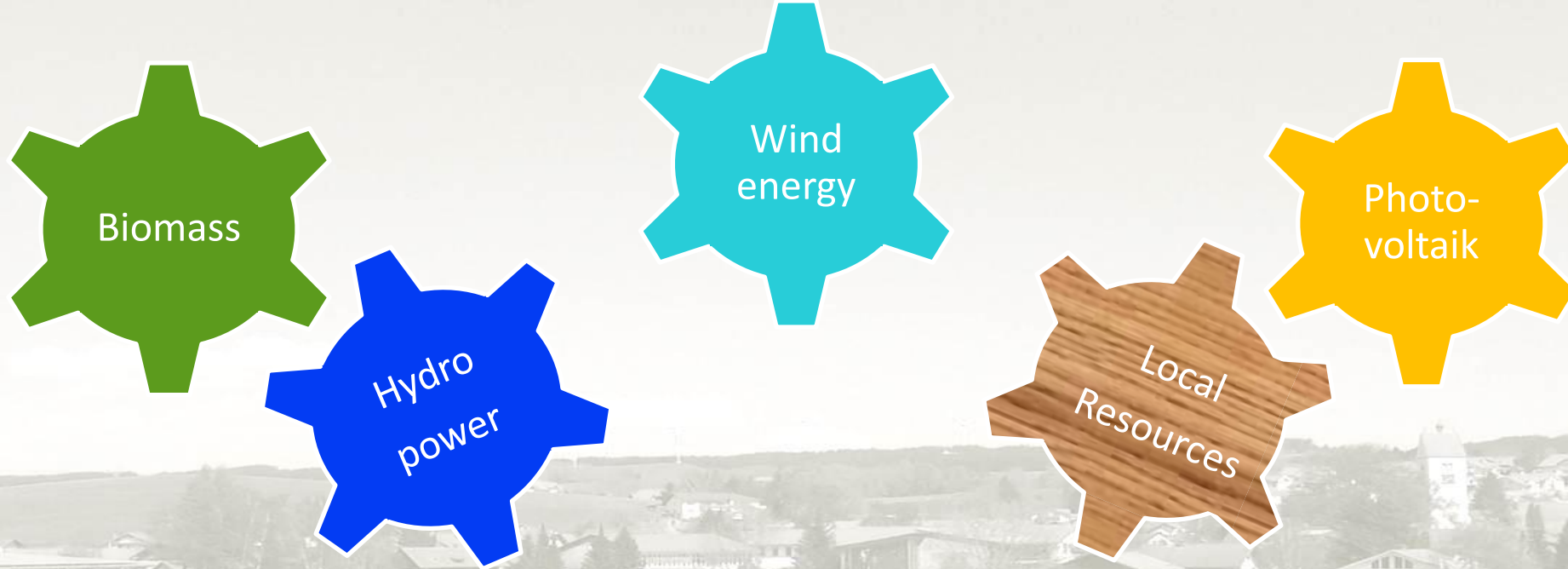




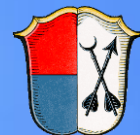
Wildpoldsried

The Energy Village





The combination of renewable energy





combined with research and education





driven by the most important gear





makes the ultimate energy system

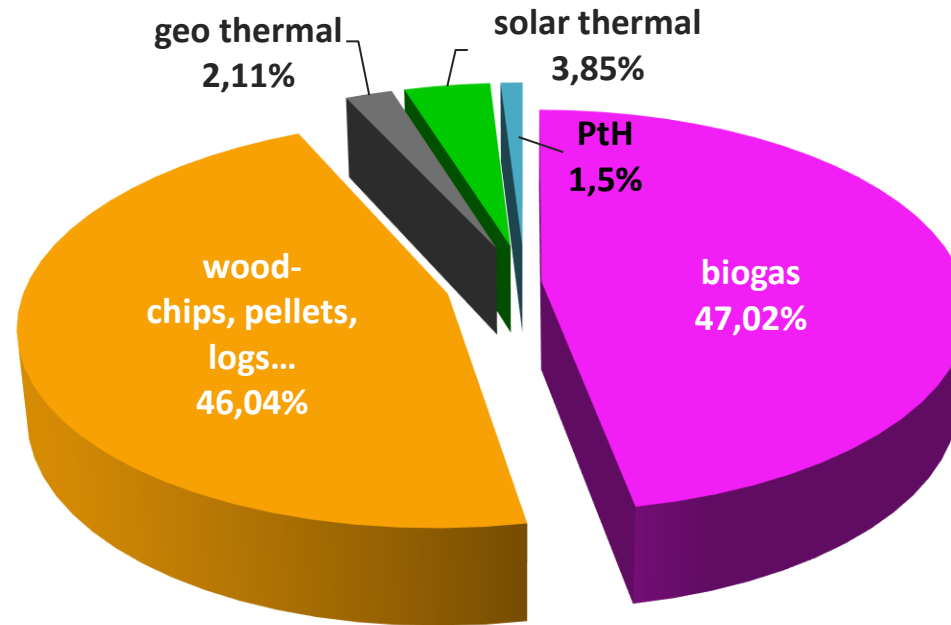


- Inhabitants 2.600
- Total area 2.134 ha
 - farming 1.413 ha
 - Forests 555 ha
- Height 722 m - 922 m
- County Oberallgäu / Bavaria

Wildpoldsried in numbers



Renewable produced heat 2020



- Total heat consumption ca. 30 GWh
- Renewable produced ca. 18 GWh
- Balance 2019 **ca. 60 %**

Biogas plant



CHP



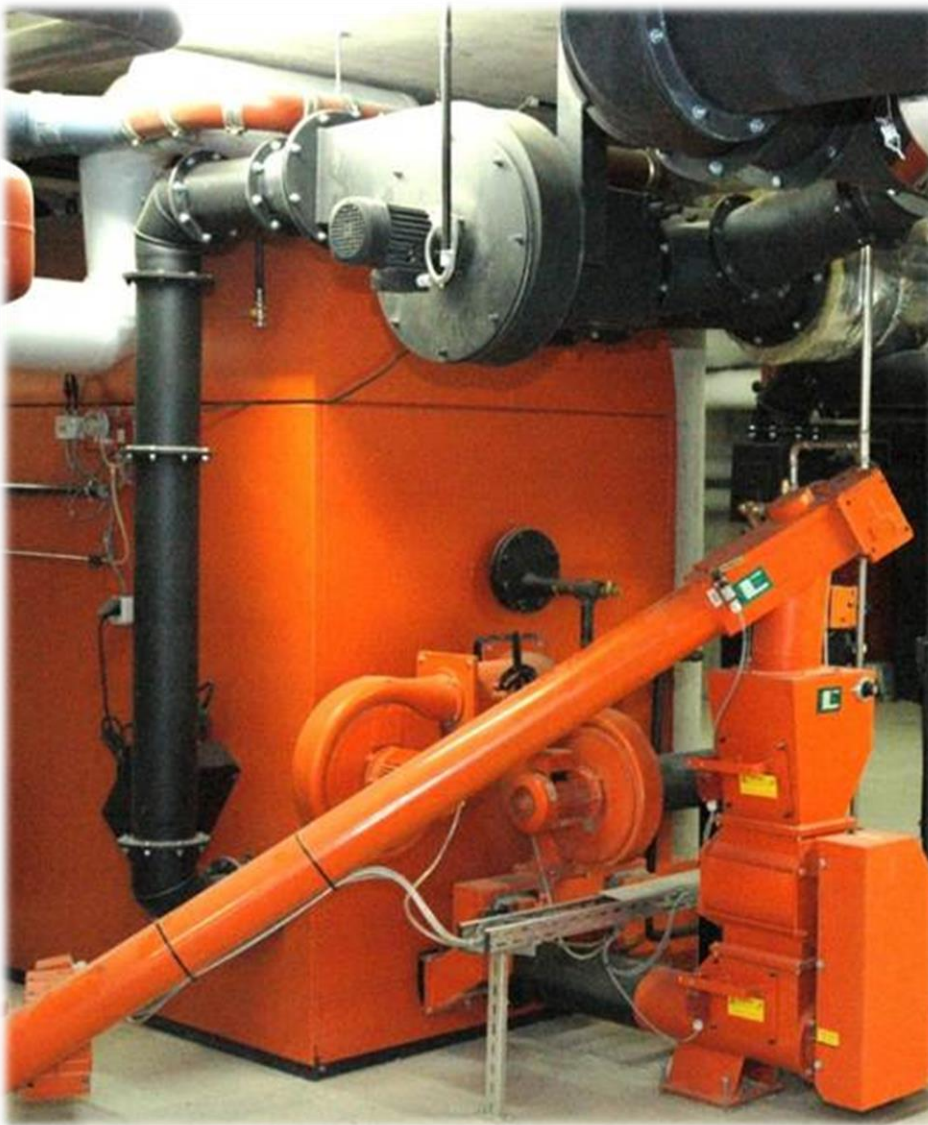
Village heating



Heat

4,2 km of gas network and „heat islands“





- With biogas produced heat
3.364 MWh/year (2020)
- With pellets produced heat
131 MWh/year (2020)

-> Oil savings
ca. 350.000 liters/year

-> CO₂ - savings
ca. 1000 tons/year

Heat

Savings

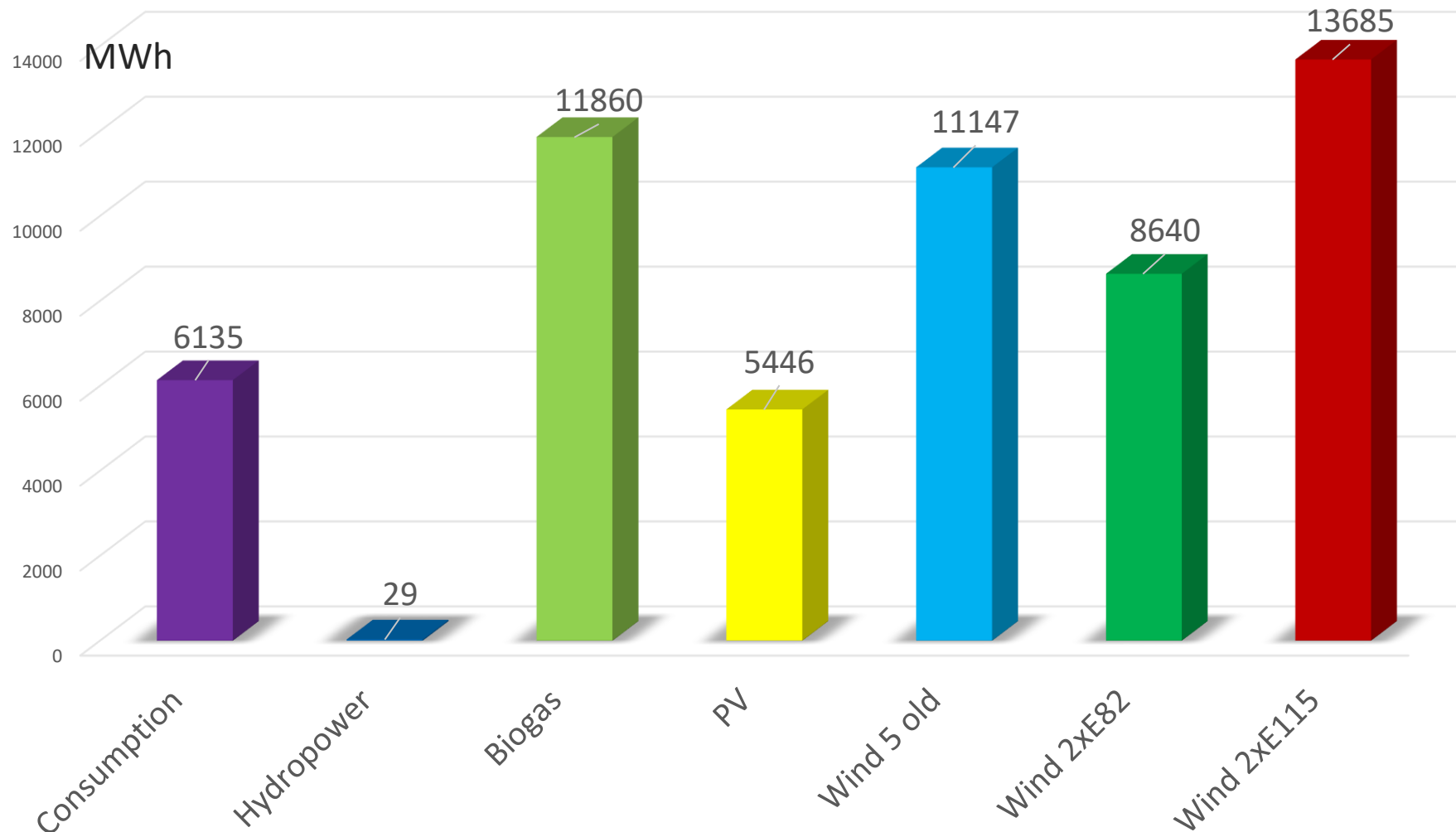




Heat

Oil savings





together about 50807 MWh = 828%

Electricity

Balance of electric energy 2020





More than 400 private participators in wind turbines,
only citizens of Wildpoldsried, all in all 17.6 MW

Electricity

Participation of citizens





Electricity

Research projects





- **IRENE:** first Smart Grid project with 40 E-Cars and 200 measuring points, 2011 - 2013
- **IREN2:** Feasibility of Micro Grids and topological power plants, 2014 - 2018
- **Pebbles:** Testing of the energy market of the future based on blockchain tech., 2019 - 2021

Research projects





<https://pebbles.fit.fraunhofer.de/>

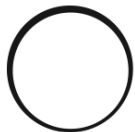
Electricity

Research projects





Storage



sonnen





- Made in „Wildpoldsried“
- Lithium ferro phosphate battery storage system
- fully integrated and smart
- automatically maximises self-consumption
- from 2 – 16 kWh
- 10000 charge cycles
- 10 years warranty
- starts at 2000€ (2kWh)

Storage

The “sonnen battery”





Storage

The „sonnen – community“





- „AllgaeuMobil“
E-Carsharing project



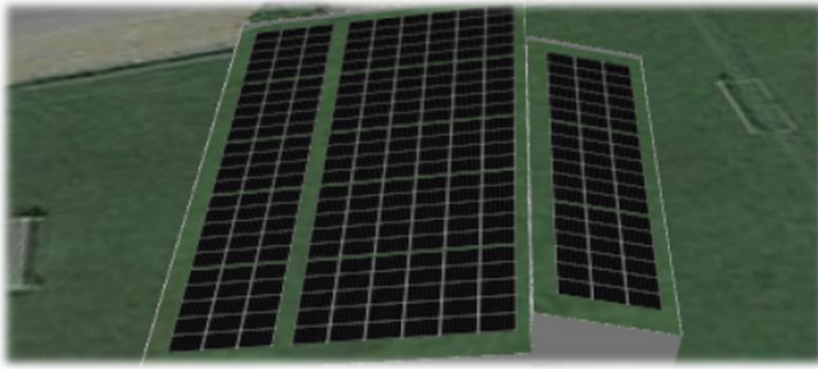
- „HyAllgäu“
Hydrogen project



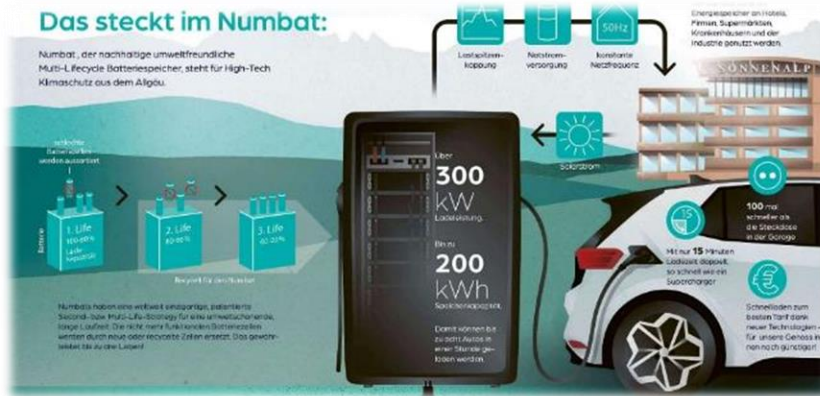
- „Second Life Batteries“
Storage concept with disused
E-Car Batteries

Current projects and aims

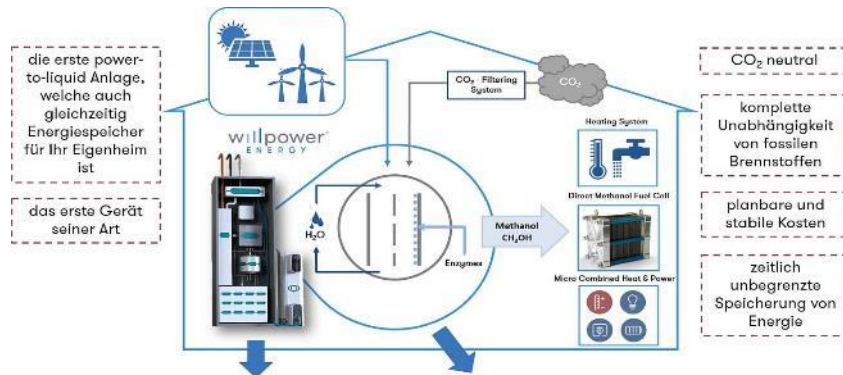




- Own power supply of the sewage pumps with a 100kW PV-system of the community center



- „Numbat“ 300kW Fast charging station with stationary electricity storage



- „Methanology“ Conversion of water and CO₂ into methanol

Curent projects and aims



educations and trainings for
communities, countries and
universities ...



Ecological education centre





- Basic Education of:
 - Electrical Engineering
 - Power Engineering
 - PV-Technology
 - Storage-Technologies



- Basics for:
 - Small „Island Solutions“
 - Small Businesses
 - „Snowball-Effect“



VET4Africa





PV1

Basics of Electrical
Engineering and
Photovoltaik



PV2

Designing, building
and operating of
battery buffered PV-
Systems



PV3

Calculation,
designing and
building of larger PV-
Systems with
battery storage on
public buildings

*Education of PV specialists in their home countries through skilled multipliers,
in company with German mentors*



VET4Africa

vocational education and training for Africa







VET4Africa certification





More than 100 international groups p.y.





Awards



european energy award **GOLD**



Awards





Thanks for your attention

The energy village of Wildpoldsried



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