



Sustainable Community – Vision or Reality?

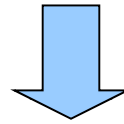
CENTER FOR ENERGY EFFICIENCY

2009

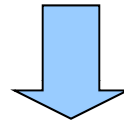
LENA BRATIC

Energy Life on Credit

irresponsible use of energy sources

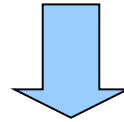


depleting the substance



**daily consumption of fosile energy sources on the planet
equals**

1347 years of sedimentation process

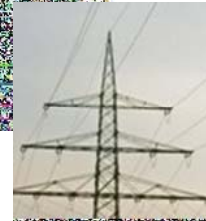
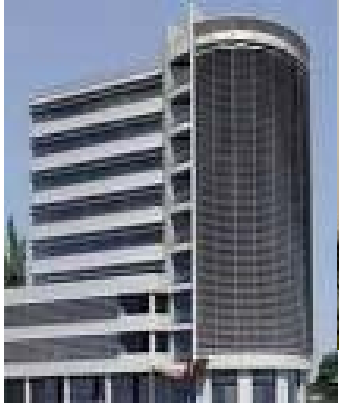


many consequences -> nature out of balance

Old Energy System

CENTRALISED

DEPENDENCY



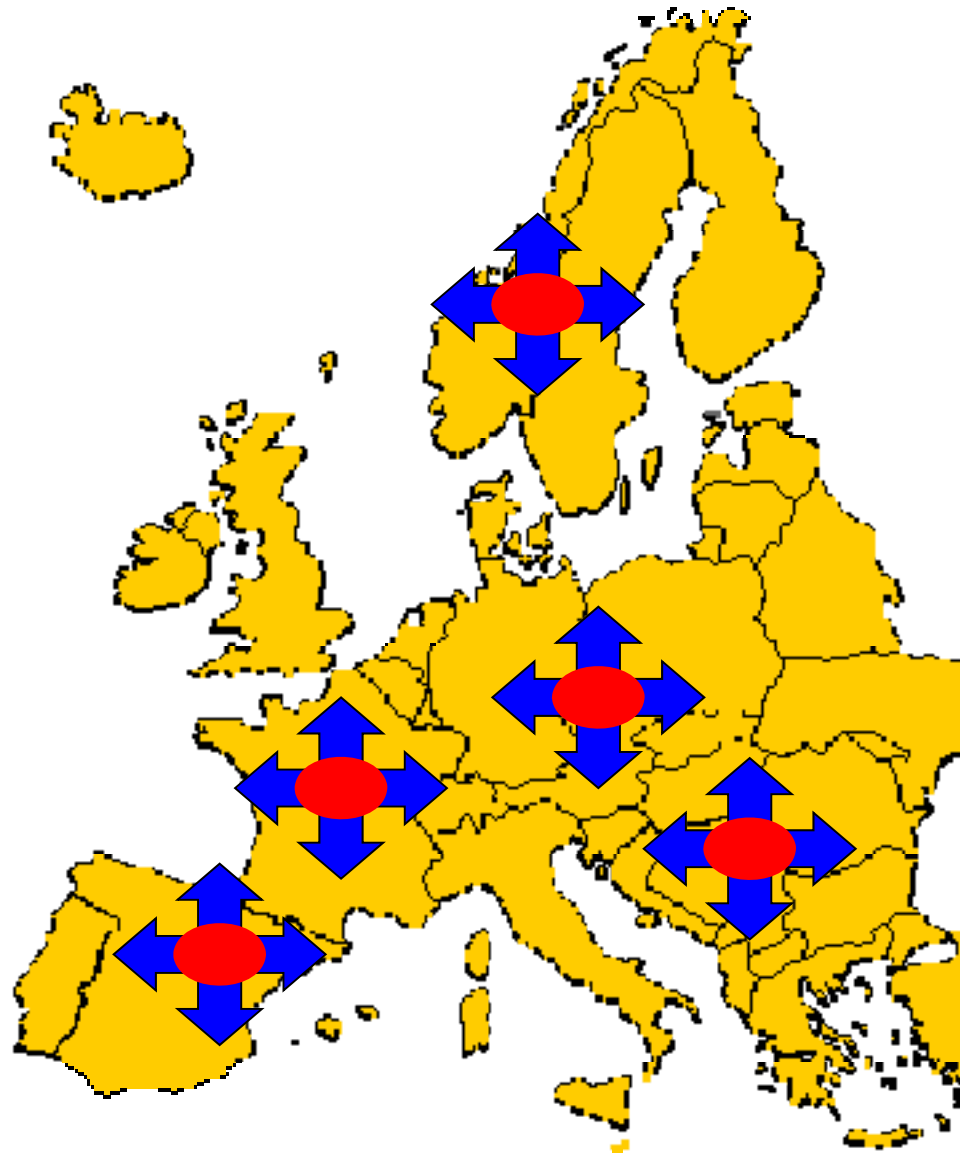
**Few Large
Powerplants**



Transmission = Energy Loss

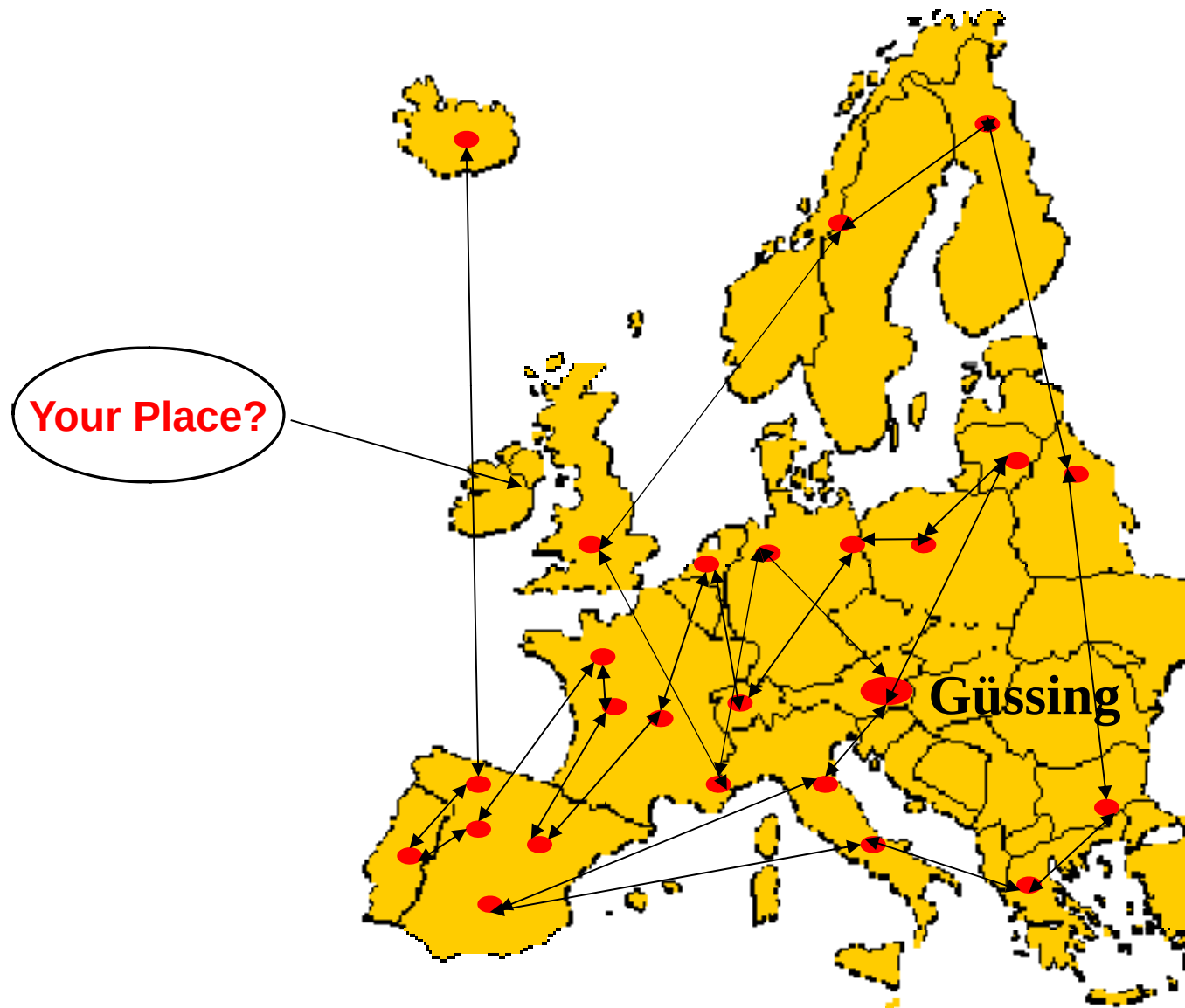
Centralised (monopolised) Energy Supply (-concepts)

DEPENDENCY!

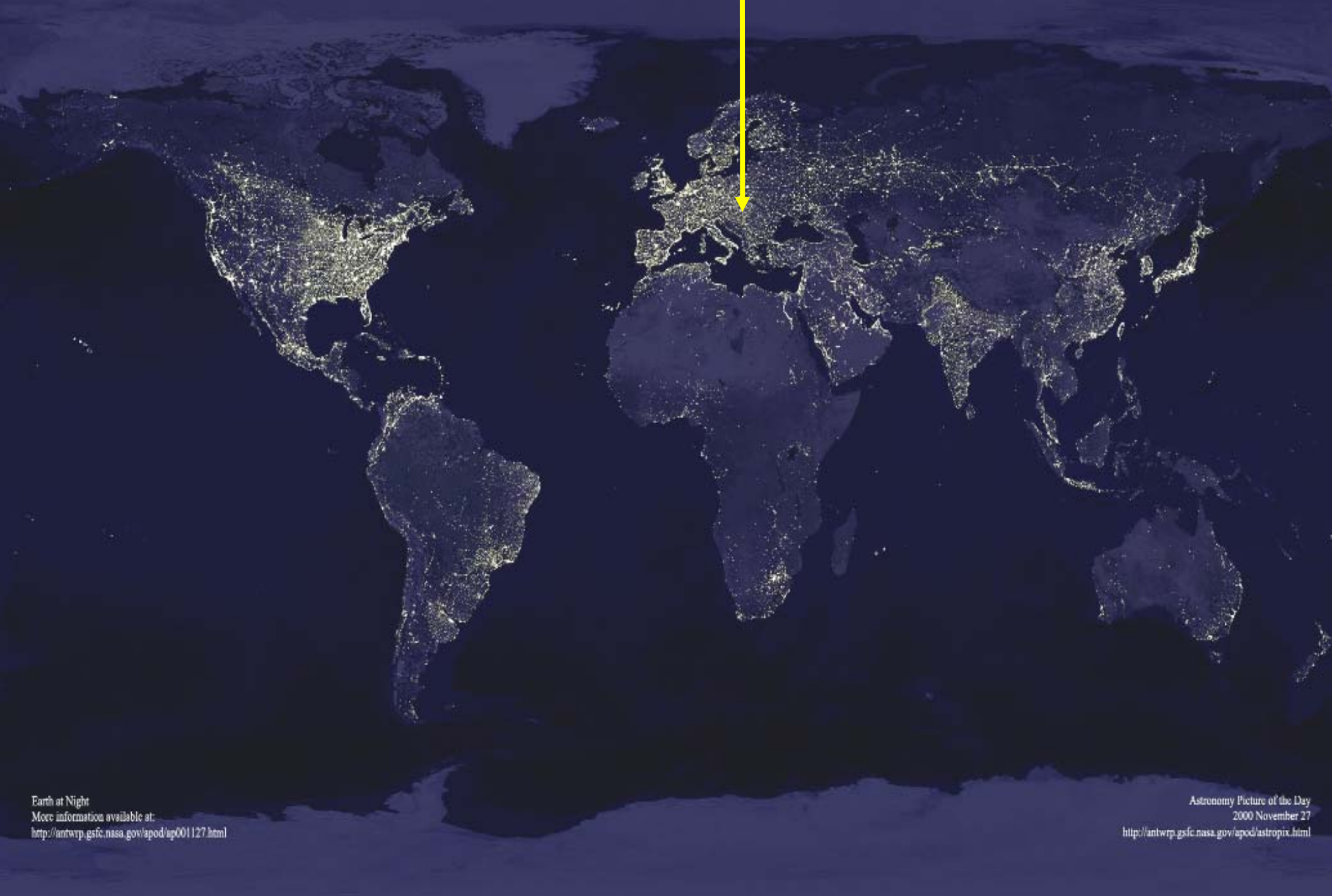


Decentralised Energy Supply

100-s of Güssings in Europe



Once upon a time, somewhere in Europe ...



... where the roads ended...



...problems, problems...

- **50 years border region to Hungary**
- **no industry**
- **high rate of unemployment**
- **70 % population commuting to Vienna...**
- **high migration rate**
- **small structured agricultural fields**
- **no traffic infrastructure**

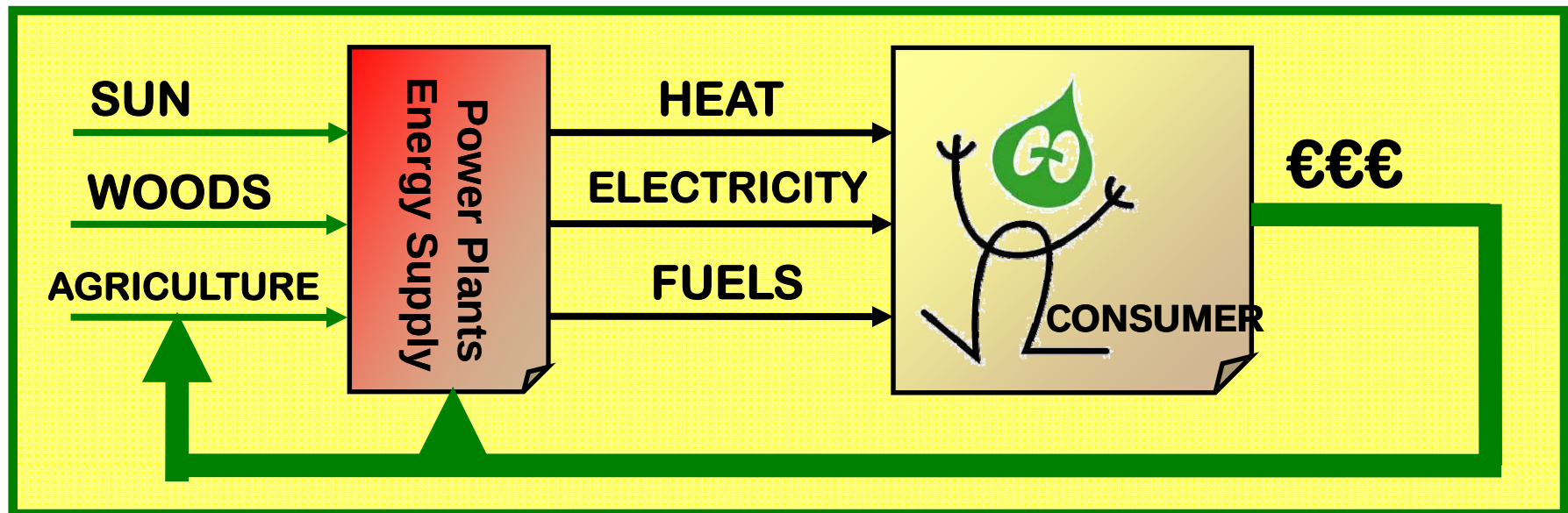
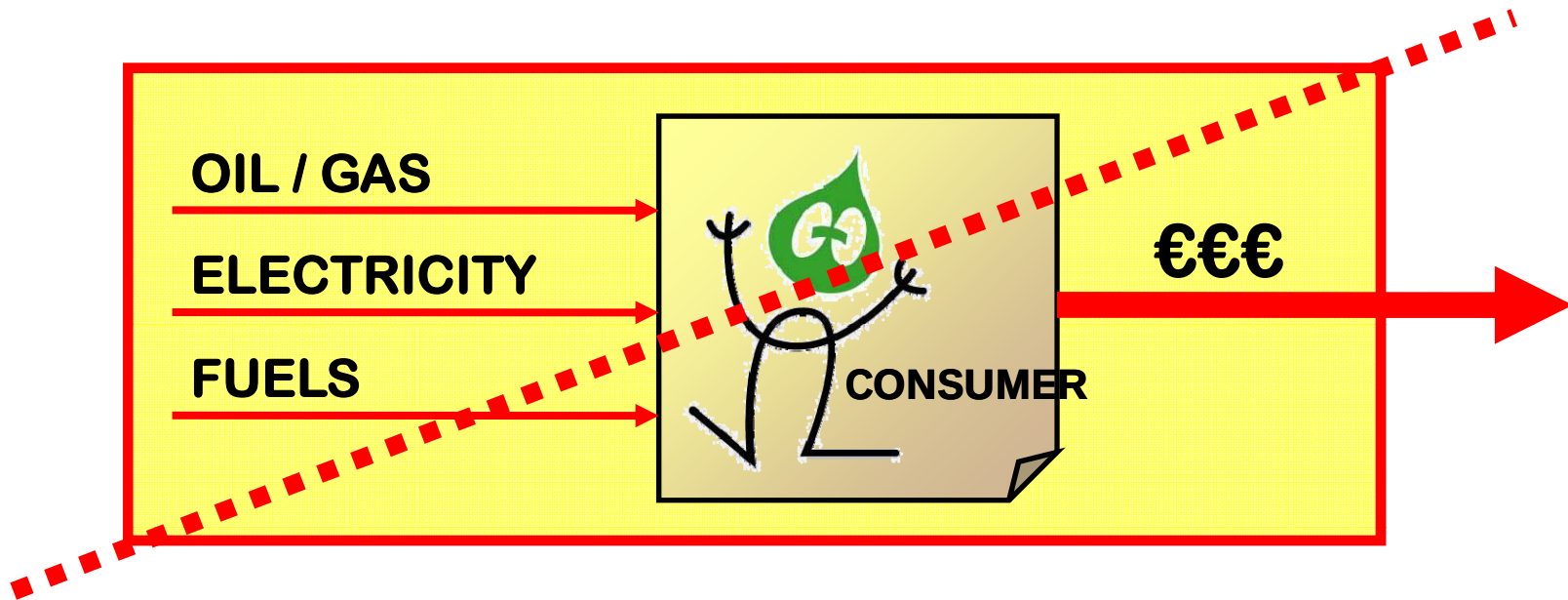
Solution

Concept for a local energy supply from renewable energy sources

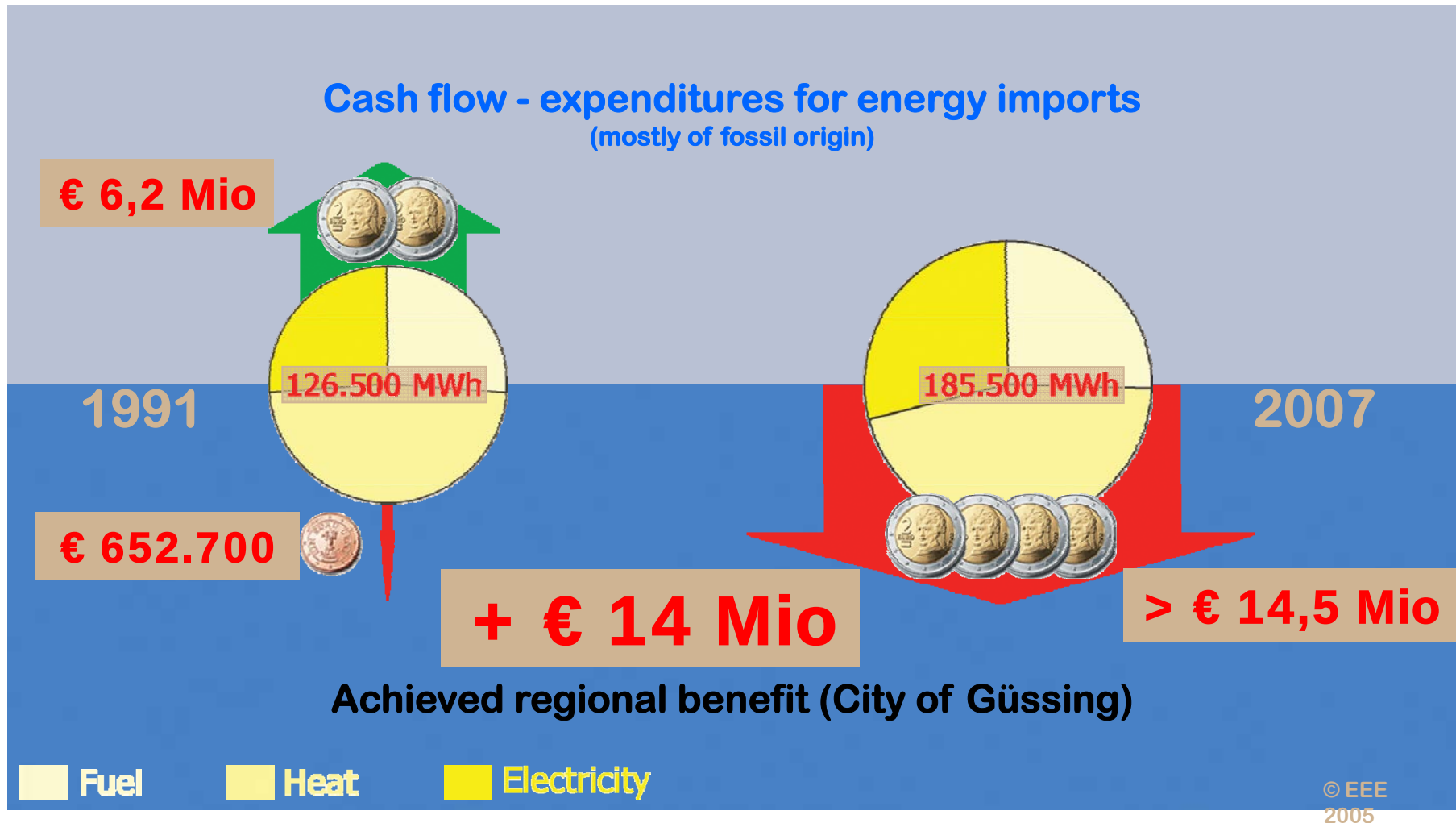
Case Study 1:

➤ The Güssing Model

The Principle

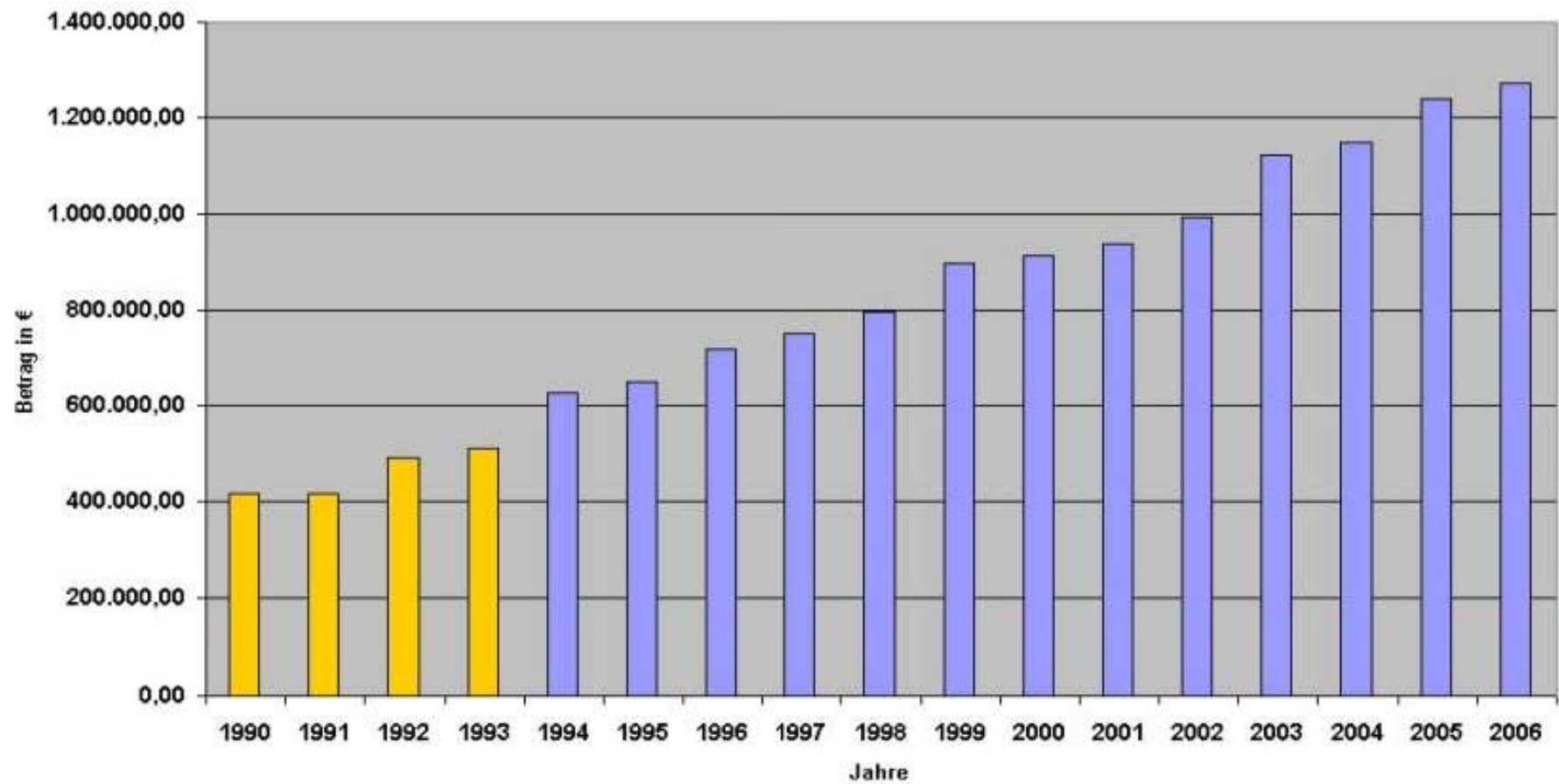


Energy Cash Flow



Municipal Tax Development

Kommunalsteuerentwicklung 1990 - 2006



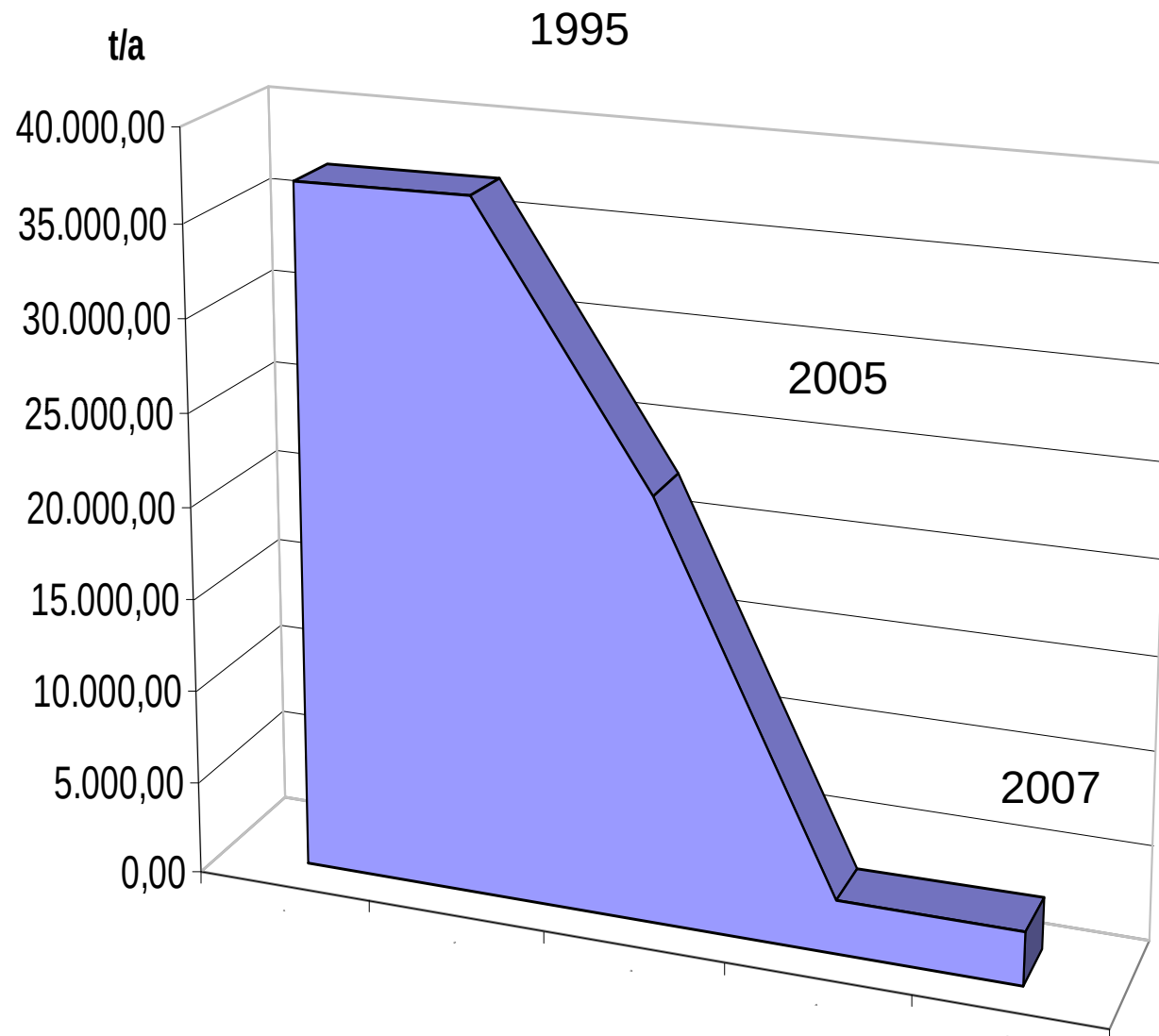
Benefits of Energy-Turnaround

Benefits of switching to regional renewable energy supply

- ✓ Values remaining within the region
- ✓ New jobs (tax income raising)
- ✓ Less traffic due to less commuters
- ✓ Independency
- ✓ Stable prices
- ✓ Secured supply
- ✓ No political tensions
- ✓ CO₂ reduction

Reduction of CO₂ Emissions – 93 %

CO₂-Emissionen der Stadt Güssing 1995 bis 2007



Values achieved within the past 10 years

Güssing City:

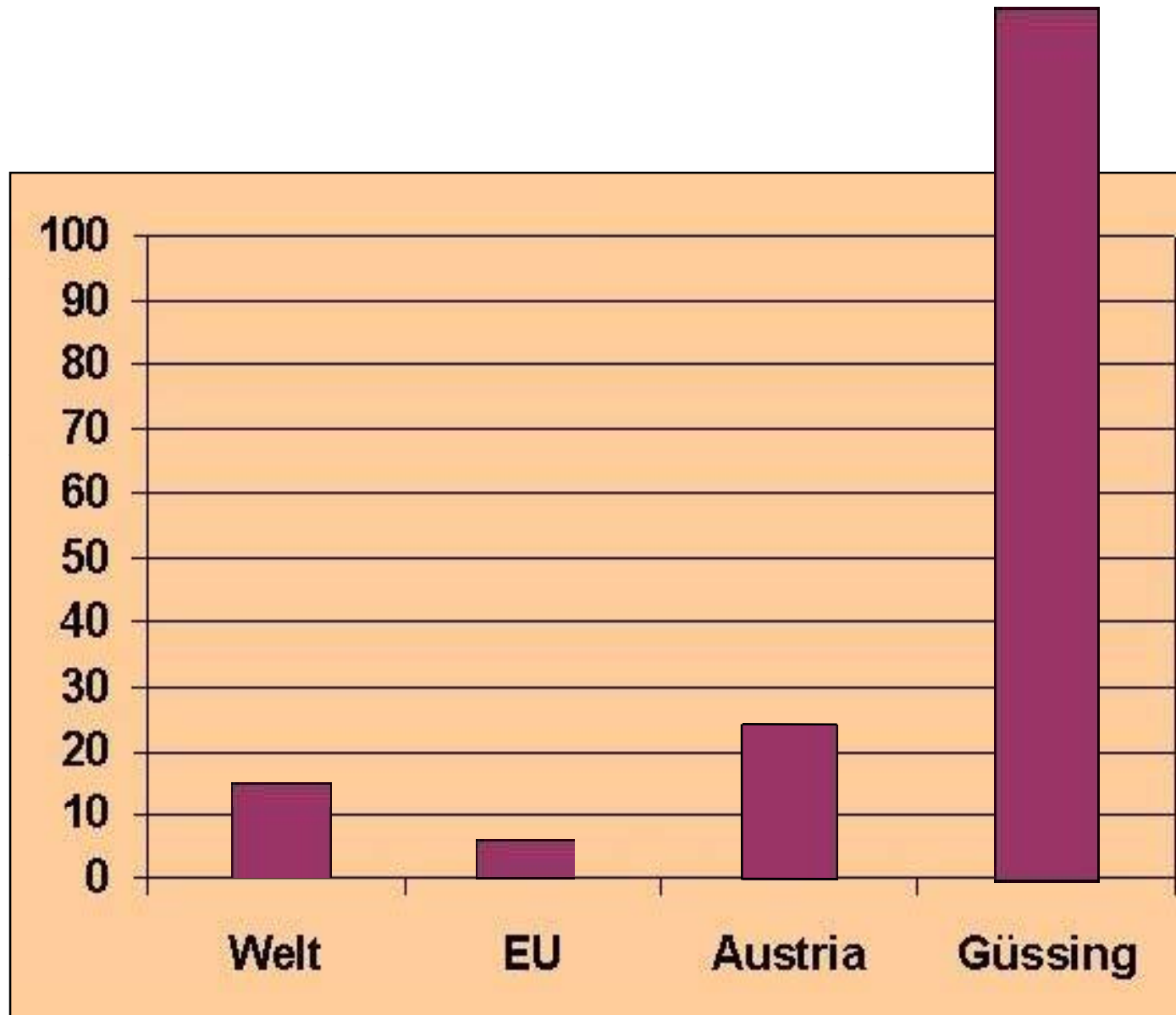
➡ 50 new companies

- over 1.100 new jobs
- net income of 9 Mio. EUR/year
- energy sales volume > 14 Mio. EUR/year
- wood consumption some 22.000 t/year

Güssing County:

- Due to ~60 % self-sufficiency in total energy supply, the region profits **> EUR 19 Mio p.a.**
- Potential when 100 % self-sufficiency goal achieved: -> **EUR 37 Millionen p.a.**

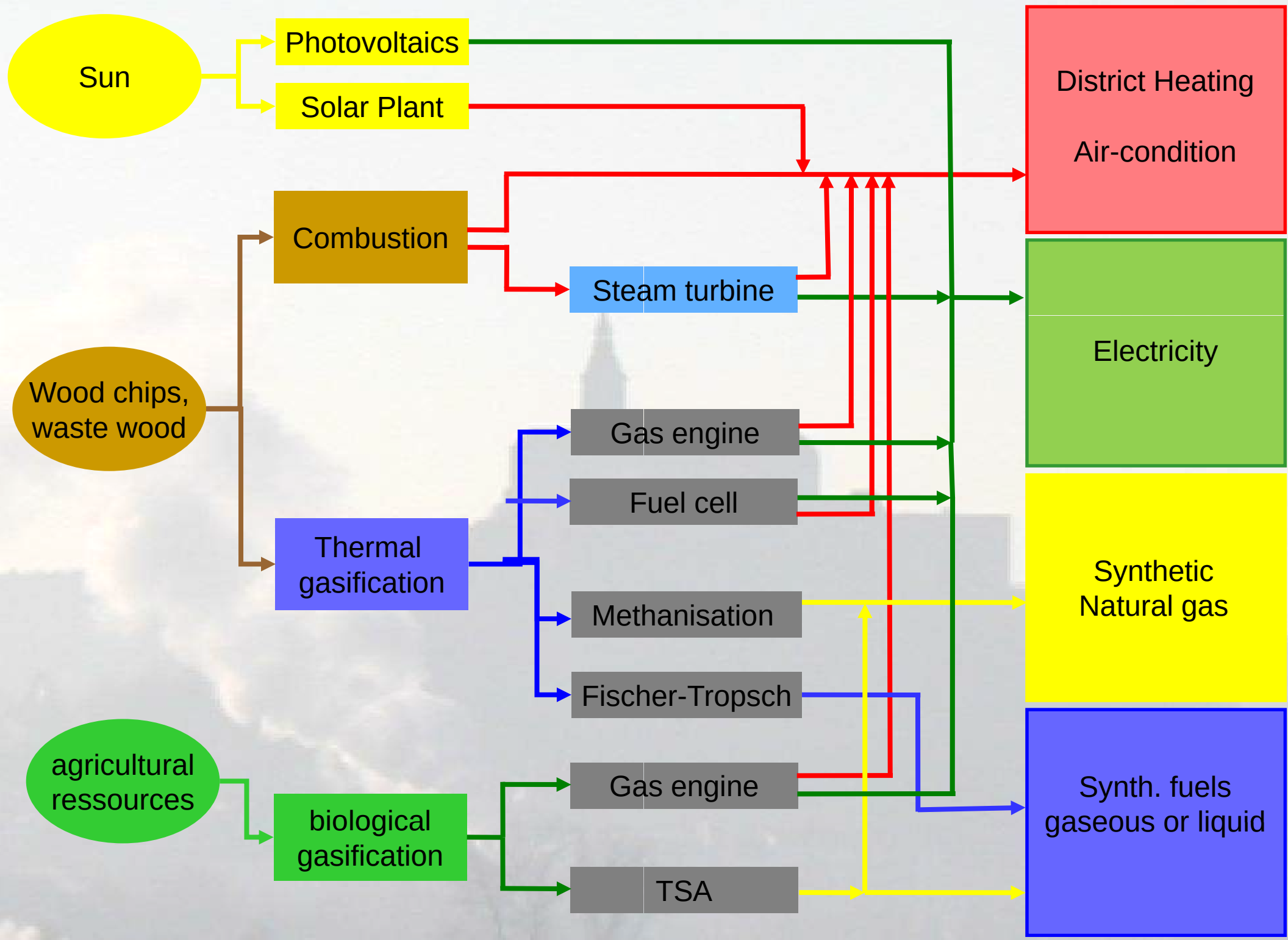
Renewable Energy Ratio Compared (%)



Ressources

Conversion technologies

Forms of energy



[illegible]

Biomass Power Plant



District Heating Plant Güssing



Urbersdorf Combined Plant



Biogas Power Plant



Power Plant „I“ Güssing



Parador Parkett



Weitzer Parkett



Research Institute

TECHNIKUM



bioenergy 2020+

Erforschung der energetischen Nutzung von Biomasse
Herstellung von Strom, Wärme, Treibstoffen und Chemikalien

DIESES PROJEKT WIRD VON DER EUROPÄISCHEN UNION, VON BUND UND LAND BURGENLAND KOFINANZIERT

Bauherr



**TECHNOLOGIEZENTRUM
GÜSSING**

Markstraße 3
7500 Güssing

Bauleiterverteilung / Projektmanagement



FMB Güssing

Markstraße 2
7500 Güssing
Tel: +43 3012 801 100
Email: office@fmbgussing.at
www.fmbgussing.at

Planung / Bauaufsicht



**ARCHITECT
HERBERT SCHMÖLZER**

Herbert Schmolzer Bau- und Raumplanungsgesellschaft mbH

ZV

7540 Güssing · Hauptplatz 1 · +43 (0)3022 43000 · www.schmolzer.at · office@schmolzer.at

Tragwerksplanung



**WOSCHITZ
ENGINEERING**

Woschitz Engineering GmbH

www.fwe-zt.at

Gebäudetechnik



IKG GmbH Ingenieurbüro für
Bautechnik, Sanitär- und
Gebäudetechnik

Europawerk 1
7540 Güssing
Tel: +43 3012 801 5
ikg.gmbh@icg.at

reNet

Renet Kompetenzcenter Güssing
Forschungsinstitut für erneuerbare
Energie (Güssing)

Baustellenkoordination



BÜRO REISS

Vertreter von bioenergy 2020+



**Technische Universität
Wien**

VIENNA
UNIVERSITY OF
TECHNOLOGY



Institut für Verfahrenstechnik,
Umwelttechnik und
Technische Biowissenschaften

Methanisation





The "Öko-Energieland"

Eco- Tourism

Overnight stays:

	Güssing City	Güssing Region
1995	1.700	27.000
2005	22.047	
2006	24.164	
2007	27.658	> 200.000

Source: EEE Güssing GmbH; municipal office Güssing: Feb. 2008



Güssing Highlight

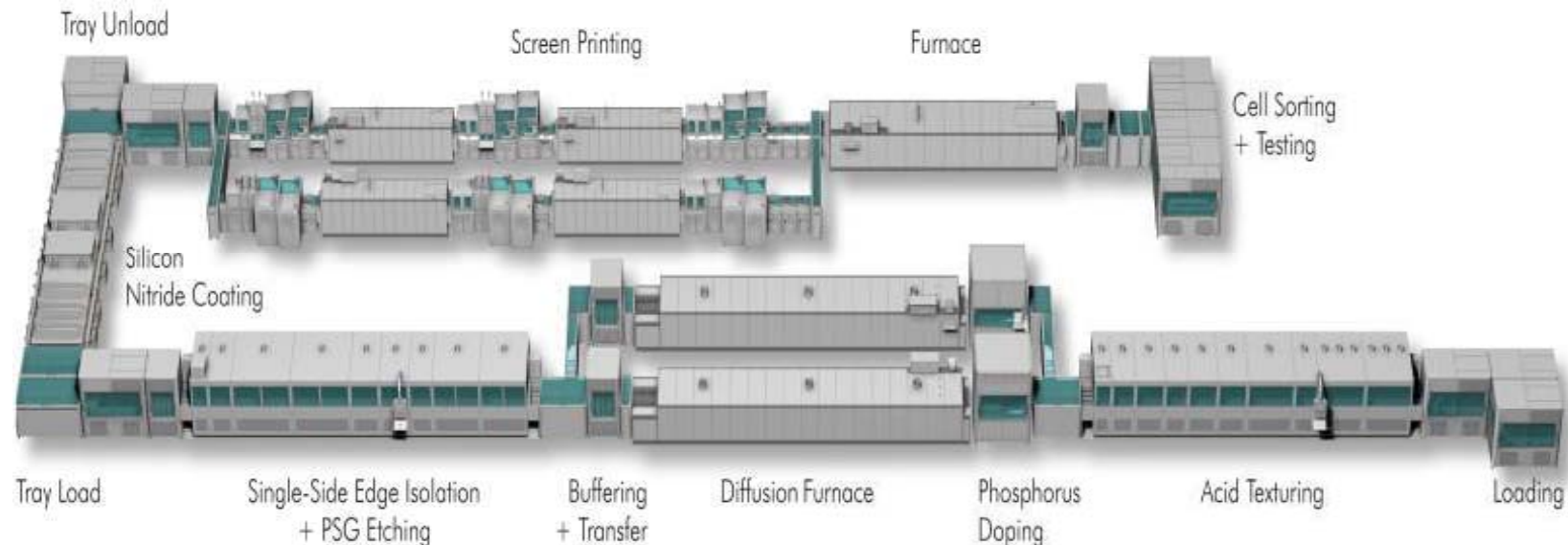
**1st hi-tech production
Worldwide
of renewable energy
hardware equipment
powered entirely
with renewable energy
from within the region...**

BLUE CHIP ENERGY GmbH

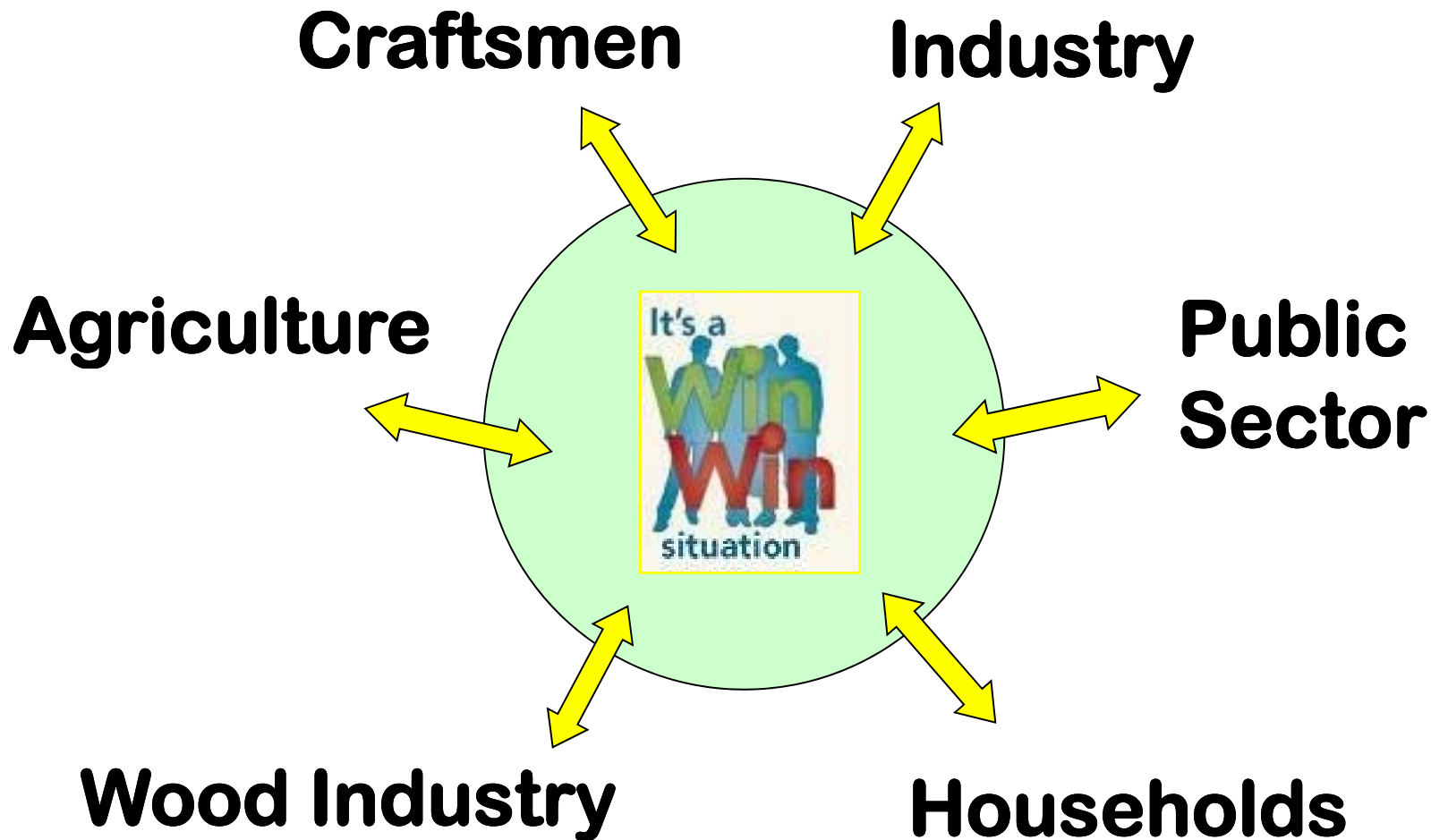
1st Austrian High-Efficiency Solar Cells Production



- Production started Q4/2008
- Full Capacity as of Q4/2009
- 100 MW/year (~ 20 Mio. Cells)
≙ electricity consumption of 20.000 households
- 140 highly trained employees
- Investment: > € 65 Mio.



Regional sustainable energy supply win – win for all



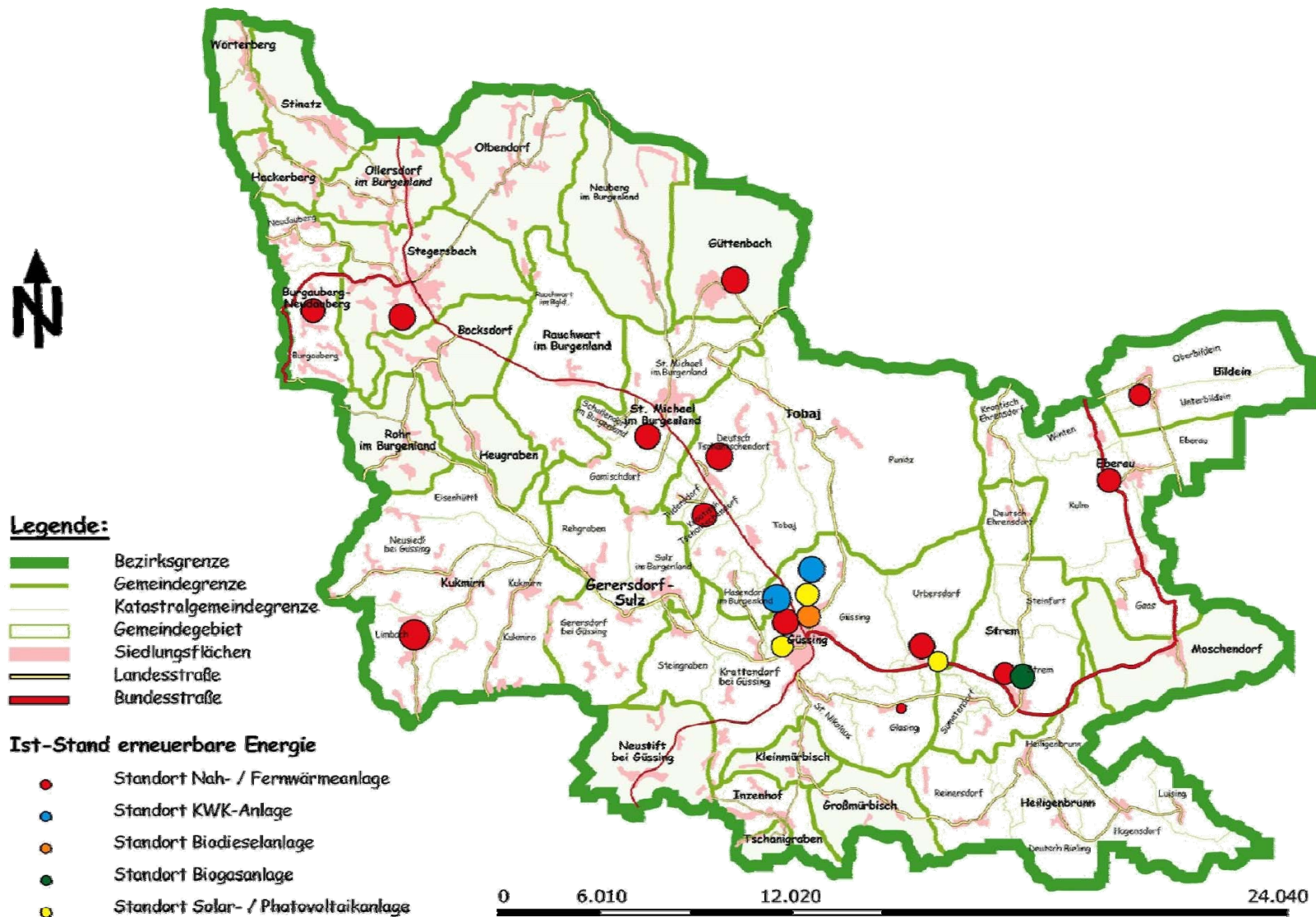
Self Sustainable Local Energy Supply

Conceptual Points

- small decentralized power plants**
- optimum size**
- flexible units**
- intelligent networks**
- simple logistic**
- low overall losses**
- easily expandable**

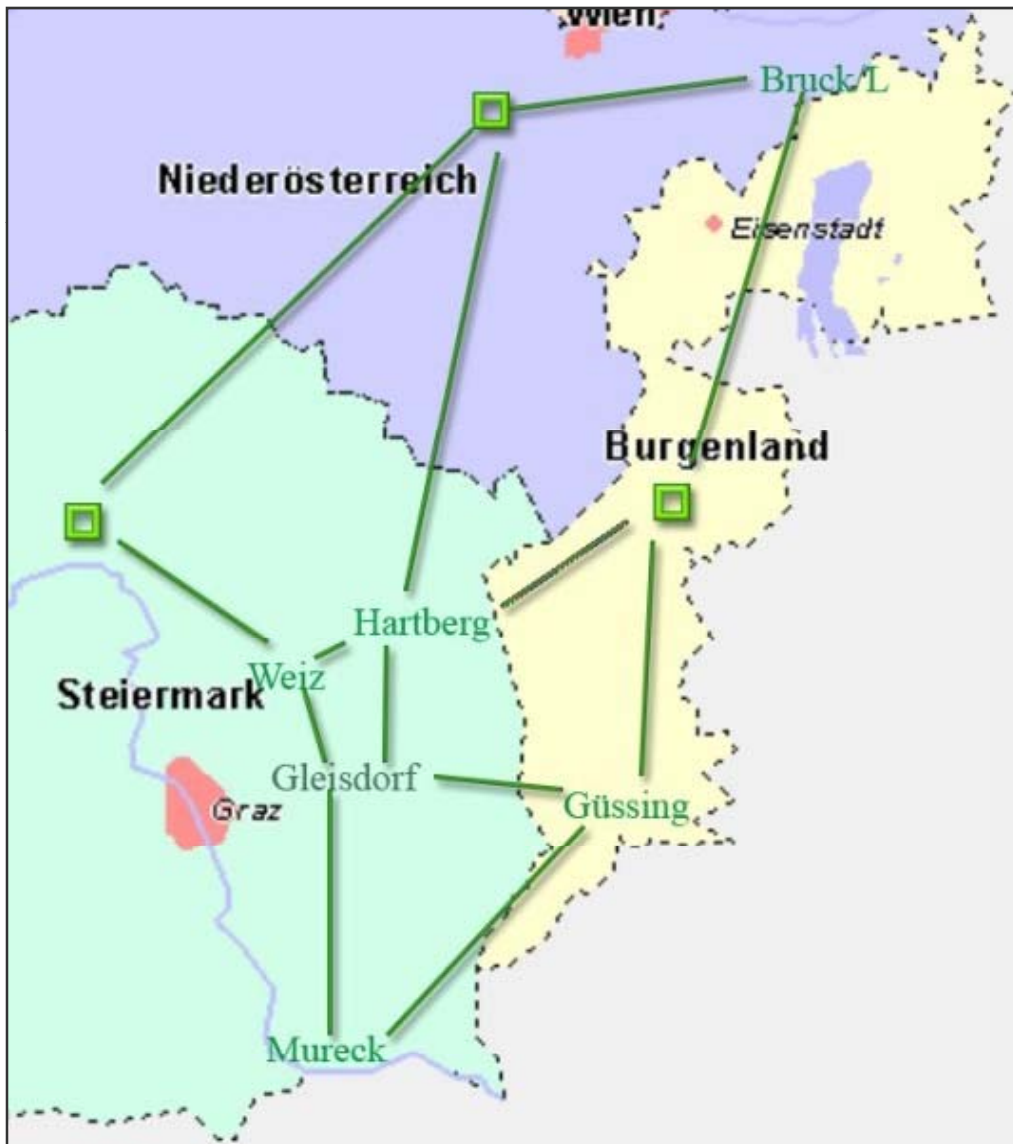
Energy Independent County

Distribution of Power Plants



Energy Partnerships

Networking of Communities



**Renewable Energy
Development Plan
means
Integral Concept !**

**Time is running out,
therefore,
we have to act fast!**

What can WE do for YOU?

(our 15+ years of field experience)

- **Sustainable Region Energy Concepts**
- **Sustainable Industry Cluster Concepts**
- **Sustainable Energy Schooling Concepts**
- **Feasibility Studies (Power Plants, Financing, ...)**
- **PV Power Plants Planning & Investments**
- **Technology R & D**
- **Neutral Moderation and Support – Workshops, etc.**

The Message

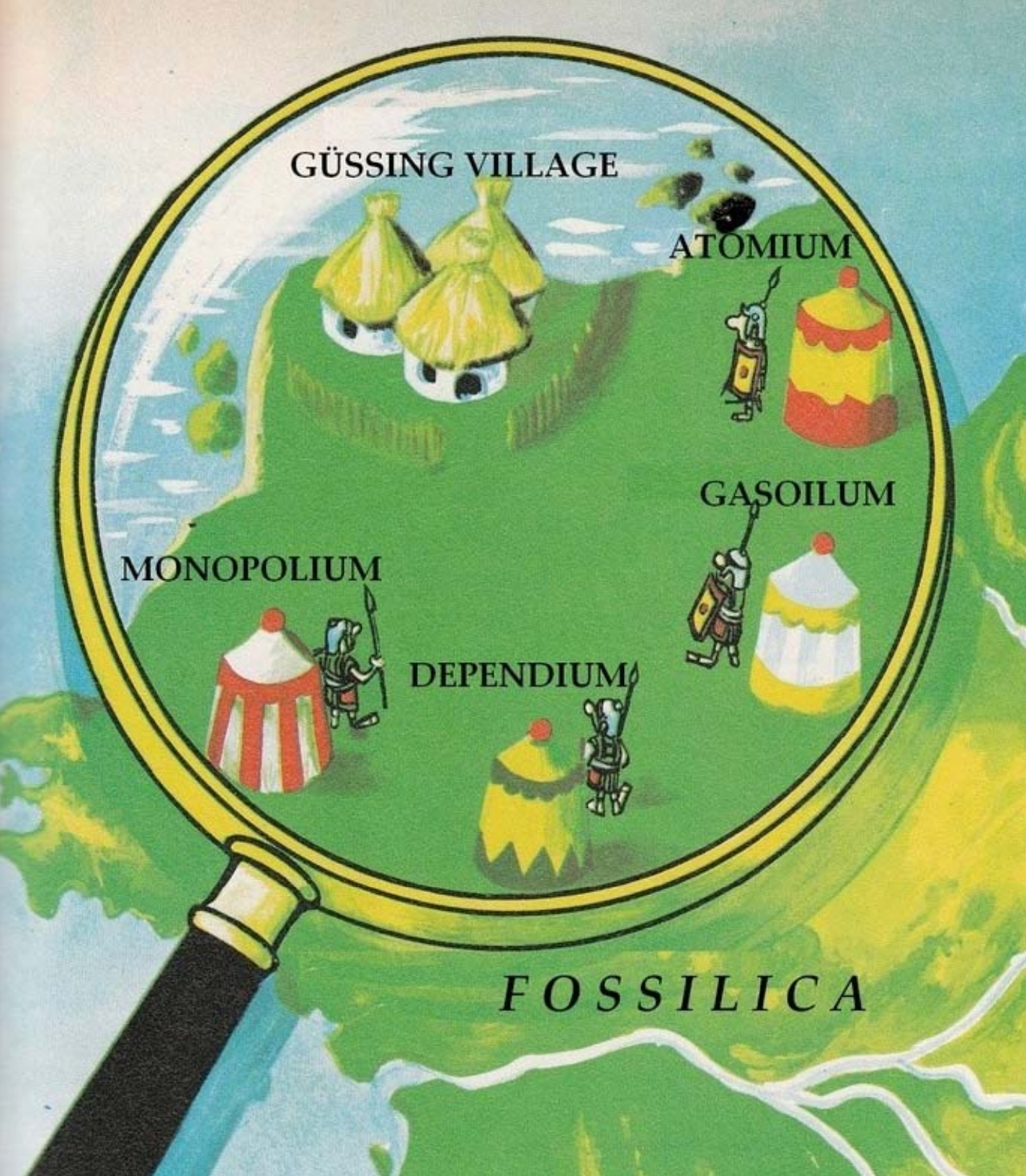
- 1) Most important, we have to save, save and again
- save energy
- 2) Remaining real energy demand is to be covered
from renewable sustainable local resources

Whoever still can not understand that the above is
the only possible way to go - well - then there's
no help.

Güssing Renewable Energy Village

This was the story
of a small,
unfaltering
renewable energy
village, surrounded
by legions of fossil
energy sources
trying to take over
the little village.

But
the village has a
magic potion
- ENERGYMIX -
made of renewable
energy sources!



LENA BRATIC
PRESIDENT
CENTER FOR ENERGY EFFICIENCY

BJELASNICKA 15
PAZARIC
BOSNIA AND HERZEGOVINA

T: +387 61 377 691
E: LENA@RERTC.NET
W: WWW.RERTC.NET