

V4 Cluster Policies and Their Influence on the Viability of Cluster Organisations

V4ClusterPol – III. Academic Workshop

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ArchEnerg Cluster, 2007-2016



Short Introduction of ArchEnerg Cluster



Dénes Bulkai
President



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Executive Director



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Focus Areas

Energy



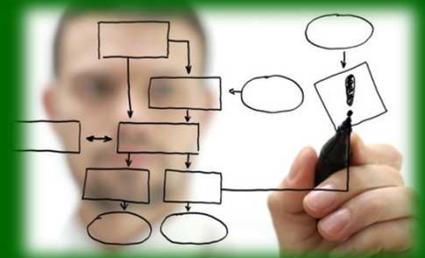
Environmental Protection



Building Industry



Organizational and business process development and innovation



Project management, research, training



Energy

- Energy rationalization, consulting
- Biomass, biogas
- Increasing energy efficiency (heat pump systems, boiler development, pellet manufacturing)
- Smart City, smart house, passive house



Environmental Protection

- Household waste management
- Hazardous waste treatment and processing
- Water management, water treatment
- Treatment of special waste (waste dumps, military waste, etc.)



Building Industry

- Traditional construction investments
- Bio-construction solutions, investments
- Electrical and other interior assembly
- Home automation (domotics), integrated control systems



Organizational and business process development and innovation

- Productivity and process efficiency based consulting
- Co-operation and organizational innovations, consulting
- Cluster management development and innovation
- Technological, business and social innovation solutions, methodologies

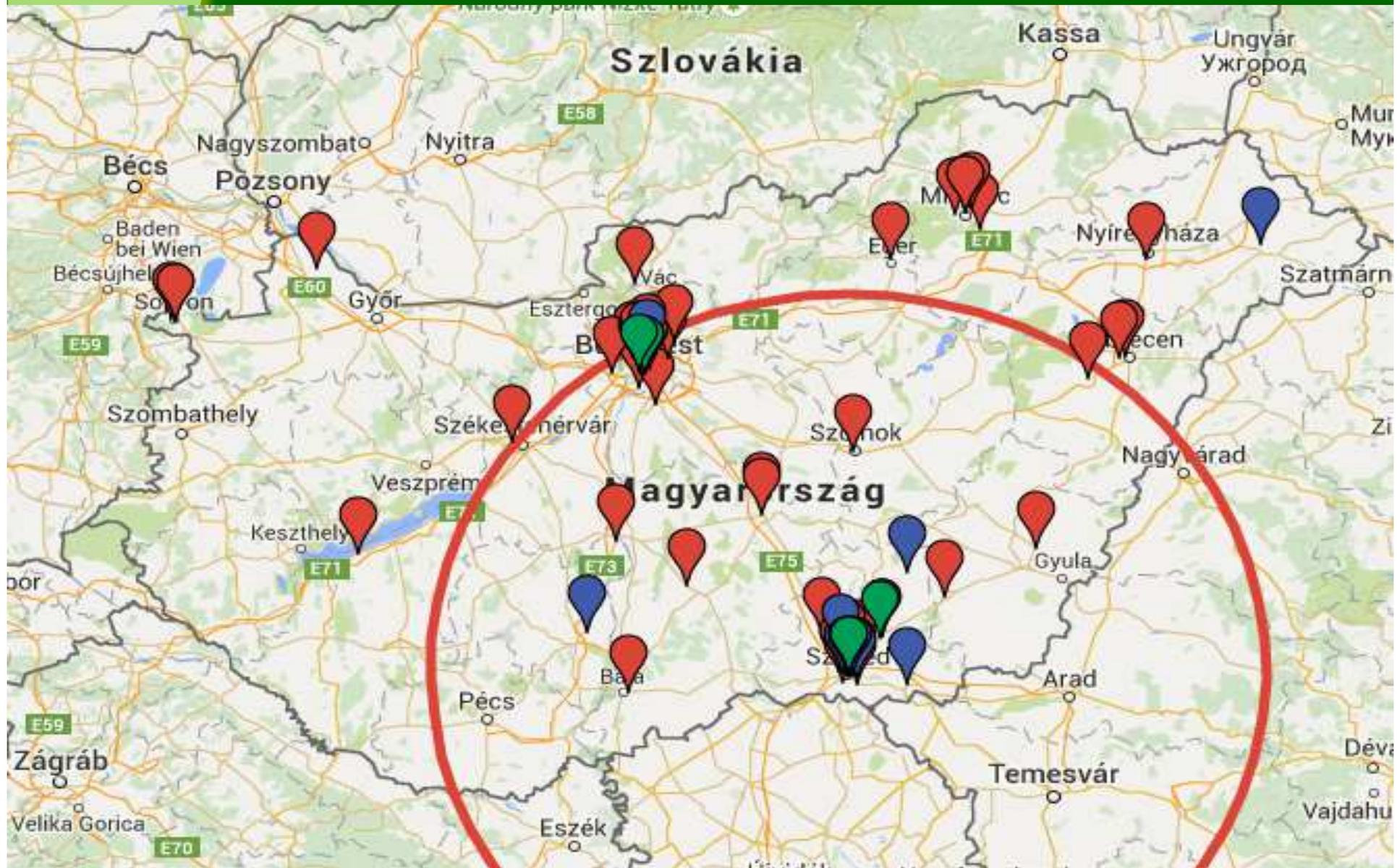


Project management, research, training

- Project generation, group creativity techniques (collective idea generation) and their documentation
- Project planning, feasibility studies, project management, project control
- Integrative innovation projects
- SMART research, development and innovation (RDI) projects



Geological concentration of our cluster members



Strategy workshop series



Motto:

„Not all profit is equal. Profits involving a social purpose represent a higher form of capitalism, one that creates a positive cycle of company and community prosperity.”

Michael Porter
a Harvard Business Review
january-february edition, 2011





ArchEnergy Cluster's Service Model

Environmental, Energy and Economic Development's Innovation Pole

Social Innovation

•COM-NANOS

•Europe PEGS-PROS

Business Innovation

Technological Innovation

Strategically focused projects

- Documented project ideas
- Project planning
- Project management
- Project control

Brainstorming, synergistic cooperation

High- value- added project initiatives

SMEs

Large companies

Scientific research and innovation agencies

Universities

Municipalities and public service institutions

Non-profit, and social organizations

We went for European Cluster Excellence Gold Label!

1. Challenging Goals
2. Top Standards of Europe
3. Best Clusters in Europe
4. Top Class in the World



Quality for the Future Cooperation

Cluster Organisation Management Excellence Assessment

ArchEnerg Cluster

Date of assessment: September 1st-3rd, 2015



The Europe's one of the most innovative heating-cooling heat pump system with special control capability by software of Hungarian engineers



Features, advantages:

- Can be use renewable and traditional energy inputs
- Energetically and informatically networked and controlled by special, innovative Hungarian solutions and software
- Energy and other parameters are measured, collected, analized and prepared for energy-management decisions





Some figures:

- With 1 kW electrical energy produces 6.25 kW heating and cooling energy (measured at operating references)
- With 3 visitable references in Budapest, Szeged, Hungary (twelve-year data-bank)
- Depending on current energy prices, 3-6 years of return on investment



The Revolutionary Plasma Enhanced Gasification Technology for Handling Hazardous Waste with Low Emission



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President



András Gonda
Executive Director



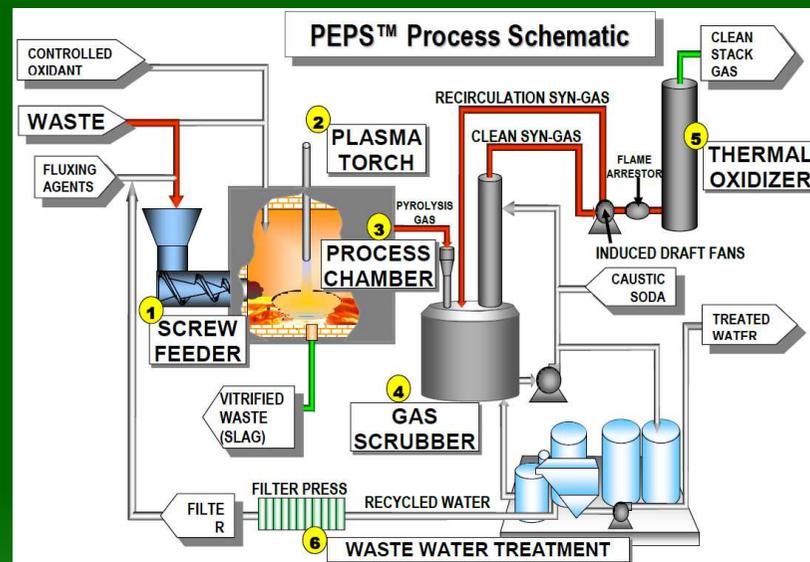
György Szügyi
Vice President



István Németh
President



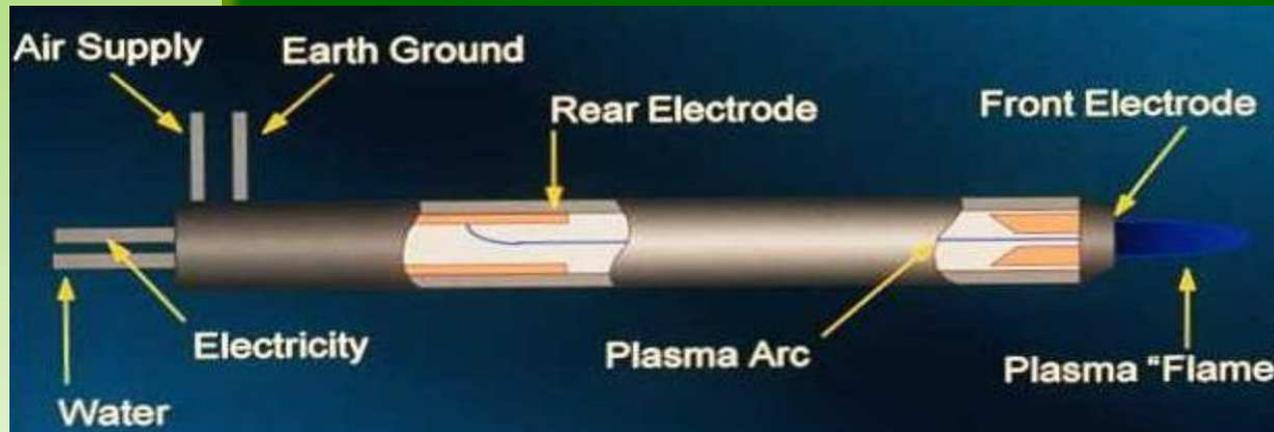
The Revolutionary Plasma Enhanced Gasification Technology PEGS/PEPS for Handling Hazardous Waste to reduce Emission Parameters far below the EPA Standards



Cluster-Consortium, 2015-2016



American Advanced Technology Center Successfully



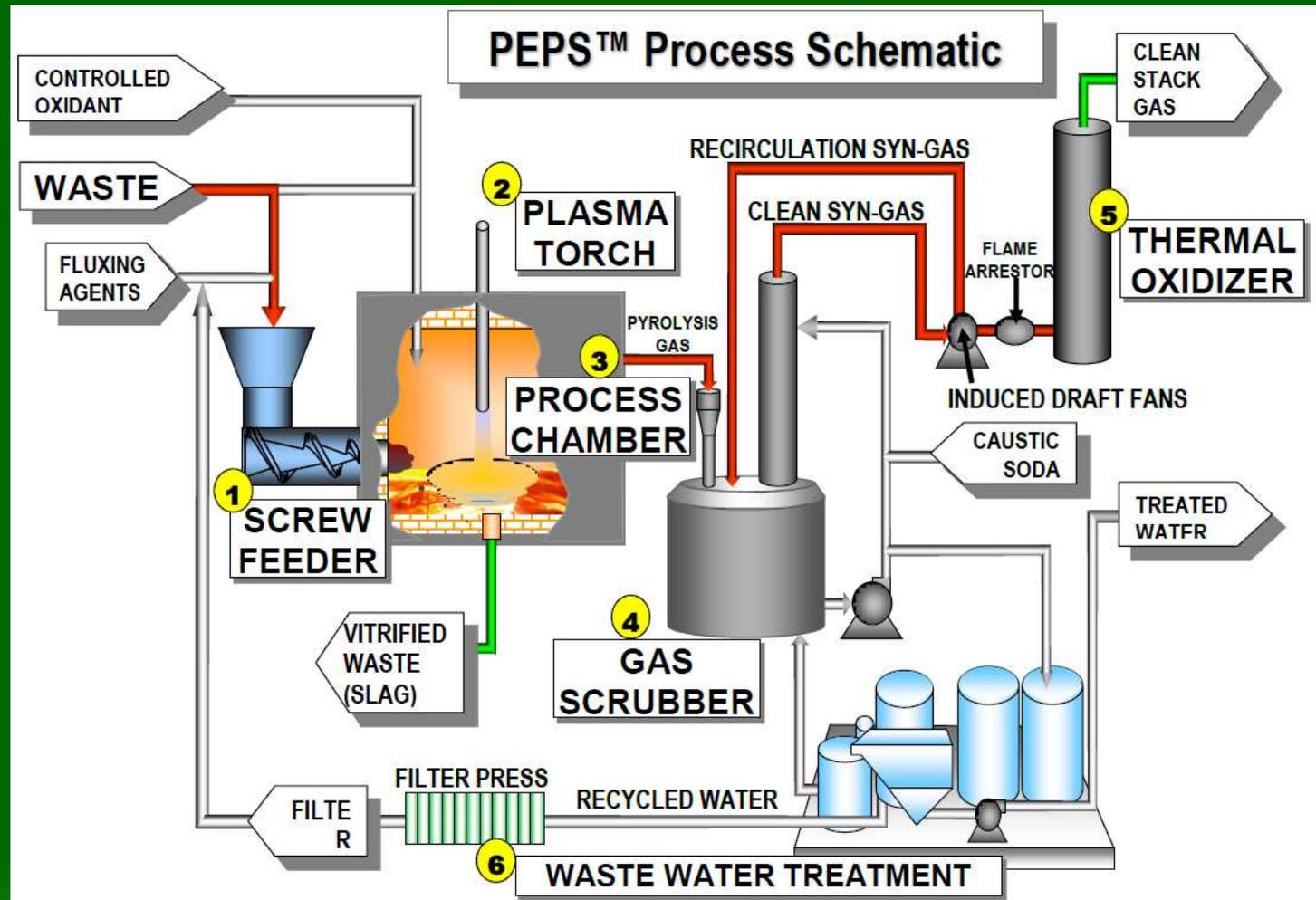
- Designed
- Built
- Tested
- Implemented



PEPS™ – Plasma Energy Pyrolysis System

PEGS™ – Plasma Enhanced Gasification System

American Advanced Technology Center PEPS System



Combination of these systems can destroy

- Toxic, hazardous waste (chemicals, explosives, heavy metal contaminated byproducts)
- Sewage sludge, biomass, household wastes, coal, petrol



Meeting the requirements for environmental safe operations



Lorton, Virginia (US)

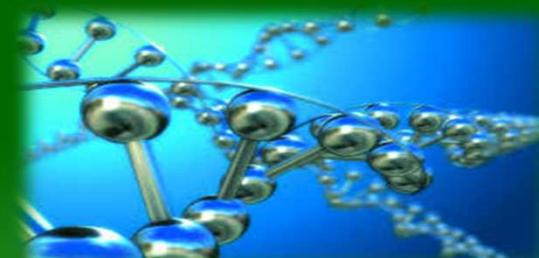


ArchEnergy
KLASZTER



Our current international projects

- **Smart Hemp House** - Renewable energy interactive information center
- **EUROPE PEGS-PROS** – the establishment of dangerous and household waste recovery systems via energy production as well as complex business and social innovation projects
- **Energy Efficiency Crossborder Projects** introduction and orientation of latest technologies to our target audience in boarder regions.
- **SmaciVE - SmartCity Vehicles** (Jedlik Ányos Cluster)
- **PREV-HiFloo** – Flood prevention via a mobile instrumental laboratory measuring, documenting flood conditions
- **COMM-NANOS** – A complex nano-technology center project (UNIV-NANOLAB, NAPRO²-LAB, INNO-CENT)





Please, do not hesitate to contact us for our splendid common future!



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