

# **Development of landfill and coal mine methane emission reduction projects**



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Transfer of Innovative Renewable Energy Technologies:  
Experiences of German Companies with CDM / JI**

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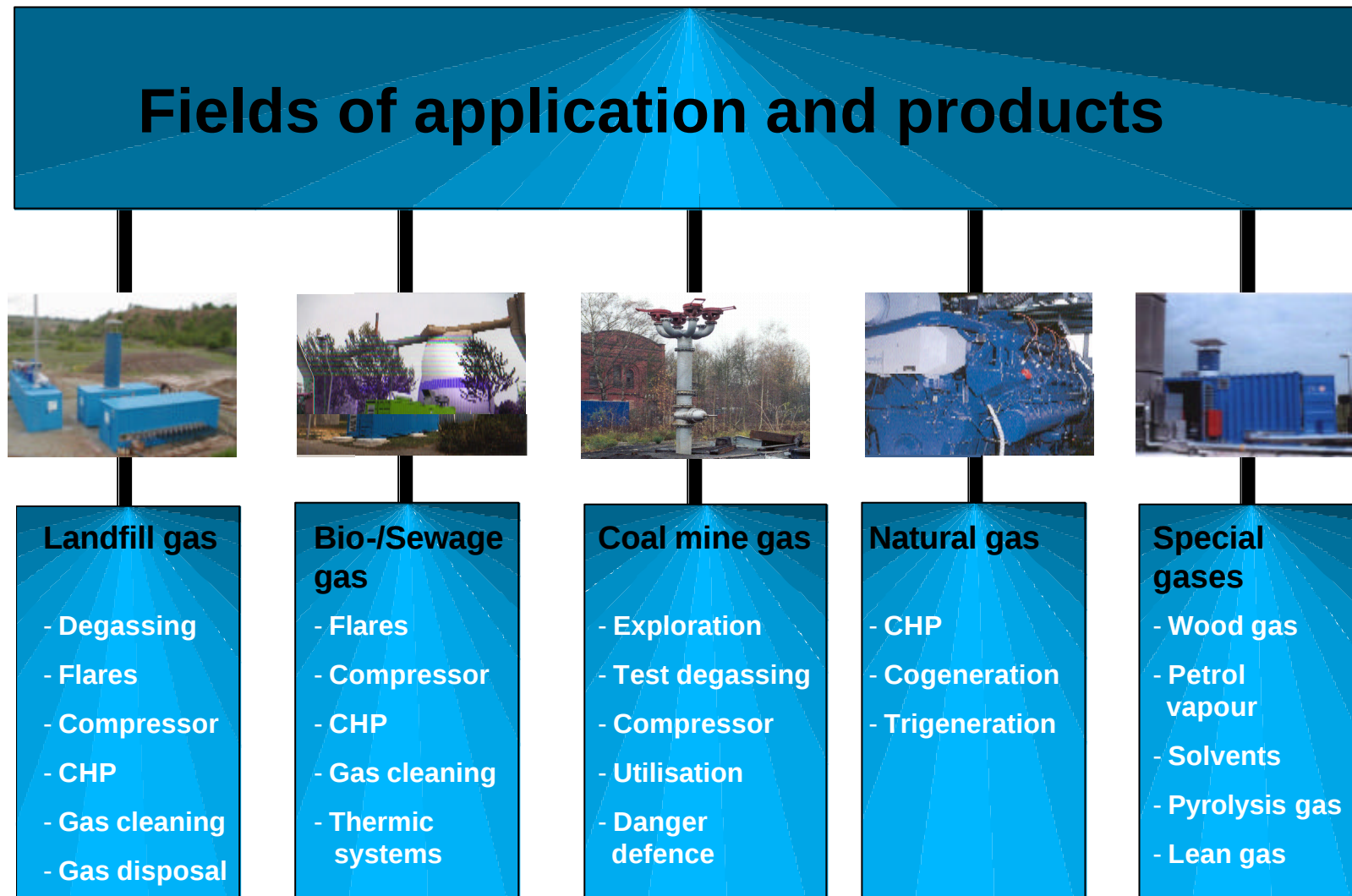
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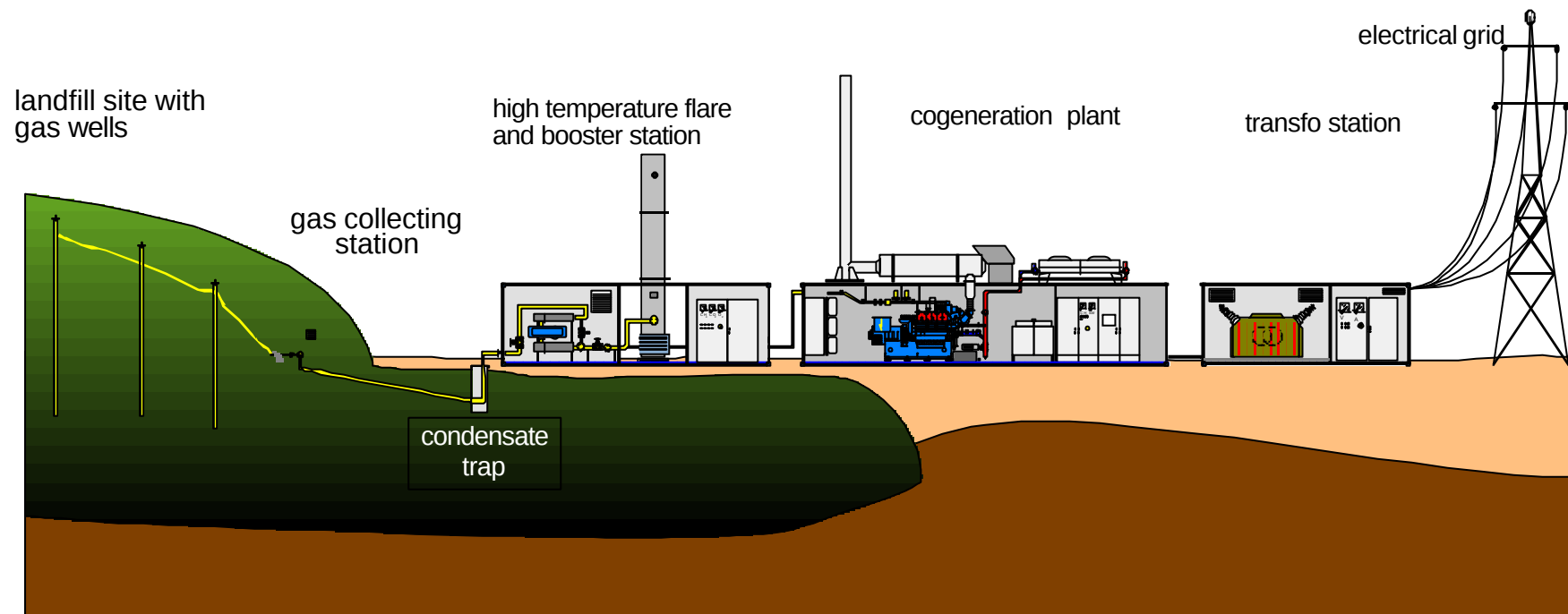
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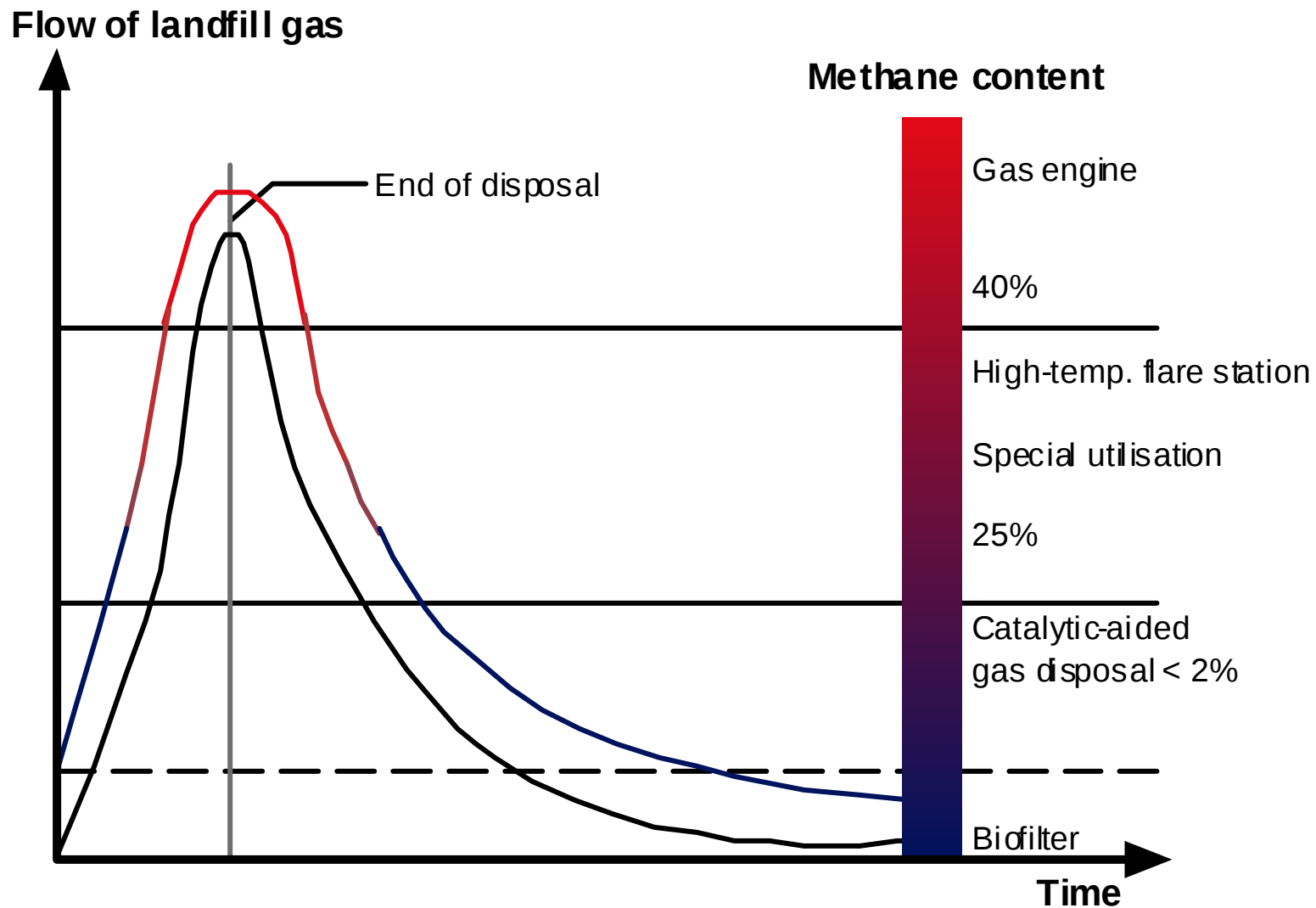
# Fields of application and products



# Landfill gas system



# Lifetime circle and advanced technologies



## Flare station

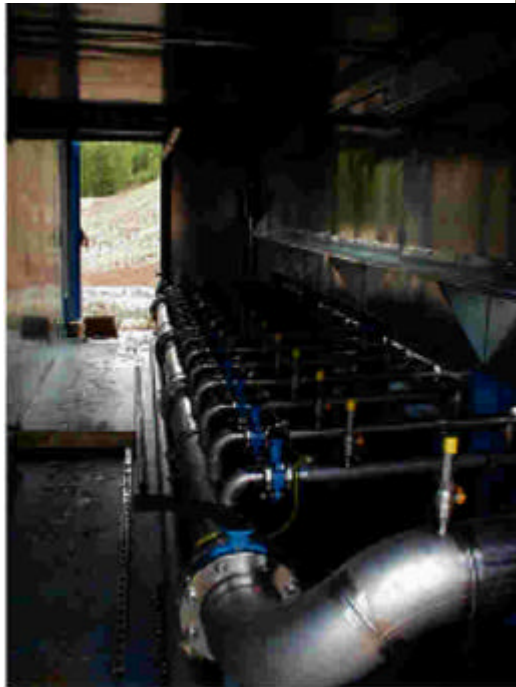
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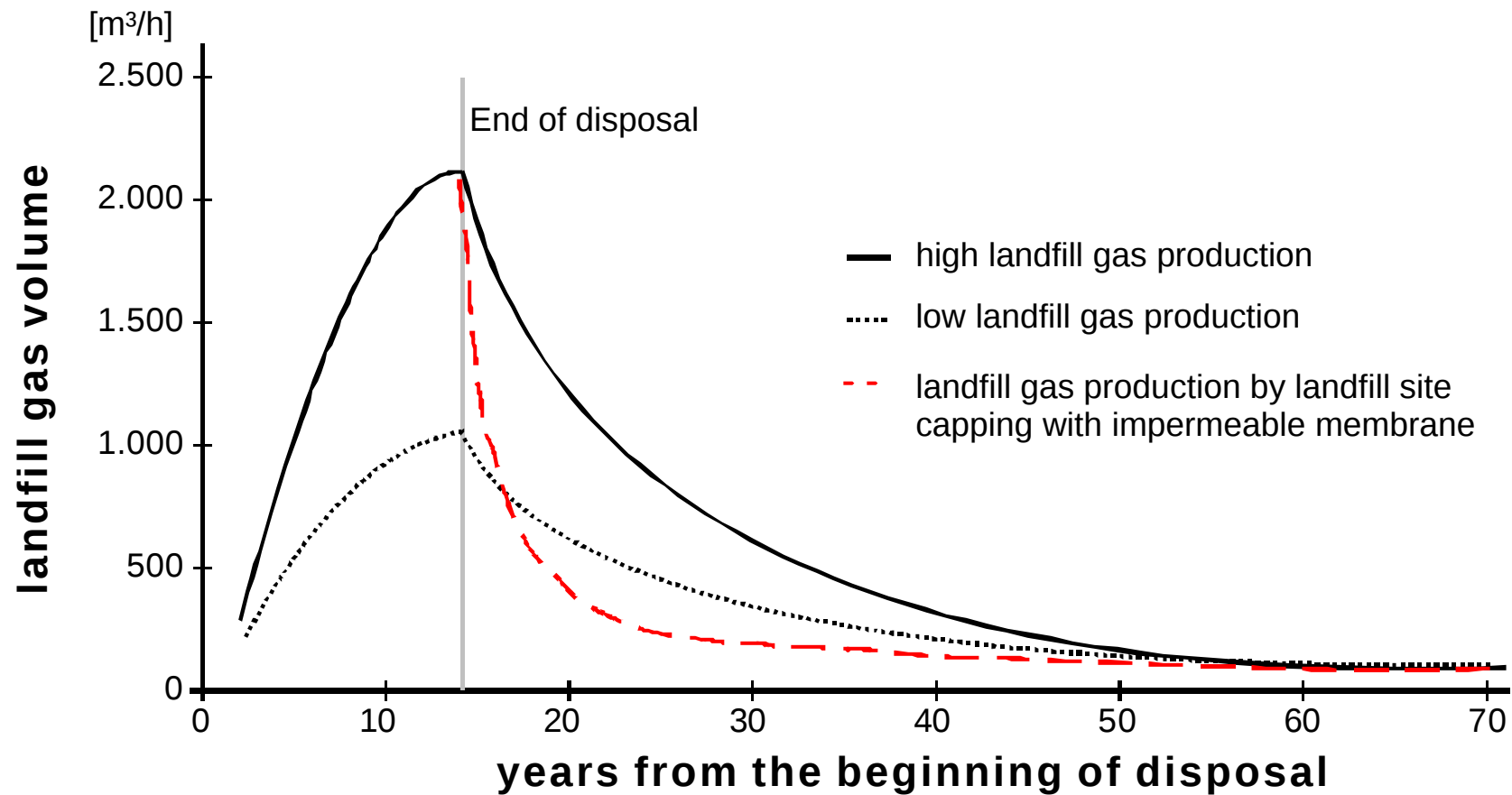
## Setting-up of a container system



# Landfill gas power station



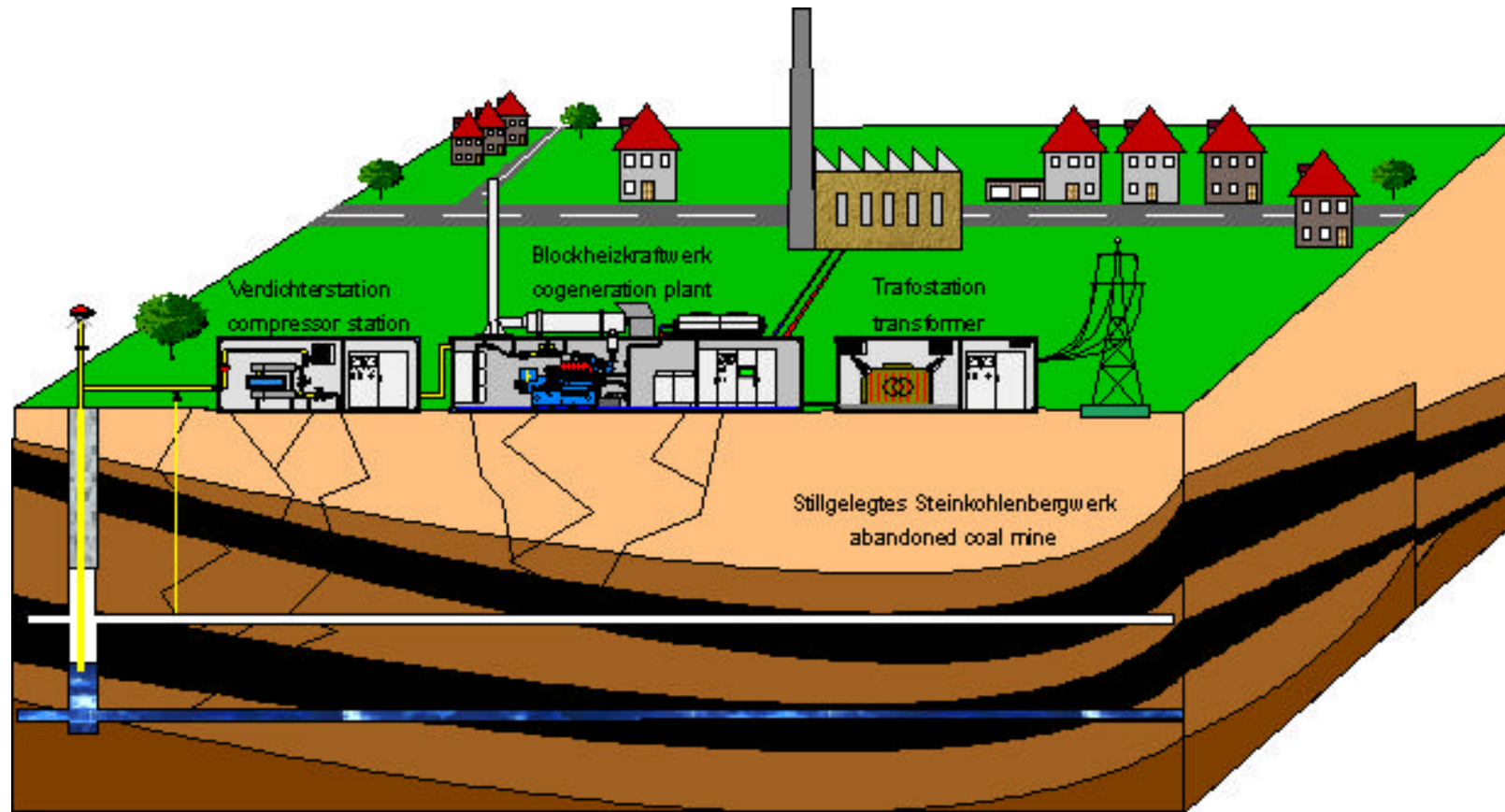
# Development of the landfill gas production



## Experiences landfill gas projects

- **Technical**
  - conservative landfill gas prediction
  - approved technology (degassing system, flare, gas engine)
  - modular systems
  - adaption of the system during operation time
- **Legal**
  - who is the owner of the gas
  - construction / licence

# Coal mine gas utilisation



# Coal mine gas drilling



Drilling plant DBA 4  
Capacity 40 t  
30.000 Nm max. torque  
17,5 m plant altitude

**Drill process:**  
Airlift drilling  
Core drilling at a depth of 200 m



## Coal mine gas test degassing



# Experiences Coal mine gas projects



- **Operating mines**
  - approved and optimized ventilation and degassing system (pre degassing)
  - dewatering system
  - optimized flare and gas engine systems for low methane content (25 vol.% CH<sub>4</sub>)

# Experiences Coal mine gas projects



- **Abandoned mines**
  - adapted suction system
  - high methane contents
  - modular systems
  - exploration licence (who is the owner of the gas)

## Conclusion

- Methane from coal mines and landfill sites have become more and more important in the context of increasing awareness of safety, climatic and environmental problems
  - The capture of coal mine and landfill gas will substantially reduce greenhouse gas emissions and could make significant contributions to energy needs
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**Many thanks for your attention.**

**Questions? - Please feel free to contact us!**

