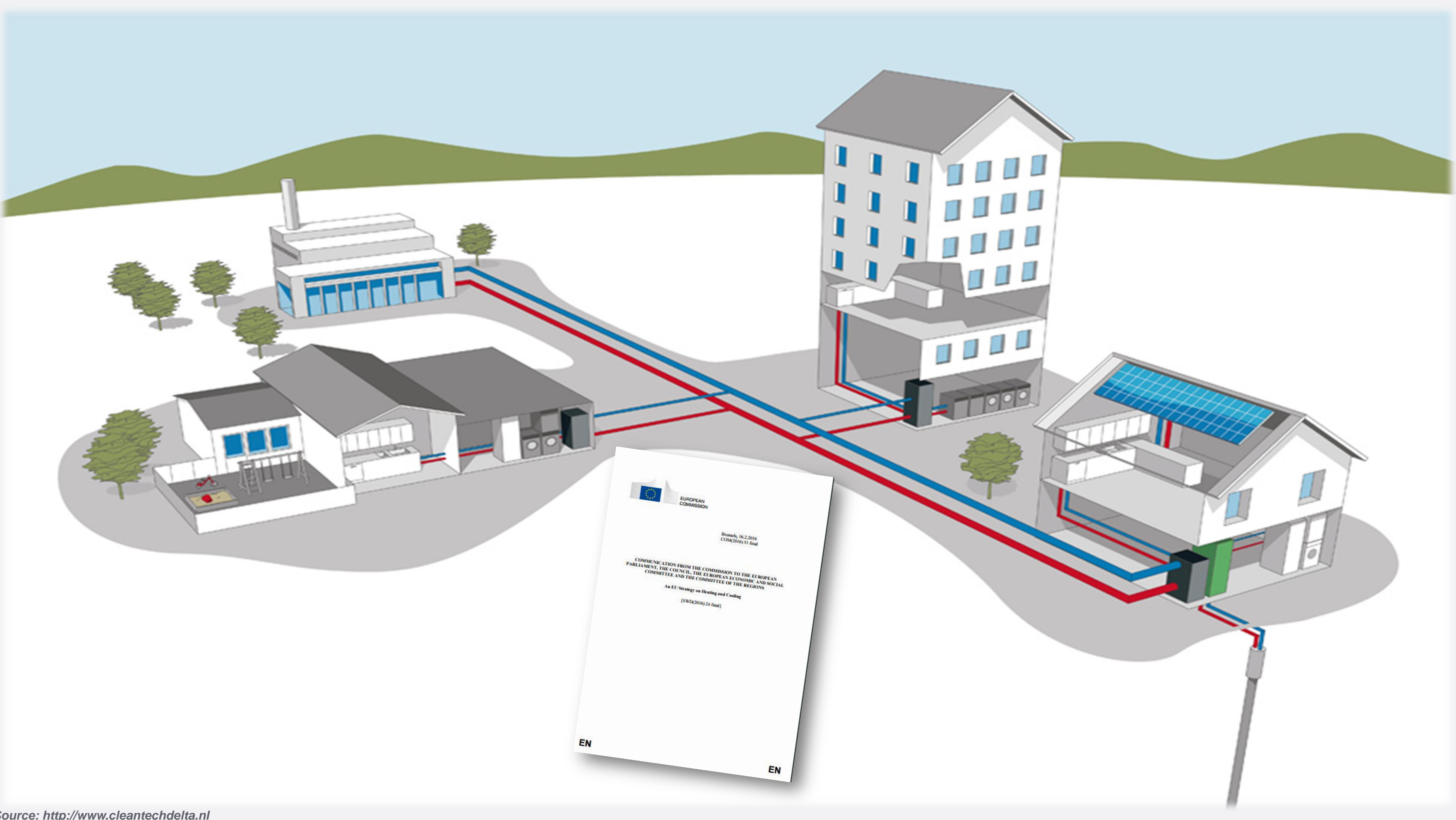


**SUSTAINABLE
INNOVATION
IN BIOENERGY**



EUROPEAN COMMISSION

Brussels, 16.2.2016
COM(2016) 51 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

An EU Strategy on Heating and Cooling
(SWK(2016) 24 final)

EN

EN



3 sister boiler
houses
in Slovakia in 2013



TLMAČE



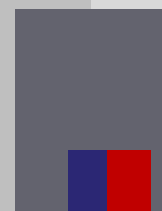
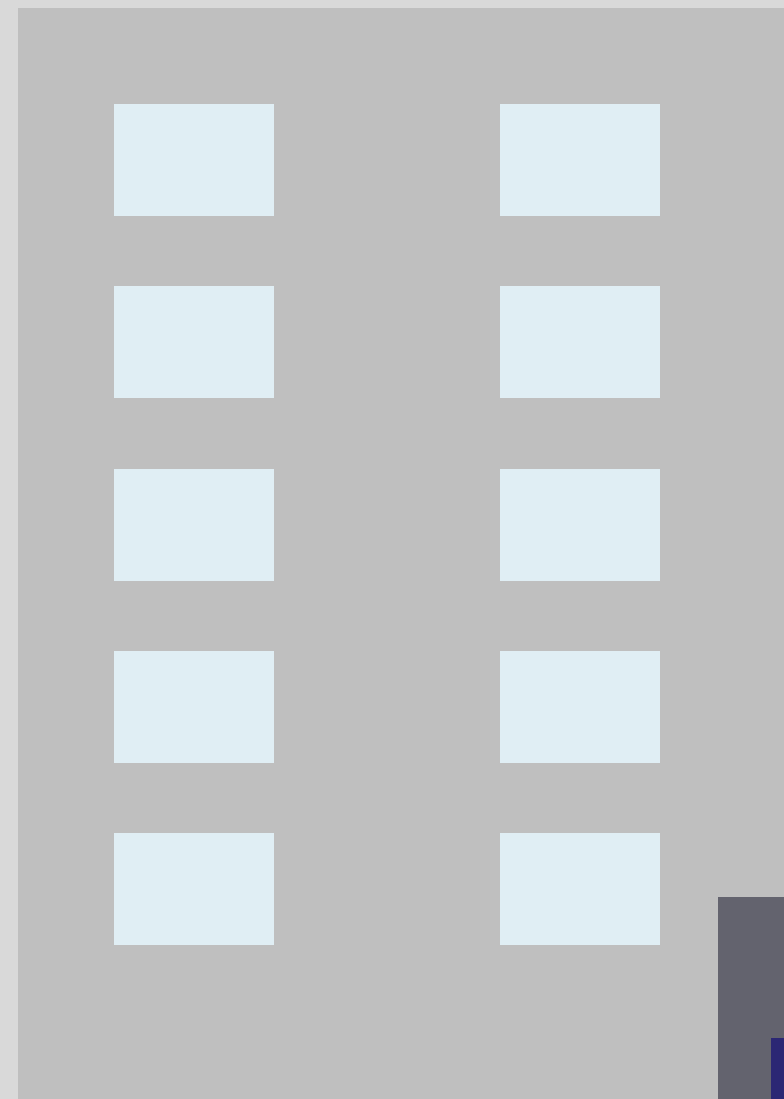
POLTÁR



TREBIŠOV

HEAT PRODUCTION VOLUME	10.044 MWh	8.650 MWh	35.087 MWh
FUEL	Coal/Natural gas	Natural gas	Natural gas
FUEL COSTS	350.000	400.000	1.650.000
TECHNICAL CONDITION	50 years	45 years	35-45 years

District heating system renovation



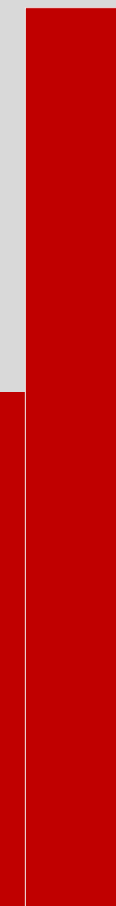
Heat exchangers
installation

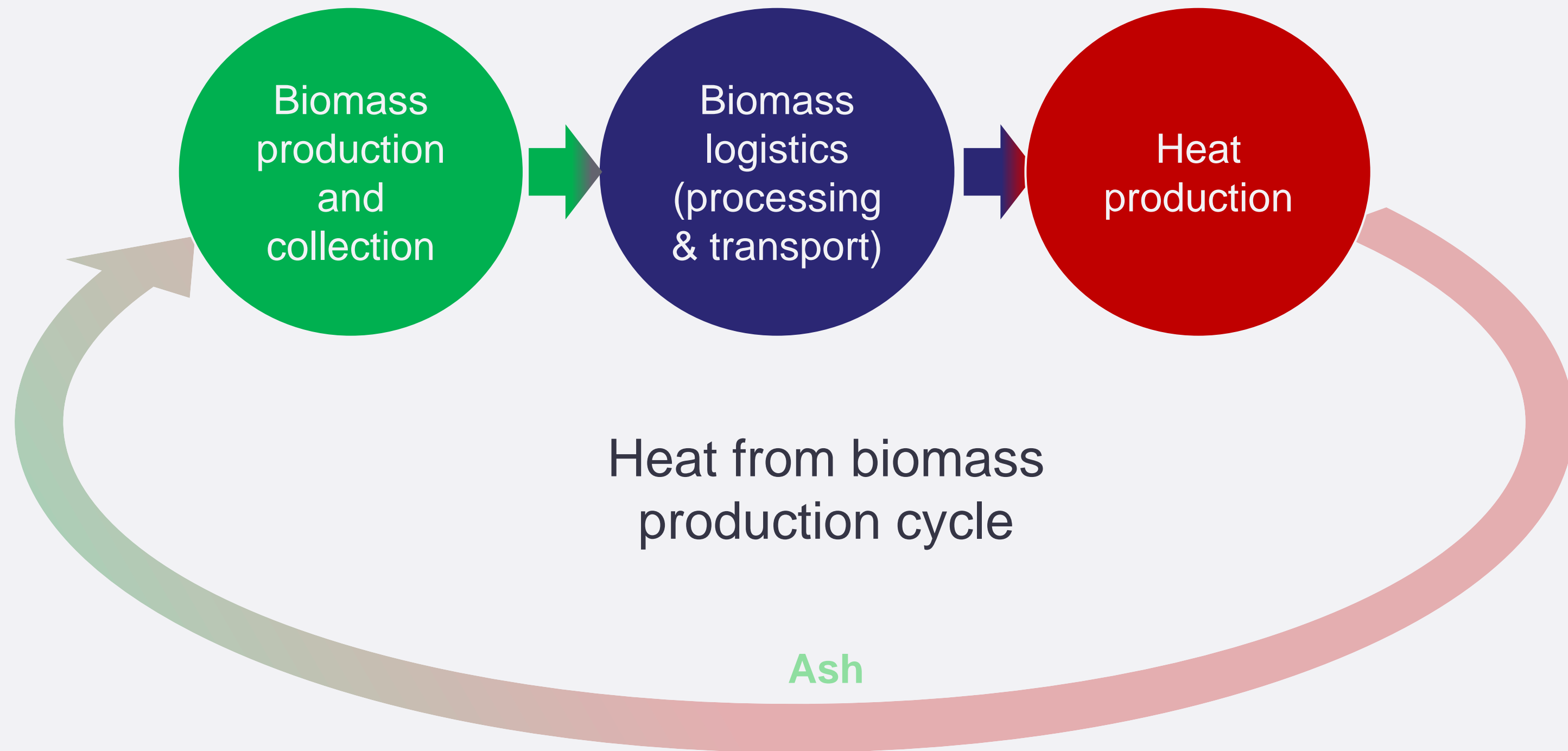


Replacing of heat distribution pipes
(loss 6-9%)



Installation of
new boiler
house
(efficiency 85%
and more)







Reconstruction of boiler plant in Tlmače

2 MW wood chips boiler
(town with 4 000 inhabitants)



Reconstruction of boiler plant in Poltár

2,5 MW wood chips boiler
(town with 6 000 inhabitants)

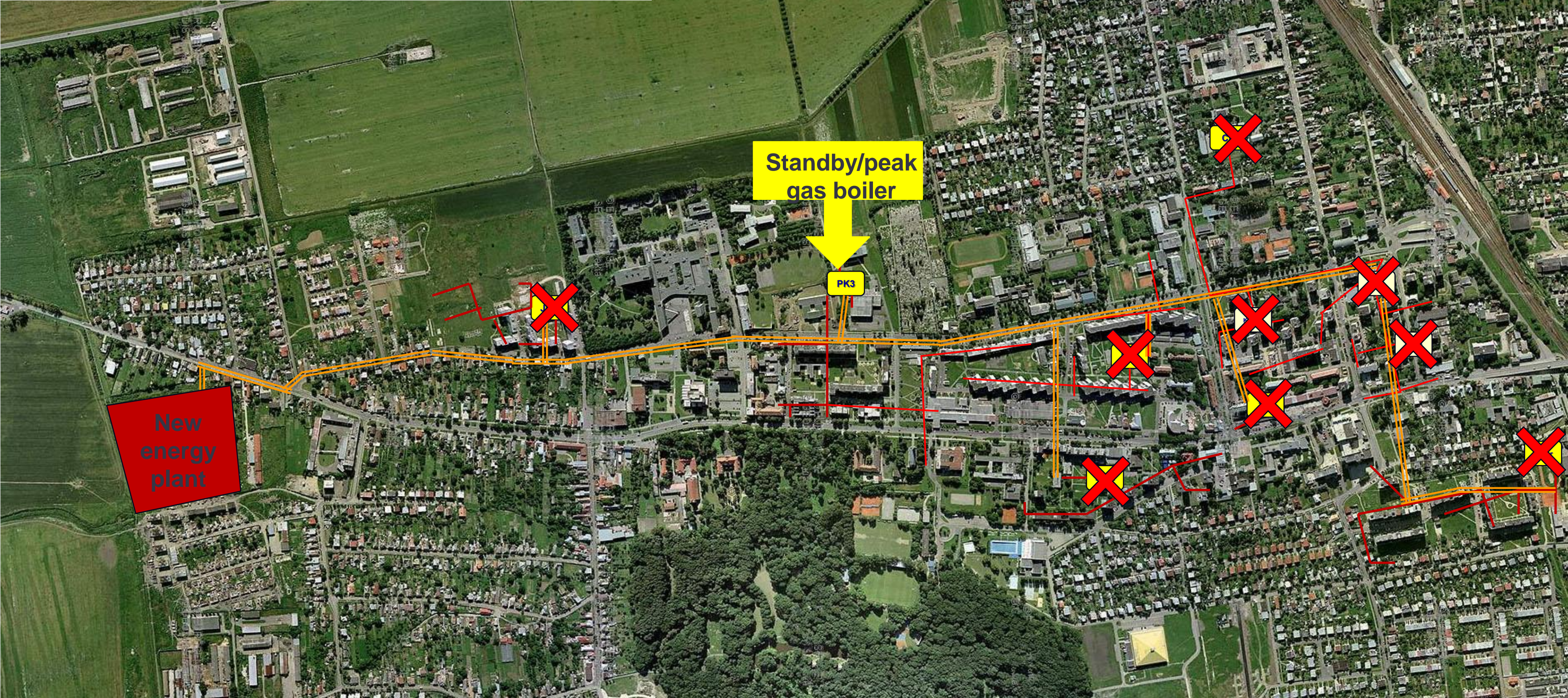


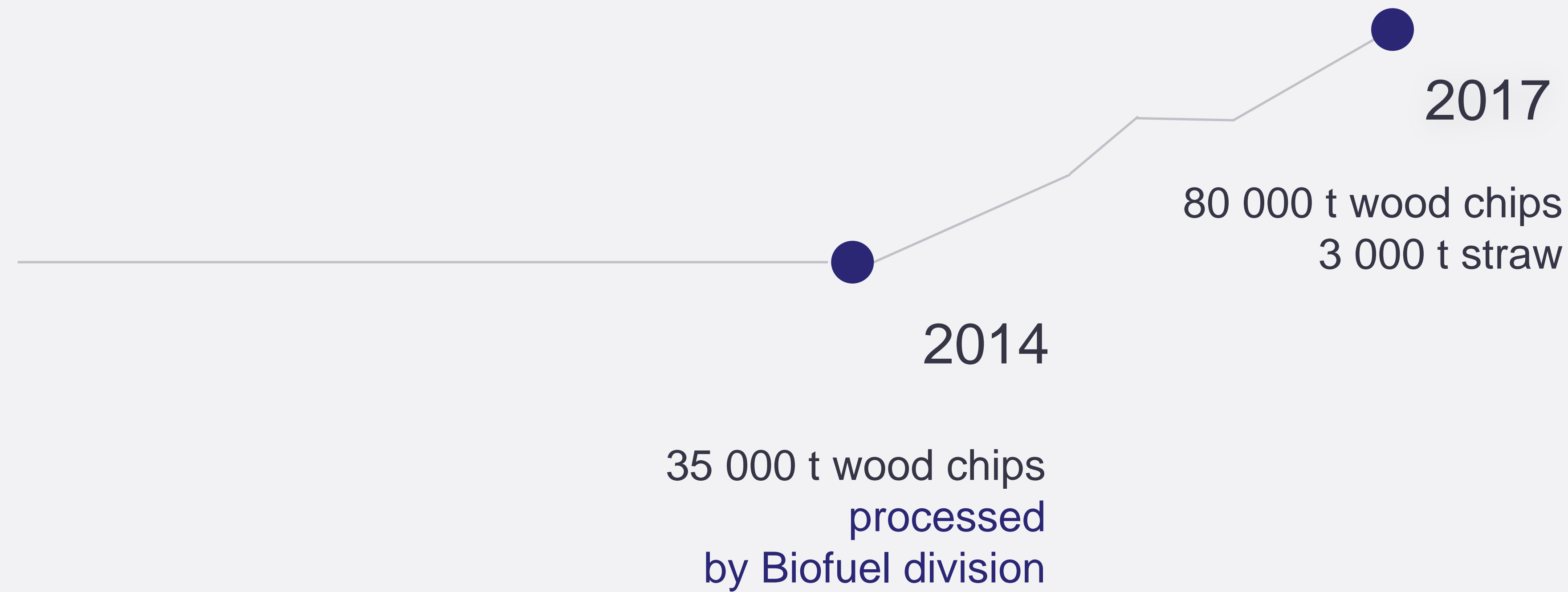
Construction of boiler plant in Trebišov

4 MW wood chips boiler + 4 MW straw boiler
11 km connection pipeline
(town with 25 000 inhabitants)



New „centralized“ DH in Trebišov







4x Trucks



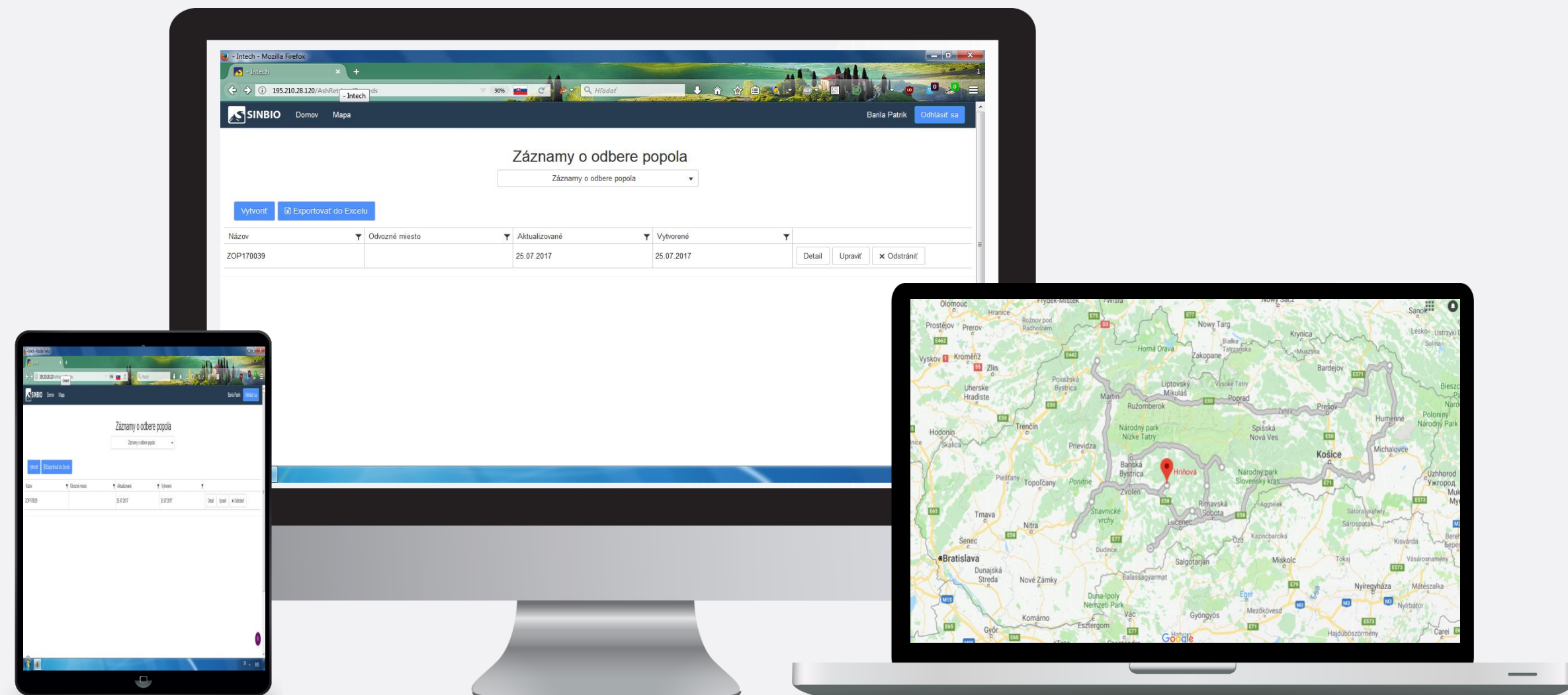
Wood chipper



2x Loaders



Forest
shredder



New biomass logistics information system

Integration of 5 separated systems with aim to reduce logistics costs and environmental footprint by accurate and timely information



Reconstruction of administrative and service center

Biofuel division center in Hriňová for personnel training, administration work and fleet maintenance/repair



Science on Sphere - National Oceanic and Atmospheric Administration



Tractor with
sprayer



Tractor with
press



4x Straw storage
houses





>1.7 mil. EUR

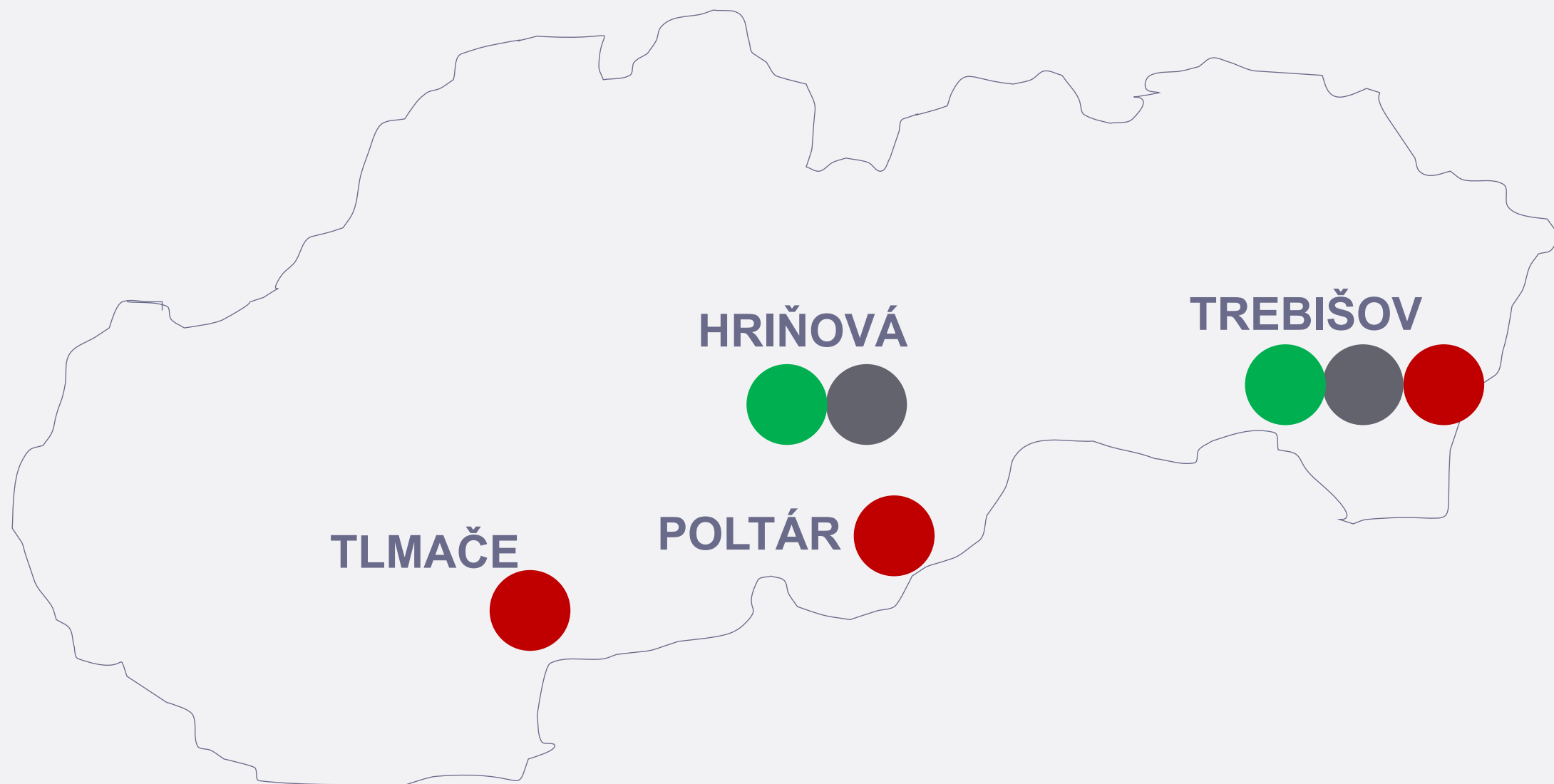
Poured in local economies

13 100 t

CO2 emissions saved

12 000 GJ

Heat losses savings in Trebišov



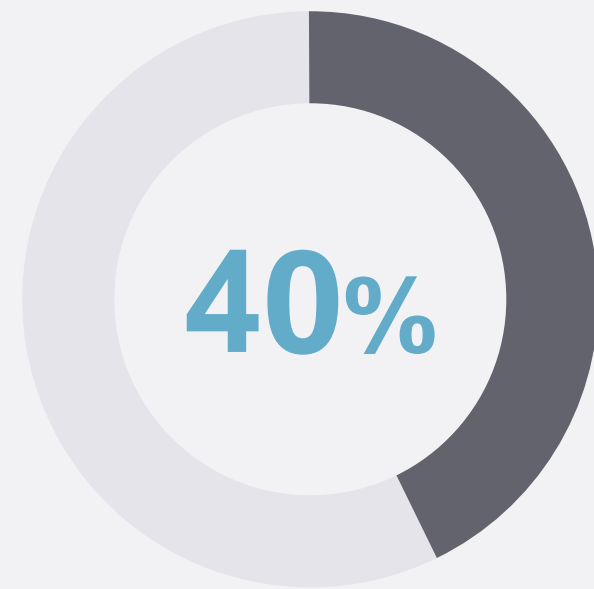
SINBIO summary

- **4 sites**
in Central and Eastern Slovakia
- **9 project partners**
(6 Slovak, 3 Norwegian)
- **10, 058 mil. EUR**
total project budget
+ *3 mil. noneligible costs*



Norway grants

4, 996 mil. EUR



Commercial loan

4, 026 mil. EUR



Own sources

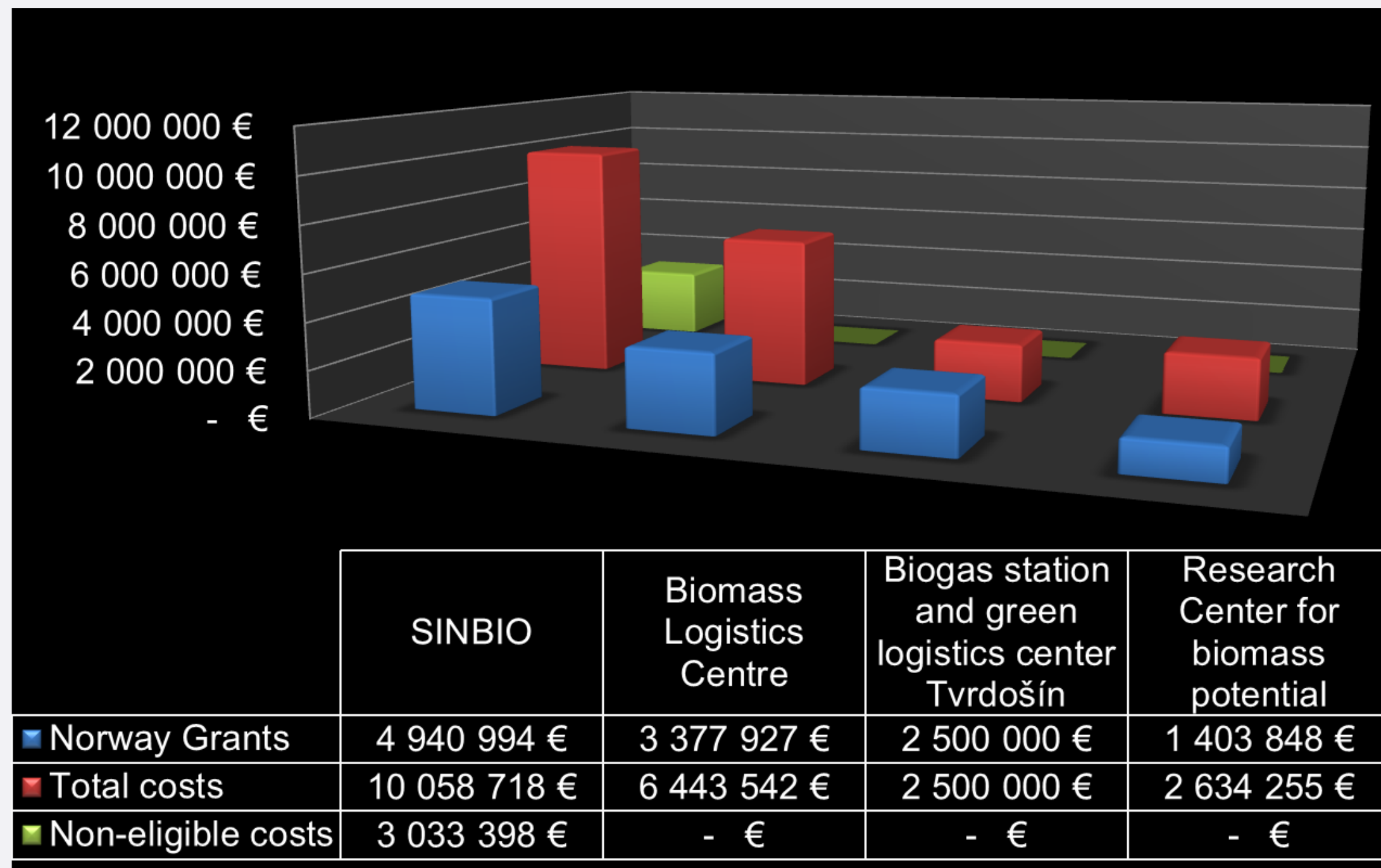
1, 029 mil. EUR



Overdraft loan

VAT financing

SINBIO financing



- ✓ 2013-2017
- ✓ 18 910 571 € - total program allocation
- ✓ 4 supported projects in biomass value chain
- ✓ Eligible entities: SMEs
- ✓ 1 mil. EUR – 5 000 mil. EUR (50%; 80%- State Aid)

Green Industry Innovation Programme, Norway Grants SK

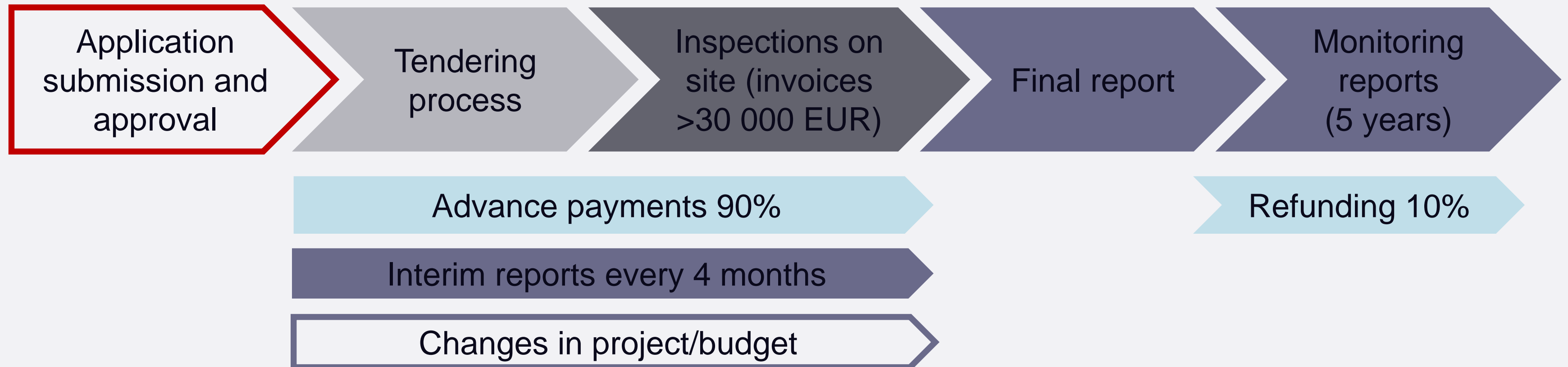
Project Objective Indicators

- Estimated biomass production in TJ per year (including electric power and heat from biomass)
- Number of newly launched environmental technologies
- Estimated number of green jobs created
- Total amount of biomass processed within the project (t)

Project Outcome Indicators

- Number of biomass energy generation facilities
- Installed energy output of biomass energy generation facilities (MW)
- Number of logistics centres created
- Number of biomass producer promoted
- Number of new technologies/new procedures established within beneficiary state

Projects evaluation - indicators



Project implementation process

[illegible]

Experiences: Public procurement delays



Experiences: Complexity of infrastructure project



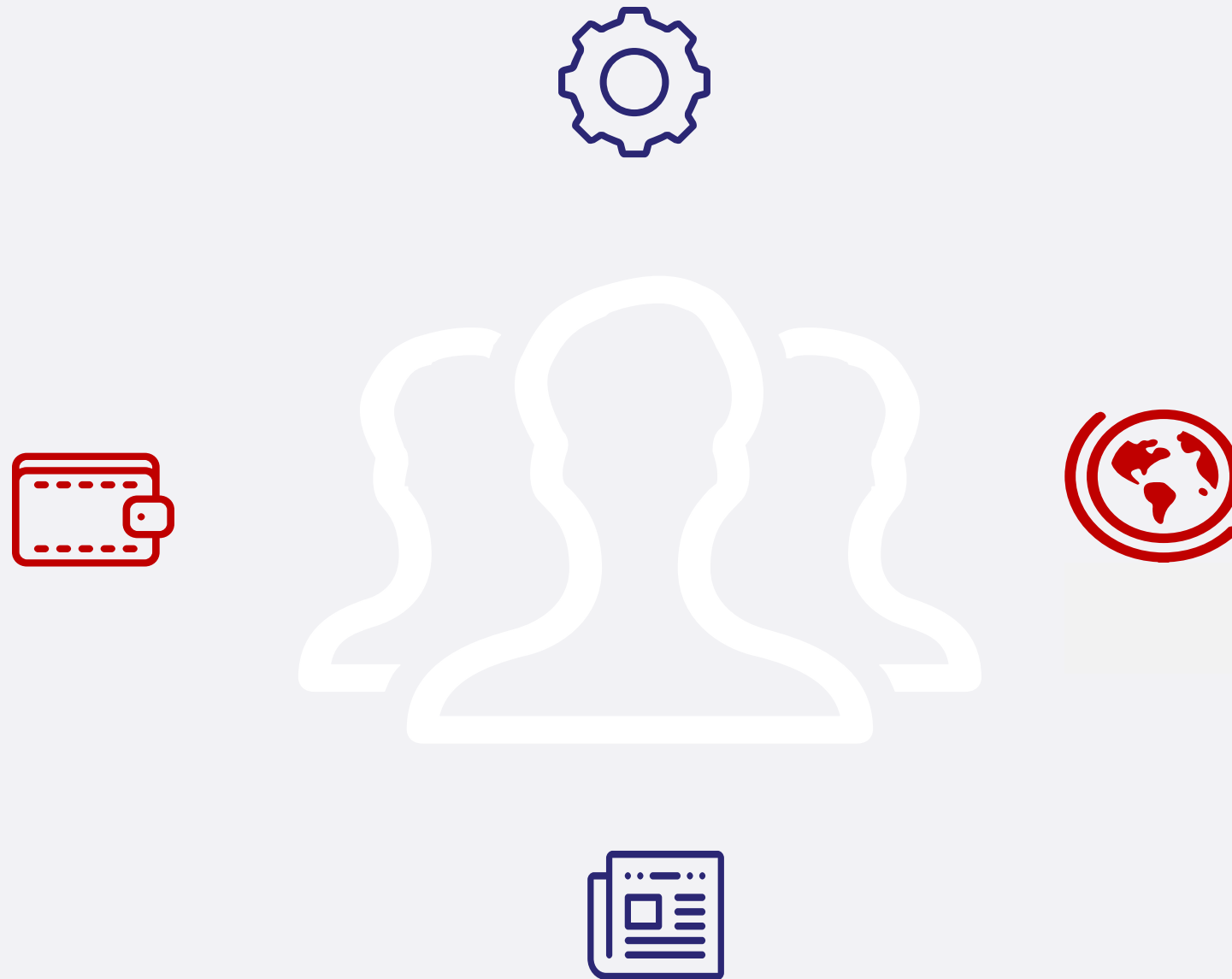
Experiences: Biomass (straw) seasonality



Experiences: Security issues



Recommendation: Proactive communication
with Program Operator



Recommendation: skilled and reliable team set up





www.intechenergo.sk