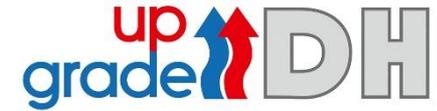
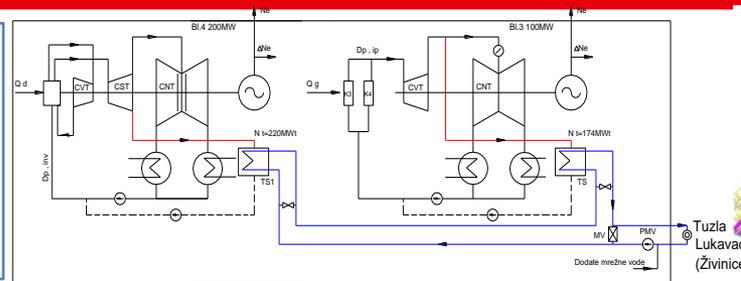


# Success stories from demo cases: Tuzla, Bosnia and Herzegovina



**220 MWt**  
**10 km main pipeline**  
**180 km distribution pipes**  
**1050 substations**



## Stakeholders involved LWG

- EPBiH/R&D dept. (3 members)
- EPBiH/CHP Tuzla (2 members)
- Distribution utility Tuzla (4 members)
- City council (1 member)
- Consumers associations (1 member)
- Buildings managers (1 member)

## Cooperation with

- Thermal engineers' association in BiH
- Association of district heating companies in FBiH

## Benefiting from

- ❑ Advices by project partners (AGFW, Solites, Optit)





## *Upgrading measures implemented and planned*

### *What has been done before*

- Replacement of heat exchangers in thermal substations.
- Replacement of old distribution pumps by electronic pumps.
- Replacement of distribution pipe networks.
- SCADA and Thermis – district heating network digitalized.

### *Upgrading measures developed to resolve hydraulics issue and improve energy efficiency*

- Upgrade the main pipeline.
- Replacement of the existing main network pump with new frequency regulated main network pumps - for each DH system separately.
- Installing temperature limiters on the main return pipe on the primary side of the house substation.
- Optimization of operation two cogeneration units + Theraml storage.

### *Introducing RES modules into Tuzla DHS*

- Solar thermal, biomass co-firing and deep geothermal.





## *What has been realized during Upgrade DH project (2018-2021)*

### **Installation of temperature limiters**

- ✓ In 2021 temperature limiters installed on the main return pipe on the primary side of the house substation in two building blocks to reduce temp. T2 (return) and T3 (radiators).

### **Replacement of distribution pumps**

- ✓ In 2020, 60 distribution pumps have been replaced by new electronic pumps.

### **Converting Tuzla Unit 6 into CHP unit (modernization of MP turbine + steam extractions)**

- In 2020 Contract awarded to GE (Alstom), in 2021 main design completed, Works realization planned in first quarter of 2022 .

### **Biomass co-firing on CHP Tuzla Unit 6**

- In 2021 Study on 0.15% biomass co-firing is conducted within BIOFIT project.

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