EVN TP

Clean air for Plovdiv through district heating

Plovdiv | June 2022
First stage: 10 years operation of the most modern Cogeneration in Bulgaria

- Produced heat – 2,37 TWh
- Produced electricity – 2,65 TWh
- 3 times less CO2 emissions from electricity production compared to the electricity in the national energy mix

Second stage: New peak hot water boilers in operation this year:

- The last old production installations are stopped
- Emission monitoring:
  - NOx <52 mg/Nm3 (Norm 100 mg/Nm3)
  - CO <12 mg/Nm3 (Norm 35 mg/Nm3)

Next stage in the development:

- Hydrogen transition and carbon neutral production projects
EVN TP grid - condition for decarbonisation of energy consumption

→ 5 of 6 regions of Plovdiv with district heating grid
→ 185 km district heating grid (over 40 km new)
→ 1 260 heating exchange stations (over 260 new since 2008)

Investors appreciate the district heating:

- Residential complexes Royal Garden, Panorama Park, Residential Park Plovdiv and others
- UMBAL St. George, Medical University, Kindergartens, Schools, Malls, office buildings and others

New focus: Projects for rehabilitation of the grid
First in Bulgaria: Using heat energy for cooling

Individual smart solution
- Suitable for hotels, office buildings
- Reduces the need of electricity
- Reduction of pollution

- Frontliner in Plovdiv: Municipality Trakia in 2013
- Sport hall Kolodrum
- 2 hotels and 2 office buildings
Clean air requires a shared vision of citizens, companies and the Municipality

For new buildings under construction:
- Design and construction of internal heating and hot water installation installation obligatory >> chance for residents to choose the type of heating and include renewable energy sources
- Do not allow construction of buildings in areas with central heating / gas without planned installations

For constructed buildings:
- Reconstruction of the heating and hot water installations - mandatory for renovation programs
Reconstruction - a step towards energy efficiency

For heating installations:

→ Reduction of energy costs from building installation by over 85%
→ Individual consumption and control, no adjustment bills
→ Extending the life of the system

For hot water installations:

→ Average price reduction for 1m³ by over 30%
→ New installation without leaks and with longer life
→ Reduced energy losses from the installation
→ Improved supply quality
Results after reconstruction Season 2020/2021

4 Dunav bul.  
MWh for apartment

<table>
<thead>
<tr>
<th>Year</th>
<th>2019-2020</th>
<th>2020-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,631 MWh</td>
<td>0,094</td>
<td></td>
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</table>

→ Energy losses in heating installation **without reconstruction** in both buildings: 
148,012 MWh

→ Energy losses in heating installation **after reconstruction** in both buildings: 
10,362 MWh

Trakia, bl. 216a, entrance B  
MWh for apartment

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<tr>
<th>Year</th>
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<tr>
<td>0,676 MWh</td>
<td>0,109</td>
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92%
For the air we breathe
EVN TP: Highlighting importance of clean air since 2018

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EVN Топлофикация работи за по-чист въздух в Пловдив.

Нека пазим въздуха за тях чист

EVN Топлофикация е на страната на чистия въздух.

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