Implementing Article 14 in Bulgaria

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Comprehensive Assessment of potential for CHP

- Estimation of the National technical potential for high-efficiency cogeneration (CHP);
- Identification of the existing high-efficiency cogeneration capacities;
- Estimation of the possibility for replacement of the existing cogeneration capacities with new high-efficiency ones;
- Calculation of the technical potential for introduction of new high-efficiency cogenerations replacing the conventional heat producers;

Two different scenarios:

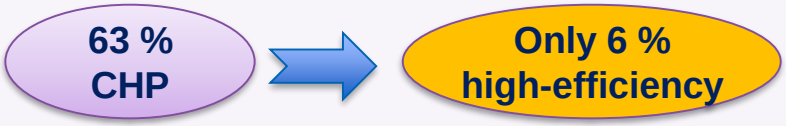
1. With the **available district heating network**;
2. With **construction of new district heating networks** delivering heating to public and residential buildings not connected to district heating.

CHP capacities

Total installed capacity for electricity gen.: 13,6 GW

Large Thermal power plants CHP: 8,6 GW

High-efficiency CHP: 0,8 GW



Expansion in the district heating systems

- Transition from heat only production to CHP
- Transition from steam turbine to gas turbines and CC
- Intensification and expansion of existing cogeneration with a potential of waste utilization

Outcomes

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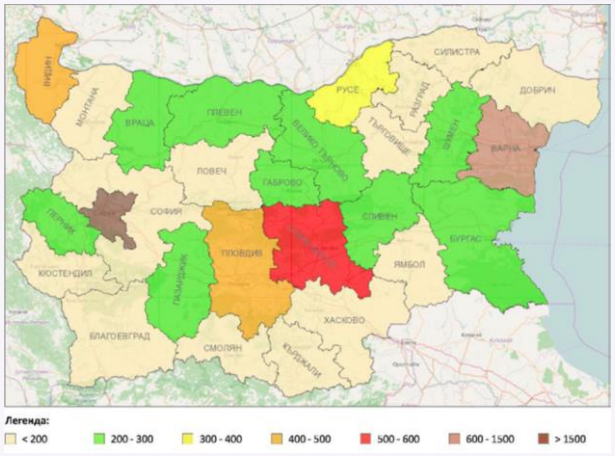
Key results

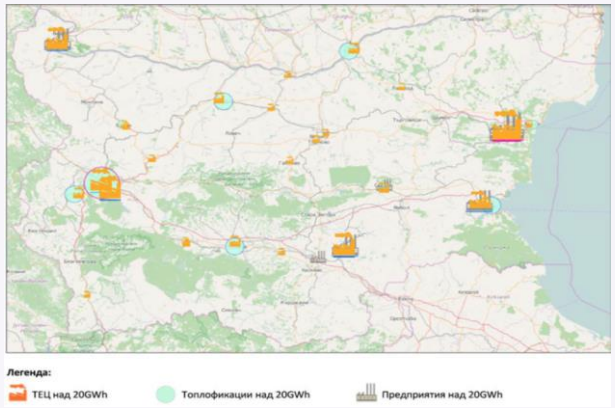
- **National Heat Map**
  - made on the basis of the analysis and the gathered information
  - consist of data for heat consumption and heat production technologies distributed in the different municipalities

- **Total potential for building CHP by 2025:**

- **Energy demand for cooling of large buildings:**
  - lack of official data on cooling and air conditioning demand
  - increase in the cooling demand – reflected by the significant increase in electricity consumption during the summer months
  - requires long-term work and is an essential part of the total energy consumption:
    - 37 % for large business buildings;
    - 38 % for the hotel sector; and
    - 56 % for office buildings.



Density of heat energy consumption (MWh/year/km^2)



District heating plants, large industrial heat consumers and TPP

Further information

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Support instrument and best practice

- **Support for electricity generation from high-efficiency CHP:**
  - Obligatory purchase of the entire quantity of electricity with certificate of origin
  - Preferential prices for the electricity
  - Priority connection to the grid Target audience

- **High-efficiency DHC in EVN Bulgaria in Plovdiv:**
  - First district cooling plant in Bulgaria
  - 6 MW cooling capacity (absorption + other chillers)
  - Supplying cool to commercial buildings (municipality, hotel, sport hall, business building)

Further information

- **Complete presentation available at:** **www.ca-eed.eu**
- **Heat map:**
- http://maps.trimbul.com/bulgaria-heatmap/

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