MILLION KILOMETRES OF DISTRICT HEATING NETWORKS

THE TOTAL LENGTH OF DISTRICT HEATING NETWORKS IN EURASIA IS GROWING THANKS TO WESTERN EUROPE AND CHINA

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Despite the widely spread opinion that district heating in Europe is rare, it is far from reality. According to European statistics [1] the length of heating supply networks in Western and Central Europe was 310 thousand km of single line at the end of 2011. Therefore, including Asia (300 thousand km), Russia and CIS countries (470 thousand km) the total length of district heating networks in Eurasia exceeds 1 million km, where Russia and China jointly make almost 60% of the total length (pic. 1, 2).

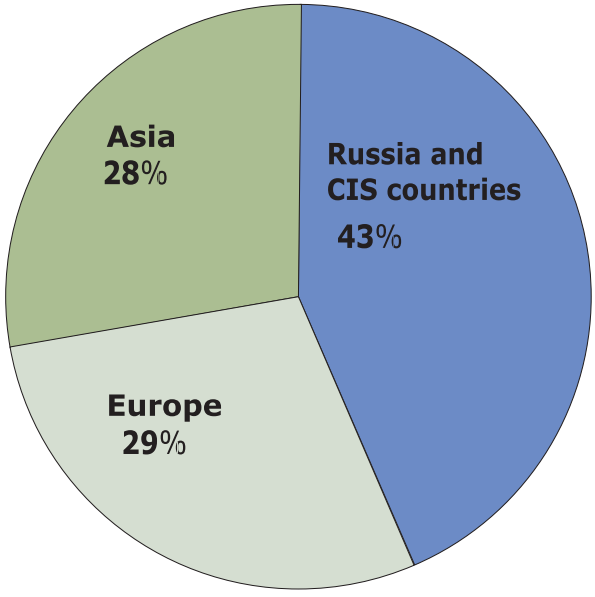
The share of district heating in the total heat supply system in different European countries varies from 2% in Iceland, where forming of geothermal system was speedily complete in the first half of 2000, to 1% in Norway, where employment in national heating supply sector do not exceed 2000 people (pic. 3).

Undoubtedly, very low level of district heat supply is conspicuous in Europe's backbone countries with total populations no less than 300 million people: Germany (12%), France (7%), Italy (5%), Netherlands (5%), Great Britain (1%).

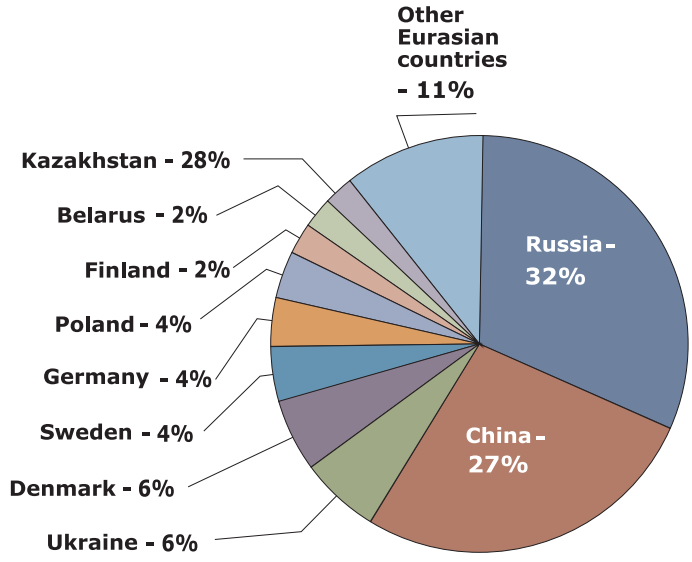
This colossal potential in prospective has good chances not only because of well-known ecological advantages. The latest large-scale study [2] shows that 60% of the European countries chose district heat supply based on economical factor.

The assumption that development factors for district heat supply in Europe are fundamental rather than speculative is confirmed by the following observations: global economic crisis of 2008 did not impact any trends formed by that time.

Pic. 1. District heating networks in Euroasia – regional structure
Source: Euroheat & Power; National statistics



Pic. 2. District heating networks in Eurasia, % of total length
Source: Euroheat & Power; National statistics



District heating in former USSR and Eastern Europe had tendency for reduction since the beginning of the 90s, whereas, in Western Europe and Kazakhstan it continued to grow at staggering pace (pic. 4).

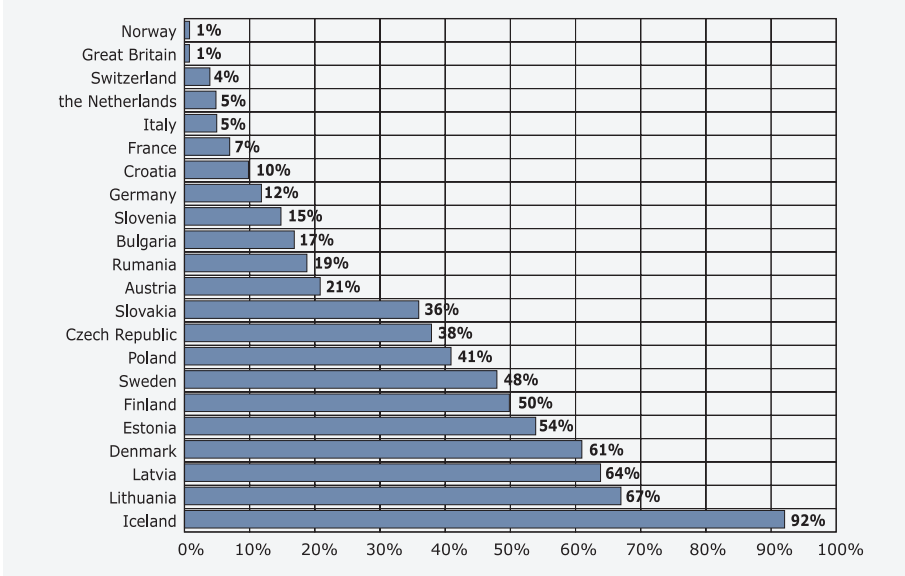
If the dynamics in Norway and Italy (which saw increase in the number of district heating networks within 4 years, from 2008 to 2011 by 10.3% and 8.0% accordingly) could be explained by low base effect, then Finland and Sweden (4.4% and 4.0 % accordingly of yearly increase in the same period) had impressive level of district heating.

10 European countries championing network replacement have jointly increased the volume of heat supply network by nearly 7,000 km in 2008–2011 (pic. 5). It is the lower value of average annual new pipeline construction of top 10 countries, excluding renovation and replacement of old networks.

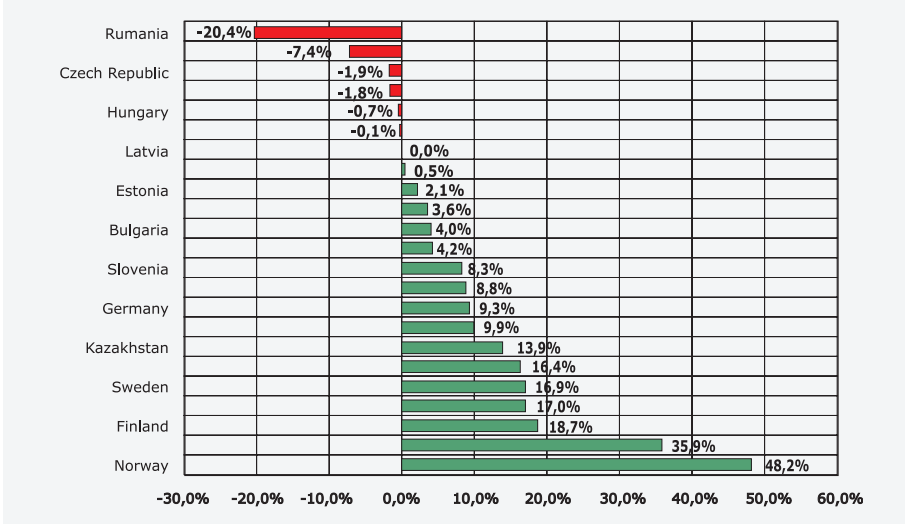
The future looks bright for district heating in Eurasia as a whole, if we take into consideration the fact the China has been keeping the rate of annual average increase of district heating at 13.5% for the last few years, putting tens of thousands kilometres of networks.

References:

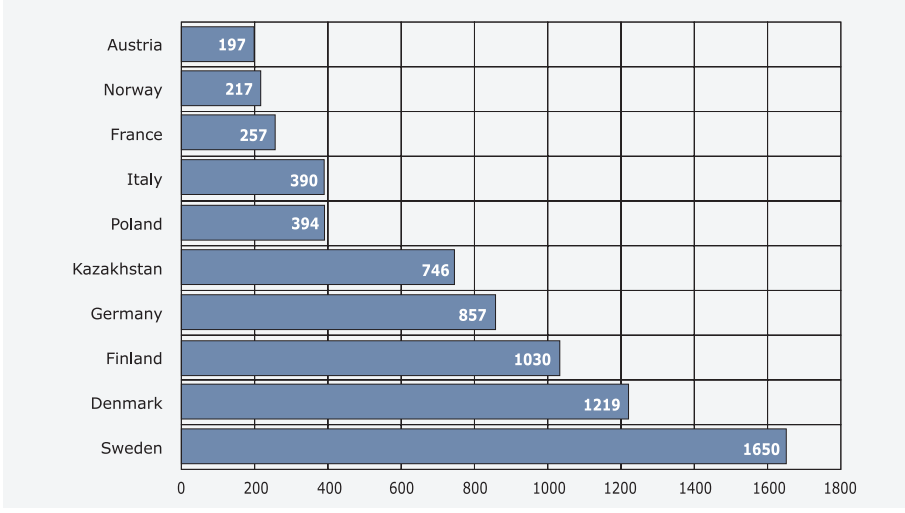
1. District Heating and cooling country by country 2013 survey. Euroheat & Power, Brussels, 2013.
2. The future competitiveness of district heating. Urban Persson/ Chalmers University of Technology/ Halmstad University, 35th Euroheat & Power, Paris, May 9th and 10th 2011.



Pic. 3. District heating services supply in Europe (2011), % of total population
Source: Euroheat & Power



Pic. 4. Relative increase in district heating networks in 2007–2011, %
Source: Euroheat & Power



Pic. 5. Annual average increase of district heat networks total length in 2008–2011 (Europe top 10), km of single pipeline per year