GEOELEC
Geothermal data Ukraine
Based on literature and public documents
Regional Workshop
Baltic States and Finland

Burkhard SANNER
European Geothermal Energy Council
Vilnius, 22/03/2012
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Information and literature used:


Barylo, A. (2000): Assessment of the energy potential of the energy potential of the Beregovsky geothermal system, Ukraine. – UNU-GTP Report 2000/03, Reykjavik


Geothermal data

Report Stoyanov & Taylor, 1996
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**Geothermal data**

Report Stoyanov & Taylor, 1996

Prospective areas:
- Dneprovsko-Donetskaia trough
- Donetskoe folding system
- Ciscarpathian depressions
- Transcarpathian depressions
- Skifskaya (Scythian) platform

Conclusion based on study by geophysical methods
- geothermal heat flux
- Depth of the 150 °C isotherme

(Map Tora, 2009, Wikimedia Commons)
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Geothermal resources (after Gordienko et al., 2005):

Values for 3, 4.5 and 6 km depth

Based on 12,000 boreholes!

Calculation of “W” after method by Dyad'kin et al., 1991
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Geothermal resources (after Gordienko et al., 2005):
• Dneprovsko-Donetskaia trough
• Donetskoе folding system
• Ciscarpathian depressions
• Transcarpathian depressions
• Skifskaya (Scythian) platform
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Study of the Beregovsky geothermal Area (Barylo, 2000) map showing locations of wells and main geological structures

Part of the Ciscarpathian area:
• thermal water within the limits of 45-120°C
• depth of the productive aquifers from 1000 to 3000 m.
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Geothermal energy use

9 geothermal plants
(list from Khvorov et al., 2005)

6 in Scythian platform
of which 5 on Crimea,
1 in Khersonskaya Oblast
3 in Ciscarpathia

in 2003:
10.9 MW heat installed
33 GWh heat production

<table>
<thead>
<tr>
<th>Geothermal object</th>
<th>Year of introduction in operation</th>
<th>Thermal (electric) capacity (MW)</th>
<th>Annual economy of fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. System of the geothermal heat supply of the Beregovskiy's sport center, Beregovskiy area, Zakarpatskaya region.</td>
<td>1978</td>
<td>2.1</td>
<td>1215</td>
</tr>
<tr>
<td>2. System of the geothermal heat supply of the sanatorium &quot;Kosyno&quot;, Beregovskiy area, Zakarpatskaya region.</td>
<td>1988</td>
<td>1.2</td>
<td>860</td>
</tr>
<tr>
<td>3. System of the geothermal heat supply of the sanitary complex &quot;Latorytsa&quot;, Mukachevskiy area, Zakarpatskaya region.</td>
<td>1985</td>
<td>0.2</td>
<td>210</td>
</tr>
<tr>
<td>4. System of the geothermal heat supply of the settlement Yantarnoe, Krasnoyarskiy region, AR Crimea</td>
<td>1991</td>
<td>4.5</td>
<td>2700</td>
</tr>
<tr>
<td>5. System of geothermal power supply of the objects of budgetary sphere in the settlement Chango, Khersonskaya region</td>
<td>1988</td>
<td>1.0(0.1)</td>
<td>900</td>
</tr>
<tr>
<td>6. System of geothermal power supply of children's establishments and of the social cultural household spheres of settlement Medvedevka, Dzhanokoyskiy area, AR Crimea</td>
<td>2002</td>
<td>0.8(0.06)</td>
<td>650</td>
</tr>
<tr>
<td>7. System of the geothermal heat supply of the objects in the settlement Zernovoe, Saksakiy area, AR Crimea</td>
<td>1997</td>
<td>0.4</td>
<td>355</td>
</tr>
<tr>
<td>8. System of the geothermal heat supply of the objects of municipal economy of settlement Piatylokaty, Krasnoyarskiy area, AR Crimea</td>
<td>1996</td>
<td>0.3</td>
<td>300</td>
</tr>
<tr>
<td>9. System of the geothermal heat supply of the objects in the settlement Nizhnoe, Saksakiy area, AR Crimea</td>
<td>1998</td>
<td>0.3</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10.9(0.17)</strong></td>
<td><strong>7470</strong></td>
<td></td>
</tr>
</tbody>
</table>
Thank You!

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