

Poland – opportunities in district heating sector

Jens Thomsen (jenth@um.dk)
Danish Embassy in Warsaw

27 November 2014



STARTING POINT

Poland **no. 10 export market** for Denmark

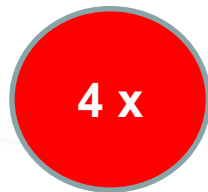
- Ahead of Russia, Brasil, Japan, India, Italy
- 850 companies with DK shareholders in PL
- Population of PL 6 times bigger than DK
- Flight time WAW – CPH: 1.1 hour
- Drive by car (Cph – Szczecin): 6 hours
- Train (WAW-BER-HAM-CPH): min. 14 hours ☺





ECONOMIC FACTS

FEATURE	DK PL	2011	2012	2013	2014
Annual percentage change					
GDP	DK	1.1	-0.4	0.4	1.5
	PL	4.5	2.0	1.6	3.2
Inflation	DK	2.7	2.4	1.1	1.6
	PL	3.9	3.7	1.4	2.0
Unemployment	DK	7.6	7.5	7.0	6.8
	PL	9.7	10.1	10.3	9.9
Export	DK	7.0	0.4	1.2	3.1
	PL	7.7	3.9	4.6	4.4



Source: European Commission, Spring Forecast 2014



NEW MARSHALL PLAN

How the EU transformed Poland

The benefits of joining 10 years ago have not been all economic: Poland is becoming more outward-looking, tolerant and confident



Remi Adekoya

theguardian.com, Thursday 1 May 2014 16.16 BST

[Jump to comments \(450\)](#)



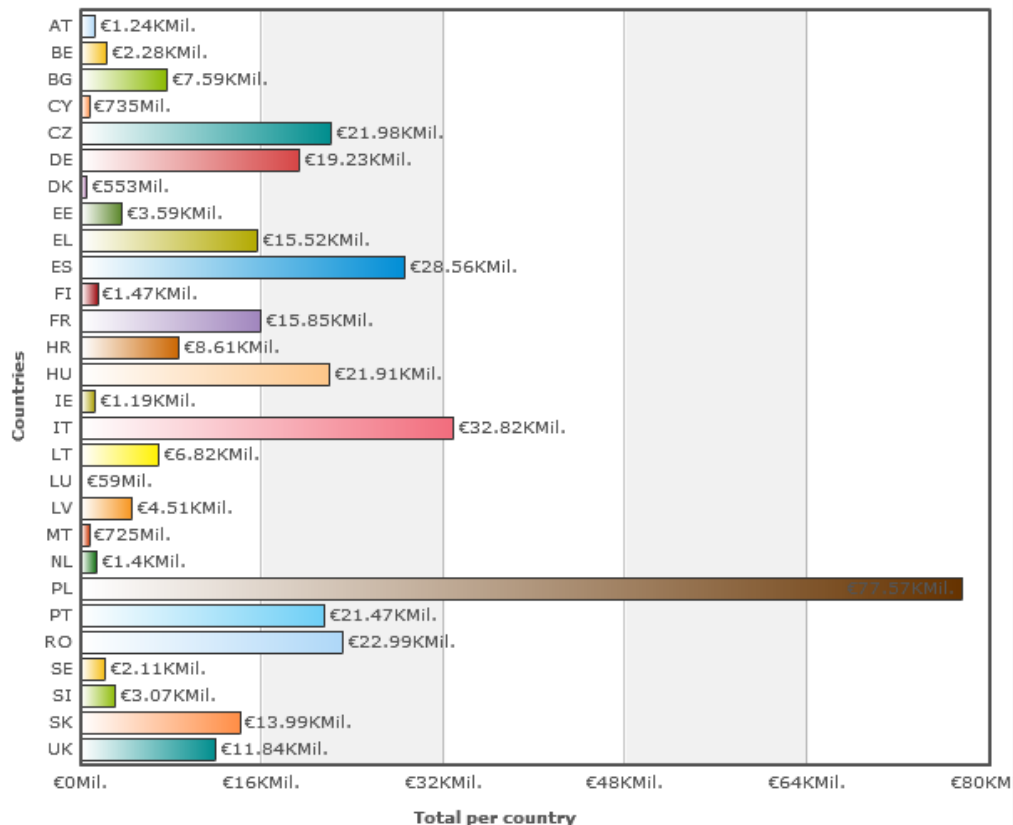
The national stadium in Warsaw, opened for Euro 2012. Poland has received more than £100bn in funding from the EU. Photograph: Wojtek Radwanski/Getty Images

Of the 10 mostly post-communist countries that joined the European Union exactly a decade ago today, none has benefited more from membership than Poland. First and foremost, there's the cash: the country received £56bn in development funds between 2007 and 2013, money that was used to build hundreds of kilometres of highways and express roads as well as youth sports facilities, modern sewerage systems, kindergartens and pre-schools.

Add to that the £60bn earmarked for Warsaw in the EU's 2014-20 budget and the country will have enjoyed a windfall equivalent to roughly double the value of the Marshall Plan, calculated in today's dollar figures. And that does not take into account the tens of billions of pounds that Polish farmers continue to receive in agricultural subsidies from Brussels. What we are witnessing is, without doubt, one of the largest wealth transfers between nations in modern history.

Financial allocations 2014-2020

Total EU allocations of Cohesion Policy 2014-2020* (million €, current prices)





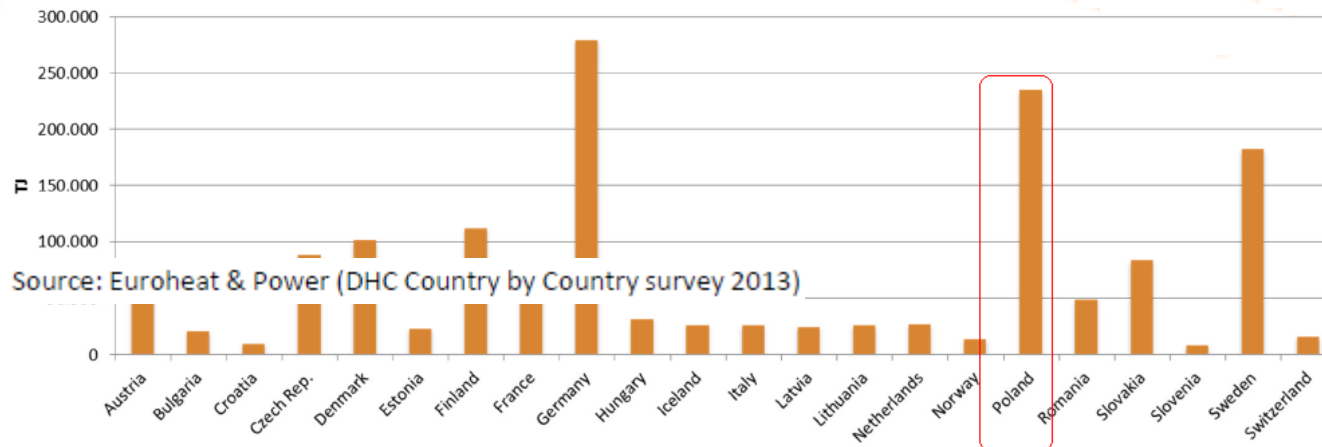
Polish district heating market

- Heat production 500 PJ
- Heating network 20 000 km
- Installed capacity 58 GW
- District heating share in heat market 50%
- Number of companies 500
- Main players: 19,3% PGNiG, 18,3 % EDF, Dalkia 12,3 %, PGE 11,4%, 6,7% Tauron, 5,8% Energa, 3,5% CEZ, 3,0 % Fortum
- Sources for energy production : 49,75 hard coal,33,3% lignite,3,9% gas, 10,4 % RES, 3,9 % gas



Sales volume of heat from the network in the EU (22 countries)

Polish district heating system is one of the largest in Europe.



Source: Euroheat & Power (DHC Country by Country survey 2013)

Source: International Energy Agency 2008



Challenges & Opportunities

- Reduction of heat demand by end users (result of increased heat efficiency)
– need for connecting more households to the district heating grid
- Increase of heat network
- Increase of heat losses – need for optimisation of transmission networks
- Modernisation of heat sources – installations based on cogeneration using natural gas and/or biomass as energy source
- Using waste as a fuel
- Development of cooling systems
- Development of system heat in new buildings
- Financing schemes for investments – (EU Funds) Operational Programme Infrastructure and Environment, to be managed by the National Fund for Environmental Protection and Water Management



Legislative support

- Energy Policy until 2030 – support of development of high efficiency cogeneration
- New Energy Policy until 2050 in preparation. Main focus on energy produced on own energy resources resulting in more flexibility towards technologies applied.
- Support system for producers of electricity from high efficiency cogeneration from 2007 to 2018.
- Priority in the provision of transmission and distribution of electricity produced from high-efficiency cogeneration.
- Obligation to purchase the electricity produced from high efficiency cogeneration located on Polish territory from power system operator.
- Obligation to connect to an existing district heating network or facility in individual renewable heat source, the heat from cogeneration and waste heat source when the peak demand for heat the object is higher than 50 kW.
- Energy Efficiency Act 15 April 2011- improvement of energy efficiency through innovative technologies
- IED Directive on Industrial Emission 2010/75 UE , implements new emission norms for energy sources above 50 MW, obligatory from 1 January 2016 in Poland, will impose the necessity of modernisation of district heating units (SO₂, NO_x, dust emission)

Activities – joint projects DBDH – IGCP - TC Warsaw 2013/2014

- Royal Visist 2014 – with Danish delegation of district heating companies
- Polish delegation visit to Denmark in June 2014
- Roadshows focused on exchange of Polish – Danish experiences in district heating in selected regions of Poland: roundtable meetings and site visists
- North Eastern Poland – Spring 2013 (Plonsk, Olsztyn, Bialystok, Lomza, Suwalki)
- South – West Poland – Autumn 2014 (Walbrzych, Opole, Gliwice, Krakow)
- CleanTech Summit, Krakow "Clean Air for Malopolska – role of district heating, 9 October 2014, resulting in Summit Memorandum about Danish Polish cooperation in district heating project in the region.





Summit Memorandum – Krakow / october 2014



Dialogue

- Dialogue and exchange of good practice between Denmark and Poland within district heating

Targets

- Optimisation of district heating systems and increase of energy efficiency – improvement of air quality in Krakow

Benchmark PL-DK

- Development of district heating in PL with inspiration from Danish examples based on the best available technologies

Next steps

- Study tours
- Pilot Projects



Plans for 2015

Projects DBDH, IGCP, TC Warsaw

- District heating study trip to Denmark – MPEC Krakow and other companies from the region – mid 2015
- Roadshow for Danish companies to Poland – region to choose (South East Poland)
- Activities within Smart Living project (opportunity to join)



HOW CAN WE HELP ?

- Study visits / roadshows to Poland and B2B meetings
- Tenders monitoring
- Finding local partners
- EKF solutions – helping Polish business partners obtaining necessary financing to purchase technologies from Danish companies through a buyers credit guarantee.
- Verification rules and procedures
- Approach to local authorities
- Branding Danish technologies - participation in Smart Living Project (Smart Living - Smart City - Smart Energy Production)





THANK YOU

Jens Thomsen (jenth@um.dk)
Danish Embassy in Warsaw