



# European Perspectives on the Challenges of Financing Low Carbon Investment: Poland

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## 1. Background

Poland was one of eight former Eastern bloc countries that joined the European Union (EU) in 2004<sup>1</sup>. The Cold War and communism had left it with a relatively low level of economic and social development. GDP per person stood at less than 75 percent of the EU average in every region<sup>2</sup>. Because of its requirement for huge levels of investment to overcome the challenges of poorly developed infrastructure, Poland stood to be a key beneficiary of European integration and Cohesion Policy. The challenges include inefficient housing, poorly developed transport infrastructure, a very high dependency on fossil-fuels, energy intensive industry and an ageing and inadequate grid infrastructure.

During the political upheaval in the late 1980s, greenhouse gas (GHG) emissions fell dramatically but began to rise again in the 1990s as economic output rose. Since then, milder winters plus increasing energy efficiency have helped offset rising output. Under the UNFCCC agreement Poland is an Annex I country and had a 2012 target of a 6 percent emissions reduction over 1990 levels. By 2009, reductions far exceeded this at 16.8 percent (excluding LULUCF)<sup>3</sup>.

Energy use per capita in Poland is relatively low compared to the rest of Europe. Gross inland energy consumption per capita is about 70 percent of the European average; similarly final electricity consumption is just over 50 percent of the European average<sup>4</sup>. However, despite energy intensity falling rapidly in recent years, Poland remains one of the most

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<sup>1</sup> Others were Czech Republic, Estonia, Hungary, Latvia, Lithuania, Slovakia and Slovenia – Malta and Cyprus also joined in 2004

<sup>2</sup> European Cohesion Policy in Poland, 2009

<sup>3</sup> Annual European Union greenhouse gas inventory 1990-2009 and inventory report 2011, European Environment Agency, 31 May 2011

<sup>4</sup> 2.59 toe in Poland versus an EU average of 3.62 toe and 3,082kWh per capita in Poland versus an EU average of 5,738KWh. Energy, transport and environment indicators, Eurostat, 2010 edition, February 2011

energy intensive Member States in the EU<sup>5</sup>. This combined with its high reliance on coal means its emissions per capita are similar to those in the UK<sup>6</sup>.

Poland has set itself a target of increasing renewables as a proportion of final energy use to 15 percent in 2020 and 20 percent in 2030<sup>7</sup> but by 2009 they produced only 9.4 percent<sup>8</sup>. According to the most recently available comparable Eurostat data (2008), renewables capacity had increased to 7.9 percent – and electricity generation from renewables had risen to 4.2 percent in 2008 from 2.1 percent in 1998 (despite having fallen to 1.6 percent in 2003)<sup>9</sup>. The most recent data from the Polish Central Statistical Office showed that renewables produced 9 percent of total primary energy in 2009 of which biomass produced 85.8 percent; biofuels and biogas a further 8.7 percent; hydro 3.4 percent and wind 1.5 percent. Electricity from renewables had risen to 5.8 percent<sup>10</sup>. Poland is currently listed as the 14<sup>th</sup> most attractive country in the world for renewables investment and 10<sup>th</sup> in Europe – and in recent years investment has picked up. In particular, there has been strong growth in wind energy: 382 MW of capacity was added in 2010, more than double that in 2009. Overall capacity is now more than 1.1 GW, putting Poland among the top eight countries within the EU<sup>11</sup>.

Despite the growth in renewables, Polish energy generation remains heavily fossil fuel-based. Primary energy production relies on hard coal (68 percent); 18 percent lignite; 1 percent oil; 5 percent gas; and 8 percent renewables in 2008 (see Figure 1).

<sup>5</sup> 384 kgoe/1 000 EUR'00 compared to the EU average of 167 kgoe/1 000 EUR'00. From Energy, transport and environment indicators, Eurostat, 2010 edition, February 2011

<sup>6</sup> 10.38 tCO<sub>2</sub>e per capita compared to 10.32 tCO<sub>2</sub>e per capita in the UK as of 2008. From United Nations Statistical Division: [http://unstats.un.org/unsd/environment/air\\_greenhouse\\_emissions.htm](http://unstats.un.org/unsd/environment/air_greenhouse_emissions.htm), 2 March 2011

<sup>7</sup> Ministry of Economy (2009) Energy policy of Poland until 2030

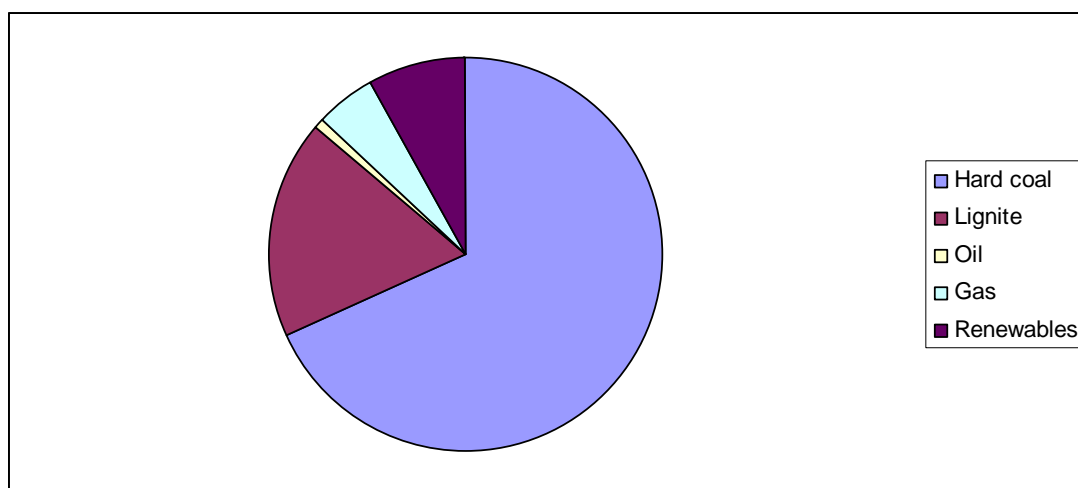
<sup>8</sup> REN21 (2011) Renewables 2011 Global Status Report

<sup>9</sup> Energy, transport and environment indicators, Eurostat, 2010 edition, February 2011

<sup>10</sup> Energy from Renewable Sources in 2009, Central Statistical Office, Warsaw 2010

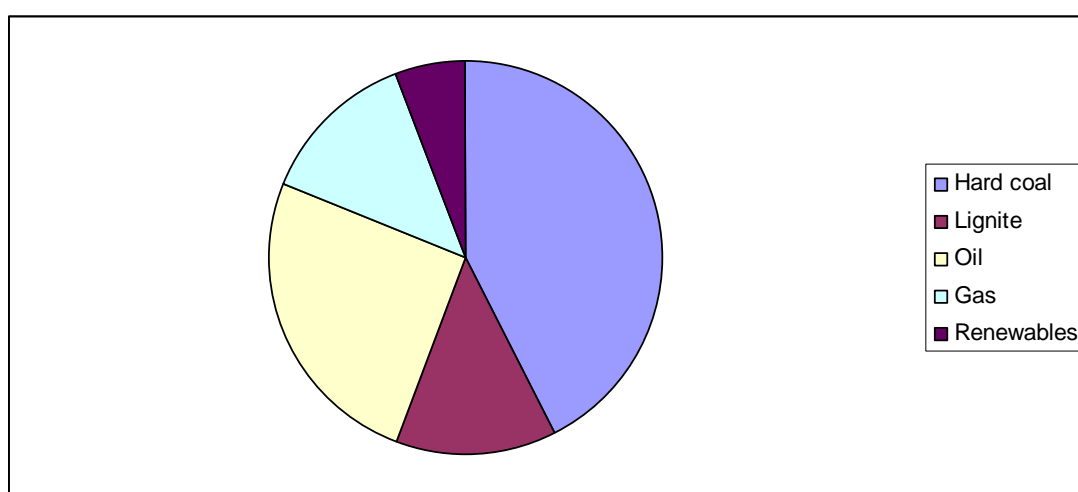
<sup>11</sup> Ernst & Young (May 2011) Renewable energy country attractiveness indices. Issue 29

Figure 1. Primary energy production in 2008.



Of gross inland consumption, 43 percent came from hard coal, 13 percent lignite, 26 percent oil, 13 percent gas and 6 percent from renewables<sup>12</sup> (see Figure 2), with high usage of coal due to the fact Poland has the largest coal reserves in Europe<sup>13</sup>.

Figure 2. Gross inland energy consumption in 2008.



Despite significant indigenous coal reserves, Poland has seen energy imports rise from 8.3 percent to 30.4 percent between 1998 and 2008 – the highest increase in Europe (the average being 54.8 percent). This is mostly due to its dependency on oil and gas imports (72.7 percent for natural gas compared to an EU average of 62.3 percent)<sup>14</sup>.

<sup>12</sup> Energy, transport and environment indicators, Eurostat, 2010 edition, February 2011

<sup>13</sup> Panorama of Energy, Eurostat, 2009

<sup>14</sup> Energy, transport and environment indicators, Eurostat, 2010 edition, February 2011

Poland needs to undertake a substantive energy infrastructure investment programme. It has been estimated that 70 percent of the country's power plants and transmission lines are more than 30 years old and must soon be rebuilt – at an estimated cost of €50 billion<sup>15</sup>. Added to this Poland, in common with other Member States, currently has a derogation from the Europe's Large Combustion Plant Directive (2001/80/EC). However, this derogation will expire in 2016, forcing non-compliant plants (estimated to be 60 percent of installed generation capacity) to shut down and potentially leading to severe electricity shortages.

## 2. Financial overview

Poland was the only country in the EU that did not go into recession during the global financial crisis – with GDP growth of 1.7 percent in 2009. GDP rose to 3.8 percent in 2010 and the International Monetary Fund (IMF) has forecast that it will continue to grow by another 3.8 percent in 2011<sup>16</sup>. Poland now has the 20<sup>th</sup> highest GDP in the world and 7<sup>th</sup> highest in the EU. However, in terms of GDP per capita it is one of the poorest in the EU, coming 23<sup>rd</sup> out of 27. Poland was to some extent shielded from the global financial crisis by the relatively insular nature of its finances (Polish pension funds are required to invest the majority of their funds into Polish assets), which limited the knock-on effects of the financial crisis. Poland's relative political stability and huge requirement for infrastructure investment make it an attractive opportunity for private investors. There are also a number of public mechanisms through which existing infrastructure investment is channelled.

### Government support

As of July 2011 the Ministry of Economy was considering introducing a new Renewable Energy Act that would amend the existing green certificate scheme for renewables and create differentiated subsidies – whereas at present all technologies receive 1 green certificate per kWh. In addition, a new Energy Efficiency Act will be in force from Q3 2011, with a target of 9 percent by 2016. It will focus on the public sector taking the lead and the introduction of a white certificate scheme which would place an obligation on suppliers of electricity, natural gas and heat to present a certain number of certificates from the reduction of energy use by end users.

### EU funding

Poland is reliant on considerable funding from the EU. It is the largest recipient of funding from European Cohesion Policy (2007–2013), having been allocated approximately €67 billion during this period. Of this, over €25 billion is allocated to transport infrastructure; €17.8 billion to protect the environment; €14 billion for innovation; and €3.6 billion to

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<sup>15</sup> FT (17 November 2010) Coal-fired source of a looming dark age

<sup>16</sup> IMF, World Economic Outlook Database, April 2011

support entrepreneurship<sup>17</sup>. Energy efficiency is a key element of all projects. Poland has developed 16 regional and five national operational programmes from its strategic development priorities. The largest national operational programme is that for 'Infrastructure and the Environment' (OPIE), which will receive almost €28 billion<sup>18</sup> (€22 billion from Cohesion Funds and €6 billion from the European Regional Development Fund). The national public contribution will be a further €10 billion taking the value to €38 billion – the largest operational programme in the EU. OPIE funds are administered by the National Fund and Ministry of Economy.

However, of these European funds received, only a small fraction (less than 10 percent) is directed to dedicated low carbon investments. Due to the very poor state of the road system, transport is the largest beneficiary of the OPIE funds. Renewable energy and energy efficiency by contrast account for only €1.4 billion, a sum that also includes investments to improve the efficiency of existing fossil fuel infrastructure. €1.7 billion is provided for energy security, which includes renewables, but also investments in oil and gas transmission pipelines and gas reservoirs. Other priorities include water, waste and environmental protection as well as education and technical assistance.

### Public financing institutions

The two main players in Poland are Bank Gospodarstwa Krajowego (BGK) and National Fund for Environmental Protection and Water Management.

### Bank Gospodarstwa Krajowego (BGK)

BGK is the state development bank for Poland. It was established in 1924 via the merger of three existing public banks. During the interwar period it focused on boosting economic development, including providing loans to large state enterprises and issuing municipal bonds to finance local government. Its activities were suspended in 1948 but reactivated in 1989 to issue bonds in the first privatised state enterprises after the communist regime fell. Its legal status is defined by a Special Act on Bank Gospodarstwa Krajowego of 14 March 2003 (with further amendments) and by the Banking Law of 23 August 2001<sup>19</sup>. It interacts directly with clients and has a network of 16 branches, three affiliates and two customer service establishments. BGK provides financial support to the Government's socio-economic programmes, including regional development. It also provides commercial banking services to public institutions and special public target funds – including those established to distribute EU funds – as well as to companies and small and medium-sized enterprises

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<sup>17</sup> European Cohesion Policy in Poland, 2009

<sup>18</sup> European Cohesion Policy in Poland, 2009

<sup>19</sup> Regulation of the President of Poland of 30 May 1924 merging the State credit institutions into Bank Gospodarstwa Krajowego (Dziennik Ustaw (Dz. U.) of 1924 No 46, item 477). No link to 2001/2003 laws

(SMEs). Current priorities include infrastructure, the public sector at central and local government level, housing, SMEs, export finance and energy efficiency.

BGK reports to the Ministry of Finance and also to the Ministry of Infrastructure, the Ministry of Regional Development, the Ministry of Economy and the Ministry of Treasury. It operates through a quasi-holding company structure – by financing and/or managing a series of government-dedicated funds as well as supporting government programmes. Funds are often set up in response to specific acts of legislation: for example, the Road Fund was set up to deliver investment in road infrastructure. Other funds focus on social housing, infrastructure (including road, rail), innovation, technical support and ‘thermomodernisation’ (energy efficiency renovation) of buildings. These funds receive capital from a number of sources including the State Budget, the European Budget, fiscal policies such as fuel levies, commercial banks, the European Investment Bank (EIB) and bond issuances. About one-third of the Road Fund’s capital comes from bonds raised by BGK and linked to specific programmes. As an example, BGK offered around €144 million in 3-year notes to finance road construction in August 2010. The offer was over-subscribed despite the fact that BGK hadn’t yet received a Treasury guarantee. Since 2009 BGK, as Bond-issuing Agent of the Road Fund has issued more than €4.6 billion in bonds<sup>20</sup>. In 2011 BGK received an A– rating from Fitch and has begun issuing its own bonds as part of its own funding activity through a medium term note programme. The A– rating is at the same level as that of the Polish Treasury and reflects BGK’s special development bank status and the state guarantee.

BGK manages and disburses the €67 billion of EU structural funds and works closely with the EIB. It also manages other funds including the European Commission’s Municipal Infrastructure/Finance Facilities; Rural Area Development Programme funds; a JESSICA urban development fund; JEREMIE holding funds; and \$11 million (€7.7 million) from the Global Environment Facility of the World Bank, UNEP and UNDP. Tools include preferential loans and sureties/guarantees.

As of 31 December 2010, BGK’s balance sheet assets totalled PLN 36 billion (€9 billion) with shareholder’s equity of PLN 5.32 billion (€1.33 billion) – giving a leverage (equity:assets) of around 1:7. Net profit was PLN 414 million (€103 million).

BGK does fund energy-related projects through its own lending activities. It is responsible for the Thermomodernisation Fund, one of the main lines of state support for energy efficiency. Under the Thermomodernisation Programme households, local authorities and cooperatives investing in energy efficiency can borrow via one of 12 commercial banks and receive a government-funded 25 percent cash-back from BGK upon completion and audit of the retrofit. In 2008, around 3,000 such cash-backs were paid. The Programme was funded from the State Budget to a value of PLN 270 million (€67 million). At year end the balance sheet of the Fund stood at PLN 377.4 million (€94 million).

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<sup>20</sup> Bloomberg, 21 August 2010,  
<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a12jSvh7DvG8>

## National Fund for Environmental Protection and Water Management

National Fund for Environmental Protection and Water Management (the National Fund) was established in 1989 as a state entity<sup>21</sup>. Its functions are defined by the National Fund Act of 27 April 2001 – the Environmental Protection Law<sup>22</sup> – which relates to environmental institutions and also encompasses the regional Vovoidship Funds for environmental protection and water management. The National Fund owns 77.27 percent of BOŚ bank. State Forestry owns 6.5 percent and other investors 16.23 percent.

The National Fund reports to the Ministry of Environment and the Ministry of Economy. Its purpose is to provide financial support to public and private institutions as well as to individuals for environment related investments. Its mandate is wide-reaching and includes air and water protection, conservation and forestry, geology and mining, education, monitoring and research. Historically it has focused on water and air protection, but renewables and energy efficiency are current priorities, and in future there will be an emphasis on energy efficiency.

The National Fund is capitalised via fiscal revenues related to environmental legislation including:

- > Ecological charges<sup>23</sup>;
- > Penalties for violation of ecological law;
- > Revenues resulting from carbon trading, although this will not continue in Phase 3 of the EU Emissions Trading Scheme (EU ETS).

The National Fund also receives money from EU Funds. In particular, it is the implementing authority for measures 9.1, 9.2, and 9.3 of OPIE. The fund as a whole provides finance for a range of environmental purposes relating to water, waste, environmental protection and low carbon power that totals €5 billion for the period 2007–2013. The National Fund also administers EU Funds relating to LIFE+, the ISPA pre-accession fund and convergence fund (€2.85 billion 2000–2006), and funds from the Norwegian and EEA Financial Mechanisms (€135 million)<sup>24</sup>.

Finally, the National Fund is also the National Operator of Green Investment Schemes (GISs). Under the GISs, the National Fund receives funds resulting from the sale of Poland's excess

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<sup>21</sup> As defined in the law of 27 August 2009 on public finances

<sup>22</sup> Link to Act (in Polish) <http://www.nfosigw.gov.pl/o-nfosigw/status-prawny/>. (Note this was amended on 20 November 2009)

<sup>23</sup> Including fees for using the environment for economic purposes; utilisation and concession fees under the geological and mining law; fees under the water management law; and fees resulting from the Act on Recycling Decommissioned Vehicles

<sup>24</sup> The National Fund website October 2010 : <http://www.nfosigw.gov.pl/en/absorption-of-foreign-founds/>

AAUs (assigned amount units or tonnes of GHG reduction)<sup>25</sup> to countries struggling to meet their emission reduction targets. These funds are ring-fenced for investments in climate change mitigation and adaptation in Poland.

Since its establishment in 1989, the National Fund has funded more than 14,000 projects, mostly loans and borrowings via BOŚ Bank. PLN 21.4 billion (€5.3 billion) was allocated and expenditure on co-financed projects totalled over PLN 76.5 billion (€19.0 billion) – mostly on water and air protection<sup>26</sup>.

The National Fund currently runs two priority programmes that provide finance for renewables and energy efficiency in addition to the GISs. The first of these is the Programme for Renewable Energy Projects and Highly Efficient Cogeneration. A third call is underway for this Programme, which aims to create 300 MW of new generation and modernise 50 MW. There are three parts to this call:

- > Part 1 – provides loans up to 75 percent of the total project cost (PLN 4 million to PLN 50 million, or €1 million to €12.4 million) and potential bonuses. It covers renewable energy technology including biomass (<20 MW), wind (<10 MW), geothermal, hydropower (<5 MW) and highly efficient cogeneration. Minimum project cost is PLN 10 million (€2.5 million); PLN 900 million (€223.8 million) has been allocated.
- > Part 2 – in cooperation with the Vovoidship Funds for Environmental Protection and Water Management. Each Vovoidship Fund could receive up to PLN 35 million (€8.7 million). Renewables covered are the same as for Part 1 plus combined heat and power (CHP) with biomass (<3 MW), biogas electricity and heat, heat pumps, and solar. For projects with a total cost of PLN 0.5 million (€0.12 million) to PLN 10 million (€2.5 million). Funds are provided via Vovoidship Funds up to 75 percent of value. PLN 560 million (€139.2 million) has been allocated.
- > Part 3 – is for solar thermal. Provides co-finance up to 45 percent plus grants for individuals and communities of apartment owners up to 100 percent value (although after bank fees and income tax is paid this actually amounts to 30 percent). PLN 300 million (€74.6 million) has been allocated<sup>27</sup>.

The second priority relates to the National Fund's role as the implementing institution for specific OPIE measures. Funds for each measure come from the EU funds supplemented by the National Fund funds and again calls are underway. The measures are:

- > 9.1 – for highly efficient generation of energy €71.77 million, with Polish co-financing of up to PLN 30 million (€7.4 million);

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<sup>25</sup> Poland has a target of 6 percent GHG reduction over 1990 levels – by 2009, reductions far exceeded this at 16.8 percent, so it has some capacity to sell

<sup>26</sup> The National Fund website October 2010 : <http://www.nfosigw.gov.pl/en>

<sup>27</sup> 2nd International Renewable Energy Congress, October 2010: Presentation: “National Fund for Environmental Protection and Water Management, Agnieszka Zagrodzka, Vice-Director of Climate Protection Department”

- > 9.2 – for effective distribution of energy €139.04 million, with Polish co-financing of up to PLN 50 million (€12.4 million); and
- > 9.3 – for thermomodernisation €76.67 million, with Polish co-financing amounting to 50 percent of expenses up to PLN 50 million (€12.4 million).

Finally, additional finance will be available via the National Fund's role as the National Operator of the GISs. Projects will receive subsidies from the sale of AAUs supplemented by additional loans and subsidies from the Fund. The initial focus will be on:

- > Energy efficiency in public buildings – PLN 1.06 billion (€262 million) for subsidies; PLN 2.1 billion (€520 million) for loans;
- > Biogas from agriculture – PLN 200 million (€49.6 million) for subsidies; PLN 300 million (€74.4 million) for loans;
- > Biomass CHP – PLN 50 million (€12.4 million) for subsidies; PLN 75 million (€18.6 million) for loans; and
- > Electricity networks to connect windpower – PLN 400 million (€99.2 million) for subsidies.

BOŚ Bank, majority owned by the Fund, has experience in providing finance to renewables. It has been involved in 3,139 projects (1991 to mid-2010) to a value of PLN 877 million (€217.6 million) from 1991 to mid-2010. It offers commercial loans; bridging loans prior to receipt of EU finance; loans from foreign credit lines including Germany's KfW Bankengruppe as well as the EIB and the Council of Europe Development Bank; preferential loans in collaboration with the National Fund and Vovoidship Funds; direct lending/co-finance with BGK and others; and municipal bond issues for local governments.

Dom Maklerski BOŚ, is part of the BOŚ Group and is a leading broker in Poland. It owns 100 percent of Eko Profit BOŚ – a public company which complements BOŚ Bank by providing services to start-ups and developing companies. It provides various forms of finance including loans, equity, subordinated loans, converted loans (mezzanine). It may take an equity stake or set up a Special Purpose Vehicle. It also provides supporting consultancy/project management where appropriate.

At the end of 2009 the National Fund's balance sheet stood at PLN 8.4 billion (€2.1 billion) – with a gross profit of PLN 1.1 billion (€282 million). In 2011, expenditure totals around PLN 11 billion (€2.8 billion), of which PLN 5.5 billion (€1.4 billion) is allocated to climate-related activities. The National Fund has experienced some difficulty in sourcing high quality projects to finance and as such the focus is shifting from dispersing money to finance renewable energy projects to a stronger focus on energy efficiency. In January 2011 the National Fund started a new industrial energy efficiency financing programme targeted at Poland's 150 largest companies (with energy usage >50GWh/year). PLN 780 million (€193.5 million) will be made available for low cost 5-year loans of up to 70 percent of the project value. The

National Fund has also made PLN 300 million to PLN 500 million (€74.4 million to €124 million) available for trialling smart grid technology.

### Ministry of Economy

The Ministry of Economy, Department of European Funds, is the implementing authority for other measures under OPIE not administered by the National Fund. These include:

- > 9.4 – for generation of energy from renewable sources;
- > 9.5 – for production of biofuels from renewable sources;
- > 9.6 – for networks facilitating reception of energy from renewable sources; and
- > 10.3 – for development of industry for renewable sources of energy.

### European Investment Bank (EIB)

In 2010, EIB financing in Poland amounted to €5.5 billion. During 2006–2010, the Bank pledged to provide funds totalling €17.4 billion for projects promoting European objectives in Poland. Lending has increased overall during this period. The focus of its lending is on four key areas: innovative economy; human capital; infrastructure and the environment; and development of eastern parts of Poland. However, only a small proportion of the EIB's activity related to low carbon investments: significant funding went to transport infrastructure-related projects, for example €550 million for motorways.

Nevertheless, in 2010 the Bank provided a €45 million loan to support the construction of the 120 MW Margonin wind farm in northwest Poland and a €20.8 million loan for the construction and operation of a new bioethanol plant in Goswinowice, southwest Poland. The Bank also provided a €50 million loan to co-finance projects promoting Poland's objectives of increased use of renewable energy and improved energy efficiency. This will support increased electricity production and heat generation from biomass and biogas-fired plants, while improving energy efficiency through the refurbishment of public buildings in Poland. The EIB also provided a €83 million loan to finance the modernisation and extension of the water and wastewater infrastructure in the City of Kraków<sup>28,29</sup>.

BGK works closely with EIB, which provides technical assistance to projects via the JEREMIE, JESSICA facilities etc.

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<sup>28</sup> The Warsaw Voice, 1 March 2011:

<http://www.warsawvoice.pl/WVpage/pages/article.php/15845/news>

<sup>29</sup> The EIB in Poland [http://www.eib.org/attachments/country/factsheet\\_poland\\_2010\\_en.pdf](http://www.eib.org/attachments/country/factsheet_poland_2010_en.pdf)

## Commercial banks

The leading commercial Polish Bank with a 32 percent market share<sup>30</sup> is Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna (PKO Bank Polski). PKO was established in 1919 as a fully state-owned bank, but was floated and now operates as an independent commercial bank. However the Government retains a 51 percent share. PKO was one of the original investors in the Marguerite Fund<sup>31</sup> – committing €100 million of equity.

Aside from PKO, the majority of banks are now privatised and in foreign ownership. Key banks include Bank Pekao SA (UniCredit SA main shareholder), Bank Śląski (ING), Citi Handlowy (Citibank), BRE Bank (Commerzbank). HSBC is also present as is Raiffeisen. To date BRE bank has been the biggest lender to renewables project finance – with €200 million lent to two projects, followed by Raiffeisen Bank Polska, which has lent €152 million to two projects<sup>32</sup>. Presentations given at a Warsaw conference in 2010 by PKO Bank Polski and Millennium Bank lend support to the prevailing view that, at least in the short-term, there is no lack of private capital in Poland that could be used to finance an increase in low carbon infrastructure. The view is that Polish utilities have strong balance sheets against which they could easily raise sufficient bonds to finance the replacement of ageing assets – and against which the banks would be willing to lend. Instead other factors are preventing such investment taking place<sup>33</sup>.

## Pensions

The Polish Government has ruled that only 10 percent of pension funds can be invested outside of Poland. This ensures that they contribute to domestic investment and growth and help retain Polish control of strategic assets. Concern was expressed that this could create an asset bubble with equity prices rising and yields on government bonds falling, but so far the funds are accumulating and pay-outs are low as pensions have mostly been taken out by the young.

## 3. Financial challenges

The threat of imminent energy shortages and high requirement for infrastructure investment mean that Poland represents a prime opportunity for investors – and there is a lot of interest in the country. However, investors face significant challenges in stepping up the scale of their investment. This is due to:

- > Low visibility on Poland's long-term decarbonisation plans;

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<sup>30</sup> Financial Times, June 2010, [http://www.ft.com/cms/s/0/94c476a2-7e1a-11df-8478-00144feabdc0,dwp\\_uuid=5540c702-4719-11df-b253-00144feab49a.html](http://www.ft.com/cms/s/0/94c476a2-7e1a-11df-8478-00144feabdc0,dwp_uuid=5540c702-4719-11df-b253-00144feab49a.html)

<sup>31</sup> Marguerite Fund is a large infrastructure fund set up by six core public institutions which aims to bring together public and private funds to invest in EU infrastructure

<sup>32</sup> Bloomberg New Energy Finance

<sup>33</sup> EIB Regional Forum, Warsaw, November 2011

- > A preference for business as usual with respect to sourcing and spending of European public funds; and
- > The degree of State control and influence over strategic companies including over energy and public finances.

**Prospects for long-term decarbonisation** – In February 2011, the World Bank produced a report on the low carbon opportunity in Poland<sup>34</sup>. It found that Poland could cut its GHGs by almost one-third by 2030 using existing technologies and at a cost of €10–€15/tCO<sub>2</sub>. It suggested that costs to Poland would be higher than those for the ‘average EU country’ and that they would peak by 2020, but that thereafter the shift to low carbon assets would augment growth. The power sector generates almost half of Poland’s emissions – and represents a significant low carbon investment opportunity. However, some potential investors in low carbon assets remain to be convinced that emissions reduction is a high priority for the Government. Poland’s outspoken opposition to a move to a 30 percent target creates uncertainty on this issue and indicates that other issues have higher importance<sup>35</sup>.

In particular, it is clear that energy security concerns take predominance over emissions reduction. This is unsurprising given Poland’s high dependency on coal and on imported Russian gas. The Polish Government recognises that the country cannot continue to rely on coal-fired power generation and has an aspiration to reduce dependency on the fuel by around 40 percent over the next 20 years<sup>36</sup>. However, the mining community also holds strong political influence and reductions in coal use would threaten employment levels in affected regions.

Energy security concerns are driving Polish interest in nuclear power. Poland is considering investing in a new nuclear power plant in Lithuania (co-funded by Estonia, Latvia and Lithuania). Poland is also planning to build two nuclear power plants with installed capacity of 6 GW by 2030. The first plant should be ready by the end of 2020, although meeting this deadline has been described as ‘very tough’. The state-owned, and largest, power company, Polska Grupa Energetyczna (PGE) will lead the investment, which is estimated to cost at least €20 billion, with one or more strategic partners. The Polish Parliament is expected to pass the necessary legislation required to build the plant in July 2011<sup>37</sup>. But this push is now being somewhat overshadowed by the opportunities presented by shale gas. Recent discovery of huge reserves in Poland has led to a dash by multinational oil and gas groups to secure drilling rights – shale gas provides a unique opportunity for Poland to diversify its fuel mix away from coal and Russian gas imports<sup>38</sup>.

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<sup>34</sup> World Bank (2011) Transition to a low emissions economy in Poland

<sup>35</sup> FT (21 June 2011) Poland blocks Brussels effort on emissions targets  
<http://www.ft.com/cms/s/0/c633d912-9c3c-11e0-acbc-00144feabdc0.html#axzz1QYgWBqhl>

<sup>36</sup> FT (17 November 2010) Coal-fired source of a looming dark age

<sup>37</sup> FT (29 June 2011) Energy: State set to push ahead with nuclear future despite concerns

<sup>38</sup> The Times (April 5 2010) Dash for Poland’s gas could end Russian stranglehold

Concerns over energy security have combined with broader concerns over loss of control to foreign companies and exposure to volatile foreign markets, and have led the current Government to retain controlling stakes in existing strategic companies and sectors. This is a reversal of the previous Government's policy which sought to liberalise the energy market and separated generation, distribution and transmission. Vertical integration has led to the domination of the energy sector by four regionalised energy companies: PGE, Energa, Tauron and Enea. The current Government (elected in 2005) is aiming to create state champions with an eye on successful models such as EDF in France. In addition, relative isolation from foreign companies and banks was part of the reason Poland escaped recession and it fears loss of control in future.

In August 2010, in line with this strategy, the State owned 85 percent of PGE, 51 percent of Enea, 36 percent of Tauron and 84 percent of Energa. However, a rising budget deficit<sup>39</sup> has subsequently forced the State to sell off significant stakes in the latter three companies, while retaining PGE as a state champion. PGE was set to purchase 84 percent of Energa however the anti-monopoly office UOKiK overturned this deal in January<sup>40</sup>. The Government appeared to favour sale to Polish interests to prevent foreign control, however, the purchase of Enea by Poland's wealthiest man – Jan Kulczyk – fell through at the last minute at the end of 2010. As a consequence a deal with PGE is now back on the table.

The impact of political flip-flopping on energy policy and politically influenced ownership creates uncertainty of direction and policy. Doubt over ownership means that investors are not sure who they will deal with in future. Both of these factors can act as a deterrent to investment. Tying up energy companies with privatisation also distracts them from developing and implementing strategic investment.

The predominance of coal also prevents ownership and investment in existing plant by foreign utilities due to the need to decarbonise their portfolios. Vattenfall had begun to establish a significant minority share in Poland's energy market but is now to withdraw on account of its ambition of achieving a 50 percent reduction in emissions from energy supply by 2030 and to be emissions-free by 2050. There may also have been a reluctance to allow Vattenfall or other foreign utilities control over coal-based production as they may have been more likely to implement cost-cutting leading to job losses. Foreign investment in renewables is more widely encouraged perhaps because market penetration is lower and the assets are not seen to be as strategically important.

Finally, Polish MEP and former Prime Minister Jerzy Buzek, who is now President of the European Parliament, has been pushing for the creation of a European Energy Community together with Jacques Delors. This would create a single market in energy and allow the joint purchase of gas at the EU level. This would increase bargaining power and reduce costs due

<sup>39</sup> The budget deficit is close to the 55 percent of GDP legal threshold that would force it to make widespread cuts. Municipal borrowing is a further 1.2 percent of GDP

<sup>40</sup> Reuters, 14 Jan, 2011: <http://www.reuters.com/article/2011/01/14/pge-idUSLDE70D1C120110114?feedType=RSS>

to economies of scale; it would also increase Poland's energy security by lessening its dependency on unilateral Russian gas imports.

**A preference for business as usual with respect to sourcing and spending of European public funds** – As one of the newer CEE members of the EU, Poland benefits from Cohesion Policy and is the largest net recipient of funds from the EU Budget. It is keen to see this continue and so is a strong opponent of any Budget restructuring or reduction that might see its share reduced. Recent moves to introduce environment 'proofing' of expenditure and in particular any low carbon controls over structural funds in the new EU Budget are not looked upon favourably. A preferred outcome for Poland would be for Cohesion Policy to remain the main EU Budget mechanism, with Member States retaining control over funds.

The OPIE programme receives some funds from the EU Budget for low carbon investment, but it is felt that having several implementing authorities (i.e. the Ministries and the National Fund) complicates the process and reduces efficiency. Criticisms have been made of the unnecessarily complicated and opaque application and evaluation processes together with suggestions of the unequal treatment of applicants<sup>41</sup>.

The EU ETS – while it has brought benefits in the form of funding for GISs – is widely considered to have failed to deliver a sufficiently high carbon price to deter future investment in fossil fuels. In addition, Poland has been granted a transition period for the obligation to purchase all allowances from 2013<sup>42</sup>. This exemption provides a de facto support to cheap coal-fired generation which only has to cover variable costs and prevents investment in lower carbon generation which cannot compete.

One area where the EU is having a more positive impact is on the liberalisation of the energy markets. Long term power purchase agreements dominated the electricity market historically but were brought to an end with a new Energy Bill in 2007 as the European Commission found that they constituted State Aid. The Bill also liberated energy prices from regulation apart from household prices. These measures will increasingly have a positive impact on industrial investment. However, household prices continue to be kept artificially low through regulation and power companies are obliged to recover costs from industrial sources. While overall regulation is moving in the right direction, electricity and gas prices for both households and industry remain lower than EU averages, which reduces potential returns to investors<sup>43</sup>. Furthermore, regulated prices undermine the case for investment in

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<sup>41</sup> For example Presentation at the 2<sup>nd</sup> International Renewable Energy Congress, 2010 by Maciej Szwedowski, Squire Sanders

<sup>42</sup> Extract from Energy Policy to 2030: "The systems operating in Poland as at 31 December 2008 will purchase only some of the allowances they need at auctions – 30 percent in 2013 (as compared to average emission in the years 2005-2007). The number of free allowances will be gradually reduced in the years 2014–2019 to reach the full auction system in 2020. Additionally, the possibility of winning free allowances will be granted to systems in respect of which the physical investment process would begin prior to 31 December 2008."

<sup>43</sup> Electricity prices including all taxes 2nd semester 2009 – households: 12.9 €/100 kWh compared to the EU average of 16.4 €/100 kWh; industry: 9.3 €/100 kWh compared to the EU average of 10.2 €/100 kWh. Natural gas prices including all taxes 2nd semester 2009 – household: 12.8 €/kWh

household energy efficiency: if the full energy costs are not borne then this encourages profligacy and reduces potential savings from lowering usage. It also increases demand for grants/subsidies at public cost to ensure investments are economic.

**Degree of State control and influence over strategic companies including over energy and public finances** – State ownership ties investment strategy to political goals that tend to emphasise energy security over low carbon investment. The reluctance to relinquish control is understandable given Poland's history of foreign intervention; however, such political control is a deterrent to private investors and inhibits market mechanisms.

As well as the energy companies, the State also enjoys considerable influence over BGK and the National Fund through their Supervisory Boards. A representative from the Finance Ministry Chairs BGK's Board and the Minister for the Environment appoints the Supervisory Board for the National Fund, which is also heavily influenced by the Ministry of Finance. Restructuring is therefore inevitable with each change of Government, which creates tensions between short and long-term commercial and political goals.

Similar political/commercial tensions also arise in the key privatised banks. PKO Bank Polski and BOŚ Bank are commercial banks; however the State retains significant shareholdings and therefore influence. Both are keen to divest themselves of State influence. BOŚ Bank was 45 percent owned by SEB which wanted to buy out the State, however, instead it was itself forced out in the 1990s.

Finally, while renewables investment is gradually picking up there are a number of additional barriers to investment:

- > The current quota system of Green Certificates driving renewables investment is set to expire in 2017. A lack of clarity over what will happen after this date may delay investment, although discussions are now beginning.
- > As in many other EU countries, the planning process is delaying investment. This is a particular problem in Poland as when the market was first opened up for wind there was a deluge of applications (anecdotally we were told some 44 GW worth) especially for Energa/Enea in the North. Many applications were from inexperienced developers. These non-professional grade applications are now limited in number as applicants are now required to prove intent.
- > Local and national bureaucratic processes are non-transparent and so not investor-friendly.
- > Site selection was being delayed as Poland had not fulfilled its requirements under Natura 2000.
- > Similarly, Poland lacked the necessary legislation and support for environmental impact assessments, which were a prerequisite for EIB lending.

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compared to the EU average of 14.7 €/100 kWh; industry: 8.4 €/kWh compared to the EU average of 8.2 €/100 kWh. Energy, transport and environment indicators, Eurostat, 2010 edition, February 2011

- > Finally, local utilities must purchase all green certificates presented to them from the distribution companies, however, there is no minimum price for these which can cost up to 95 percent of the penalty. Questions were raised as to how long they would honour the requirement if they can not sell them for more than they are paying for them. There are fears that distribution companies are vulnerable to any renege as they are separate companies.

#### 4. Conclusion

During the second half of 2011 Poland holds the 6-month rotating EU Presidency. At the centre of Poland's priorities is the next European Budget (2014–2020). Presidency priorities will ultimately focus on securing an increased share of the EU Budget for Poland – as part of a broader agenda on using the EU Budget as an investment tool to serve implementation of the Europe 2020 Strategy – and so they oppose major Budget reform. The main task, as seen by the Polish Presidency, is to put the EU on a path to faster economic growth and enhanced political community. The Presidency will therefore focus on three priority areas:

- > European integration as a source of growth – the new Budget should enforce enhanced cooperation within the EU, with Cohesion Policy and Funds remaining a key policy tool for achieving greater integration. Completing the Single Market Act is also a key objective.
- > A secure Europe – a focus on energy, food and defence including developing an external energy policy for Europe; reform of the Common Agricultural Policy to ensure European funds are used more effectively; and the improvement of economic governance in the EU.
- > Europe benefitting from openness – an aspiration to expand Europe's influence through further EU enlargement and the development of cooperation with neighbouring countries.

References to tackling climate change are conspicuous by their absence<sup>44</sup>.

This is perhaps in part because Poland's energy policy priorities are in a state of flux due to the current unfolding situation around potential shale gas opportunities. In addition, concerns over energy security and preserving Poland's share of the EU Budget divert political attention away from developing low carbon infrastructure – despite fears of an imminent power shortage due to the expected closure of a significant proportion of Poland's power plants in 2016. While there is an increasing focus on driving energy efficiency investment, there does not appear to be an official acknowledgment of the energy security benefits of investing in low carbon assets at scale (renewables and massively increased energy efficiency investment) as opposed to unabated coal or shale gas. State control over key energy and financial entities means that these political goals are limiting the opportunities for low carbon investment, with short term political considerations dominating

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<sup>44</sup> The Priorities of the Polish Presidency of the EU Council

consideration of longer term strategic and macro-economic benefits. The resultant uncertainty is acting as a barrier to increasing private investment into low carbon assets.

EU membership has done little to catalyse the low carbon agenda to date. Indeed, EU policies on derogation under EU ETS have served to prolong the life of cheaper coal-fired generation in Poland as in many other Member States. It will be essential that the EU stands by the expiration of its derogation and ensures compliance or this situation will continue. Similarly, Poland is not on schedule to deliver the regulations that are a prerequisite for it receiving funds from the New Entrant Reserve Fund for support of carbon capture and storage (CCS) investment. Successful reform of the EU Budget through environmental 'proofing' of investments and introducing criteria to prevent lock-in of high carbon infrastructure – something Poland would be likely to block – looks to be the only viable tool with which the EU can shape future Polish energy investment choices toward low carbon options. Poland is a prime candidate for greater energy efficiency, renewable energy as well as CCS investment.

Reducing short-term political influence over key companies could be another driver to unlock low carbon investment – but the State will first need to be persuaded of the green growth agenda and the economic benefits this can bring. The Prime Minister Donald Tusk and his ruling party the Civic Platform remain popular due to Poland's relatively strong economic performance through the financial crisis. The recent positive outcome in local elections for the Civic Platform party confirms continued support for their policies – and an imminent change of Government, and attitudes to the low carbon opportunity, seems unlikely.

Rising growth and prosperity in Poland will increase energy usage and associated GHG emissions unless such investments are made. However, this increasing growth and rising prosperity will also increasingly undermine its claims of relative poverty and could reduce the level of ongoing EU support through Cohesion Funds. Reconciling these issues is key to unlocking greater low carbon investment – both longer term growth and continued European support is very likely to be dependent on a shift to a low carbon sustainable economy. While climate change may be low on the list of priorities for many of Poland's leading political thinkers, Poland's increasingly younger demographic may well change the public nature of the debate<sup>45</sup>. As the generation most likely to be affected by climate change, they are likely to judge their current leaders by their ability to set the foundations for a sustainable future. There will be no shortage of private organisation willing to invest in Poland to create this future if the opportunity is presented.

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<sup>45</sup> Eight of Warsaw's most influential think tank experts have just published an [open letter](#) [link in Polish] arguing that ahead of Poland's EU presidency, which starts in six weeks, the government is neglecting climate-change issues  
[http://www.economist.com/blogs/easternapproaches/2011/05/polands\\_environmental\\_politics](http://www.economist.com/blogs/easternapproaches/2011/05/polands_environmental_politics)