# **Missing sustainability**

Study on EBRD controversial energy lending in Ukraine





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## **Executive summary**

The European Bank for Reconstruction and Development (EBRD), a public institution, 60% owned by the EU and its member states, has invested over 1.2 billion euros into energy projects in Ukraine between 2006 and 2013. While the bank's founding document require it to "promote in the full range of its activities environmentally sound and sustainable development"<sup>1</sup> more than half of the bank's energy investments in Ukraine for this period hardly served the purpose of sustainable development promotion. In this period the EBRD has supported nuclear energy production and new output capacities for nuclear power plants, export-oriented infrastructure, as well as controversial initiatives in the renewable energy sector. The EBRD has to revise its policies and their practical application in order to stop public money flowing to unsustainable energy projects. Based on the analysis of practical cases in Ukraine, this paper elaborates a number of recommendations towards the EBRD.

<sup>1</sup> http://www.ebrd.com/downloads/research/guides/basics.pdf.

## Analysis of the EBRD's energy investments in Ukraine

The EBRD is the biggest financial investor in Ukraine. Ukraine's energy sector benefits significantly from EBRD support – over 1,2 billion euros of direct investments between 2006 and 2013 (see Figure 1). Energy is one of the priority cooperation areas between the EU and Ukraine, and, correspondingly, between the EBRD and Ukraine.

The priority areas in the bank's Energy Operations Policy 2006 are set much too widely and in practice allow the bank to support virtually any type of project in the energy and natural resources sectors, starting from natural gas exploration and ending with exporting infrastructure for hydrocarbons and power to the EU.

High inefficiency and heavy pollution were acknowledged by the bank as key threats to energy security and to shifting towards sustainable energy systems in the bank's countries of operations.





Despite this statement, over 60 % of the bank's investments went to unsustainable energy sources and are in fact supporting "business as usual" in Ukraine's energy sector. Only 38 % of bank's energy investments in Ukraine were allocated to renewable energy and energy efficiency projects (see Figure 2). Newly installed renewable energy capacities got only about EUR 83 million and municipal energy efficiency projects EUR 183 million (7 percent and 15 percent respectively of the bank's total energy lending in the country (see Figure 3).

Although a few more EBRD projects include certain energy efficiency improvements (like energy efficient petroleum filling stations or minor improvements in electricity transmission) they are not helpful in moving towards a more sustainable energy system.



\*Approved and signed projects in categories "Power & Energy", "Natural Resources" and "Energy Efficiency" and Ukraine Sustainable Energy Finance Facility (USEFF) according to bank's categorisation as of September 26, 2013;

<sup>\*\*</sup>Oil, gas and nuclear energy (including supporting infrastructure) are considered to be unsustainable investments according to CEE Bankwatch Network's classification, while renewable energy sources and investments into municipal energy efficiency improvements are classified as sustainable investments.

### Export-oriented infrastructure and nuclear energy – the main recipients

As Figure 2 illustrates, the biggest chunk of the EBRD's financial support to the Ukrainian energy sector was allocated to nuclear energy and supporting infrastructure, e.g. high-voltage transmission lines from nuclear power plants in different regions of Ukraine to lay the ground for increasing nuclear and coal electricity exports to the EU countries (Case study: Dirty nuclear and coal electricity exports). Nuclear energy is not regarded as sustainable energy source due to the high risks and vast potential negative impacts associated with nuclear accidents at power plants as well as with uranium mining, nuclear fuel production and spent nuclear fuel and radioactive waste management.

### Case study 1: EU support for dirty nuclear and coal electricity exports

## Second Backbone Project (EBRD, EIB) and Nuclear Power Plants Safety Upgrade Project (EBRD, Euratom)

In 2005 Ukraine and the EU signed a Memorandum of Understanding on co-operation in the field of energy<sup>2</sup>, according to which "the EU and Ukraine share convergent interests and both could benefit from the integration of their respective energy markets, thereby enhancing the energy security of the European continent." In 2010 Ukraine became a member of the Energy Community of Southern and Eastern Europe.

Between 2005 and 2010 the EBRD and the EIB invested approximately EUR 650 million in a number of high voltage transmission line projects (Rivne-Kiev<sup>3</sup>, Ajalyk-Usatove<sup>4</sup>. Zaporizhya-Kakhovka<sup>5</sup>) developed by the Ukrainian state-owned utility Ukrenergo. The EBRD claims that these transmission line projects aim to increase the overall stability of the grid system in Ukraine, as well as the quality, efficiency and reliability of the electricity supply in the Odessa and Kyiv regions.6 In 2010 the EBRD indicated its interest in supporting the "second backbone" ultra high-voltage corridor<sup>7</sup> (total approximate cost



EUR 2.6 billion) that is to connect the substations at Kakhovska and Primorska with the Dnistrovska pumped storage plant and the Khmelnitska nuclear power plant (NPP).

Looking at Map 1 below, it is apparent that once all of the planned transmission line projects are completed, a continuous 750 kV transmission corridor over 1500 kilometres in length from east to west will connect three Ukrainian NPPs (totaling twelve nuclear reactors) and two hydro pumped storage plants.

<sup>2</sup> http://ec.europa.eu/dgs/energy\_transport/international/bilateral/ukraine/doc/mou\_en\_final\_en.pdf.

<sup>3</sup> Rivne Kyiv High Voltage Line Project: http://www.ebrd.com/english/pages/project/psd/2007/37598.shtml.

<sup>4</sup> Odessa High Voltage Grid Upgrade: http://www.ebrd.com/english/pages/project/psd/2005/33896.shtml.

<sup>5</sup> South Ukraine Transmission Project: http://www.ebrd.com/english/pages/project/psd/2009/40147.shtml.

<sup>6</sup> See the project summary documents of the Odessa High Voltage Grid Upgrade and Rivne Kyiv High Voltage Line Project.

<sup>7</sup> By publishing a procurement notice on its website – a standard sign that the EBRD is considering a project but has not yet approved the financing.

According to the banks, these projects will also contribute to reducing  $CO_2$  emissions and will help foster the development of renewable energy sources. Yet the Ukrainian Energy Strategy up to 2030 emphasises how the "second backbone" and the Rivne-Kyiv-Donbass corridors will "create conditions for the integration of the Ukrainian grid into the European network and significantly increase electricity exports".<sup>8</sup>

According to the Energy Strategy of Ukraine up to 2030 (elaborated in 2006)<sup>9</sup>, Ukraine plans to become a major electricity exporter in Europe. Currently Ukraine exports electricity to the EU only from the Burshtyn Energy Island which is connected via direct current cables to the EU network, while export from other power plants (including nuclear) is limited because of a lack of necessary infrastructure and "nuclear safety related embargo" which according to the EBRD limits Ukraine's ability to trade electricity with the EU.<sup>10</sup>

There are several aspects of this plan that raise serious concerns. By 2020, twelve out of 15 nuclear reactors in Ukraine will reach the end of their design lifetime and are to be closed and decommissioned. The Ukrainian government, despite failing to accumulate any funds for decommissioning, decided in 2004 to approve a plan to extend the lifetime of reactors<sup>11</sup> for another 10-15 years. The most costly component of the lifetime extension program is the modernisation of old and worn out equipment, and such modernisation measures are envisaged within the Complex (Consolidated) Nuclear Power Plants Safety Upgrade Programme (NPP SUP).

In 2010 the EBRD and Euratom announced their intension to finance NPP SUP. The EBRD describes the aim of the program as "safety upgrades only, at all 15 operating nuclear power units in Ukraine to bring them in line with internationally accepted safety standards and the Ukrainian requirements."<sup>12</sup> It is a seven year program with a noble objective: safety upgrades, but these upgrades will enable Energoatom, Ukraine's state operator of NPPs, to prepare old reactors for lifetime extension. However, ample evidence supports the idea that when operating nuclear reactors beyond their intended lifespan, the number of incidents rises sharply with the age of the units.<sup>13</sup> Although the EBRD denies its involvement with the lifetime extension of the reactors, the Ukrainian side has no problem with admitting that the SUP measures are a necessary component of lifetime extension.<sup>14</sup> The other part of the problem is that Ukraine's nuclear electricity is perceived to be cheap. The tariff is kept low (currently it's about 2 euro cent) by the National Electricity Regulatory Commission (NERC) and covers neither safety upgrades and modernisation costs, the cost of spent nuclear fuel treatment and utilisation, nor the full cost of decommissioning.

In March 2013 the EBRD has approved EUR 300 million loan to NPP SUP but to date it is still not effective and no money has been disbursed. Later in 2013 European NGOs has been actively calling<sup>15</sup> on EU institutions to stop further proceedings with both EBRD and Euratom loans because, additionally to above mentioned problems, Ukraine was found to be in non-compliance with Espoo Convention requirements by not preparing environmental impact assessment (EIA) in the case of nuclear units life-time extensions and not consulting it with neighboring states.<sup>16</sup> To date, the decision on Euratom loan has not been made public or yet postponed.

10 Project summary document for Ukraine NPP Safety Upgrade Program http://www.ebrd.com/english/pages/project/psd/2011/42086.shtml.

<sup>8</sup> The Energy Strategy of Ukraine for the period up to 2030: 3.1.5. Present state and further development of electricity networks.
9 Energy Strategy of Ukraine up to 2030 http://zakon.rada.gov.ua/signal/kr06145a.doc.

<sup>11</sup> Complex Lifetime Extension Programme for operating blocks of nuclear power stations, approved by Cabinet of Minister's decree from 29.04.2004.

<sup>12</sup> http://www.ebrd.com/english/pages/project/psd/2011/42086.shtml.

<sup>13</sup> Meyer, N., D. Rieck, and I. Tweer. Alterung in Kernkraftwerken. Greenpeace, Hamburg, 1996 (revised version 1998).

<sup>14</sup> Complex (Consolidated) Nuclear Power Plants Safety Upgrade Programme in Ukraine, page 14.

<sup>15</sup> Letters to the EBRD President and EU Commissioners from CEE Bankwatch, Greenpeace, FoEE; Open appeal from about 40 European NGOs: http://bankwatch.org/publications/appeal-stop-european-commission-supporting-ukraine-violating-international-law.

**<sup>16</sup>** Letter to Ministry of Environmental Protection of Ukraine from Implementation Committee of Espoo Convention, dated March 25, 2013: http://www.ecoclubrivne.org/files/Espoo13.pdf.

The second major concern is with what level of CO<sub>2</sub> emissions would be stimulated to decrease. Currently Ukraine has excessive electricity generating capacities, though mostly old and outdated. Due to the fact that priority to work as base load capacities is given to nuclear plants, many of the country's thermo-power plants (TPPs) stand idle, thus do not emit. This should change and emissions should increase rapidly as soon as exports from those TPPs become technically possible. This will happen as soon as the "second backbone" transmission corridor becomes operational and Ukraine's energy grid is synchronised with the European Network of Transmission System Operators for Electricity (ENTSO-E). It is also worth mentioning that a significant number of the TPPs are or are supposed to be privatised, i.e. all the export revenues will go to private companies while the infrastructure for transmission will be built at public expense. DTEC, one of Ukraine's biggest private energy companies that owns TPPs, is already exporting electricity to EU member states

These export-oriented projects may result in a number of negative implications for the environment and people: the risk of accidents and uncompensated impacts from nuclear power plants' operations, negative impacts on the livelihoods of local people along transmission lines and near TPPs, etc. The question of benefit distribution is also important – in some of these projects private companies are involved, thus the majority of revenues go to private hands, with ordinary people having to deal with the real risks.

Furthermore, the construction of new high-voltage transmission lines between nuclear power plants is not the fastest and cheapest way to tackle the problem of high electricity loses in transmission and distribution – it takes years after a loan's approval to even start the new line construction, meanwhile the existing distribution grids desperately need to be refurbished to effectively decrease losses of electricity.

It is important to stress that EU citizens themselves are at risk of being exposed to some of the negative impacts that may arise from producing nuclear energy in Ukraine and exporting the electricity to Europe. Most significant of course is the risk of nuclear accidents – seeing an end to their own nuclear programmes while at the same time supporting the lifetime extension of nuclear generating capacities in their own backyard is a problematic contradiction and does not help protect people living in the EU from the risks that nuclear energy poses.

The current Energy Operations Policy allows the bank to make investments into the nuclear energy sector "without a direct link to the closure of high risk reactors"<sup>17</sup>. The policy stipulates that "... while the Bank will not consider providing financing to new reactors, it may provide financing to an operating facility in relation to nuclear safety improvements,..."<sup>18</sup>. The case of the Ukrainian Safety Upgrade Programme demonstrates, however, that this current policy, although saying nothing about lifetime extension financing, in fact allows the bank to finance nuclear sector programmes which enable old units to operate beyond their designed lifetime. This has to be seen as a direct support for the nuclear industry, especially in situations when nuclear electricity tariff is kept on the level below full production cost as in case of Ukraine. The EBRD should not invest in nuclear energy as it is neither a sustainable energy source nor a new innovative technology needing extra support. The new EBRD energy strategy (to replace the Energy Operations Policy from 2006) should contain clear formulations that in the nuclear sector the bank can only support decommissioning and the safe and secure management of radioactive waste and spent nuclear fuel.

<sup>17</sup> Energy Operations Policy (from July 2006).

<sup>18</sup> Energy Operations Policy (from July 2006).

## EBRD financing new small-scale renewable projects: off on the wrong foot

Small-scale decentralizsed renewable energy sources are usually regarded as a sustainable "green" energy. However, even a small "greenfield" project if badly sited or poorly implemented can have tangible negative impacts on both local populations and the environment. This fact should be carefully taken into consideration, but in case of Ukraine, there are no legally binding criteria or guidelines that would require the screening of projects for sustainability before a "green tariff" is granted. The EBRD's internal safeguard policies as well as specifically developed papers and a "screening tool" has not proved to be sufficient to avoid unsustainable investments (see Case Study 2: the Goloshyno small HPPs).

In 2009 the EBRD established the EUR 50 million Ukraine Renewable Energy Direct Landing Facility (later renamed the Ukraine Sustainable Energy Landing Facility) to support the development of small-scale projects in all renewable energy generation sectors, including hydro, wind, biomass and solar power. While the initiative is welcomed and timely, the first projects to be developed were not transparent, jeopardising the whole notion of renewable energy as sustainable and socially-acceptable.

When launching the facility, the EBRD commissioned a strategic environmental review of renewable energy technologies with the purpose of identifying "the optimal areas of Ukraine for the development of renewable energy generation facilities"<sup>19</sup> and "key environmental issues associated with renewable energy projects and provide a source of environmental and social data relevant to guide and inform later environmental reviews of specific projects."<sup>20</sup>

The review identified the Carpathian mountain region as an area sensitive to the development of small hydropower projects due its high ecological value. During consultations however the EBRD made it clear that the review is not a full strategic environmental assessment, thus for example it did not provide information about the potential cumulative effects from multiple small hydropower plants on one river or in one river basin. Additionally the small HPP "Carpathian screening tool" and "process flow chart" were developed to focus discussions and planning of small HPPs and demonstrate "how interactions between small HPP developers, stream/river stakeholders, NGOs and interested parties lead to acceptable small HPP operations".

The Carpathian Mountains appear to be the most attractive area for small HPP development in Ukraine from a commercial point of view. The hydroelectric potential of Carpathian rivers is among the highest in Ukraine. Small HPP regional programmes<sup>21</sup> are mushrooming in the region, triggered in part by the feed-in tariff law. Yet such programmes are being developed without strategic environmental assessments, and some projects, mostly the derivative type of small HPPs, violate the law, neglect local people's concerns, and destroy rivers and landscapes. In 2011 strong public resistance to this boom of small HPP construction in the region began to unite local activists, environmental groups and tourism associations.

In this context the EBRD's proposal to work with developers on "acceptable small HPP operations" is timely and welcomed as a benchmark for sustainable small hydro and best practice for public involvement.

**<sup>19</sup>** Non-technical summary of Environmental Report of USELF SER, December 2011.

<sup>20</sup> http://www.uself.com.ua/index.php?id=33&L=2.

<sup>21 336</sup> SHPPs siting scheme for Zakarpatska oblast (2009-2010), 45 SHPPs siting places within state programs of flood protection measures, including in Ivano-Frankivska and Zakarpatska oblasts.

#### Case study 2: the Goloshyno small HPPs

### EBRD's Ukraine Sustainable Energy Lending Facility (USELF)

In September 2012 the first small HPP project under the facility was announced near Goloshyno on the White Cheremosh River in the Carpathians. While the proposed construction sites are not in a protected area, they are located along a stretch of river with a high ecological value, home to a number of protected fish species.

The project promoter LLC Hydropower posted a non-technical project summary to its and the facility's websites and provided the following information: "Comments can also be made at the public meeting which will be announced at the project website late September 2012. The date, time and location of public meeting will be announced two weeks before the event, and advertised in local mass media."<sup>22</sup> LLC Hydropower replied to an official request for more information about project on 25 December, one day before the final decision of the EBRD about the project<sup>23</sup>, indicating that the public consultation meeting was announced in only one village of Goloshyno and just two days before the meeting, with no notification posted on the company's website. Information about the potentially adverse environmental and social impacts of the projects was not sufficiently disclosed to local communities. According to local activists, during the public meeting these communities did not receive information "on risks to and potential impacts with regards to environment ... and proposed mitigations plans"<sup>24</sup>. As such LLC Hydropower actions were not fully in line with the provisions of the EBRD Environmental and Social Policy.

In spite of EBRD promises, NGOs and other interested parties like tourists associations were excluded from project preparations. In its reply<sup>25</sup> to an open NGOs letter, the EBRD acknowledges certain failures in provisions for public engagement however leaves all the responsibility to Ukrainian authorities and to company and does not consider those gaps significant enough to require rectifications. Gaps in the environmental impact assessment (EIA) were revealed only after the project was approved by the bank as EIA materials were not available to public before 25 December. These gaps<sup>26</sup> include an analysis of seismic activity and its impacts on the safety of a 4,5 m high dam, analysis of impacts on river ecosystem



Public action in a front of the EBRD office in Kiev, 14 March 2013. Author: M. Petyakh.

from water reservoir, etc. During dedicated meeting requested by Ukrainian NGOs on 15 February 2013<sup>27</sup>, banks stuff, company and consultant were all trying to convince public about various improvements to the initial project design done on the basis of additional studies which should have covered the gaps of an EIA. But the text of key study on fish and Environmental and Social Action Plan (ESAP) were refused to be disclosed at that time so civil society members did not have any more information besides faulty EIA to rely on and therefore chances of building a good dialog

<sup>22</sup> http://www.uself.com.ua/fileadmin/documents/Visum%20NTS%20developer%20agreed Eng 120907.pdf.

<sup>23</sup> http://gazeta.ua/articles/business/ ebrr-vidilit-2-miljoni-evro-na-budivnictvo-malih-ges-v-ukrajini/485003.

<sup>24</sup> EBRD Environmental and Social Policy, 2008, p. 70.

<sup>25</sup> Letter from Mr Alistair Clark, Managing Director, Environment and Sustainability Department of the EBRD to Ukrainian NGOs from 29 April 2013.

<sup>26</sup> See the letter to Executive Committee of the EBRD from Ukrainian environmental groups for more details: http://necu.org.ua/wp-content/uploads/NGO-Letter-EBRD\_Goloshino-SHPP\_1.13.13.pdf.

<sup>27</sup> Letter of BEI # 204/01-13 from 24.01.2013.

and understanding among the public were poor. This example can hardly be regarded as 'best practice', nor does it help build trust and dialogue between the bank and concerned stakeholders. On the contrary it has provoked active opposition to small hydro developments in the Carpathians. On 14 March 2013, public actions were held in Kiev and six towns in western Ukraine<sup>28</sup>, demanding that small HPPs both mainstream environmental and social issues and adhere to national laws, and some protests called for scrapping hydro developments in the Carpathians altogether.

The case of Goloshyno small HPPs sets a negative precedent and positions the public against EBRD-financed small hydropower projects. The EBRD must ensure that future renewable energy projects financed by the bank are developed in a transparent and inclusive manner and proven to be environmentally acceptable. For this, we recommend the bank to ensure the adequate due diligence for any small hydropower project, including preparation of environmental impact assessment and effective public participation. Small HPPs should usually be regarded as Category A projects as per criteria 26 and 27 on Category A projects in the EBRD's Environmental and Social Policy. For the Carpathians, the development of small hydropower should be put on hold until a comprehensive strategic environmental assessment is prepared to avoid the destruction of river ecosystems by cascades of small hydropower plants and discreditation of small hydropower as sustainable energy source. CEE Bankwatch Network and its member groups have developed a set of criteria for sustainable hydropower development, both on strategic and project levels<sup>29</sup>. These should help to ensure the environmental and social sustainability of hydropower projects.

<sup>28</sup> http://necu.org.ua/ukrayintsi-ryatuyut-karpaty-vid-ebrr/.

<sup>29</sup> Sustainability criteria for hydropower development http://bankwatch.org/publications/sustainability-criteria-hydropower-development.

## **Conclusions and recommendations**

Between 2006 and 2013 44 percent of the EBRD's investments in Ukraine's energy sector were allocated to export-oriented projects and nuclear energy. These projects also got or are expecting to get additional financing of similar size from other EU institutions, such as European Investment Bank (EIB) and the Euratom Loan Facility – the financing all together amounts up to EUR 1 billion.

The lifetime extensions of nuclear units and the connected export-oriented projects may result in a number of negative implications for the environment and people: the risk of accidents and uncompensated impacts from the nuclear power plants' operations, negative impacts on the livelihoods of local people living along transmission lines and near TPPs, and has nothing to do with fostering renewable energy growth or improved efficiency of energy use.

Such investments to a great extent support the current status quo and the unsustainable energy strategy of Ukraine. They therefore undermine any chance to bring about a significant shift of the country's energy sector to a more sustainable path. The approach of gradual minor advances in sustainable energy (like energy efficiency improvements) cannot have the necessary positive impact if delivered alongside major support for nuclear with lack of good practices in public participation in the planning and implementation of projects.

About 38 percent of the EBRD's energy investments in Ukraine went to renewable energy and energy efficiency improvements in the municipal sector which is a highly welcomed development. In practice however, not every renewable energy project is apriori a sustainable and "nature friendly" one. A worrying signal is that the EBRD's first small hydropower project in the Ukrainian Carpathians has been confronted by environmental groups for intransparency, bad siting and gaps in the environmental impacts assessment. Such negligence is unacceptable as it risks to undermine the concept of renewable energy as a sustainable energy source in the eyes of the Ukrainian public. The EBRD needs to strengthen its criteria for renewables and ensure their careful and transparent application to make sure that the concept of the sustainability of renewable energy is not discredited and that good benchmarks are set for further developments. European institutions are seen in neighbouring states as "best practice" setters, they are expected to demonstrate the highest environmental standards and best public participation practices.

#### We therefore recommend that:

- The EBRD (as well as other EU public institutions and funds) should not prioritise projects aimed at increased exports of unsustainable energy from Ukraine to the EU; Such projects do not help in shifting from a highly-inefficient energy sector to a more sustainable mode but rather heap additional negative effects on the shoulders of Ukrainian citizens;
- 2. New EBRD energy strategy should contain clear formulations that limit the bank's support for the nuclear sector to decommissioning and the safe and secure management of radioactive waste and spent nuclear fuel;
- 3. The EBRD's investments into municipal energy efficiency initiatives and small scale renewable energy projects are highly welcomed. However, the EBRD must ensure that future renewable energy projects financed by the bank are developed in a transparent and inclusive manner and prove to be environmentally acceptable. For this, criteria or guidelines for sustainable hydropower should be developed and have the status of an obligatory standard that should be met by any project seeking EBRD financing in the hydropower sector.



### CONTACT DETAILS:

### Iryna Holovko

National Ecological Center of Ukraine (NECU) Pankivska st. 6B, Kyiv, 01033 tel.: (044) 238-6260, tel./fax: (044) 238-6259 www.necu.org.ua iryna@bankwatch.org