

## Ten ways to improve the EBRD's Sustainable Energy Initiative

The EBRD's mainstreaming of energy efficiency across its operations in recent years through the Sustainable Energy Initiative (SEI) has been impressive. It has drawn attention to the fact that decreases in energy intensity need to take place across all sectors, and as a result it appears that significant amounts of energy have been saved and CO<sub>2</sub> emissions prevented. At the same time this paper outlines several ways in which the SEI needs to be improved in order to increase its impact.

Overall, **the SEI criteria need to be tightened up in line with climate science and EU policy.** The European Commission's recent "*Roadmap for moving to a low-carbon economy in 2050*" sets the goal of becoming a resource-efficient, renewables-based economy by 2050. It demonstrates that in order to achieve this, **a near-total decarbonisation of the EU energy sector is needed by 2050, as well as that of the industry and residential sectors**, with massive emissions reductions needed in all other sectors. As most energy infrastructure built now will still be operating in 2050, the EBRD needs to orient its SEI towards this goal.<sup>1</sup>

**In addition, of the EU 20-20-20 targets, the one that so far looks most likely to be missed is the commitment to increase energy efficiency by 20 percent** compared to business as usual. This means that the EBRD needs to step up its efforts in this field, not only in the EU but also in its other countries of operation which still suffer from massive energy intensity.

### 1. Expand investments in energy efficiency projects in residential and public buildings

#### Case Study: energy efficiency and end users in Kazakhstan

The EBRD's Sustainable Energy Action Plan for Kazakhstan signed in 2007 recognises that the problem with sustainable energy use in the country is not only the power generation sector, but also distribution and end use by customers.

The SEAP says that "A significant proportion of public buildings (e.g. schools and hospitals) and urban housing stock is equipped with inefficient energy systems and requires major refurbishment". It also says that "public services and residential buildings require significant investment". Since last year EBRD has approved three projects on the supply side of district heating, but still no investments have been made to improve efficiency of energy use by end users.

In Karaganda, as in other cities, the houses are overheated during the winter and the usual way to regulate the temperature is to open the windows. There are no regulators on radiators. At the same time in some parts of the city the heating does not meet demand and the local authorities have come to the conclusion that power generation should be increased – which has been supported by the EBRD. Thermal energy consumption is not metered, so bills are paid according to the heated area. The authorities, with the support of institutions like the EBRD, should assess the capacity for increasing energy efficiency on the demand side before making decisions on increasing generation in district heating. There have been some projects financed by UNDP in Kazakhstan aimed at reduction of GHG emissions and improvement of energy efficiency in municipal infrastructure. This experience should be taken into account by the EBRD.

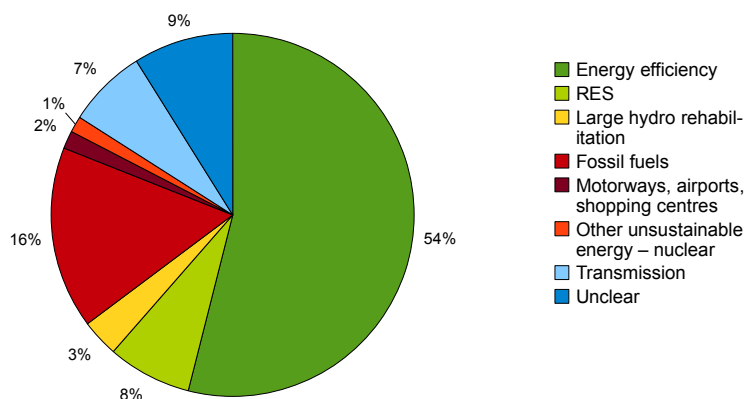
The EBRD says it is willing to provide technical assistance with regard to metering and also to finance private sector energy service companies (ESCOs) which can lead energy saving measures. However, no sign of any such loans is in the bank's Kazakh portfolio yet.

<sup>1</sup> Although strictly speaking this may only to apply to those countries which will be EU members by 2050, this is already a substantial portion of the EBRD's countries of operation. In addition, as the EBRD's own report *The Low Carbon Transition* (April 2011, <http://www.ebrd.com/downloads/research/transition/trsp.pdf>) argues, late adoption of clean technologies by other countries of operation will lead to them being at a disadvantage in these sectors. Thus the bank needs to ensure that its own operations promote decarbonisation across its countries of operation even if some of the more eastern governments are not willing to go as far as the EU targets in their wider policies.

## 2. Power and energy and natural resources: Tighten SEI energy efficiency criteria to exclude projects with increased overall annual or lifetime GHG emissions

The SEI's effectiveness is somewhat weakened by its unambitious criteria for inclusion in the initiative and the questionable classification of certain projects as 'sustainable'. Our calculations show that

SEI according to Bankwatch criteria  
2006-2010



around 1/3 of the total SEI investments are questionable (shown in red and blue in the chart).<sup>2</sup>

In particular, some of the EBRD criteria for power energy efficiency are very weak. The most striking examples are new coal fired generation units. They just have to be state of the art in efficiency and CCS ready in line with the requirements of the relevant EU Directives<sup>3</sup>. One project meeting these criteria is Belchatow II<sup>4</sup>.

### Case study: Belchatow II

The main component of this project is the construction of a new state of the art lignite-fired unit in the Belchatow power plant, the largest absolute emitter of CO<sub>2</sub> in Europe<sup>5</sup>, situated in the central part of Poland. The new 858 MW unit will replace two 370 MW blocks, which are not able to meet the requirements of EU environmental legislation and will have to be closed by the end of 2015<sup>6</sup>.

With the construction of a new unit and decommissioning of two units, which have to be closed anyway, CO<sub>2</sub> emissions per unit of energy produced will certainly decrease. At the same time the new unit alone will emit yearly 5.5 million tonnes of CO<sub>2</sub> for at least 40 years of its planned lifetime going beyond the year 2050, when according to the European Commission the EU energy sector should be decarbonised<sup>7</sup>.

This is a clear example of a project labelled 'sustainable' by the EBRD, which goes against EU goals and climate science. If the EBRD decides to finance more 'sustainable energy projects of this kind, we will end up with plenty of highly efficient coal plants and a climate catastrophe very soon.

For *rehabilitation of existing units* in old power plants (including cogeneration plants), in order to meet the EBRD criteria projects must improve electricity efficiency by at least 3 percentage points (e.g. from 30 to 33 percent) and reduce specific carbon emissions per kWh generated by at least 10 percent<sup>8</sup>. Such small improvements will not decarbonise the energy sector by 2050.

### Case study: Turceni rehabilitation, Romania

Rehabilitation of unit 6 in Turceni TPP in Romania<sup>9</sup> will enable it to meet the criteria of the EU's Large Combustion Plant Directive,<sup>10</sup> regulating emissions of sulphur dioxide, nitrogen oxides and dust from

- 2 The methodology can be found in the Annex of: <http://bankwatch.org/publications/carbon-rising-european-investment-bank-energy-lending-2007-2010> (the same method was used for both the EIB and EBRD calculations).
- 3 Terry McCallion, EBRD: Response to Bankwatch query, 20.04.2011
- 4 <http://www.ebrd.com/english/pages/project/psd/2005/25438.shtml>
- 5 WWF: Dirty Thirty, May 2007, [http://www.wwf.eu/climate/publications\\_climate/?106380/Dirty-Thirty](http://www.wwf.eu/climate/publications_climate/?106380/Dirty-Thirty)
- 6 The EBRD financed unit was selected for an EU Carbon Capture and Storage pilot project. Even if completed the CCS installation will capture only 1/3 of the emissions. Currently the project is stalled because of lack of funding.
- 7 EC Communication: "A Roadmap for moving to a competitive low carbon economy in 2050, March 2011, COM(2011) 112 final.
- 8 Terry McCallion, EBRD: Response to Bankwatch query, 20.04.2011
- 9 <http://www.ebrd.com/pages/project/psd/2008/37696.shtml>
- 10 Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of

installations burning various types of fuels. Without this project the plant would have to be closed by the end of 2015, but now it will continue polluting for next 15 years with slightly lower CO<sub>2</sub> emissions per unit of energy produced. In this way an EBRD intervention classified as 'sustainable' is radically increasing the lifetime CO<sub>2</sub> emissions of the given unit.

Currently the EBRD includes *mining projects* in the SEI, when they improve specific energy consumption by at least 10 percent<sup>11</sup>. Efficiency of energy use in a mining operation should not be the sole criterion for including the project into the SEI. For example the majority of investments in more efficient coal mining lead to a significant increase of coal extraction and result in overall higher CO<sub>2</sub> emissions (when counting both emissions from the mine and from burning the mined coal). There is also the issue of the methane emitted from the coal bed during mining and it is not clear whether the EBRD criteria and GHG accounting methodology take this into account.

#### **Case study: Kolubara, Serbia**

In July 2011 the EBRD Board of Directors approved a loan worth EUR 80 million for the expansion of Kolubara mine, the largest lignite mine in Serbia. The Bank justifies its involvement with improvements in efficiency of coal extraction and combustion equal to 200 000 tonnes of CO<sub>2</sub> saved yearly. However this improvement cannot be a justification for supporting the mining of 87 million tonnes of lignite in the eastern part of Kolubara basin<sup>12</sup>, which, when burned, will result in approximately 80 million of CO<sub>2</sub> emitted, cancelling the efficiency gains many times over and locking Serbia into coal dependency for decades to come. It is not yet clear whether the EBRD will include this project in its SEI list for 2011.

We therefore recommend that:

- The EBRD should stop including its investments in new fossil fuel based power plants into SEI, no matter whether they replace old installations or not.
- Investments into the modernisation of power plants should be included into SEI only when they do not result in increased emissions calculated for the life-time of the installation.
- Therefore EBRD investments into efficiency improvement in coal mining should be included in SEI only if they do not result in mining more coal yearly or in expanding the lifetime of the mine (through opening new deposits).

**These types of investments should not only be removed from the SEI, but should be immediately removed from the EBRD portfolio**, because they lock the countries of operation into high-carbon infrastructure and crowd out investments into energy efficiency and renewables, bringing us closer to the point when run-away climate change is irreversible.

- The EBRD definition of energy efficiency in power generation should be seriously reconsidered, taking into account the absolute annual and lifetime emissions of installations it supports. The new approach should be based on climate science calling for a worldwide decrease in CO<sub>2</sub> emissions and emission mitigation scenarios for various regions.

### **3. Power and energy: Do not finance transmission projects that only support nuclear power**

#### **High-voltage transmission lines, Ukraine**

In 2008-2010, a very significant portion of EBRD investments under SEI in Ukraine has gone to the construction of new high-voltage transmission lines (TLs) clearly connected to unsustainable energy sources - nuclear power plants (NPPs).

In 2008 the whole EBRD loan (EUR 150 million) for the Rivne Kyiv High Voltage Line Project was signed as an SEI component, and made up 43 per cent of all SEI projects in Ukraine in that year. This project envisaged the construction of a new power line from Rivne Nuclear Power Plant to the Kyiv region and could hardly be classified as a sustainable energy project because it is directly supporting old Ukrainian nuclear plants. The disadvantages of nuclear power are recognised in the EBRD's own energy policy.

emissions of certain pollutants into the air from large combustion plants.

<sup>11</sup> EBRD Response to Bankwatch's query on SEI investments, letter from the EBRD to Bankwatch, 20.04.2011.

<sup>12</sup> Environmental Impact Assessment Study for the project „Coal exploitation in the open case mine „field C“, Belgrade 2009.

In 2010 the South Ukraine Transmission Line was approved and this time the EBRD signed only part of it - EUR 87.5 million – under SEI. The project's goal is to “strengthen existing grid and to help providing output for additional 700 MW of existing capacities of Zaporizhska NPP (ZNPP)”<sup>13</sup>. In response to a Bankwatch request on what exactly the SEI component of this project is, the EBRD has explained that the increased efficiency of ZNPP “reduces CO2 emissions by up to 2.1 million tons per annum, by decreasing the dispatch of outdated conventional thermal power plants”<sup>14</sup>. Such grounds for assigning an SEI component are rather dubious as ZNPP, just like any other NPP of this type, is not able to work at full load throughout the year. The average capacity of ZNPP cannot exceed 5,100 MW and even if the new transmission line was to become operational ZNPP would not be able to provide a full 6000 MW throughout the year. Therefore, the planned CO2 reductions may never be reached in practice. There is also no proof that the increased working hours of the nuclear plant would really correspond to a decrease in the work of coal thermal power plants - both may be used at the same time.

As for reduction of network losses, the South Ukraine Transmission Line project's SEI component counts for 56 per cent of all Ukrainian projects listed under SEI in 2010. Because in our view the practical realization of the estimated EE increase and emission reductions from this project are highly unrealistic, the effectiveness of SEI in Ukraine is under question. More generally, no projects that support the nuclear energy industry can be regarded as a part of the SEI – minor improvements in capacity output or transmission efficiency will not turn nuclear energy into a sustainable energy source.

#### 4. Measure and publish projects' final CO2 emissions reduction, not just projected savings.

It is hard to assess the SEI's contribution to CO2 emissions reduction because only estimates made before the projects are used in place of real results. We agree with the EBRD Evaluation Department that “It would be useful to have a more definite indication that projects are yielding the expected benefits”.<sup>15</sup> Of course during the first year or so of the projects it is impossible to do anything other than projecting benefits as there are no on-the-ground results to measure, but after this **it is vital to be more specific with what has been achieved and to report actual results.** There is a real likelihood that some projects do not bring the planned benefits and that lessons need to be learned accordingly. ArcelorMittal Kriviy Rih is one major example. Others include credit lines via intermediary banks where it is not clear how much of the money is actually disbursed in the end.

It is not clear what information on the results from projects is being collected by the EBRD for monitoring and evaluation purposes, but it is vital to publish at least actual CO2 and energy savings in order to see the difference between what was planned and what was achieved and thus to see what works well and what does not. Other indicators may include costs saved due to energy efficiency measures, number of people lifted out of energy poverty by energy efficiency measures, jobs created in the energy efficiency and renewables sector, MW of renewable energy installed/share of RES in the energy mix etc. We also back the Evaluation Department's call for a “consistent approach to reporting of energy and CO2 savings in situations where a project gives rise to an increase in production capacity as well as an improvement in energy efficiency, preferably using pre-project production levels.”<sup>16</sup>

It is sometimes suggested by bank staff that tracking results may put an additional burden on clients. However, while of course some work is expected from clients (eg. reporting what project components have been carried out, tracking energy consumption, production levels etc), we assume that businesses track such data anyway and that energy consumption data can be converted into a calculation of CO2 emissions taking into account the technology used. A simplified methodology for calculating emissions savings could be developed for smaller clients.

13 Ukrenergo TL ZNPP-Kakhovska final report (Ukr version), page I-4, January 2010

14 EBRD letter to CEE Bankwatch Network from 11.10.2010

15 EBRD Evaluation Department: Sustainable Energy Initiative Phase I Strategic Review, June 2011, <http://www.ebrd.com/downloads/about/evaluation/1106.pdf>

16 Ibid.

## 5. Renewable energy: Assist countries of operation in strategically planning investments, including the introduction of renewable energy sustainability criteria

The EBRD's environmental safeguards for renewable energy are based on the relevant EU regulations.<sup>17</sup> However, although a good start if properly applied, EU regulations may not be enough to ensure real sustainability in this sector in reality.

### Case study: Renewable energy in Bulgaria

The experience in Bulgaria is a good example of the insufficiency of using EU law as the only criteria for renewable energy development, for three reasons:

- 1) problems in enforcement;
- 2) lack of co-ordination between different regulations leading to holes in implementation;
- 3) EU law in some cases not going far enough to prevent environmentally harmful investments.

The general problems of enforcement of EU environmental legislation in Bulgaria resulted in a situation in which the sponsors of larger individual projects such as St. Nikola wind farm attempted to implement suitable mitigation measures on the project level, but at the same time many smaller renewable energy projects moved forward in an uncontrolled way. Combined with other pressures, eg. for tourism development and urban infrastructure, the cumulative effect of RES projects was beyond mitigation, especially in Natura 2000 areas<sup>18</sup>. For example it is practically impossible for the responsible authorities to monitor the implementation of mitigation measures on numerous small hydropower projects on rivers which are practically dry in the summer and where all remaining water is diverted away from the fish passages in order to generate power.

Only after it was abundantly clear that there was a problem, in 2009 the European Commission intervened<sup>19</sup>, threatening Bulgaria with an infringement procedure, and only then the government decided to develop a renewable energy strategy, putting a temporary moratorium on renewable energy development. This of course hit investors hard – both responsible and irresponsible ones. Currently a number of conflicting legislative proposals are attempting to address the problem, with the RES strategy still lagging behind as the energy strategy for Bulgaria till 2020 and the law on the use of agricultural lands<sup>20</sup> are pre-empting its development.

Additional concerns are now being raised by energy consumers, both households and industries, which started feeling the weight of their energy bills after the deepening of the economic crisis in the country. For example the Bulgarian Industrial Chamber called for a RES law that will consider both realistic targets and a diverse mix of renewable sources, in order to deliver accomplishment of RES development goals at optimal costs for consumers. For this some sources like biomass should be given more attention, and the tendency to focus on wind and solar (the most expensive ones) should be balanced in the future.

The lesson from Bulgaria is that strategic planning must go first, before many RES projects are developed. There is a need for Strategic Impact Assessment and development and enforcement of a set of sustainability criteria. This requires a real departure from the business as usual approach of developing 'green' projects - like any project that impacts on the environment, they need to be accorded with River Basin Plans (complying with the Water Framework Directive), N2000 site management plans or protected areas management plans.

The EBRD can play a useful role in technical assistance for countries to develop a Renewable Energy Action Plan and an Energy Efficiency Action plan or a Sustainable Energy Action Plan combining both. However there should be proper public consultations organized in the process of preparation of

<sup>17</sup> Terry McCallion, EBRD: Response to Bankwatch query, 20.04.2011

<sup>18</sup> On "the twin crises of climate change and the loss of nature": <http://www.rspb.org.uk/community/getinvolved/b/specialplaces/archive/2011/10/13/new-hope-for-bulgaria-s-black-sea-coast.aspx>

<sup>19</sup> Press Release, Commission warns Poland and Bulgaria over nature protection shortcomings; closes German case, 29/10/2010: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/1651&format=HTML>

<sup>20</sup> Some proposals include a moratorium for solar and wind projects on arable land from 1<sup>st</sup> to 4<sup>th</sup> category, which is up to half of agricultural land in the country.

such action plans and the content of the plans must truly concentrate on sustainable energy – new renewables and energy efficiency. The bank can further contribute to:

- assessments of the potential for improving energy efficiency for end-users
- Strategic Environmental Assessments of the above plans
- creation of structures for investments in public buildings
- creation of markets for energy efficiency companies
- supporting producers of energy efficiency and RES equipment
- continuing support to ESCOs
- providing technical assistance in the creation of regulatory frameworks for RES and EE
- assessments of future energy consumption and development of demand management plans

### **Case Study: The Kazakhstan Sustainable Energy Action Plan**

The EBRD's involvement in developing an SEAP in Kazakhstan is welcome, however the resulting Action Plan has contradicting goals. It plans a transition to a low carbon economy, but 6 out of 8 of its priority power generation projects are coal-fired power plants. While the EBRD could not dictate the final Action Plan, it should at least finance only sustainable projects from the Plan. However the EBRD Country Strategy for Kazakhstan suggests that the EBRD is ready to support coal projects as follows:

- *Utilise the best available techniques (BAT) structured to meet EU environmental and energy efficiency performance for new and existing coalfired power plants with strong industry sponsors*
- *Target significant efficiency improvements and power supply reliability through rehabilitation of existing plants or construction of new plants;...*

Supporting coal in Kazakhstan will smother opportunities for the development of renewable energy sources. Currently no known significant RES projects are being implemented in Kazakhstan and the share of RES in power generation in the country is between 0.03% and 0.46%. This share is planned to be increased to more than 3% by 2020, but even this small increase seems very ambitious if the EBRD continues to support fossil fuels. The volume of coal extraction is expected to increase by 42% (123 million tonnes) by 2014 and to 158.35 million tonnes by 2020. The focus in the SEAP is on power generation projects in the north of the country and transmission to energy deficient regions, which involves significant energy losses caused by the huge distances.

The EBRD has recognized that the energy tariffs in Kazakhstan remain low and generally do not include environmental costs, so price signals do not provide incentives to use energy efficiently. This is possible because of the relatively cheap and abundant coal resources. The Government has not demonstrated political will in the real development of RES. Electricity and heating tariffs are a sensitive social issue and the Government is interested in keeping control over them. Therefore the EBRD will face a challenge in changing the situation with the tariffs. RES will never be cost-effective in this situation. That means the bank needs to take a different approach to improve energy efficiency and develop renewable energy sources in Kazakhstan. It should not only provide direct support to true RES, but also cease investments to the coal sector and coal fired power plants.

We welcome the EBRD's involvement in the development of the 2009 Renewable Energy Law, but this needs to be supplemented by an enhanced legal and regulatory framework. We see opportunities for technical assistance here.

Considering that the SEAP does not give adequate coverage to new renewables and energy efficiency in Kazakhstan, additional action plans on RES and energy efficiency need to be developed, and more importantly implemented, for the country. For example the National Program on Wind Power Development for 2015, drafted in 2007 with UNDP assistance, has still not been adopted.

However, the method of developing strategic programmes should be changed. The current practice of energy efficiency planning in the Kazakh regions is based on collecting suggestions/projects from stakeholders to be included to the programme/plan. Upon receiving them the programme designer develops the plan of activities. In parallel he works with the state regional finance departments to consult about the availability of state funds for these activities, and only then s/he formulates the objectives, tasks and indicators for the programme. Therefore the goals and objectives of the programme are adjusted to the suggested projects and initiatives and not the other way around. This approach to planning does not allow the authorities to identify the key problems with energy efficiency and find ways to solve them.

## 6. Take the construction of large hydropower plants out of the SEI and adopt sustainability criteria for renewable energy projects

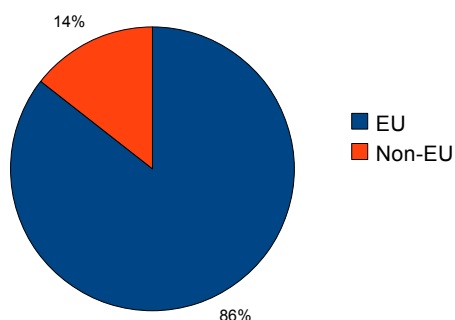
All forms of energy production can be unacceptably harmful for the environment if constructed at the in the wrong place or at the wrong scale. While the EBRD's eyes are – rightly - on climate change as a leading environmental threat, this does not mean that other goals such as the EU's commitment to halt biodiversity loss by 2020<sup>21</sup> can be put aside. In the EBRD region of operations, the largest threats to biodiversity in the energy sector are caused by the construction of hydropower plants. It is quite reasonable to include the rehabilitation of existing large hydropower plants (> 10 MW) under the SEI, but not the construction of new ones, for the following reasons:

- The EBRD exists to support new markets, of which large hydropower is not one. There is no technology transfer benefit from large hydropower.
- Most large hydropower plants have unacceptable negative impacts on biodiversity, and many also have harmful impacts on people.
- Hydropower production is increasingly fluctuating in this era of climate change.
- Given the costs of large hydropower, it is likely to crowd out investments into new renewables.

Small hydro plants and other forms of renewable energy can also cause serious impacts if not properly planned, as in the case of Bulgaria, above. Therefore we call on the EBRD to adopt sustainability criteria for renewable energy sources. **Our proposals for such criteria can be found in Annex 1.**

## 7. Improve the regional balance of lending for new renewable energy

Regional distribution of RES investments  
2006-2010



Financing for the various SEI sub-sectors is very uneven, with only 12 percent of SEI financing directed at new renewable energy. Of this small amount, 86 percent is inside the EU. While the EU New Member States do need support with the development of renewable energy,<sup>22</sup> the countries outside the EU need it much equally - if not more - as they are not stimulated by the EU's 20-20-20 targets.

In some countries there is also too heavy reliance on particular kinds of energy, for example hydropower in Georgia and Albania. The EBRD should ensure that it does not contribute to perpetuating such imbalances.

## 8. Take carbon-intensive, traffic-inducing transport projects out of the SEI

The SEI project list 2006-2010 features several projects involving road construction or expansion or airport expansions. While there may be various arguments about whether each individual project is needed or not, calling them Sustainable Energy is stretching the credibility of the SEI, particularly as the transport sector is the fastest growing emitter of greenhouse gases globally<sup>23</sup>.

<sup>21</sup> Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions: Our life insurance, our natural capital: an EU biodiversity strategy to 2020, Brussels, 3.5.2011 COM(2011) 244 final

<sup>22</sup> With the possible exception of Bulgaria (see case study above)

<sup>23</sup> According to the IPCC, "In 2004, transport was responsible for 23% of world energy-related GHG emissions with about three quarters coming from road vehicles. Over the past decade, transport's GHG emissions have increased at a faster rate than any other energy using sector (high agreement, much evidence) [...] Unless there is a major shift away from current patterns of energy use, world transport energy use is projected to increase at the rate of about 2% per year, with the highest rates of growth in the emerging economies, and total transport energy use and carbon emissions is projected to be about 80% higher than current levels by 2030 (medium agreement, medium evidence)" See previous footnote, p.325

The current criteria for inclusion of transport projects in the SEI is as follows: “Projects/components which reduce specific energy use, i.e. energy used per unit of output expressed as primary energy, e.g., GJ/ton·km, in transport infrastructure projects, including public transport outside cities”.

In response to an enquiry the bank has further explained that: “For the project of M6-60, the SEI allocation comes from estimated lower congestion and for the Corridor VC project it is fuel efficiency due to road alignment and improved operating conditions. Nevertheless, recognising that there is no established reliable methodology for overall impact assessment of motorways, the EBRD is now developing a more structured methodology for assessing these projects and have for this purpose employed a dedicated sustainable transport specialist. In the past the SEI portion has been calculated based on estimating the specific fuel savings generated from the improved motorway. Please note that motorways are at present not included in the carbon accounting portfolio assessment.”<sup>24</sup>

While there may be reductions in specific energy use through individual road and airport projects – although very difficult to measure - there is likely to be an increase in overall energy use and CO2 emissions because road expansions induce new traffic.<sup>25</sup> This would have to be measured against any energy savings to come out with a credible claim about emissions savings from projects.

However the phenomenon of induced traffic is not well quantified due to its complexity and it is made even harder by the lack of detailed evaluations of previous road projects and their impacts on traffic. However, an Oxford University study published in 1996 concluded that: “Disparate evidence indicates that the provision of extra road capacity results in a greater volume of traffic. The amount of extra traffic must be heavily dependent on the context, size and location of road schemes [...] an average road improvement has induced an additional 10% of base traffic in the short term and 20% in the long term: individual schemes with induced traffic at double this level may not be very unusual, especially for peak periods.”<sup>26</sup>

While we welcome the EBRD's commitment to looking into developing a more structured methodology for assessing the impact of its transport projects, if overall emissions are not taken into account this cannot give us meaningful information about emissions savings from projects.

#### **Case study: Pan-European Corridors, Ukraine (2010)**

This project is aimed at rehabilitation and upgrading of road approaches to Kyiv – road sections on international and key national highways. The Board Document states that:

*“The analysis undertaken suggests that compared to the baseline scenario, the Project brings substantial fuel savings, mainly as a consequence of reduced rolling friction (due to better pavement conditions), average speed closer to optimal (in terms of specific fuel use) and upgraded maintenance practices. It is expected that in the period 2013-2023, the Project will induce cumulatively fuel savings of about 350,000 toe (tonnes of oil equivalent) and GHG emission reduction in excess of 600,000 tonnes of CO2. Indicatively, this is equivalent to annual GHG emissions from 100,000 cars.”*

It seems highly unlikely that there will be *only* fuel savings - this disregards the increasing traffic volume due to the higher attractiveness of the roads, especially over a long period of time.

If the bank feels confident that it *can* quantify overall energy savings and GHG emissions avoided *and* increased energy use from induced traffic, the following could be added into the existing criteria:

*“Projects/components which reduce specific energy use (i.e. energy used per unit of output expressed as primary energy, e.g., GJ/ton·km) **and overall energy use and greenhouse gas emissions***

<sup>24</sup> Terry McCallion, EBRD: Response to Bankwatch query, 20.04.2011

<sup>25</sup> There is less evidence available on induced traffic due to airport expansion projects but globally air travel is increasing rapidly so it is reasonable to assume that this would also be the case at individual airports. According to the IPCC, “without policy intervention, projected annual improvements in aircraft fuel efficiency of the order of 1–2%, will be surpassed by annual traffic growth of around 5% each year, leading to an annual increase of CO2 emissions of 3–4% per year (high agreement, much evidence).” (Kahn Ribeiro et al 2007: Transport and its infrastructure. In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [B. Metz et al (eds)], Cambridge University Press, p.326)

<sup>26</sup> Phil B. Goodwin, ESRC Transport Studies Unit, University of Oxford: Empirical evidence on induced traffic, Transportation Vol. 23, No. 1, 35-54, 1996



in transport infrastructure projects, including public transport outside cities". Alternatively, and more simply, projects involving the expansion of the high-carbon-intensity modes – aviation and roads – could simply be left out of SEI, while prioritising public transport projects.

## 9. Take traffic-inducing shopping centres out of the SEI

No less than 8 SEI projects between 2006 and 2010 were shopping centres. The EBRD explains that *"only components considered are those which go beyond local performance standards (e.g. high spec glazing). Otherwise greenfield projects are included only if there is a direct link to a capacity replacement. As an example, we would not include [a] shopping center that only conforms to current building regulation in the SEI even though it would be far better in terms of energy performance compared to the average shopping center in the country."*<sup>27</sup>

We would expect all EBRD investments to go beyond local performance standards in order to add value. However this is not sufficient as it appears that the traffic-inducing effect of shopping centres<sup>28</sup> which most likely more than cancels out energy efficiency gains - has not been taken into account at all. Indeed, public development financing should not be used for shopping centres at all, as they are hardly a basic human need and should be financed privately.

## 10. Incentivise staff to achieve CO2 savings, not only high business volume

The bank's SEI brochures suggest that it counts new business volume as a major measure of success, rather than actual CO2 emissions, which are not measured. However, this brings three problems:

1) It promotes quantity of new loans signed, not quality or speed of implementation. In this respect we support the Evaluation Department's recommendation on Results-Based Management: *"Currently the E2C2 team tracks volume at approval. Indications are that disbursements lag Board approvals and some projects disburse (for example, working capital) but then delay the investments. The Bank should report on results achieved as measured by actual investments of EBRD funds. The E2C2 team's targets should be based on results-based accounting, not on new business volume."*<sup>29</sup>

2) It misses low or no-cost opportunities: *"The projects funded range from large budget, high results projects (for example, new, clean power plants) to "low cost/no cost" opportunities, where there are potential carbon reductions for minimal to no investment. For the smaller operations, the EBRD has effectively utilised Financial Intermediaries (FIs) as the delivery vehicle. However, even FIs are incentivised to build a loan around specific investments, thus "no cost" options receive less attention. By adding carbon accounting to the equation, the EBRD could balance the business volume driven incentive with a carbon incentive."*<sup>30</sup>

3) It promotes larger projects, which according to the Evaluation Department's review of SEI1, as well as Bankwatch's experience, have been less effective than small SEI projects.<sup>31</sup>

Therefore the incentive system for the SEI should be changed to look at CO2 saved rather than just at new business volume.

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<sup>27</sup> Terry McCallion, EBRD: Response to Bankwatch query, 20.04.2011

<sup>28</sup> See for example US Institute of Transport Engineers, Traffic Generation: 8<sup>th</sup> Edition, 2008. Table on trip generation available at: <http://www.ci.troutdale.or.us/publicworks/documents/itelanduselist.pdf>

<sup>29</sup> EBRD Evaluation Department: Sustainable Energy Initiative Phase I Strategic Review, June 2011, <http://www.ebrd.com/downloads/about/evaluation/1106.pdf>

<sup>30</sup> See footnote 29

<sup>31</sup> See footnote 29

## Annex 1: Bankwatch criteria for sustainable renewable energy

### All renewables:

- Must be part of a renewable energy development plan that is subject to a Strategic Environmental Assessment Procedure,
- Must be in line with River Basin Plans and protected area management plans,
- Must not be in (planned) Natura2000 sites without a compatibility assessment and a cumulative impact assessment.

**1. Biogas.** By-products from the biogas plants should be used as a fertiliser only after independent certification (for example in case of biogas plants which use wastes from slaughter and meat processing factories as an input material).

**2. Solar,** if siting avoids valuable agricultural land and the potential impacts on wildlife have been addressed.

### 3. Wind, if

- the project is not developed in a protected natural area;
- the project is not developed along a bird migration route;
- the project does not impact bat populations (besides collision and habitat disturbance, the issue of ultrasound emissions is to be dealt with);
- wind farm projects will be based on biodiversity baseline studies and will undergo an environmental impact assessment, as any large industrial project;
- wind projects will have post-commissioning monitoring programmes to ensure there is no negative impact on communities and wildlife;
- the project will use state-of-the-art equipment, in order to minimise noise, vibration and electric and magnetic fields; old, used installations will not receive funding from IFIs;
- off-shore wind projects will be based on a thorough analysis of potential impact on both birds and mammals, including their habitats and feeding areas and sources.

**4. Water,** if the project meets international standards, including the recommendations of the World Commission on Dams and:

- the project is under 10 MW;
- the project does not involve dam, reservoir and resettlement;
- the project does not affect the water flow regime and wildlife circulation;
- the project does not affect biodiversity, nor people's water needs;
- the project does not affect possible investments to rehabilitate and increase efficiency of existing units in the project area;
- the project is not situated in a protected area (included in IUCN category IV);
- small hydro plants (below 10 MW) with derivation channels if the water intake is relatively small and does not negatively affect biodiversity and livelihoods downstream.
- not more than 30-50% of rivers in a catchment area are developed with small hydropower (exact boundary to be determined by experts).

### 5. Geothermal, if

- the project uses injects the water back to the ground, there are no discharges that could thermally pollute river or lake systems;
- equipment is in place to eliminate harmful emissions of greenhouse gases, hydrogen sulphide and other gases in the thermal water.

### 6. Biomass and biofuel, if:

- the design and layout of plantations promotes the protection, restoration and conservation of natural forests, and does not increase pressures on natural forests or nature protected areas;
- a biomass origin certification system is in place;
- the plantations do not have a negative impact on natural habitats;
- the crops exclude genetically modified organisms;
- native species are preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species, which shall be used only when their performance is greater than

that of native species, shall be carefully monitored to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts;

- the project brings about improvements in soil structure, fertility and biological activity;
- the project does not involve the use of harmful fertilizers and insecticides;
- the project does not bring about adverse impacts on water availability and quality, or impact on river and lake systems for that matter;
- no species is planted on a large scale until local trials and/or experience have shown that they are ecologically well-adapted to the site, are not invasive, and do not have significant negative ecological impacts on other ecosystems;
- the project does not raise land ownership, use or access issues;
- the project is not a threat to food security on any level (energy plantations drastically reducing/ eliminating food crops in the area);
- the project does not involve an increase in GHG emissions;
- the biomass resource is of local origin (no imports of biomass from the Global South);
- the project must not create social conflicts;
- biomass production must have a substantial positive energy balance (energy output versus input);
- exploitation of energy biomass from production forests has to be in accordance with rules of sustainable forestry (all logging and 30 cubic metres per hectare should not be removed from the forest).