



# PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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## PART I: PROJECT INFORMATION

Project Title:	Belarus Green Cities : Supporting Green Urban Development in Small and Medium Sized Cities in Belarus		
Country(ies):	Belarus	GEF Project ID: <sup>1</sup>	5372
GEF Agency(ies):	UNDP	GEF Agency Project ID:	4981
Other Executing Partner(s):	Ministry of Natural Resources and Environmental Protection of Belarus, Munisipalities of Novogrudok, Novopolotsk and Polotsk	Submission Date: Resubmission Date:	4 April 2013 11 April 2013
GEF Focal Area (s):	Climate Change	Project Duration (Months)	60
Name of parent program (if applicable): • For SFM/REDD+ <input type="checkbox"/> • For SGP <input type="checkbox"/>	n/a	Agency Fee (\$):	293,645

### A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCM-2	GEFTF	1,020,000	2,150,000
CCM-4	GEFTF	2,071,000	8,000,000
Total Project Cost		3,091,000	10,150,000

### B. INDICATIVE PROJECT FRAMEWORK

<b>Project Objective:</b> The development of green urban development plans and pilot green urban development projects related to energy-efficiency and sustainable transport in small and medium cities in Belarus						
Project Component	Grant Type <sup>3</sup>	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. Green Urban Development Plans	TA	Green Urban Development plans successfully developed and adopted	1.1 National Green Urban Development Plan for Belarus including identification of funding modalities and proposed financial mechanisms for sustainability 1.2 Green Urban Development Plans for Cities of Polotsk, Novopolotsk and Novogrudok 1.3 Prefeasibility studies and business plans for demo projects under component 2 and 3	GEFTF	300,000	1,010,000

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the reference attached on the [Focal Area Results Framework](#) when completing Table A.

<sup>3</sup> TA includes capacity building, and research and development.





National Government	Ministry of Architecture and Construction	In-kind	300,000
Local Government	City of Polotsk	In-kind	500,000
Local Government	City of Polotsk	Cash	2,500,000
Local Government	City of Novopolotsk	In-kind	500,000
Local Government	City of Novopolotsk	Cash	2,500,000
Local Government	City of Novogrudok	In-kind	500,000
Local Government	City of Novogrudok	Cash	1,000,000
GEF Agency	UNDP : European Union Green Economy Project	In-kind	2,000,000
GEF Agency	UNDP	Cash	200,000
<b>Total Cofinancing</b>			<b>10,150,000</b>

**D. INDICATIVE TRUST FUND RESOURCES (\$) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY<sup>1</sup>**

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (\$) (a)	Agency Fee (\$) (b) <sup>2</sup>	Total (\$) c=a+b
n/a						
<b>Total Grant Resources</b>						

<sup>1</sup> In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

<sup>2</sup> Indicate fees related to this project.

**E. PROJECT PREPARATION GRANT (PPG)<sup>5</sup>**

Please check on the appropriate box for PPG as needed for the project according to the GEF Project Grant:

	<u>Amount Requested (\$)</u>	<u>Agency Fee for PPG (\$)<sup>6</sup></u>
• No PPG required.	-- 0--	--0--
• (upto) \$50k for projects up to & including \$1 million		
• (upto)\$100k for projects up to & including \$3 million	\$80,000	\$7,600
• (upto)\$150k for projects up to & including \$6 million		
• (upto)\$200k for projects up to & including \$10 million		
• (upto)\$300k for projects above \$10 million		

**PPG AMOUNT REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF PROJECT ONLY**

Trust Fund	GEF Agency	Focal Area	Country Name/Global	(in \$)		
				PPG (a)	Agency Fee (b)	Total c = a + b
n/a						
<b>Total PPG Amount</b>						

MFA: Multi-focal area projects; MTF: Multi-Trust Fund projects.

<sup>5</sup> On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

<sup>6</sup> PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

## **PART II: PROJECT JUSTIFICATION**<sup>7</sup>

### **A. PROJECT OVERVIEW**

#### A.1. Project Description.

##### ***Global environmental problems, root causes and barriers that need to be addressed***

1. The Republic of Belarus is a landlocked country in Eastern Europe bordered by Russia, Ukraine, Poland, Lithuania, and Latvia with a population of 9.5 million. The capital city is Minsk and other major cities include Brest, Grodno, Gomel, Mogilev, and Vitebsk. Over forty percent of the 207,600 square kilometers of the country is covered in forests. The strongest economic sectors are service industries and manufacturing. The majority of the population lives in cities and the country is highly urbanized. The Government of Belarus is an Annex I Party to the UNFCCC since the year 2000 and is a Party to the Kyoto Protocol since 2005. The Government of Belarus also signed up to the Copenhagen Accord (2009) and pledged to reduce GHG emissions to 10% below 1990 levels by the year 2020. The Government of Belarus also supports the negotiation and agreement of a successor instrument to the Kyoto Protocol.

2. The project aims to introduce in Belarus the concept of green urban development and support for planning and developing green cities. A green city is defined as a city which is designed taking into consideration the environmental impacts of new investments in the city infrastructure and is inhabited by people dedicated to the minimization of required inputs of energy, water, and food and waste, output of heat, and air pollution. A sustainable green city should meet the needs of the present generation without sacrificing the needs of future generations. The development of a green city should lead to significant reductions in greenhouse gas emissions. The challenges for environmentally conscious developers are to design green cities in such a way that saving energy and reducing greenhouse gas emissions is done in a manner, which is both economically beneficial and environmentally friendly. In Belarus, there are no cities which currently meet this definition of a green city. There are only cities which aspire to this status but who are impeded in realizing this goal by a lack of knowledge, experience and planning capacity related to green urban development.

3. The problem will be addressed in this project by developing green urban development plans and demonstration green urban development projects in the cities of Novopolotsk, Polotsk, and Novogrudok. These three cities have been chosen by this project based upon their commitment to integrated green urban development as expressed through their participation in the EU Covenant of Mayors, their willingness to provide co-financing to the project and to support the project activities, and due to the fact that none of the cities are significantly large enough to warrant a much larger project. The project does not focus on larger cities in Belarus such as the capital city Minsk due to the fact that it is more realistic within the scope and budget of this project to focus on smaller and medium sized cities where the demonstration potential should make replication easier. The concept of linking green urban development to GHG emissions reduction is quite new globally and very new in Belarus. City planners generally plan urban development in a fragmented incoherent manner and the link towards green urban planning is generally not made. In particular, these three cities have expressed to UNDP their request for assistance with green urban development planning as a tool for assisting them with low emissions development. Polotsk and Novogrudok have signed up to the EU Covenant of Mayors, while Novopolotsk is planning to in the near future, and each of them is committed towards green urban development. The EU Covenant of Mayors currently has 4,463 signatories as of April 2013. The EU Covenant of Mayors represents a voluntary commitment of participating cities to increase investments in energy-efficiency and renewable energy. The EU Covenant of Mayors does not come with any funding attached to it meaning that signing up to the Covenant of Mayors requires cities to find additional funding themselves. For this project, each participating city will provide significant co-financing and UNDP will also provide significant co-

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<sup>7</sup> Part II should not be longer than 5 pages.

financing.

4. Novopolotsk and Polotsk are less than 10 km apart so they can also be considered as one large urban area. The following map shows the three cities that have indicated to UNDP their strong interest in working together in the area of green urban development. As part of the replication component of the project, at least 5 other cities in Belarus will be identified and provided with support related to green urban development.

**Figure 1:1 – Selected Pilot Cities in Republic of Belarus**

5. Without this project, under a business-as-usual scenario, green urban development is unlikely to take hold and gather momentum in Belarus. The problem that this project seeks to address is ensuring that urban development in Belarus is taking place in an environmentally sustainable manner (in particular in the cities of Novopolotsk/Polotsk/and Novogrudok) and that barriers are being removed to promote greater application of energy-efficient technologies in urban environment and sustainable transport. In particular, the project will focus on the transport sector in Novopolotsk and Polotsk where greenhouse gas emissions (GHG) are rising. Stakeholder consultations in both Novopolotsk and Polotsk revealed that the transport sector is under represented in urban planning. Both cities have issues with transportation and neither has developed an integrated sustainable transportation plan. In particular, both cities indicated the need to improve their transportation systems and to develop additional elements of transportation infrastructure to connect the two cities. In short, the transport sector offers excellent opportunities to reduce GHG emissions and it is an area which other donors or technical assistance programs have not been targeting in Belarus.



6. In the case of Novogrudok transport is not an issue as the city is small and does not have major GHG emissions. Meetings with the city authorities in Novogrudok revealed that energy-efficient street and public buildings lighting is the area where they see greatest potential for undertaking new activities and making new investment to enable cost savings and achieve GHG emission reductions. Energy-efficient lighting offers the benefit of being highly visible and therefore it should help to catalyze new and additional sustainable urban development interventions in the city of Novogrudok in the area of energy-efficiency.

### ***Baseline Scenario and Associated Baseline Projects***

#### ***Polotsk***

7. Dating back to 862, Polotsk is the oldest city in Belarus and is a major tourist attraction. It is located in northern part of Belarus in Vitebsk oblast. Polotsk has a population of over 83,000 people and covers an area of 42 sq.km. Polotsk became the first Belarusian city to sign the Covenant of Mayors and to develop a Sustainable Energy Action Plan (SEAP) which was recently completed in late 2012. The following data is presented as per SEAP baseline analysis and does *not* include the industrial sector. The city's energy balance (industry excluded) is dominated by natural gas that accounts for 53% of total final energy consumption in Polotsk (2010 data):

**Table 1:1 – Energy Balance for the City of Polotsk (2010)**

Energy source	Consumption, MWh	Share, %
Natural gas	469,398	52.9
Petroleum	194,098	21.9
Coal/peat	19,020	2.1
Electricity	83,584	9.4
Biomass	120,533	13.6
<b>TOTAL</b>	<b>886,633</b>	<b>100</b>

8. On the basis of the above energy balance, the GHG footprint of Polotsk could be estimated at around *170,000 tons CO<sub>2</sub>* per year. Sectoral consumption is dominated by residential and public buildings. Private, commercial, municipal, public *transport* accounts for a significant 18.6% share of GHG emissions.

**Table 1:2 Sectoral energy use for the City of Polotsk (2010)**

Sector	Consumption, MWh	Share, %
Residential buildings	370,348	43.8
Municipal buildings	247,657	29.3
Private and commercial transport	120,459	14.2
Municipal transport	16,847	2.0
Public transport	20,602	2.4
Other	69,808	8.3

9. As part of the SEAP, Polotsk has undertaken a voluntary commitment to reduce its emissions by at least 20% by 2020 against the baseline of 2010. The bulk of energy (and resultant CO<sub>2</sub>) savings are expected to come from improvements in *municipal buildings and lighting*. Actions in this sector have already been initiated with 75 LED lighting fixtures installed along the central avenue of the city. Further measures, that are likely to get implemented as part of SEAP (i.e. under business-as-usual for this GEF project), will include installation of solar water heaters in sports facilities and city council building, installation of efficiency pumps in municipal boiler houses, upgrade of heating network etc. Thus, under a *business-as-usual scenario*, the city of Polotsk would focus mainly on GHG emission reductions in the *municipal buildings sector*, and the transport sector would likely be neglected and GHG benefits from optimized public transport systems, modal shifts and promotion of non-motorized transportation are likely to go untapped. Meetings with city officials in the city of Polotsk indicated a strong interest in collaboration with UNDP and GEF in the area of sustainable transport.

#### *Novopolotsk*

10. Founded in 1958, Novopolotsk has grown from being Polotsk's satellite town to the largest petrochemical industrial center in Belarus with the total population of 106,000 people, sprawling close to 55 sq.km. The two cities (Polotsk and Novopolotsk) are located less than 10 km apart. Novopolotsk's budget (over \$27M in 2011) is largely centered around Naftan JCS, the largest refinery in Belarus. The city contributes close to 64% to Vitebsk oblast gross regional product.

**Table 1:3 Energy Balance for City of Novopolotsk (2010)**

Energy source	Consumption, MWh	Share, %
Natural gas	4,420,387	37.0
Petroleum	2,269,928	19.0
Electricity	2,628,338	22.0
Biomass	23,894	0.2
Other	2,604,444	21.8

TOTAL	<b>11,946,991</b>	100
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11. Clearly, sectoral consumption is dominated by the petrochemical industry in Polotsk as the following table indicates.

**Table 1:4 Sectoral energy use for the City of Novopolotsk (2010)**

Sector	Consumption, MWh	Share, %
Industry	11,015,125	92.2
Residential buildings	597,350	5.0
Municipal buildings	179,205	1.5
Transport	153,344	1.3

12. On the basis of the above energy data, the city of Novopolotsk has a GHG footprint, which could be roughly estimated at around 3.6 Mt CO<sub>2</sub> per year, which is significant, but which is largely dominated by petrochemicals use at the Naftan refinery. Since the project does *not* aim to target the GHG emissions from the refinery in any way, it would be more appropriate to leave the refinery's footprint out of the GHG picture. Thus industry excluded, the city's footprint comes out at around 280,000 tons CO<sub>2</sub> per year, with transport accounting for close to 15% thereof. The key priorities for the city's development in 2012-2015 include further growth in industrial production and exports, facilitation of small and medium business development. Though the city of Novopolotsk has announced its intention to join the EU Covenant of Mayors, under a *business-as-usual scenario*, industrial development (primarily, production of petrochemicals) in Novopolotsk will continue to receive top-priority attention and some progress is expected to be made in the area of distributed renewable energy generation through installation of solar water heaters in sports facilities and public buildings. Transportation infrastructure development is not likely to benefit from a comprehensive planning approach, whereby public transport benefits, including GHG reductions, are maximized.

#### *Novogrudok*

13. Novogrudok is a typical middle-sized Belarusian town with a population of around 30,000 people and total area of 13.75 sq.km. The town is located in north-western part of Belarus in Grodno oblast. It is a significantly smaller city than both Novopolotsk and Polotsk and does not have a problem with transport. Discussions with city officials revealed that energy efficiency was the top priority of the city administration for reducing greenhouse gas emissions. The town's economy is based around industry (machinery building, apparel, food) at 40%, utilities and services. Some 13% (or over \$3.5M) of the city's annual budget of \$27.35M<sup>8</sup> goes to pay for energy resources to meet the needs of the population and industry. Hence, promotion of renewable (and domestic) sources of energy and energy efficiency is high on the municipality's agenda. The town's energy balance is dominated by natural gas that accounts for 42% of total final energy consumption in Novogrudok (2011 data):

**Table 1:5 Energy Balance for City of Novogrudok (2010)**

Energy source	Consumption, MWh	Share, %
Natural gas	250,328	41.9
Petroleum	85,928	14.4
Coal/peat	228	0.04
Electricity	215,842	36.1
Biomass	45,345	7.6
TOTAL	<b>597,671</b>	100

14. On the basis of the above energy balance, Novogrudok's GHG footprint can be estimated to be around

<sup>8</sup> at April 2013 exchange rate of 8700 roubles to USD



170,000 tons of CO<sub>2</sub> per year, or around *115,000 tons CO<sub>2</sub>* if industry-related emissions are left out. Sectoral consumption is dominated by residential buildings, followed by industry and municipal sector, which forms 12.8% of total GHG emissions.

**Table 1:6 Sectoral energy use for the City of Novogrudok (2010)**

Sector	Consumption, MWh	Share, %
Residential buildings	247,188	45.4
Industry	179,530	33.0
Municipal buildings	69,931	12.8
Other	46,648	8.6
Transport	1,140	0.2

15. Novogrudok is located at one of the highest points in Belarus (323 m above sea level), which is a favorable factor for development of wind energy. In fact, Novogrudok is the first city in Belarus to host a commercial scale wind turbine - a 1.5 MW HEAG turbine was installed near the city by regional utility GrodnoEnergoin 2010. Municipality is looking for an investor to develop the site into a windpark with some 10 additional turbines to be installed (total capacity around 20 MW). A natural gas-fired 2MW<sub>el</sub>+2MW<sub>th</sub> mini-CHP has been commissioned by Novogrudok utility company in 2012. The CHP operates as a baseload plant providing year-round hot water to the community, while utility boiler houses prove heating load during the heating season. On January 25, 2013, Novogrudok acceded to the Covenant of Mayors and will need to develop a Sustainable Energy Action Plan (SEAP) in a short while. The EU typically in most cases does not provide funding for cities to develop Sustainable Energy Actions Plans. They have to do so with their own resources. Consequently, experience has shown in some cities that have signed up to the EU Covenant of Mayors there have been significant delays in the development of a SEAP. Under the business-as-usual scenario, the city of Novogrudok is likely to go ahead with small-scale renewable energy generation through installation of solar water heaters at some of its schools and day-care facilities. However, the city is expected to continue to operate the existing street and public buildings lighting systems which are based on old and inefficient technologies because these are cheaper and more abundant on the market. Modern energy efficient lighting fixtures and intelligent control systems are not likely to get introduced under the business-as-usual.

***Proposed alternative scenario: brief description of expected outcomes and components of the project***

16. In the proposed alternative scenario, greater attention to green urban development and planning is undertaken in each of the three cities. The city of *Polotsk* will elaborate a sustainable urban mobility plan, and create integrated park-and-ride facilities, delineate and/or build some 10 km of bike lanes, implement fuel-switch for public transport (from diesel to cleaner fuels like CNG or LPG) and outline a traffic-free area to minimize the impact on the environment. In the greater urban area of *Novopolotsk*, potential areas for improving public transport efficiency is extension of the tramways to cover new residential areas currently under development. Coupled with the construction of at least 10 km of modern bike lanes, these will facilitate modal shifts enabling energy and GHG savings across the city transport network. Further, both cities' officials are willing to consider a bikeway project that could connect Polotsk and Novopolotsk thereby providing an alternative option for travel between the two cities. Discussions with officials from Novopolotsk revealed a strong interest to work together with the city of Polotsk and with UNDP and GEF to explore in detail this possibility in greater detail, initially through funding of pre-feasibility and feasibility studies and subject to positive results through the implementation of a full-scale project to connect the two cities via a cycling track. In *Novogrudok*, the alternative green urban development scenario will comprise a switch of all of the town's street and public buildings' lighting to energy efficient systems. The City of Novogrudok indicated its strong interest in collaborating with UNDP and GEF within this priority to work jointly on a demonstration of EE street lighting initiative, demonstrating the efficiencies that can be obtained from new lighting technologies in public lighting.

17. **Component 1** of the project focuses on the development of a National Green Urban Development Plan for the Republic of Belarus which covers all issues related to the development of low carbon climate resilient cities in Belarus including all issues related to energy-efficiency, renewable energy, and sustainable transport. Among others, the plan will also identify funding modalities and commit funding for green urban planning from the various sources, including state and municipal budgets, corporate and project financing, grants. In addition, it will assist with the development of green urban development plans for the cities of Novopolotsk, Polotsk, and Novogrudok. The green development plan for Novopolotsk and Polotsk will focus on sustainable transport whereas the plan for Novogrudok will pay more attention to issues related to improvements in energy-efficiency in the public lighting sector. The key outputs of this component will be a comprehensive national green urban development plan developed and adopted in Belarus and three more green urban plans developed and adopted for Novopolotsk, Polotsk, and Novogrudok. Further a review of the existing policies and regulations in the area of public lighting and urban transport development will aim to identify gaps or deficiencies that will need to be filled and relevant proposals for additional policy instruments in these areas will be proposed.

18. **Component 2** of the project focuses on the promotion of sustainable transport in the cities of Novopolotsk and Polotsk. Discussions with city officials have indicated a priority should be given to tramways and to increased use of cycling as an alternative to cars as a means of transport. A focus of component 2 will be to ensure that sustainable transport considerations receive priority as part of integrated green urban development planning. In particular, the cities officials support the development of a cycle lane to connect the two cities, which are less than 10km apart. The key outcome of component 2 will be successful pilots on sustainable transport carried out in the cities of Novopolotsk and Polotsk related to tramways, cycling, park-and-ride facilities, efficient public transport which include at least \$6 million of co-financing to complement the proposed GEF activities. The GEF funding going toward the investment part of this component will represent a maximum of 30% of the total capital cost of each demonstration project.

19. **Component 3** of the project focuses on promoting energy-efficient street lighting in the city of Novogrudok. City officials identified street lighting as an area where significant energy savings could be made with a focus on replacement of old incandescent bulbs with CFLs and/or LED technologies. In particular, City officials stressed that their view that energy efficiency should be at the core of green urban development in Novogrudok. The main outcome of component 3 should be that a successful energy-efficiency street lighting pilot is carried out in Novogrudok and included as part of integrated green urban development planning and then that EE street lighting pilots are successfully replicated in at least 3 other cities where this project will support feasibility study / business plan preparation which will lead to actual investment. The GEF funding going toward the investment part of this component will represent a maximum of 30% of the total capital cost of the demonstration project.

20. **Component 4** of the project will focus on replication and dissemination of the approach of the project and in particular support strengthened participation of at least 5 other cities in the EU Covenant of Mayors and with developing green urban development plans. The aim of component 4 is to ensure that green urban development approaches are disseminated widely throughout Belarus. With this goal in mind, component 4 will establish a new NGO, the Belarusian Association of Green Cities (with each participating city paying a small annual fee to help ensure sustainability) with the key outcome being that this association will support cities throughout Belarus with participation in the EU Covenant of Mayors and with the development and updating of green urban development plans. In addition, it is envisaged that through initial support from the project on organizational, legal and managerial matters at the set-up phase, the Belarusian Association of Green Cities should be sustainable by the end of the project, meaning that it will be able to continue without the support of the project from the annual membership fees from the participating cities. GEF support will be used to support the launch of the NGO but not its operation

beyond the lifetime of the project.

*Incremental cost reasoning and expected contributions from the baseline, the GEFTF and co-financing*

21. In each of the three cities, analysis of municipal plans and strategies clearly shows that without GEF assistance, a high priority to green urban development planning and projects would be unlikely to take place over the next five years. There is only one other new initiative in Belarus related to developing a green economy and green urban development planning. This is the EU's Green Economy project for Belarus, due to start in mid-2013, of which UNDP will manage approximately US \$5 million dollars. This project does not have any specific focus on the cities of Novopolotsk, Polotsk, and Novogrudok and it deals with a wider range of environmental issues such as water, waste, ecotourism, and green energy. This project will work closely with the Green Economy project of the EU to ensure that green urban development issues and climate change mitigation issues are better integrated. The combined budget of the two projects would be US \$18 million (\$15 million EU Green Economy, \$3 million UNDP GEF Green Cities) which is a significant contribution towards developing green cities in Belarus.

22. The contribution from the baseline to this project is estimated at \$13.15 million and includes a combined contribution of \$10.5 million from the cities of Novopolotsk, Polotsk, and Novogrudok for the pilot demonstration activities in each of cities. In addition, the Ministry of Architecture and Construction will provide a \$300,000 contribution, which includes support for the development of a national green urban development plan. The Ministry of Environment and Natural Resources as the GEF Operational Focal Point will provide a \$150,000 co-financing contribution, which includes support for office space for hosting the project management unit. UNDP will provide a contribution of \$2,200,000 which is broken down into \$2 million of support from the EU Green Economy project as it relates to green energy issues and an additional \$200,000 contribution to support workshops, seminars, and other outreach events. UNDP also manages the \$4.5 million USD energy efficiency in residential buildings project, which started in December 2012 and has as its main focus the introduction of new building codes for Belarus including minimum energy performance standards for residential buildings. This project is complementary to the ongoing UNDP GEF energy efficiency residential buildings project, as a new building code for Belarus is supportive of integrated green urban development.

*Global environmental benefits*

23. A preliminary bottom-up assessment of direct GHG benefits from the proposed GEF project has been undertaken at the PIF stage. Since the project includes two distinct types of interventions – transport and energy efficient lighting – these have been assessed separately. Based on the default value for GHG emission savings for bike lane projects of 250 tCO<sub>2</sub>/km/year<sup>9</sup> and total length of bike lanes to be constructed in Polotsk and Novopolotsk (including intercity lanes) at 30 km, annual GHG emission savings have been estimated at 7,500 tons CO<sub>2</sub>/year. On a 20-year lifetime horizon for infrastructure projects, this translates into 150 ktCO<sub>2</sub> of lifetime emission savings for the bike lane components of the transportation interventions for the two cities. The savings would be even higher if benefits from park-and-ride facilities and improved efficiencies of public transport are included. At this point, though, quantification of these benefits appears highly constrained by the lack of necessary data and can only be accomplished at the PPG stage. For the energy efficient lighting component in Novogrudok, GHG estimates are based on achieved savings from public lighting projects in the region<sup>10</sup>: annual power consumption for public lighting is estimated at around 4600 MWh; energy savings of at least 40% (or 1840 MWh) translate into GHG savings of 828 tons CO<sub>2</sub> per year (at the Belarusian grid emission factor of 0.450 tCO<sub>2</sub>/MWh) or over 8kt CO<sub>2</sub> over a 10-year lifetime. Thus, direct GHG emission reductions from

<sup>9</sup> ABD Study “Reducing Carbon Emissions from Transport Projects”

<sup>10</sup> UNDP public lighting projects in Russia or Slovakia have achieved up to 50-60% energy savings

the proposed interventions can be conservatively estimated at around 160 kt CO<sub>2</sub> over the lifetime of investments. Indirect GHG emission reductions once an integrated approach to green urban development planning takes place in Belarus will be even larger. These calculations will be refined and adjusted, as relevant, during the PPG stage using the GEF STAP methodology for energy-efficiency and transport projects.

### *Innovativeness, sustainability and potential for scaling up*

24. An integrated approach combining energy-efficiency measures and sustainable transport measures towards reducing greenhouse gas emissions in a cost-effective manner which manifests itself in the development of green urban development plans which are consistent with and complementary to a national green urban development plan for Belarus represents a highly innovative approach. According to the World Health Organization, over 50% of the population around the world lives in cities and this number is expected to increase to 70% by the year 2050. In Belarus, the urban population is estimated as 73% of the total population of 9.5 million and this percentage is increasing. The opportunities for significantly reducing GHG emissions from green urban development in Belarus are therefore significant. The development of a green urban development approach has not been tried before in Belarus and there is only one other project (EU Green Economy Initiative which is currently in the planning stage), which deals specifically with this issue in Belarus. The sustainability of this project will rest on a number of pillars. The first pillar is the National Green Urban Development Plan that will provide the overall framework for green urban planning and identify funding modalities for activities across the country. The second pillar will be the commitments under the EU Covenant of Mayors that Polotsk and Novogrudok have taken on (with Novopolotsk due to join soon) and the respective Sustainable Energy Action Plans. The third one is the Association of Green Cities of Belarus (to be funded by annual fees from participating cities) that the project will help establish. Through the Belarusian Association of Green Cities the project will aim to start the replication of the project approach in at least 5 other cities in Belarus before the end of the project. The Belarusian Association of Green Cities will support additional cities in Belarus with development of green urban development plans and participation in the EU Covenant of Mayors will assist with the sustainability of this project.

**A.2. Stakeholders.** Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and others as relevant) and describe how they will be engaged in project preparation:

25. The key stakeholders involved in this project are the Ministry of Natural Resources and Environment, the Ministry of Architecture and Construction (for green urban planning and the development of a national green urban development plan), the City of Novopolotsk, the city of Polotsk, and the city of Novogrudok all of whom will contribute to the detailed project design including the development and elaboration of the project activities, outputs, and the development of the project strategy. Five other cities in Belarus will become key stakeholders during the second half of the project once they have integrated into the project workplan. The key roles of these partners will be support for national green urban development plans, support for activities related to the EU Covenant of Mayors and support for the implementation of demonstration projects. The European Union, with its Green Economy project, will be another key partner in this project. Other key partners such as academia, NGOs, and private sector will be identified during the course of further preparation of the project during the PPG phase.

**A.3 Risks.** Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable):

26. The following risks have been identified related to this project.

**Table 1:7: Risks related to project implementation and mitigation measures**

<b>Risk</b>	<b>Rating</b>	<b>Mitigation Measures</b>
<b>Data and information risks:</b> Lack of data and information makes it difficult to accurately calculate GHG emission reductions from this project.	Low	The project will include in its design a heavy emphasis on monitoring, verification, and reporting of greenhouse gas emissions (both direct and indirect) which are a result of the activities and outputs of this project. A key national expert will be given the task of monitoring and reporting of GHG emission reductions.
<b>Financing Risks related to demonstration projects:</b> Lack of Municipal Co-Financing in the three pilot cities means that pilot projects are not successfully realized.	Medium	The cities of Novopolotsk/Polotsk and Novogrudok have already committed some \$10.5 million in co-financing to this project. In addition, they have signed up to EU Covenant of Mayors and are committed to developing green urban development plans. They are strongly committed to working with UNDP and to making sure these demonstration projects are successful. The risk that municipal co-financing does not materialize is rated as medium given that over time municipal budgets can be changed and there is the possibility they might be reduced in future. As a final resort, if co-financing does not materialize partner cities can be changed during project implementation.
<b>Financing Risks related to replication:</b> Sustainable funding for green urban planning does not become available.	Medium	This is the risk that plans are drawn up but then funding is not available to finance sustainable green urban development. The National Green Urban Development Plan, to be drawn up as part of the project, will include a range of funding sources and modalities for green urban development in Belarus. The Association of Green Cities of Belarus will provide a further vehicle for exchanging best-practices in green urban planning and thus facilitating greater state and municipal funding.
<b>Technical Risks:</b> Officials in the participating cities lack experience and knowledge concerning integrated urban development and planning issues related to the development of green cities.	Low	The project will launch a Belarusian Association of Green Cities, which will play a strong role in raising awareness and increasing information about integrated urban development and sustainable green cities. Membership fees will help the NGO to continue its operations beyond the lifetime of the project.

**A.4. Coordination.** Outline the coordination with other relevant GEF financed and other initiatives:

27. The project will draw lessons learned from the UNDP GEF Belarus energy-efficiency state sector project which concluded activities in early 2012 and which highlighted the importance of special partnership agreements between the public and private sector in order to promote energy-efficiency as well as the need to incorporate energy-efficiency planning appropriately into the allocation of state budgets. The project will also coordinate closely with the ongoing UNDP GEF energy efficiency in residential buildings project which focuses on the introduction of new building codes for Belarus and also with the EBRD BELSEFF initiative which working through local banks will provide a credit line of \$50 million to small and medium enterprises for energy-efficiency and renewable energy investments in Belarus. In addition,

UNDP is developing a new initiative to support removing barriers to wind energy in Belarus and one of the pilot sites where there is already one pilot wind turbine operating and in place is Novogrudok. This project will coordinate closely its activities with the UNDP GEF wind energy project.

28. Finally, there is also one other significant initiative in Belarus currently in the planning phase which is of direct relevance to this project. This is the European Union Green Economy Initiative in Belarus which is EUR 12 million of which approximately EUR 4 million (over US\$ 5 million) will be being given to UNDP to manage. The EU Green Economy Initiative is planned to run from July 2013 – July 2016 and aims to support the implementation of Belarus’s environmental policies as well as supporting small-scale community projects in the field of green economy which could include ecotourism, agriculture, waste management, ecological expertise, renewable energy and energy-efficiency. Education and dissemination activities promote awareness raising, capacity building and development of grassroots initiatives at local level, including an information campaign, involving the Belarusian citizens, targeted NGOs, schools, universities, businesses, as well as local and regional, authorities will all be supported. Another focus of the EU project will be support for demonstration projects related to green economy which links in well with component 4 of this project where additional funding may be required depending on the level of interest of other cities. During the project preparation grant (PPG) phase, the exact modalities by which this project will coordinate and work closely with the EU Green Economy Initiative for Belarus will be further explored and defined. The EU also is implementing the Sustainable Urban Development project which is primarily working in Ukraine. However, this project does have some activities in the city of Novolukoml in Belarus and this project will explore possibilities to collaborate with the EU Sustainable Development project.

**B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:**

**B.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.:**

29. The 5th National Communications of the Republic of Belarus to the UNFCCC identifies both energy-efficiency and transport as two priority areas with large potential for reduction of greenhouse gases in the domestic economy in the Republic of Belarus. The National Program of Measures to Mitigate the Consequences of Climate Change (2008-12) and the Strategy for Reducing Emissions and Enhancing Removal of Sinks by Greenhouse Gases by Sinks in the Republic of Belarus (2007-12) have both emphasized energy-efficiency and transport as key priority areas for additional action. Finally, in the transport sector the Program of Development of Automotive Sector of Republic of Belarus (2007-2010) and Program for reducing Negative Impact of Transport on Environment of the Republic of Belarus (2006-10) both recognize the importance of sustainable transport policies and initiatives as a tool to mitigate and reduce greenhouse gases in Belarus. This project is full consistent with the all national strategies and plans of the Republic of Belarus.

**B.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities:**

30. This project is consistent with the GEF Climate Change mitigation focal area and specifically “CCM:2 – Promote Market Transformation for Energy-Efficiency in Building and Industrial Sectors” by promoting investment, technologies and policies for energy-efficient street and public buildings lighting in pilot city of Novogrudok (Component 3) and with “CCM:4 – Promote energy-efficient low carbon transport and urban systems” by promoting investment, technologies and policies for sustainable transport in the pilot cities of Novopolotsk and Polotsk. The project focuses on green urban development planning and support for strengthening of participation Belarusian municipalities in the EU Covenant of Mayors and includes a component on replication to at least 5 additional cities. The project aims to remove barriers to support further investment in green urban development by cities in Belarus, with a particular emphasis on energy-efficiency in street and public buildings lighting and sustainable transport initiatives. These

activities are consistent with the GEF climate change mitigation focal area with their emphasis on reducing greenhouse gas emission reductions, in particular from transport and lighting sectors.

### **B.3 The GEF Agency's comparative advantage for implementing this project:**

31. This project is a climate change capacity building / technical assistance intervention that falls under UNDP's comparative advantages as presented in Annex L of the document GEF/C.31/5 rev.1. The project does not deal with large scale investment (with the exception of demonstration projects) but rather a main focus is on technical assistance activities aimed supporting green urban development cities in Belarus in two areas where UNDP already has significant experience. The project is also fully aligned with UNDP-GEF's signature program on *Low emission climate resilient urban and transport infrastructure* which aims to significantly save energy and reduce greenhouse gas emission related to urban management. UNDP will bring significant experience to this project with the implementation of 21 other ongoing energy-efficiency GEF projects in the region and 5 other sustainable transport projects in the region.

32. UNDP will also provide significant co-financing to this project of \$2,200,000 which includes a \$2,000,000 in-kind contribution from the EU Green Economy project and \$200,000 cash contribution. These funds will be used to support staff costs and related expenses for project management unit and also support for the cost of organizing seminars, workshops, and stakeholder consultation events. This level of co-financing which stands at 60% of the requested GEF contribution is greater than the level of co-financing that UNDP has provided as support many other environmental projects in the region and shows the strong level of commitment of UNDP to this particular project.

33. The final draft UNDAF for Belarus (which has been agreed and approved by the Council of Ministers of Belarus) includes Agency outcome 3.1. National capacity to mitigate and adapt to climate change enhanced. Under this Outcome, actions to reduce greenhouse gases through energy-efficiency and sustainable transport are both included. The proposed project is fully in line with the UNDP Country Programme Document (CPD) for Belarus for 2011-2016 which states that "UNDP will assist Belarus with further developing the country's capacity to mitigate and adapt to climate change. UNDP will provide the Government with capacity building support to help meet the country's obligations under the environmental conventions ratified by Belarus." The CPD 2011-2016 among its outputs includes Output 3.1.2. "National legal and institutional frameworks for the use of renewable energy sources, particularly wind energy, strengthened." Outcome 3 of the CPD is for enhancing environmental sustainability and has a budget of US\$3.5 million. UNDP also has experience with implementing two energy-efficiency in buildings projects with the GEF, one focused on the public sector which finished in early 2012 and another one on energy-efficiency in residential buildings which started in December 2012.


34. The UNDP Belarus Country Office's structure includes a Programme Unit (9 people), Programme Support Unit (3 people), Finance Unit (3 people), Procurement Unit (3 people), HR Unit (2 people), and Logistics Unit. In the Programme Unit, two officers have experience in running GEF projects (and are currently supervising GEF financed projects). One of them has an MSc degree in Environmental Sciences and Policy from the Central European University, and the other one has a Master in Public Administration degree from Harvard University in the United States. Specialists from the Finance and Programme Support have intensive experience in processing payments under GEF project, including budgeting and financial monitoring of GEF projects expenditures. The Procurement Unit has been procuring goods and services within GEF projects for more than 5 years; and the HR specialists have been recruiting and administrating national and international experts for GEF projects for several years.

### **PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

<b>NAME</b>	<b>POSITION</b>	<b>MINISTRY</b>	<b>DATE (MM/dd/yyyy)</b>
Mr Vitaly KULIK	First Deputy Ministry, GEF National Focal Point	Ministry of Environment and Natural Resources Protection	<b>21 MARCH 2013</b>

**B. GEF AGENCY(IES) CERTIFICATION**

<b>This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.</b>					
<b>Agency Coordinator, Agency name</b>	<b>Signature</b>	<b>DATE (MM/dd/yyyy)</b>	<b>Project Contact Person</b>	<b>Telephone</b>	<b>Email Address</b>
Adriana Dinu UNDP/GEF Officer-in- Charge		April 11, 2013	John O'Brien Regional Technical Advisor EITT	421 917 415 017	John.obrien@undp.org