**United Nations Development Programme**

**UNDP Ukraine**

|  |  |
| --- | --- |
| **Project Title:** | Ukraine Rural Biomass and Energy Project |
|  |  |
| **Thematic Area:** | Energy & Environment |
|  |  |
| **UNDAF Outcomes:** | The project is consistent with the UNDAF and the UNDP Country Programme Action Plan (CPAP) which states that vulnerable groups in poor rural and urban areas should be assisted to take advantage of sustainable socioeconomic development opportunities, including though accessible and reliable energy service provision and job creation.  |
|  |  |
| **Summary:** | This Ukraine Biomass and Energy project seeks to assist Ukraine with diversification of its energy supply away from dependence on imported fossil fuels to promote renewable energy, and specifically biomass energy. The project will aim to contribute to a more secure, competitive and sustainable energy production through popularization of cheap and accessible energy from local biomass. Specifically, this will aim to lay the basis for significantly increased use of biomass for heating in rural areas and smaller towns and villages. New green jobs and income and revenue streams will be created through the support that is provided to small and medium enterprises (SMEs). Finally, a nation-wide awareness campaign on biomass energy (combined with a school education programme) will help to change an attitude of the population towards biomass energy, laying a foundation for increased usage and investment in the future in Ukraine biomass energy and related technologies. |
|  |  |
| **Expected Outcomes:** | 1. Energy security of Ukraine increased; dependency on expensive imported gas reduced;
2. Quality and reliability of heating services in the municipal and residential sector, especially in rural and peri-urban areas of Ukraine, ensured;
3. Low-cost and aссessible technologies that ensure the use of locally grown biomass as fuel are popularized;
4. New jobs and income related to biomass energy are created in poor rural and peri-urban areas of Ukraine
 |
|  |  |
| **Implementing Partners:** | Ministry of Ecology and Natural Development, Ministry of Regional Development, Construction, Housing, and Communal Services, Ministry of Agriculture, Municipalities and Local Administrations, small and medium sized enterprises and local entrepreneurs, NGOs |
| **Responsible Party** | United Nations Development Programme (UNDP) |
| **Project Budget:** | 24 million |
|  |  |
| **Estimated Duration:** | Four Years (1 January 2019 – 31 December 2022) |

**Estimated Project Budget – Ukraine Rural Biomass and Energy Project**

|  |  |  |
| --- | --- | --- |
| **Component** | **Investment/Technical Assistance** | **Estimated Budget** |
| 1. Micro-grants for local communities for biomass heaters and energy plants nurseries  | Grants | € 14,000,000 |
| 2. Support to local entrepreneurs to develop bioenergy business in rural and peri-urban areas  | Grants | € 6,000,000 |
| 3. Targeted training for local authorities, small and medium sized enterprises (SMEs) and entrepreneurs on the benefits of biomass energy | TA | €1,800,000 |
| 5. Awareness Raising, Replication, and Dissemination | TA | €1,000,000 |
| Project Management |  | €1,200,000 |
| Estimated Total Cost |  | €24,000,000 |

**Narrative Summary of Objectives and Outputs**

The Ukraine Rural Biomass and Energy project will be a 4 year, 24 million euros project which will aim to improve living conditions, enhance the economic resilience of the population, and contribute to greater security of energy supply in Ukraine with a focus on targeted support for biomass energy (primarily wood and agricultural waste but also biogas from animal waste) in rural areas, working to support local entrepreneurs, small and medium sized enterprises (SMEs) and local Ukrainians municipalities to make sustainable bioenergy available locally for communal and residential needs. The objectives of the project are seven-fold:

1. To promote use of biomass as a source of energy for heating and industrial production in rural areas and small towns of Ukraine
2. To assist the Government in rolling-out the programme of fuel subsidies promoting the use of biomass
3. To increase green jobs and employment from supporting biomass based businesses with a focus on rural areas of Ukraine by launching a business incubator which will support new biomass start-up businesses
4. To provide significant trainings to local authorities, small and medium sized enterprises (SMEs) and entrepreneurs on the benefits of biomass energy
5. To significantly build capacity in central government to understand the benefits of biomass based systems;
6. To raise awareness nationally about the benefits of biomass energy through the launch of a national marketing campaign
7. To reduce greenhouse gas emissions and to create a more climate resilient green economy in Ukraine by putting in place financial support mechanisms that support increased investment in biomass energy

It is envisaged that the project will be implemented in all provinces of Ukraine (with possibly the exception of Crimea) and communities, businesses, and local authorities will all be able to apply for and benefit from the project financial support mechanism and business incubator support mechanism, to be developed by the project.

The project will primarily focus on improving heating comfort levels in rural public sector buildings including schools, kindergartens, hospitals, libraries, local government buildings, and community centers by using readily available waste straw supplied from local agricultural and/or forestry enterprises. Priority will be given for supporting rural regions and those regions of the country, which are affected by the conflict and fuel poverty or have faced or are likely to face additional fuel supply issues as a result of political events or because of economic difficulties. The project will also support biogas projects using anaerobically decomposed animal waste. The project aims to stimulate local markets for improved household heating, industrial cogeneration, and biomass-based briquetting and pelleting, as well as raise local capacity of the private sector (entrepreneurs and SMEs) in the biomass sector.

The project will consist of four (4) related and linked outputs as follows:

**Output 1:** **Micro-grants for local communities to finance procurement and installation of biomass heaters; procurement and installation of new boilers.** Activities under output 1 aim to improve municipal heating of public buildings in rural and semi-rural areas. Under this output new thermal heating systems primarily burning straw will be installed throughout Ukraine totaling about 400-450 MWth. This will allow for quick replacement of the expensive and environmentally harmful fossil fuels that are used to operate outdated heating systems of public buildings in villages and small towns throughout Ukraine with modern easy-to-operate and inexpensive boilers that will utilize the potential of locally available biomass. The output will help ensure energy independence and provide high quality services to the public. The project will use the established network of CBA project partners to disseminate information and engage with rural administrative units and communities that are interested to receive a grant.

**Output 2:** **Support to local entrepreneurs to develop bioenergy business in rural and peri-urban areas:** support the development of a private sector market for contractors wishing to act as fuel suppliers to the heating plants installed under Activity 1.1. Straw handling equipment such as balers, trailers and bale handling tractors will be provided using lease-finance models. At least 2,000 new jobs will be created in the area of biomass fuel production and up to 3,000 new jobs will be created in the area of heat generating facilities operating and maintenance. It is expected that around 60% of the new jobs will be occupied by females.

**Output 3: Targeted Training for local authorities, entrepreneurs, communities and individual residents on bioenergy.** Targeted training at the local and municipal level on biomass energy will include practical guidelines and training on development of biomass projects to local municipal authorities. Special attention will be put on providing support to individual residents who would like to benefit from governmental subsidies and switch to biomass boilers. For small and medium sized businesses (especially those agricultural companies that produce agro waste) and farms, and for entrepreneurs training materials and a business plan template will be developed, aiming at enhancing the knowledge and capacity of commercial fuel suppliers will be developed.

**Output 4: Awareness raising and dissemination strategy on Biomass Energy** – A national marketing and awareness campaign on biomass energy will be developed and launched which will target (i) consumers and SMEs (ii) universities and (iii) and schools with a focus on rural areas. The awareness raising will include specific awareness raising aimed at explaining how the financial support mechanisms and the business incubator will work as well as presenting the municipal biomass guide and other training products prepared under Output 3 of the project.

**I. Situation Analysis**

1. Globally, renewable energy is an energy sector that is dynamically developing in the world. Many governments have put in place a variety of incentives and policies to promote renewable energy. Today, the share of RES in the global primary energy supply is about **13%**, including that of biomass **10%** that is over 1300 Mtoe/yr. The European Union is successfully moving towards achieving its 2020 targets on renewable energy – 20% energy from RES in the gross final energy consumption. During past 10 years this index has increased from 8% to **14%**. Contribution of biomass into the EU's gross final energy consumption has already exceeded **8%**, and it must increase and additional 14% by 2020 to reach the 20% target. In the EU, the biggest progress has been made in the heat energy sector – biomass covers almost **16%** of the total generation that is the third place after natural gas and coal. The contribution of biomass to the EU power sector is comparatively modest – **4%** of the total generation and **19%** of all renewables. These successes with promoting biomass energy in the EU can be replicated in Ukraine with targeted technical assistance to overcome market barriers and build confidence in the biomass market.
2. Ukraine has considerable potential of biomass available for energy production, and this is a good precondition for the dynamic development of bioenergy. Theoretical potential of biomass in the country is about **20**-**25 Mtce/yr**. Main parts of the potential are agricultural waste (straw, corn stalks, sunflower stalks etc.) – over 11 Mtce/yr (2013 data) and energy crops – about 10 Mtce/yr.[[1]](#footnote-1) Regrettably in Ukraine bioenergy is developing much slower than in European countries and the current share of biomass in the total primary energy supply of the country is only 1.2%, and the share of biomass in the gross final energy consumption is 1.78%. However, under the current political situation, bioenergy is becoming even more important strategic area of energy development in the country given the high dependence of the country on imported energy carriers, first of all natural gas.
3. Ukraine currently produces domestically only some 20% of its natural gas requirements for energy (estimated at 55 bcm per annum on 2012) and approximately 80% is imported from other countries and in particular the Russian Federation. Diversification of energy sources is therefore a high priority of the Government of Ukraine away from imported natural gas and promoting domestic sources of energy production, including through renewable energy and biomass energy. Energy independence is for Ukraine is very high on the political agenda at the current time. In March 2014, the Ukrainian government announced that natural gas prices will rise 50% in order to receive a major loan from the International Monetary Fund (IMF), estimated of being up to 19 billion euros. Current political crisis in Ukraine makes the imperative of promoting renewable energy (and in particular biomass energy) more important than ever for Ukraine.
4. Progress in promoting biomass hearing and energy production depends on the rate at which Ukrainian government removes subsidies on natural gas which is a key condition of the IMF lending to Ukraine. Once natural gas subsidies are cut, the use of biomass becomes much more attractive, especially with additional government incentives for those who switch away from natural gas.

Currently tariffs are as follows:

**Natural Gas (industry):** 913 UAH/Gcal

**Natural Gas (population):** 314 UAH/Gcal

**Straw Pellets:** 851 UAH/Gcal

**Wood Pellets:** 900 UAH/Gcal

The price for the general population remains much lower for natural gas and there is currently very little incentive to switch to wood or straw pellets but this is changing.

The recent decision of the Cabinet of Ministers (Decree of the Cabinet of Ministers of Ukraine No.453 of 10 September 2014 “On the incentives of natural gas replacement for the heat energy production for the institutions and organizations that are financed from the state and local budgets) from a few months ago is to provide 508 UAH/Gcal incentive to users who switch away from natural gas will decisively change the economics of fuel consumption and will shape prices as follows:

Straw Pellets: 851 - 508  = 343 UAH/Gcal

Wood Pellets: 900 - 508 = 392 UAH/Gcal

In addition, in December 2014, the new Government of PM Yatseniuk has announced further plan to increase the price of natural gas. In this situation, soon straw pellets and wood pellets should be cheaper than natural gas for households.

Other Government incentives for switching to alternative energy sources include:

* Priority Status to projects replacing natural gas by other fuels and energy;
* Premium for replacement of natural gas to companies installing heat supply equipment on other fuels and energy (than gas) in DH and public sector;
* Reimbursement of part of the credits provided by banks to population for installing of heat supply equipment on other fuels and energy (than gas)
1. In addition to the fact that biomass energy can commonly be used for energy generation it has to be noted that Ukraine's agricultural sector produces large amounts of organic waste, including animal waste from livestock (pigs, cows, sheep, chickens etc) providing potential for biogas generation, which is able to help replace up to 2.6 billion m3 of natural per year. With the further development of agriculture and the wide use of green material (silage, grass), this potential can be extended according to various estimates from 7.7 to 18 billion m3 natural gas per year. In the first case it is supposed to use 6% of arable land (50% abandoned land) in Ukraine for growing corn silage for biogas with a conservative yield of 30 t/ha. The share of biogas from maize silage will contribute 53.0% of the total potential; biogas from the by-products and crop residues - 5.7%; biogas from by-products and waste of the food processing industry - 5.3%; and biogas from the animal manure waste - 36%. The main areas for the use of energy potential of biomass and biogas in Ukraine are production of heat and power.
2. The economics of developing renewable energy power generation projects is strongly determined by existing mechanisms of financial support. One of the few effective instruments for renewable energy sources (RES) support in the country is Green Tariff on the power produced from renewables including biomass. For energy producers Green Tariff is 12.39 eurocents/kWh that is equivalent to 194.85 kop./kWh (without VAT) as of 01.05.2014 up until the year 2030.
3. It is also recognized that under current prices of fossil fuels (first of all natural gas), heat energy and biomass, introduction of biomass boilers for heat production is economically feasible and can be recommended for industrial and state-financed sectors, especially given that the price of natural gas in Ukraine is expected to rise by up to 50% or more. Given the expected increases in the price of natural gas, implementation of such biomass/biogas energy projects in housing-communal sector is now on the verge of profitability. The payback period of wood and straw fired boilers is 2-3 years for industrial and state-financed sectors and 8-10 years for housing-communal sector meaning that in the industrial sector fuel-switching is already a very attractive option provided that biomass supply can be secured with long-term reliable supply agreements. In the housing-communal sector some kind of subsidy mechanism (investment grant mechanism) is likely still necessary to make the boiler conversions economically feasible.
4. Given such trends, it is estimated that by the year 2020 biomass energy can replace about **3.5** billion m3/yr of natural gas for heat production in Ukraine, and by 2030 **7.5** billion m3/yr which would represent over 10% of all heat supply One of the key factors which will need to take place in order for this to happen will be the gradual increase in the share of biomass CHPPs and MSW CHPPs installed capacity. By the year 2030 it is considered by the Ukrainian government that the following allocation of thermal capacity would be optimal: biomass CHP plants 25%, MSW CHP plants 10%, boiler installations and domestic boilers 65%. In the power sector, installed capacity of the biomass plants may come to over **530** MWel by 2020 and over **2100** MWel by 2030. It is predicted that biomass CHPPs, biogas cogeneration plants and co-combustion of biomass with coal on the existing coal TPPs will considerably contribute to the structure of electrical installed capacity on biomass.
5. In accordance with the Energy Strategy of Ukraine, it is proposed that the share of biomass in the total heat production should be **14%** in 2020 and **32%** in 2030; and that in power production will be **1%** and **4%** respectively. The contribution of biomass to the gross final energy consumption of the country may reach **4.3%** in 2020 and **10%** in 2030. According to the Energy Strategy of Ukraine until 2030[[2]](#footnote-2), in 2030, alternative and renewable energy sources would ensure replacement of 57,730 million tons of standard fuel, which would make up 19% of total primary energy consumption. But for this to be a reality, additional targeted support is needed to train local municipal officials, entrepreneurs, and small and medium sized enterprises in order to make this goal a reality.
6. The energy supply situation in rural Ukraine is that energy typically comes from coal and gas with very low penetration levels for biomass energy. Communal heat supply systems are for the most part run on coal and gas and barriers such as lack of affordability, increased fuel costs, lack of awareness, and overall inertia due to fear of change mean that for the most part there is very little investment in biomass based heating systems from local authorities. In addition, the long payback periods and the competing priorities for municipal funds (roads, schools, hospitals, parks, public buildings renovation, etc) mean that investment in biomass based heating systems is low down on the list of municipal investment priorities.
7. Despite the fact that investment levels are currently very low, bioenergy remains one of the most promising renewable energy sources in Ukraine given that the country has huge agricultural potential and large areas of forested land. At present, energy production from bioenergy sources is about 38 PJ/yr (or 10.6 TWh, heat only) that corresponds to 0.65% (0.76 mill toe, or 1.1 mill tce – “coal equivalent”) of the total primary energy supply - mainly firewood for domestic purposes as well as for fuel in forestry and wood processing enterprises. This contrasts with the country’s 54.6 GW electricity generation capacity consisting of 67% thermal, 24 % nuclear and almost 9 % hydro. Some studies have suggested that biomass energy could provide at least six times more and potentially ten times more energy to Ukraine’s energy mix, which would bring the share of biomass in the supply up to as much as 6% of the overall energy supply. In particular, biomass energy is suited to small-scale systems in rural areas for heating and hot water supply where investment capacity is limited and where there is an abundance of either agricultural and/or wood waste.
8. A number of barriers to increased investment in biomass energy (for both heat and power) mean that the market is not fully. These barriers are summarized in the following table along with the proposed means by which this project would attempt to overcome the barriers.

**Table 1:1 – Barriers to Increased Investment in Biomass Energy in Ukraine and Proposed Means of Project to help Overcome Barriers**

|  |  |
| --- | --- |
| **Barrier** | **Proposed Means of Project of helping to Overcome this Barrier** |
| Until recently, lack of economic incentives for users of heat and energy to switch to biomass sources. Large-scale state subsidies for gas consumption | Following the change of state policy, removal of subsidies for gas and provision of financial incentives for “switching” to bio-fuels, the project will provide grants for local communities for introduction of biofuel based heaters. The grants programme will stimulate the process of taking advantage of government incentives and will build a critical mass of users of bio-fuels heating and energy at the local level. |
| Lack of awareness among central government on the business opportunities from biomass energy | - Capacity Building for relevant central government officials - Study Tours to EU countries for central government officials (decision makers)  |
| Lack of trained technical engineers and specialists in biomass energy | - Detailed training programmes on biomass energy for central and local authorities, SMEs, and entrepreneurs to be carried out  |
| Long payback periods for conversion | - Financial Support Mechanism (investment grant mechanism) to encourage municipalities and local authorities to switch their boilers to biomass |
| Lack of affordability of biomass/biogas producing equipment for SMEs and entrepreneurs | - Financial Support Mechanism (leasing mechanism) to encourage SMEs and local entrepreneurs to create biomass based businesses without having to invest large sums of money that they might not be able to otherwise afford  |
| Lack of private sector interest in biomass investment in Ukraine | - Biomass Business Incubator to support the launch of new biomass based businesses in Ukraine |
| Lack of awareness about the benefits of biomass energy | - Comprehensive National Marketing Campaign on Biomass Energy  |

1. A separate serious problem and barrier to investment is the state subsidizing of prices for gas and heat for the population and housing sector. In 2013, heat energy for the population in housing sector was produced from Russian gas, purchased at the price of more than $ **400**/1000 m3, and sold to municipal utilities at **1309** UAH/1000 m3. Price of gas itself in the selling price amounts to **770** UAH/1000 m3 that is more than **4.5** times cheaper than the purchase price of gas. In order to compensate this difference, the State budget subsidized NJSC "Naftogaz of Ukraine" at the level of 25-30 billion m3 per year. However, this problem which is a big disincentive to invest in biomass energy is likely to be reduced in future as the Ukrainian government has agreed in principle to gradually stop subsidizing natural gas, in return for receiving financial support from the International Monetary Fund (IMF). It is envisaged that some of the funds which are recouped by the Ukrainian government from removing subsidies on natural gas could be used to support an investment grant mechanism to scale up the mechanism that will be piloted under this project.
2. Energy poverty (defined as when a household struggles to pay its energy bill because energy bill is greater than 10 percent of monthly household income) has become a major issue in Ukraine for politicians who have in the past sought to neutralize this issue by offering massive subsidies for natural gas. Following government announcements in March 2014, these subsidies are going to be gradually reduced in future meaning that energy poverty can become even more of a major issue. The criteria for defining energy poverty can be even more complicated and include, not just the cost of energy resources, but also take into account consumption levels, prices and the energy efficiency of homes. Overall, households risk finding themselves below the energy poverty line when three factors coincide low income, poor energy-efficiency and high rates for energy costs. Moreover, these three factors are inextricably connected. For instance, when buildings are poorly insulated, it directly affects the total cost of heating: those who live in buildings that are poorly insulated will pay more and will be at greater risk of finding themselves experiencing energy poverty. Meanwhile, they risk being trapped by a vicious cycle in which low incomes do not allow them to save money meaning that they cannot pay to insulate their homes or upgrade the equipment that generates or delivers energy, resulting in excessive costs for the energy they consume. Equally dangerous is the widespread habit of wasteful use of energy resources that encouraged by the existing social assistance system and unreasonable low energy prices.
3. In Ukraine in 2011, it is estimated that 5.6% of households spent more than 10% of their total income on heating. With the current and expected raises of rates for gas and electricity and prices for fuel the level the overall cost of communal services in the rural Ukraine will badly affect the households’ budgets, causing greater instances of fuel poverty to occur. In addition, the Ukrainian currency (the grivna) has dropped in value by some 50% over the period February 2014 – August 2014 meaning that the purchasing power of inhabitants is significantly reduced when paying for imported products and goods meaning that energy poverty issues could get even worse.
4. In summary, Ukraine as of August 2014, faces the situation where natural gas prices are likely to increase significantly over coming months and years meaning that more and more inhabitants are likely to face situations of fuel poverty, where their energy bill makes up more than 10% of their total monthly costs. According to Sustainable Energy and Human Development in Europe and the CIS report prepared by UNDP it is expected that if gas rates increase to predicted levels over the next 10 years, it is estimated that nearly 45% of all households will have to spend more than 10% of their income on communal services[[3]](#footnote-3). Approximately 63% of the affected households will be in rural areas and many more households will enter into a situation of fuel poverty, facing large difficulties in paying their monthly bills.
5. The most vulnerable people to the effects of socio-economic crisis and communal infrastructure collapse will be the population of villages and small towns of Ukraine where monthly incomes are among the lowest. This is explained by the fact that historically most of the small towns have been created around one or two major plants that led to the overdependence and vulnerability of local economies. Consequently, sectorial adjustment and economy restructuring, decline in industrial and agricultural outputs, destabilization of the socio-economic and financial situation in Ukraine seriously weakened the economic base of small towns and urban-type settlements. The percentage of the population living below the national poverty line in rural Ukraine is about 75% of the population. Inadequate employment opportunities, underdeveloped service sector, unsatisfactory housing conditions, limited scale of water-, heat- and domestic hot water supply, poor transport and social infrastructure, limited urban development are among the key factors contributing to the poverty of the local population in rural Ukraine. Another problem of rural areas is poor housing conditions. Although the majority of rural dwellers own homes, the quality of these homes is unsatisfactory. Often, rural houses lack running water or sewer and are in need of repair. The majority of low-income families live in houses without adequate heating and water supply. Only a few rural settlements are connected to the sewer lines. At the beginning of January 2013 the total surface area of Ukraine’s housing stock was 1,094.2 million sq. meters, of which 36% was located in urban areas. Yet only 28% of all villages are gasified as opposed to 78% of the Ukrainian urban settlements that enjoy decent heating and hot water supply. Increased use of biomass energy has an additional benefit in that it will create jobs among local populations in collecting and pelletizing agricultural or wood waste of collecting animal waste for biogas systems.

**Rationale for international assistance and EU funding**

The government needs support in increasing gas prices and managing public perceptions and expectations in the context of ongoing economic crisis. Undertaking a nation-wide campaign of biomass promotion reaching vulnerable groups, managing a nation-wide incentives programme and running a communications component around the energy reform is a formidable task. No single Government agency is capable in such complex, cross-sectoral undertaking at the moment. International partners of Ukraine, including the EU, UNDP, EIB and EBRD are well placed to assist in introduction of a programme that will help cushion the impact of removal of energy subsidies and will ensure continuity and stability of the initiative despite frequent changes in state institutions responsible for energy policy.

**Rationale for UNDP Involvement**

1. There is a strong rationale for UNDP to be the lead agency to promote a project on biomass energy in Ukraine supporting the development of biomass based businesses and systems in rural areas. Since its formation in 1966, UNDP has been active working in development and technical assistance in over 135 countries around the world including in all countries of the Europe & CIS region. The core mandate of UNDP has a specific focus on development and on poverty alleviation and job creation, which is at the core of this project. In the Europe and CIS region, UNDP has a track record of successful experience in developing and implementing technical assistance projects to support biomass energy in Slovakia, Poland, Belarus, Latvia, Slovenia, Serbia, Georgia, and Moldova as well as a new UNDP GEF bioenergy project in Ukraine which aims to support biomass energy in the Ivano-Frankovsk and Cherkassy regions of the country. This project, which is starting in late 2014, is highly complementary to this project (albeit that it focuses mainly on just two regions due to its smaller size and scope) and synergies between the two projects can and should be created and strengthened.
2. UNDP has been active in Ukraine since 1992 and has an ongoing portfolio of environmental projects (including the above mentioned UNDP GEF bioenergy project of USD $4.7 million) totaling over USD $30 million dollars in technical assistance. UNDP has in place systems in place for monitoring and evaluation and for results based management and measuring delivery of technical assistance as well as comprehensive and robust systems in place for recruitment of experts and goods and services. In addition, UNDP in Ukraine coordinates the UN Resident Coordinator system in Ukraine meaning that the UNDP Resident Representative is also the UN Coordinator for Ukraine. UNDP also has considerable experience over the past five years of working at local levels through the Community Based Approach to Local Development Project – CBA and the Joint Integrated Local Development Programme (JILDP) – promoting economic development at a sub-regional and local level, which will be used as a point of entry for the Ukraine Rural Biomass and Energy Project at the community level, UNDP has gained wide expertise, resources and knowledge related to the substantive and managerial aspects as well as regarding collaboration with local public authorities which includes substantial experience in understanding how municipal investment decisions are considered and made.
3. At a corporate level, UNDP’s goal is to strengthen national capacities to manage the environment in a sustainable manner while ensuring adequate protection of the poor. Specific focus is given on building local capacity to better manage the environment and deliver services, especially energy. Over the past 15 years, UNDP assistance in environment and energy has evolved from supporting technology demonstration projects to promoting market development for environment-friendly technologies. Expanding access to environmental and energy services for the poor is a key target, recognizing that those are essential for poverty reduction and economic growth. UNDP’s activities include institutional capacity development to scale up energy service delivery to ensure nationwide coverage. This is especially important at the local level since service delivery is increasingly decentralized to local public authorities. UNDP assists local authorities in building the capacity of local agents including communities, non-governmental organizations, micro-, small and medium-sized enterprises, financial institutions and other private sector actors to manage and stimulate business and development benefits from environmental and energy service delivery.
4. In addition, UNDP has considerable experience related to biomass energy available its regional office in Istanbul (UNDP Istanbul Regional Centre) as well as experts in New York where UNDP recently authored a publication on de-risking investments in renewable energy. This mandate and experience related to biomass energy means that UNDP is well positioned to lead the Ukraine Rural Biomass and Energy Project and its implementation on a country-wide scale focusing on changing minds and approaches of central and rural authorities, rural population and agrarian businesses, enhance their ability to see and manage local opportunities and expand biofuel and bioenergy markets and thus generating income and improving living conditions.

**Rationale for focusing the Biomass and Energy project in Ukraine on Rural and Semi-Rural Areas**

1. A third of Ukraine’s population currently lived in rural areas and it is estimated that some 27 percent of all rural inhabitants live below the poverty line, while 60 percent said that their village had stopped developing or was actually disintegrating[[4]](#footnote-4). The first and foremost problem of rural areas in Ukraine is the mono-functional nature of rural economies resulting from its socialist past and the economic restructuring of the 1990s. During the Soviet era, rural employment was provided almost entirely by the collective and state farms. Although the majority of rural residents were employed on these farms, there was a small proportion of rural industrial and service workers who worked at small plants and factories, branches of big enterprises located in the nearby cities. This pattern was typical for practically all countries of the former Soviet Union including Ukraine. When the restructuring of the 1990s started, many of the city-based enterprises shut down their rural branches, producing growing unemployment in rural areas. One of the advantages of biomass energy is that it will create employment opportunities for small-scale local entrepreneurs and businesses, which includes creation of new businesses and restructuring of existing businesses to focus on biomass energy.
2. Another element of economic restructuring in Ukraine has been land privatization, which has taken place over previous years. Collective land ownership has been eliminated in Ukraine and turned into private land ownership. This element of a market economy has been new and unknown to rural people in Ukraine. Due to their lack of experience and material resources, many rural residents leased their land parcels to the newly emergent class of farmers, usually managers of the former collective farms. This type of relationship is still widely practiced in rural Ukraine. Usually, these relationships do not generate sufficient income for leasers, who have to search for salaried jobs or survive by subsistence living. Currently, the most common income-generating activity in rural areas is private agriculture, which accounts for 43 per cent of the employed rural population[[5]](#footnote-5) Agricultural waste is often left to lie and rot in the fields when it could be used to create biomass briquettes or pellets for heating and/or electricity. The majority of employed rural residents (55 per cent) belong to professions that do not require special knowledge or professional qualification. Unsurprisingly, agriculture wages are about half as much as the average in Ukraine’s manufacturing sector. This system produces little incentive for young people to return to rural areas after completing their education and as a result there is general migration towards the cities and towns where wages are higher. Biomass collection and utilization would help to reverse this trend, creating local jobs and employment opportunities
3. Gender considerations are important to take into account in such difficult financial, social and cultural conditions in rural Ukraine. Ukrainian rural women are often forced to work up to 15 hours a day, combining work in agriculture with housework. According to the State Committee of Statistics, only 10 percent of rural women feel that they are in good health. Almost 90 percent of the rural women surveyed in a study by the Horshenin Institute said that they didn’t want their children to work in agriculture. Biomass energy helps to create jobs for women and can lead to empowerment as experience with biomass projects around the world has shown that the involvement of women in biomass collection and waste utilization increases the chances of the projects being successful. This project, therefore, will play particular attention to supporting the role of women in biomass projects in rural Ukraine.
4. A quick analysis of the on-going international technical assistance and development support to rural Ukraine from the Government and bi- and multilateral technical assistance and financial agencies provides clear indications that the support is often limited and insufficient (as in case with governmental support) and that it is primarily focused on particular geographic locations and very often focused on urban areas and larger cities rather than rural territories, deals with isolated energy efficiency and energy problems (primarily in communal services) and environmental protection performance, as well as administrative and legal barriers in providing favorable conditions and opportunities for improvement of living conditions in rural areas. In case of financing for large technological projects including energy sector project, the support is based on banks’ resources (loans), which in most instances are difficult due to high interest rates and the inability of borrowers to repay the loan or to provide sufficient guarantees to banks in order to secure the loan. Therefore, the agricultural sector, as the platform for expanding bioenergy market, has had limited attention from international donors and the approach proposed by this project is unique and fills a niche which needs to be filled if investment in biomass energy systems is to increase significantly in Ukraine.

**UNDP Expertise, Capacity and Best Practices**

1. Since the 1990s UNDP in Ukraine has been engaged in piloting and implementing projects to promote participatory governance for addressing social, economic and environmental issues by use of social mobilisation/area-based development approach. Community Based Approach to Local Development Project, funded by the EU, in its Phase 1 (September 2007 – June 2011) succeeded in scaling up the community led approach to local development countrywide (24 oblast authorities and the Crimean Government; 200 rayon authorities and 832 village/city councils of Ukraine). It contributed to strengthening participatory governance, supported and developed local capacities for community-based development, and facilitated a collaborative relationship between communities and local authorities.
2. Over 1.2 million people have benefitted from implementation of 1303 sustainable community initiatives worth 25 million dollars and have improved primary social infrastructure (healthcare points), water supply management, environmental protection, energy efficiency and local transport services while empowering local communities.
3. The 2nd phase of Community Based Approach to Local Development Project, (June 2011 – June 2015) is aimed to upscale the approach and disseminate the knowledge and best practices on community based development. The Project has a separate Energy Efficiency Component (energy saving, energy efficiency, alternative energy sources) targeted to assist rural Ukrainian communities and local/regional authorities to achieve the vision of energy efficiency through collective action under the framework of its ‘energy efficiency component’.
4. The on-going Moldova Energy and Biomass Project, a 14.56 million euro project, funded by the European Commission, and implemented by UNDP , exemplifies another success story of EU – UNDP partnership and cooperation in contributing to a more secure, competitive and sustainable energy production in the Republic of Moldova through targeted support to the most viable and readily available local source of renewable energy, namely biomass from agricultural wastes.
5. The Project lays the basis for the establishment of functional markets for biomass technologies while increasing the use of renewable energy sources, in particular for heating public buildings and households in rural areas. New jobs and income are created and secured through the establishment of value added chains at the local and regional level through the supply of biomass fuel and technologies.
6. As of now the Moldova Energy and Biomass Project demonstrated impressive accomplishments.
7. The Project has been promoted in the entire Republic of Moldova, including ATU Gagauz Yeri. 126 villages have been selected to connect their public institutions to alternative biomass heating systems. Modern biomass heating systems are being installed in 143 public buildings, such as schools, kindergartens, community centres. More than 89.000 people, including 26.519 children, benefit from securely supplied energy and more heating comfort. The new biomass heating systems led to the creation of more than 300 new jobs, as well as to the launch of tens of new businesses producing biomass fuel in the form of pellets and briquettes. 5.590 representatives of the local public administration and local leaders, 492 suppliers of biomass fuels and 432 operators have got knowledge and new abilities regarding the modern technologies of production and usage of biomass to produce heat. One million Euro was provided for the purchase of biomass fuel production and processing equipment through a leasing mechanism. 30 local entrepreneurs already benefited from this program and received the briquetting, pelleting, grinding and balling equipment for the biomass. More than 600 families are able to purchase modern biomass boilers, 1300 EUR of the investment costs being reimbursed through project funds. More than 100 applications were already registered and at the moment are in the process to be financed. A pilot project in the co-generation field on agricultural biomass was financially supported to demonstrate the feasibility in the use of the advanced technologies with the purpose of obtaining local energy resources. A pilot project in the field of generating and distribution of biomass based heat to the public institutions services was co-financed and launched in Leova district. The scope of the activity is the promotion of some new ways of development of the local markets in using the biomass in energy purposes. More than 20,000 school students learned about renewables and energy efficiency. Three editions of Moldova Eco-Energetica Award ceremony in the field of renewable energy sources and energy efficiency were successfully organized.
8. The general public, central and local public authorities and the private sector are well informed about the opportunities and benefits of renewable energy in general and biomass energy specifically for Moldova.
9. The mechanisms that have been employed by the Moldova Energy and Biomass Project and best practices generated by the Project in bioenergy promotion and educational campaigning are readily available for replication within the framework of Ukraine Rural Energy and Biomass Project

**Activities of Other Donors in Ukraine Related to Bioenergy**

1. Several other donors are also active in Ukraine in the field of bio-energy and the following table clearly indicates how they are complementary to the proposed Ukraine Rural Biomass and Energy project.

**Table 1:2 - Selected Activities of Donors Active in Ukraine related to biomass energy as of Q4 2014**

|  |  |
| --- | --- |
| **Initiative** | **Brief Description and Means of Cooperation with the Rural Biomass and Energy Project** |
| Government of Ukraine approved State Target Program of the Development of the Ukrainian Village until 2015 (Decree of the Cabinet of Ministers of Ukraine # 1158 of September 19, 2007). | Increased agricultural outputs, as envisaged under the state programme leads to increase agricultural waste which in turn leads to higher potential for biomass energy from agro-waste, as supported by this project. |
| UNDP GEF $4.7 bioenergy project (Ministry of Agriculture) | **Highly Complementary.** This project is starting in the last quarter of 2014 and should run for years. UNDP is the responsible partner for this project so it is suggested to co-locate Project Management Units (where possible) and coordinate project activities to develop further synergies. |
| UNIDO – EE and Renewable Energy in the Agro-Food Industry | This $5.1 million UNIDO GEF project provides grant support for up to 30 projects in renewable energy projects in Ukraine (including a number of projects on biomass energy) where the projects are funded with a mixture of GEF financing and co-financing. |
| EBRD – Ukraine Sustainable Energy Lending Facility (USELF)[www.uself.com.ua](http://www.uself.com.ua) | 100 million euros facility to provide debt financing for renewable energy projects in Ukraine, including biomass and biogas projects -- typically for larger projects of over 3 million euros. |
| EBRD – Ukraine Energy Efficiency Programme (UKEEP)[www.ukeep.org](http://www.ukeep.org) | UKEEP also lends for energy-efficiency and renewable energy projects in Ukraine and has already lent over 80 million euro with the difference between UKEEP and USELF being that UKEEP typically lends for smaller projects up to 3 million euros in total project cost. |
| GiZ – Establishment of Energy Agencies in Ukraine | This project can work with the established Energy Agencies to promote biomass energy. |

**II. Strategy**

1. The project strategy of the Ukraine Rural Biomass and Energy project will be to contribute to a more secure, competitive and sustainable energy production in the rural and peri-urban areas of Ukraine through targeted support to the reliable and accessible local source of renewable energy, namely biomass from agricultural wastes. The project will achieve this aim by focusing on (i) providing communities with grants to replace outdates boilers that use fossil fuel with modern biomass boilers; (ii) creating new jobs and launching of new biomass business by focusing on supporting local biomass fuel producers and biomass boilers producers; (iii) i) capacity building and comprehensive training for local municipal authorities, small and medium entrepreneurs and (iv) a nation-wide awareness programme and marketing campaign.

**II.1 Program Objective(s)**

1. The overall objective of this project is to contribute to security of energy supply and energy independence and increase the quality and reliability of heating services in villages and small towns of Ukraine through promotion of biomass energy by means of targeted support to communities and generation of employment and new businesses in rural and peri-urban areas of Ukraine

**Program components: outputs and indicative activities**

1. The Ukraine Rural Biomass and Energy project will consist of five man components and outputs as demonstrated in the following table:

**Table 1:3 – Ukraine Rural Biomass and Energy Project Description of Components and Estimated EU Project Budget**

|  |  |  |
| --- | --- | --- |
| **Component** | **Investment/Technical Assistance** | **Estimated Budget** |
| 1. Micro-grants for local communities for biomass heaters | Grants | € 14,000,000 |
| 2. Support to local entrepreneurs to develop bioenergy business in rural and peri-urban areas  | Grants | € 6,000,000 |
| 3. Targeted training for local authorities, small and medium sized enterprises (SMEs) and entrepreneurs on the benefits of biomass energy | TA | €1800,000 |
| 4. Awareness Raising, Replication, and Dissemination | TA | €1,000,000 |
| Project Management |  | €1,200,000 |
| Estimated Total Cost |  | €24,000,000 |

**Output 1:** **Micro-grants for local communities for biomass heaters**

Activities under output 1 aim to improve municipal heating of public buildings in rural and semi-rural areas. Under this output 250-300 modern thermal heating systems primarily burning straw will be installed in all pilot sites throughout Ukraine totaling about 200-300 MWth. This will allow for quick replacement of the expensive and environmentally harmful fossil fuels that are used to operate outdated heating systems of public buildings in villages and small towns throughout Ukraine with modern easy-to-operate and inexpensive boilers that will utilize the potential of locally available biomass. The output will help ensure energy independence and provide high quality services to the public. The project will use the established network of CBA project partners to disseminate information and engage with rural administrative units and communities that are interested to receive a grant.

**Indicative Activities**

* 1. Develop selection criteria for districts and communities and agree with Project Board.
	2. Choose initial districts based on selection criteria developed. The assessment will be made by the PMT and agreed by the Project Board.
	3. Distribute information about the call for the expression of interest for micro-grants and receive expressions of interest from communities
	4. Undertake preliminary appraisal based on criteria developed. At this stage the communities will be ranked; only communities which do not fulfill basic requirements (like availability of straw, existence of an eligible public building) will be rejected at this stage.
	5. Undertake a compliance check of each community project through a participatory appraisal procedure (community institutional capacities, funds and partnerships available, community needs and assessments, feasibility of the project, energy audits, environmental evaluation, etc.) together with the representatives of local authorities, councils, etc.
	6. Identify winning proposals and sign contracts between UNDP and the Community Project Committee.
	7. Organize trainings developed under Output 3 below for the community and local authorities;
	8. Monitor micro-grant project implementation and gather lessons learned.
	9. Organize demonstration visits and lessons learning sessions for the communities that join the project at a later stage.

**Output 2:** **Support to local entrepreneurs to develop bioenergy business in rural and peri-urban areas:** support the development of a private sector market for contractors wishing to act as fuel suppliers to the heating plants installed under Activity 1.1. Straw handling equipment such as balers, trailers and bale handling tractors will be provided using lease-finance models.

The potential of this output with regard to input generation is significant. At least 2,000 new jobs will be created in the area of biomass fuel production and up to 3,000 new jobs will be created in the area of heat generating facilities operating and maintenance. It is expected that around 60% of the new jobs will be occupied by females.

**Indicative Activities**

* 1. Establish eligibility criteria for local entrepreneurs in rural and semi-rural areas.
	2. Train and support the startups in biomass fuel production
	3. Develop terms and conditions to employ lease-finance models for acquisition of equipment and machinery.
	4. Facilitate fuel suppliers contracting for heating plants
	5. Monitor gender up-streaming in utilizing job opportunities

**Output 3: Targeted Training for local authorities, entrepreneurs, and communities on bioenergy.** Targeted training at the local and municipal level on biomass energy will include practical guidelines and training on development of biomass projects to local municipal authorities. For small and medium sized businesses (especially those agricultural companies that produce agro waste) and farms, and for entrepreneurs training materials for developing a business plan will be designed, aiming at enhancing the knowledge and capacity of commercial fuel suppliers. In addition to the detailed trainings, several study tours to EU countries will be organized to demonstrate the benefits of biomass energy to local municipal authorities and to SMEs and entrepreneurs who indicate and interest to invest in biomass energy systems.

**Indicative Activities**

3.1 Development and test of training programmes (per target audience) for local authorities, entrepreneurs and communities.

3.2. Provide assistance and training to residents of private houses who would like to benefit from governmental subsidies to replace the gas with biomass boilers through support with filling in application forms, preparing necessary technical documents for the application processes, etc.

3.3 Study tours to the EU countries to capitalize on best practices and lessons learnt in biomass business development, marketing and investment

3.4. Support in establishing and promoting of investment opportunities in the country

3.5. Build new business partnerships between municipal authorities, SMEs and entrepreneurs of Ukraine and those in the EU countries to promote effective management of biomass fuel market.

**Output 4: Awareness raising and dissemination strategy on Biomass Energy** – A national marketing and awareness campaign on biomass energy will be developed and launched which will target (i) consumers and SMEs (ii) universities and (iii) and schools with a focus on rural areas. The awareness raising will also include the municipal biomass guide and other training products prepared under Output 3 of the project.

**Indicative Activities**

* 1. Nation Wide Marketing Strategy (including media campaign) on Biomass Energy targeted at consumers, small businesses, and local authorities
	2. General Awareness Seminars on Biomass Energy targeted for the general public
	3. Biomass seminars for local authorities focused on technical experts involved in municipal heat supply including boiler operators familiar working with natural gas based boilers but with no experience with biomass based systems
	4. Biomass seminars for local entrepreneurs and small and medium sized enterprises (SMEs) interested to develop biomass based businesses including presenting model biomass supply agreements from private companies to local authorities
	5. Support for an annual international conference on biomass energy in Ukraine, once per year in Kiev
	6. Comprehensive Project Website – highlighting all the activities and outputs of the project and containing short videos, where possible

**Key Indicators of Success**

34. Key indicators of the project will include, inter alia, the following indicators

* + 1. number of new jobs created related to biomass systems (biomass/biogas)
		2. number of new biomass heating systems installed in local municipalities
		3. number of regions in which the project has worked
		4. number of local leaders, entrepreneurs, and boiler operators trained
		5. amount of funds disbursed through investment grant mechanism
		6. additional funding mobilized through the investment grant mechanism
		7. amount of funding available through the leasing mechanism
		8. number of people reached through project communication and media activities including the national marketing and media campaigns

**Timeframe and Project Phases**

35. The project will start shortly after the signing of the UNDP project document. An inception workshop should be held within 2 months of hiring the project manager, which is estimated to be within 4 months of the start of the project. Taking into consideration the complexity of the foreseen activities (multi-sectoral, production of alternative heating technologies, switching to alternative fuel from bio wastes, creation of alternative fuel supply chains, rehabilitation of existing facilities and heating systems, etc.) the project envisages an inception phase of up to 6 months from the date of the signing of the project document.

36. During the inception phase (i.e. – first six months of the project), the project will:

(i) Establish a Project Management Unit (PMU) within UNDP Ukraine, including a Project Manager, a Project Assistant and 5 Task Managers for each of the Project Component supported by a full-time communications advisor and a part-time international CTA on biomass. The project implementation structure is envisaged to be as defined in Section V of this document.

(ii) Coordinate the list of project national stakeholders and establish a National Project Board and Advisory Group as well as establish the Inter Ministry Committee on Biomass Energy that should meet three times a year (once per four months);

(iii). Develop general project operational formats, and templates for all project staff and subcontractors;

(iv). Finalize selection criteria for the terms of reference for the investment grant mechanism and the leasing mechanism.

(v). Provide training and review operating modalities for the Design-Build procurement process within UNDP to make it consistent with the investment grant mechanism envisaged by this project: There are a number of reasons that support the decision to use a design build delivery method for the bulk of the procurement in this project. Both complex and simple projects can benefit by using the design-build method and the approach could be used for bundles of investments or individual projects. Since this approach is relatively new in Ukraine it is necessary to develop it in such a way as to be compatible with UNDP procurement processes and Ukrainian legislation.

(vi). Developed strategies for communication, visibility and media engagement and hire a full time Communications Advisor for the project

(vii). Develop survey methods, and impact logs which will be used to monitor the impacts of the various activities, and

(viii). Elaborate and approve the detailed Work Plan for the first year of implementation.

(ix). Verify assessment method to be used at the end of year 1 and onwards.

**III. Results and Resources Framework**

|  |
| --- |
| **Intended Outcome as stated in the Country Programme Results and Resource Framework** |
| The project is consistent with the UNDAF and the UNDP Country Programme Action Plan (CPAP) for Ukraine which states that vulnerable groups in poor rural and urban areas should be assisted to take advantage of sustainable socioeconomic development opportunities, including though better service provision and infrastructure development in urban and rural areas. |
| 3.2 New businesses and jobs are created in targeted poor rural and urban areas Indicator: Number of small business enterprises operating *Baseline: to be added*Indicator: Number of new jobs created with the help of Rural Biomass and Energy Project*Target: At least 2,000 new jobs will be created in the area of biomass fuel production and up to 3,000 new jobs will be created in the area of heat generating facilities operating and maintenance. It is expected that around 60% of the new jobs will be occupied by females* |
| **Outcomes:** Managing energy and the environment for sustainable development: Strengthened capacity of local institutions to manage the environment and expand environment and energy services, especially to the poor |
| **Partnership Strategy**A participatory approach will be used in the implementation of this project. Experts from relevant line ministries (will be involved at both the inception and implementation phases) and will be invited to be members of a newly-established Council on Biomass Energy involved in project oversight. Close cooperation between UNDP and EU Delegation in Ukraine and continuous coordination both in the framework of the Project Board and the Project Advisory Group and with the Inter-Ministry Council on Biomass Energy will help to guide the project and provide it with direction. To provide overall direction and take decisions on specific aspects of project implementation a Project Board will be created, led by the Government and involving senior representatives of all beneficiaries of the project. The Project Board will be complemented by an Advisory Group, which will further include local authorities, communities, SMEs, local media,, academia, donors, civil society and other institutions and associations. At the community level, the project’s key partners are the representatives of local public authorities throughout Ukraine as well as local entrepreneurs and small and medium sized enterprises interested in investing in biomass energy. |
| **Project title and ID (ATLAS Award ID):** Ukraine Rural Biomass and Energy Project |

**V. MANAGEMENT ARRANGEMENTS**

Project management arrangements are envisaged as per the table below:

**Table 1:4 – Indicative PMU Structure for Rural Biomass and Energy Project in Ukraine.**

A *Project Board* (PB) will manage the Project at the highest level. The project Board will have 7 members, made up of one representative from the following (i) Representative of the Donor (ii) Ministry of Ecology and Natural Resources (iii) Ministry of Agriculture (iv) Ministry of Regional Development, Construction, Housing, and Communal Services (v) Cabinet of Ministers of Ukraine (vi) UNDP and (vii) a representative of civil society (i.e – an NGO active in the area of biomass). To avoid conflicts of interest, the NGO selected will not be able to be contracted or sub-contracted by the project. The Project Board will meet once per four months or three times per year.

The Project Board is the group responsible for making management decisions for a project when the Project Manager, including recommendation for UNDP/Implementing Partner approval of project plans and revisions, requires guidance. In order to ensure UNDP’s ultimate accountability, Project Board decisions should be made in accordance to standards that shall ensure best value to money, fairness, integrity transparency and effective international competition. Project reviews by this group are made at designated decision points during the running of a project or as necessary when raised by the Project Manager. The Project Manager for decisions consults this group when PM tolerances (normally in terms of time and budget) have been exceeded.

Based on the approved annual work plan (AWP), the Project Board may review and approve project quarterly plans when required and authorizes any major deviation from these agreed quarterly plans. It is the authority that signs off the completion of each quarterly plan as well as authorizes the start of the next quarterly plan. It ensures that required resources are committee.

The Project will be implemented by the UNDP and recruitment and procurement will be according to UNDP rules and procedures. As such, UNDP will bear the overall accountability for delivering the project in accordance with its applicable regulations, rules, policies and procedures (http://content.undp.org/go/userguide/results).

A *Project Management Unit* (PMU) will be established, and staffed with a project manager, a team of project officers with each project officer leading one component of the project as well as a full time Communications Advisor and an Administrative Assistant. The PMU will ensure results-based project management and successful implementation of the project within 48 months, close monitoring and evaluation of project progress, observance of procedures, transparency and efficient use of funds, quality of works, and involvement of local and regional stakeholders and beneficiary communities in the decision-making processes. The project manager should have an engineering background, and have a successful track record of implementing local community development projects, preferably with experience in biomass energy in Ukraine. Consultants will be hired as needed for specialist short-term assignments from local and international sources including neighboring countries such as Ukraine and Romania.

An *Advisory Group* will be established to facilitate effective and quality implementation and coordination of the project. It will be made up of the UNDP, the EC delegation, technical specialists representing the other project board members and other international financing institutions such as World Bank, NEFCO, GiZ, and EBRD. The advisory group composition can be amended and technical sub-groups can be established as required and will meet if required on a quarterly basis usually before the quarterly meeting of the Project Board.

*Project Assurance* is the responsibility of each Project Board member, however the role can be delegated. The Project Assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. On behalf of UNDP, the function is delegated to a UNDP Portfolio Manager. Specific ‘Assurance’ tasks are to:

*  Ensure that funds are made available to the project;
*  Ensure that risks and issues are properly managed and monitored, and that the logs  are regularly updated;
*  Ensure that Project Progress/Financial Reports are prepared and submitted on time,  and according to standards in terms of format and content quality and submitted to the Project Board;
1. Bioenergy in Ukraine: State of the Art and Prospects for Development, Geletukha G., Zheliezna. T, www.biomass.kiev.ua [↑](#footnote-ref-1)
2. http://mpe.kmu.gov.ua/fuel/control/uk/doccatalog/list?currDir=50505 [↑](#footnote-ref-2)
3. Sustainable Energy and Human Development in ECIS. Bratislava: UNDP BRC [↑](#footnote-ref-3)
4. Irina Klyuchkovska, Director of the International Institute for Educational Workers, Culture and Contact with the Diaspora, International Conference “The Ukrainian Women’s Movement in the Modern World and National Dimension”, Lviv, August 2011 [↑](#footnote-ref-4)
5. Libanova, E. et al. 2007. [↑](#footnote-ref-5)