A. PROJECT IDENTIFICATION NOTE

A 1 Project Scope	
Project Name	Building of cogeneration station with the capacity of 31 Megawatt at PE „Tirotex", Tiraspol city, Republic of Moldova
Declarant	PE "Tirotex"
Country-Declarant	Republic of Moldova
Category of Project	Building of cogeneration station
Generation of Emission Reductions	from 2009 till 2034
Evaluative Emission Reductions	Total evaluative emission reductions for the period of 2009 – 2012: 204 800 tons CO_2-equiv

B PROJECT PARTICIPANTS

B 1 Project Participant	
Name of organization	PE „Tirotex"
Type of organization	Public Enterprise
Basic kinds of activity and experience	PE „Tirotex" is one of the largest enterprises of textile industry in the South-West of the Commonwealth of Independent States. Its building was started in 1972 and finished in 1982. PE „Tirotex" includes: two spinning-weaving factories, one finishing factory, sewing factory, mechanical plant, power plant, building firm, brickworks, agrocomplex, research institute „Textile", developing an ecologically pure technology. Kinds of activity: • Spinning • Weaving • Finishing • Sewing
Contact Person	Director General: Vilor N.Ordin
Address	October Industrial Unit Moldova, 3300, Tiraspol, Republic of Moldova
Tel/Fax	Tel.: +373 (533) 955 74; Fax.: +373 (533) 228 49
Web-site	www.tirotex.com
E-mail	tiro@tirotex.com

C COUNTRY OF PROJECT IMPLEMENTATION (HOST COUNTRY)

C 1 Project location	
Country	Republic of Moldova
City	Tiraspol
Str., etc.	October Industrial Unit
Concise description of Project location	The units of PE „Tirotex" are located in Tiraspol city, Republic of Moldova, on the left bank of river Dnister. It is the second largest city of the country where 180 thousand people live. Tiraspol is 70km from Chisinau. At present time Tiraspol is a big industrial and cultural center of the region. The largest enterprises are „Litmash", „Electromash", „Moldavizolit", „Tirotex", „Kvint", Metalware mill. 

D GENERAL INFORMATION ABOUT THE PROJECT

D 1 General Information	
Project Name	Building of cogeneration station with the capacity of 31 Megawatt at PE „Tirotex", Tirotex
Primary Intent of the Project	Greenhouse Gases (GHG) Emission Reduction and more efficient use of initial energy supply for obtaining thermal and electric energy. Primary Intent of the Project

	• Provision of quality and safety of electrical energy delivery. • Mothballing of obsolete boiler equipment. • Reduction of company's costs for energy carriers. • Greenhouse Gases (GHG) Emission Reduction during power generation.
Project prerequisites/intentions concerning Project Implementation	The city and its industrial projects are large and important consumers of energy supply, in particular: electrical energy, natural gas, thermal clamping water. A lack of generating supply in the region results in import of electrical energy from neighbor power systems (Ukraine). Further to that, electro-generating systems existing in the region have been working for more than 30 years and possess a low coefficient of efficiency in the process of generation of electrical energy. Heat Energy necessary to cover the needs of PE „Tirotex", is generated by the company's boiler-house by means of popping of natural gas. As natural gas is imported to the region, it is of current importance to increase the effectiveness of its utilization (use). The most part of equipment of the boiler-house has become obsolete and must be replaced. Electrical energy necessary to cover the needs of the company and the boiler-house itself is bought from the network. A reconstruction of a heat supply system and building of a power supply system in the industrial area of PE „Tirotex", namely building of cogeneration station on the basis of gas-reciprocating motors, will allow to increase the effectiveness of natural gas utilization and resolve some other problems, in particular to create a job (new working places), reduce greenhouse gases emission in the region and increase the reliability of power supply.
D 2 Project Category	
Project Category	☒ Building (or modernization) of plants for combined generation of heat and electrical energy.
D 3 Technical aspects	
Main technical aspects must be briefly presented	The Project provides mounting of 8 go-generation modules (in two stages - 24 MW_e (2009) and 31 MW_e (2010)) TCG2032V16 company "Deutz". Electrical power of each module is 3916 kW and heat power is 4129 kW. Additionally the Project provides installation of: o Heat utilizer Combiblok ADH-UE 7-15 barq with steam output 7.3 t/h (3 pcs.); o Heat utilizer Combiblok ADH-UE 7-15 barq with steam output 2.4 t/h; o Four (4) steam boilers – utilizers with afterburning of series „Vitomax 200HS" produced by „VIESSMANN" (Germany), steam capacity 5 t/h; o Four (4) steam boilers – utilizers with afterburning of series „Vitomax 200" produced by „VIESSMANN" (Germany). Total installed capacity of co-generation station will be: - electrical power – 31 MW; - hot water 35 Gcal/h.

	Thus, a new co-generation station will consume 56.563 mln. m^3 of natural gas a year and produce 248 000 000 kW·hour/year of electrical power (201 600 kW·hour/year). Thermal energy received during utilization of waste heat of combustion gas in boilers-utilizers - 35 Gcal/h – will be used for supplying technological consumers of the factory with hot water. A new co-generation station will be built at the territory of existing old boiler-house. Gas-piston enginnes, boilers-utilizers and other equipment will be placed in existing construction, width - 18 m; length – 45.56 m; height – 6.35 m. Project realization will lead to reduction of GG emission (in particular – CO_2) because of more effective technology of combined generation of heat and electrical energy. A generated energy will be used for the factory's needs and the excess will be exported to Dnestrenergo grid, thereby replacing more CO_2-intensive electrical energy from the network. A technology of combined generation of electrical energy on the basis of Gas-piston engines and heat is widely used and proved itself in Western countries but did not find a wide application in Moldova. There are some Project's risks related with operational maintenance of co-generation station because of the lack of personnel's experience, as well as technical maintenance because of the lack of any developed net of maintenance of such equipment in Moldova. The main risks during the period of operation of co-generation station are related with possible problem of supplying natural gas in future. A predictable rise in prices for natural gas in future can lead to worsening of economic indicators of the Project. This fact must be taken into consideration when evaluating the Project.

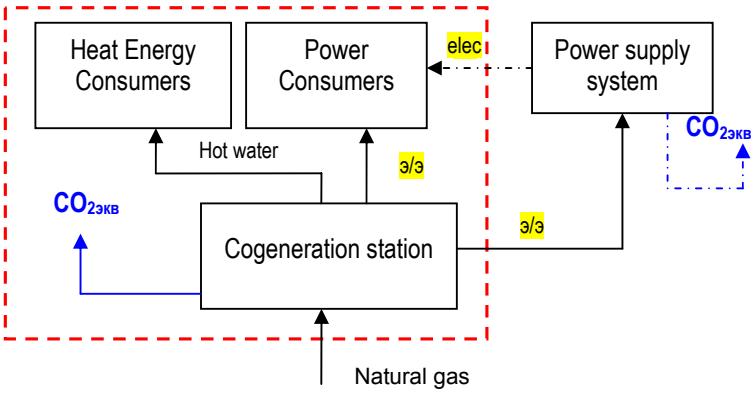
E PROJECT ORGANIZATION

E 1 Schedule of works	
Current State of the Project	Planning
Financing State	In negotiations stage
Preparation / licensing / permitting	All necessary permittings for the Project are issued by PE "Tirotex"
Project Preparation	2009
Building/Assembling	2009
Project life cycle	2009 - 2034
Generation of CRU (Certified Reductions Unit)/CERs	From: 2009 till: 2012 and further till 2034.

<table>
<tr><td>Other remarks</td><td>-</td></tr>
<tr><td>E 2 Financial Aspects</td><td></td></tr>
<tr><td>The Cost of Project Development (Euro)</td><td>Total Cost of Project is 29.67 mln €</td></tr>
<tr><td>The Cost of Project Implementation (Euro)
Please indicate the figures and briefly describe the basis of calculation</td><td>General investment is:
<table>
<tr><td></td><td>investment, €</td></tr>
<tr><td>Projecting</td><td>382 166</td></tr>
<tr><td>Costs for building</td><td>3 562 878</td></tr>
<tr><td>The cost of equipment</td><td>13 471 383</td></tr>
<tr><td>Credit size</td><td>10 827 586</td></tr>
<tr><td>The cost of service of the main contractor</td><td>1 841 332</td></tr>
</table></td></tr>
<tr><td>Annual Evaluative Operating Costs (Euro)
Please indicate the figures and briefly describe the basis of calculation</td><td>Operating costs in 2008-2012 (8 plants):
<table>
<tr><td></td><td>2009</td><td>2010</td><td>2011</td><td>2012</td></tr>
<tr><td>Operating costs, thousand. €</td><td>5 341 655</td><td>5 341 655</td><td>5 341 655</td><td>5 341 655</td></tr>
</table>
Structure of annual operating costs of go-generation station
<table>
<tr><td colspan="2">Annual operating costs, €</td></tr>
<tr><td>Purchase of natural gas</td><td>4 482 507</td></tr>
<tr><td>Salary</td><td>172 154</td></tr>
<tr><td>Technical maitenance works</td><td>453 716</td></tr>
<tr><td>Oil</td><td>154 085</td></tr>
<tr><td>Additional materials</td><td>79 193</td></tr>
<tr><td>Total operating costs</td><td>5 341 655</td></tr>
</table></td></tr>
<tr><td>Evaluative annual income (Euro)
Please indicate the figures and briefly describe the basis of calculation</td><td>
<table>
<tr><td></td><td>2009</td><td>2010</td><td>2011</td><td>2012</td></tr>
<tr><td>Heat and electrical power generation income, €</td><td>3 948 342</td><td>4 369 412</td><td>4 664 470</td><td>4 664 470</td></tr>
</table></td></tr>
<tr><td>Source of financing</td><td>21.5 % - own capital of the company; 78.5% - credit.</td></tr>
</table>

F GREENHOUSE GASES EMISSION REDUCTIONS

<table>
<tr><td>F 1 Greenhouse Gases</td><td></td></tr>
<tr><td>Greenhouse gases, emissions of which have to be reduced beyond the Project</td><td>○ CO_2
○ CH_4
○ N_2O
○ HFCs
○ PFCs
○ SF_6</td></tr>
<tr><td>F 2 Project ambit</td><td></td></tr>
</table>

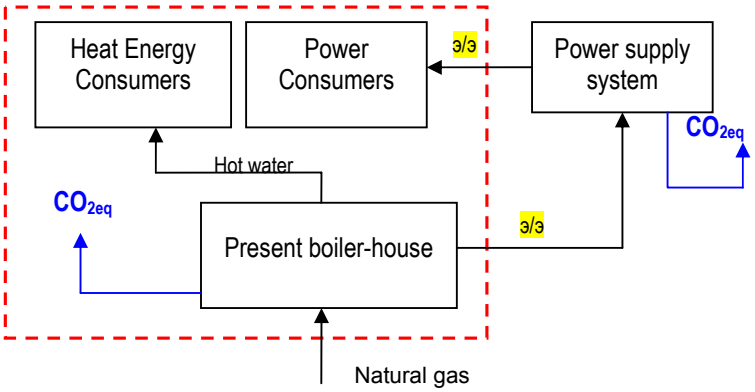
Description of Project ambit	The Project's ambit (marked with a dotted line) involves a go-generation station and existent consumers of heat and electrical energy at PE "Tirotex" facilities. The following parameters must be controlled when calculating CERs in the Project's scenario: 1. Consumption of natural gas by a new co-generation station, m^3; 2. Generation and distribution of electrical energy by a new co-generation station, MW·h; 3. Generation and distribution of heat energy by a new co-generation station, GJ. All the parameters must be measured, periodicity of measuring – once per month: 

F 3 Project Emission	
Description and evaluation of specific project emissions of greenhouse gases according to the project's ambit	There is only one direct source of emission in the Project's scenario – consumption of natural gas by go-generation station. Greenhouse gases emission caused by natural gas burning is presented in the table below:

	2009	***2010***	***2011***	***2012***
Coefficient of emission, tCO_2-equiv/TJ	56,1	56,1	56,1	56,1
Consumption of natural gas, TJ	1 605	1 605	2 139	2 139
Emission when natural gas burning in the Project's scenario, tCO_2equiv	90 016	90 016	120 022	120 022

F 4 Basic scenario	

Substantiation of basic scenario methodology examined/scenario and evaluation of emission according the basic scenario considering the Project's ambit	There are several alternative scenarios when the Project proposed is failing: • Building of co-generation electrical power station of lesser power; • Substitution of fuel– change from natural gas to coal, black oil, diesel and alternative sources of energy; • Proposition of existent practices (purchase of electrical energy from the network and generation of heat energy on the basis of existent boiler-house). A proposition of existent practice was taken as a basic scenario because this alternative does not face any barriers. Thus, the basic scenario will contain the following GG emissions: • CO_2 emission caused by operation of gas-steam boilers installed in the boiler-house of PE "Tirotex"; • CO_2 emission beyond the Project caused by generation of electrical energy consumed by the company from the network.



Emission according to the basic scenario (marked with a dotted line) is represented in below table:

	2009	***2010***	***2011***	***2012***
Electrical energy generated by the cogeneration station, MWh/year	187 200	187 200	249 600	249 600
Coefficient of emission of the network (Moldavian State Regional Electrical Station (SRES)), tCO_2-equiv/MW	0,595	0,595	0,595	0,595
GG Emission beyond the Project during power generation by Moldavian SRES,	111 384	111 384	148 512	148 512

	tCO_2-equiv				
	GG Emission при производстве of hot water for technological needs, tCO_2- equiv	26 271	26 271	26 271	26 271
	Total volume of emission in basic scenario, tCO_2- equiv	137 655	137 655	174 783	174 783
F 5 Leakage					
Description and evaluation of leakage	There are no factors which can lead to significant "leakage" in the process of CDM Project realization and consequently cause the decrease of emission reductions volume expected. «The leakage», which can cause the decrease of GG emission reductions volume during the realization of the Project, may happen during the production, transportation of equipment and its installation at the facilities. But such a «leakage» is less than 1% of the total volume of CERs and can be not taken into consideration.				
F 6 Emission Reductions					
Examination period	2009 – 2012 It is supposed that the whole examination period will constitute 3 x 7 years.				
Evaluative annual and total GG emission reductions in tCO_2-equiv in comparison with the basic scenario (considering the leakage)	Thus, the only source of GG emission in the Project scenario is burning of natural gas in the go-generation plant (consumption of natural gas is about 56,6 mln. m^3/year):				
	2009	**2010**	**2011**	**2012**
	GG Emissions in basic scenario, tCO_2-equiv	137 655	137 655	174 783	174 783
	GG Emissions in Project scenario, tCO_2-equiv	90 016	90 016	120 022	120 022
	GG Emission Reductions, tCO_2-equiv	47 639	47 639	54 761	54 761
	Total emission reduction (2009-2012), tCO_2-equiv				**204 800**

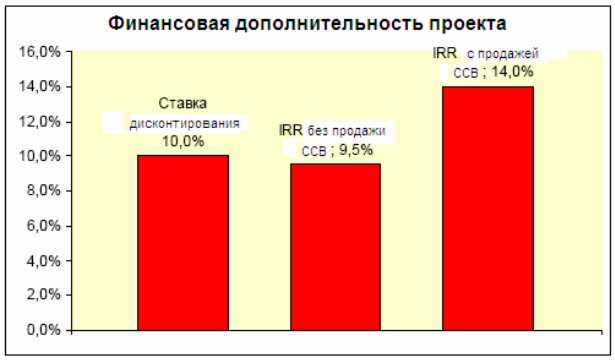
G (ADDITIONAL) ECOLOGICAL, SOCIAL-ECONOMIC EFFECTS AND/OR DEFELOPMENT EFFECTS

G 1 Expected effects concerning influence on environment	
Expected global/local effects	The Project as a whole will have a positive influence on environment because

concerning influence on environment (positive and negative) of this Project	the generation of electrical energy will become less CO_2-intensive. Although the use of gas as fuel for go-generation station causes the emission of carbon dioxide CO_2, a common effect of the Project concerning emission reduction will be substantial. • Expected global/local ecological effect (positive or negative) of the Project Co-generation technology is an effective technology of combined generation of heat and electrical energy. Co-generation can provide a safe and effective generation of electrical energy close by consumer. Owing to the use of heat obtained during generation of electrical energy and energy loss saving during transportation because of short distance between co-generation station and consumer, a co-generation station saves about 30 % primary energy carriers in comparison with the generation of similar lower by simple electric power stations and boiler-houses. Having an appropriate balance of heat and electric tension/voltage, this technology provides essential ecological benefits. General influence on population health – positive. In a region, where a modern co-generation technology is used, GG emission reduction takes place. Environmental impact – no significant negative impact. Emission of harmful substances does not exceed a maximum concentration limit for this region. Impact on water – direct, short-term, negative, caused by application of oils. A new plant can pollute water only with remains of waste oils due to washing of engines. In the presence of drain cleaning system this effect will be insignificant. Noise impact – direct, constant, negative but within the bounds of norms. • Expectation of social-economic effect of the Project New workplaces will be created: permanent – after the Project is implemented, and temporary – for a period of co-generation station building and putting into operation.

H ADDITIONALITY AND SUSTAINABILITY EFFECTS

H 1 Additionality	
Presentation of Project's additionality Please explain briefly how and why the Project is additional and why a basic scenario is not considered. *Please describe why emission reduction will not occur if this Project does not exist, taking into consideration national and/or regional policy and* .	Today there are no laws and regulatory statements in the region, which could oblige the owners and manufacturers of electrical energy building co-generation plants. This station will be the first in the region. There are several barriers on the path to realization of the Project: - legislative: the lack of necessary legislative instruments regulating the work of co-generation stations - technological: the company/the region has no experience in exploitation of co-generation stations on the basis of Gas-piston engines. This station will be the first station using such a technology in the region. - financial: considering the fact that about 80% of the Project financing is implemented out of load proceeds, economical indicators of the Project in case of absence of monetary flow from CERs selling are not attractive for the investor.

	
H 2 Stability effects	
Concise description of Project's contribution to steady development of the host country	Project's contribution into steady development consists in replacement of more CO_2-intensive electrical energy by less CO_2-intensive electrical energy, as well as closing of existent boiler-house, which uses natural gas and is equipped with underproductive and outdated boilers. Application of this Project will positively influence the development of Tiraspol (increase of power supply reliability, new workplaces, etc.) and will promote a steady development of the region as a whole.