Annex I

ACTIVITIES IMPLEMENTED JOINTLY REVISED UNIFORM REPORTING FORMAT (URF 01)

${f A}_{f ullet}$ Governmental acceptance, approval or endorsement

- Date of this report: 31/03/2006
- This report is a *(please underline)*:
 - First report
 - Interim report
 - Final report
- Please indicate here which sections were modified since the last report (e.g. B.2, E.2.4, F.2): Report is newly completed on the Revised Uniform Reporting Format.

B. Summary of AIJ project

B.1 Title of project

Aluksne I, Boiler conversion project

B.2 Participants

In the project three participants were taking part:

- The donor country is Sweden, represented by a governmental institution Swedish Energy Agency (STEM). (previously named as NUTEK)
- The host country local organisation, which owns or operates the facility, where investment is made is DH company A/S "Simone", Municipal JSC
- The host country primary institution responsible for the Framework Convention on Climate Change and all other climate related issues is The Ministry of Environment of the Republic of Latvia
- The technical assistance during project implementation and follow-up activities were provided by STEM consultants (SIA "Ekodoma").
- Projects performance data collection and reporting activities are carried out by SIA "Ekodoma"

Please describe briefly the role(s) of the main participating organization(s) and provide detailed contact information in annex 1:

B.3 Activity summary

- B.3.1 General description Aluksne is a small town in Latvia. There are several coal or light oil fired boiler plants and district heating networks in Aluksne. In one of these boiler houses there were three old coal fired DKVR 4-13 boilers. Annual energy consumption/demand for this net was 30 000 MWh.
- B.3.2 Type of activity

Sector	Activity
Energy	Fuel-switching (from heavy oil to biofuels)

Please use project type descriptors contained in annex 2.

B.3.3 Location (e.g. city, region, state):

Aluksne town; Aluksne district; LATVIA

- B.3.4 Stage of activity (*Please underline the appropriate option*):
- Pre-feasibility study completed
- Feasibility study completed
- In start-up or construction phase

(e.g. ensuring financing, construction of site, purchase of land, installation of new equipment)

B.3.4 Stage of activity (continued)

• In_operation

(e.g. new windmill plant is connected, converted boiler reconnected, etc. and real, measurable and long-term GHG emission reductions or removals by sinks are generated)

Completed

(AIJ project activity no longer generates GHG reductions or removals by sinks or has been terminated)

Suspended

(Please indicate date when AIJ project activity is expected to resume, and give brief explanation of reasons for suspension (up to half a page)):

B.3.5 Lifetime of AIJ project activity:

• Approval date 13/01/1994

(Date at which the AIJ project activity was mutually approved by designated national authorities of **all** Parties involved.)

- Starting date:18. January 1994 (letter or intent)
 - (Date at which real, measurable and long-term GHG reductions or removals by sinks will begin or began to be generated.)
- Ending date (expected):September 30, 2003 (loan expire date)
 - (Date at which AIJ project activity is expected to no longer generate GHG reductions or removals by sinks.)
- Ending date (actual): In operation
 - (Date at which AIJ project no longer generated GHG reductions or removals by sinks or was terminated.)
- Ending of the operational life of the project if different from the ending date of the AIJ project activity: Expected technical lifetime is 15 years which means that the converted boiler is expected to be in operation till 2010
- Reasons for the choice of lifetime dates (Describe briefly (up to half a page)):

The lifetime criteria have been arranged in different groups depending on type of implemented activities. This classification assumes a level of operation and maintenance, which is normal in western countries.

Heat production plants (bio fuel)

25 years	New installation of all main equipment parts (fuel handling system, firing
	equipment and boiler) and modernisation of secondary equipment.
15 years	Conversion of existing boiler but new installation fuel handling system and firing
	equipment. Modernisation of secondary equipment.
10 years	Limited installation of new equipment (only one part of the three main parts,
	normally the firing equipment). Modernisation of other equipment.

Heat distribution systems and sub-stations

25 years	Pre-fabricated pipes and installations using certified contractors and supervisor according to EN norms and applicable district heating practise
15 years	Pre-fabricated pipes and installations without using certified contractors and
	supervisor
10 years	Modernisation of existing pipes.

Energy efficiency in buildings

25 years	Additional insulation roofs walls etc. with Scandinavian technology. New installed heating systems.
15 years	Renovation and balancing of heating systems including thermostat valves.
10 years	Weather stripping windows, doors etc.

^{*} if a combination of measures is done a reasonable lifetime for the project have to be calculated.

B.4 Determination of the baseline

- B.4.1 Date of completing the baseline determination: (1997 first report)
- B.4.2 Carried out by (name): STEM/ÅF-International (Please provide detailed contact information in annex 1)
- B.4.3 Type of baseline methodology applied and described in detail in section E.1 (*Please underline the appropriate option(s)*)
- Project-specific by:
 - I. Simulating a likely situation that would have existed without the project
 - II. Taking an actual reference case project
 - III. Other (*Please specify (insert lines as needed)*):
- Multi-project by using (please specify briefly):

B.4.4 Describe the scope of the project boundary (*Please summarize briefly the related information provided in section E. 2*):

In one of these boiler houses there were three old coal-fired DKVR 4-13 boilers. The annual energy consumption for this net was 30 000 MWh. In one of the heating plants in the town a new boiler with a pre-furnace for wood chips firing has been installed. Automatic fuel storage, wood chipper and flue gas cleaning are also included.

B.4.5 Describe the degree of aggregation of the multi-project baseline (*Please summarize briefly the related information provided in section E. 1*):

The project activity is heat production and this includes emissions from in-site combustion of fossil fuels and bio fuels. The project and baseline heat production activity is assumed to be equal. This means that the emission reduction from the project is based on the difference in mazout consumption before and after the implementation of the project activity.

C. General compatibility with and supportiveness of national economic development and socioeconomic and environment priorities and strategies

Describe briefly, to the extent that information is available (up to one page) and refer to documents, decisions and laws, as appropriate:

The Swedish side considers that the project meets the following objectives in the Latvian Energy Law:

- Efficient use of energy resources;
 - Creation and usage of energy efficient technologies, fuel/energy consuming and diagnostic equipment, construction and insulation materials; energy flow metering and control devices, automated energy consumption control systems;

Latvia became a Party of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992.

In accordance with Kyoto Protocol to the UNFCCC on 10 December 1997, Latvia individually or jointly should ensure, that its aggregate anthropogenic CO_2 equivalent emissions of CO_2 , CH_4 , N_2O , HFCs, PFCs and SF_6 in 2008 - 2012 should be 8% below the 1990 level.

D. Environmental, economic and social and cultural impacts

D.1 Environmental impact (positive and/or negative)

Annual emissions reduction:

- 3 085 ton CO₂
- 8.8 ton SO₂
- 3.5 ton NO_{x}

Lower pollution. Boiler plants is firing wood waste which earlier wa deposited in forest.

D.2 Economic impact (positive and/or negative)

Decreased energy prices about 3 USD/MWh

D.3 Social and cultural impact (positive and/or negative)

• More stable energy supply.

- Improved working conditions, increased motivation and local employment.
- Improved trade balance.

E. Calculation of real, measurable and long-term environmental benefits related to the mitigation of climatic change, that would not have occurred otherwise

E.1 Assumptions and characteristics of the baseline

E.1.1 Assumptions of the baseline

(Describe (up to 1 page)): The project based status quo baseline had been assumed to be static for the project. The key parameters for the used baseline are:

- Baseline fuel coal;
- Baseline efficiency of the fossil fuel boilers;
- Total heat production of the boiler plant before boiler conversion.

It has been assumed that these parameters used for baseline will not change during whole period. The numerical data are presented in section E.1.4.

E.1.2 Describe the baseline

(Please describe the baseline as well as leakage effects (up to 1 page)):

The project baseline is status quo baseline (total boiler plant heat production and emissions in the period before the conversion to renewable fuel). The most important factor in calculation baseline emission is the annual efficiency of fossil fuel boilers. Baseline efficiency of the fossil fuel boilers has been derived from available heat production data, boiler house energy balance, technical specifications or expert judgement.

There was not assumed any indirect effects outside project boundary and leakages in the baseline emission calculation.

The project baseline boundary includes direct in-site (boiler plant) emissions, i.e. emissions from in-site combustion of fossil fuels. Emissions related e.g. to the transport of fuels to the project site are not included

E.1.3 Reasons for selecting a baseline and its methodology (*Describe (up to 1 page)*):

The project specific baseline as status quo case has been initially selected to start reporting on AIJ with the future plans to re-evaluate chosen baseline at pre-determined intervals in order to account for developments in the heating sector and indirect effects

E.1.4 Calculation of values reported in 'Baseline scenario' in table E.5.1 column (A): Emission reductions are calculated using the IPCC Guidelines, using the Carbon Emission Factor (CEF) for different types of fuel, using actual system efficiency. For boiler conversion, the decrease in emissions is calculated in relation to the amount of fossil fuel replaced (status quo). For energy efficiency project the decrease in emissions reflects the amount of fuel that is saved through the project. In the case that the system uses renewable fuels, the reduction is calculated comparing the amount of fossil fuels that was used before the conversion to renewable fuels.

Calculation of values reported in 'Baseline scenario' in table E.5.1 column (A):

 CO_2 emissons values are calculated according the IPCC guidelines (1966). Carbon Emission Factor (CEF) are used to CO2 emitted during fuel combustion. Calculate CO_2 emission (M_{co2}). Formula for this calculation as follows:

$$M_{CO2} = Q_{fb*} q_{co2} *100/\eta_b$$

Were,

Q_{fb}- boiler(s) heat production, MWh/year,

K_c - fraction of carbon oxidised,

q_c - carbon emission factor, tC/TJ,

 η_b - annual efficiency of boiler(s), i.e. baseline efficiency of fossil fuel boilers.

Documentation box (*Please provide numerical data referred to in this section*):

The following data are used for calculation of the baseline scenario CO₂ emission reductions:

Total heat production of the boiler plant before boiler conversion -28000 Baseline efficiency of the fossil fuel boilers -65% Carbon emission factor for heavy fuel oil -0.331 CO₂/MWh

E.2 Assumptions and characteristics of the project scenario

E.3.1 Assumptions for the AIJ project activity and its boundary

The project activity is heat production and this includes emissions from on-site
combustion of fossil fuels and bio fuels. These emissions are under control of the boiler
house staff. The project and baseline heat production activity is assumed to be equal

E.3.2 Describe the project scenario:

Emission reductions are calculated using the IPCC Guidelines, using the Carbon Emission Factor (CEF) for different types of fuel, using actual system efficiency. For boiler conversion, the decrease in emissions is calculated in relation to the amount of fossil fuel replaced (status quo). For energy efficiency project the decrease in emissions reflects the amount of fuel that is saved through the project. In the case that the system uses renewable fuels, the reduction is calculated comparing the amount of fossil fuels that was used before the conversion to renewable fuels.

(Please describe the project scenario as well as effects occurring outside the project boundary (up to 1 page)):

E.3.3 Please explain why the AIJ project activity would not have taken place anyway (*Describe (up to 1 page)*):

As a party to the Climate Convention, Latvia has started to facilitate the transformation toward an ecologically sustainable energy system as subject to the conditions of the Convention. Several factors have been restrained implementation AIJ projects:

- Lack of investment capital for renewable energy sources and energy efficiency projects, allowing financing at reasonable costs as long-term loans at reasonable interest rates;
- Lack of sufficient institutional responsibility for implementation AIJ projects;
- A weak local tradition using wood waste from industry and from forest as a fuel in the boiler plants and applying an up to date technology for energy saving. The local technology for the wood fuels firing has largely been missing;
- Lack of wood fuels firing know-how.

During the implementation of the EAES Programme in Latvia these barriers have been over-come by transfer reliable wood fuels firing technology and know-how.

E.3.4 Calculation of values reported in 'Project scenario' in table E.5.1, column (B) According to the section E.1.4 the following is used to calculate CO₂ emission:

$$M_{CO2} = Q_{fb*} q_{co2}/\eta_b$$

Were,

Q_{fb}- boiler(s) heat production, MWh/year,

K_c - fraction of carbon oxidised,

q_c - carbon emission factor, tC/TJ,

 η_{b} - annual efficiency of boiler(s), i.e. baseline efficiency of fossil fuel boilers.

Documentation box (*Please provide numerical data referred to in this section*):

The following data are used for calculation of the baseline scenario CO₂ emission reductions:

Total heat production of the boiler plant before boiler conversion – 28000 Baseline efficiency of the fossil fuel boilers – 65%

Carbon emission factor for heavy fuel oil – 0.331 CO₂/MWh

E.3 Revision of the baseline for the project

- E.3.1 Baseline revisions are planned (please <u>underline</u>): <u>Yes</u>/ No *If yes, please complete the remainder of section E.3.*
- E.3.2 Revisions are planned at regular intervals (please <u>underline</u>): Yes/No
- If yes, please specify date of first planned revision and the length of the intervals:
- If no, please explain revision schedule (up to half a page):

The new data are planned to introduce in the baseline scenario. The time schedule is not yet specified.

E.3.3 Information on revisions

- If a baseline (and/or the project scenario) revision is covered by this report, describe briefly the nature of this revision, including parameters changed in the revision as well as the calculation of the new set of values in the column 'Baseline scenario' in a revision of table E.5.1, column (A): (up to one page)
- Date of last baseline revision: (DD/MM/YYYY)
- Date of next baseline revision: (DD/MM/YYYY)

Documentation box (Please provide numerical data referred to in this section):

E.4 Scope and performance of the actual project

Provide actual project data (E.5.2. Column B) and the calculations of the actual real, measurable and long-term emission reductions and/or removals as measured against the relevant (original/revised) baseline scenario values

Documentation box (*Please provide numerical data referred to in this section*): *The following data are used for calculation of the actual CO*₂ *emission reductions:*

Actual heat production on bio fuels, MWh/y

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												-
Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
Heat production	24700	2600	20600	21100	20040	16180	16161	15422	16797	16404	15240	ì

Other data used for calculations are presented in sections E.1 and E.2

E.5 Tables on real, measurable and long-term GHG emission reductions or removals by sinks (in CO2 equivalent)

Projected real, measurable and long-term GHG emission reductions or removals by sinks E.5.1

Projected real, measurable and long-term GHG emission reductions or removals by sinks over the lifetime of the AIJ activity (Please underline and fill, as appropriate: This is the initial table or this is revision __ of this table) (in metric tons of CO₂ equivalent^a)

Insert rows as needed

		:	•	,			•				-	
	- 1	Baseline scenario (A)	scenario 4)			Froject	Project scenario (B)		Frojecte 	Projected real, measurable and long-term GHG emission	easurab G emissi	le and ion
									reductions (-) or removals by sinks (+)	s (-) or re (+)	emovals l	by sinks
										((B)-(A))	<i>((Y</i>	
Year	CO_2	$\mathrm{CH_4}^\mathrm{a}$	N_2O^a	Other ^a	CO_2	$\mathrm{CH_4}^{\mathrm{a}}$	N_2O^a	Other	CO_2	CH_4	N_2O	Other
Year 1 =1995	15400				0				-15400			
Year 2 =1996	15400				0				-15400			
Year 3 =1997	15400				0				-15400			
Year 4 =1998	15400				0				-15400			
Year 5 =1999	15400				0				-15400			
Year 6 =2000	15400				0				-15400			
Year 7 =2001	15400				0				-15400			
Year 8=2002	15400				0				-15400			
Year 9=2003 15400	15400				0				-15400			

0 -15400	0 -15400	0 0	0
15400	15400	10108	111 185
	Year 11=2005	Year 15* 10108	TOTAL 1

*- Average figure for previous full years of operation

^b Including effects occurring outside the project boundary (leakage) as described in section's E.1.4, and E.2.4, as applicable ^a Please convert values into global warming potentials, referring to annex 3 for conversion factors.

E.5.2 <u>Actual</u> real, measurable and long-term GHG emission reductions or removals by sinks

Actual real, measurable and long-term GHG emission reductions or removals by sinks of the AIJ activity (in metric tons of ${\rm CO}_2$ equivalent^a)

	Values indicated are assessed independently (Yes/No)													
	e and sion als by	Other												
	easurabl HG emiss or remov s (+)	N_2O												
	Actual real, measurable and long-term GHG emission reductions (-) or removals by sinks (+)	CH ₄												
	Actua long reduct	CO_2	-13600	-14300	-11300	-11600	-11000	-8880	-8180	908 <i>L</i> -	-8502	-8 303	-7 714	
needed.	a	Other ^a												
rows as 1	Actual project ^{b c}	N_2O^a												
it. Insert	Actual	$ m CH_4^a$												
asuremer		CO_2	0	0	0	0	0	0	0	0	0	0	0	
after met		Other ^a												
post i.e.	scenario ^b (A)	N_2O^a												
sessed ex	Saseline ($ m CH_4^a$												
values as	I	CO_2	13 600	14 300	11 300	11 600	11 000	8 880	8 180	908 /	8 502	8 303	7 714	
Please insert	Baseline scenario ^{b c} (A) (B)	Year	Year 1 =1995	Year 2 =1996	Year 3 =1997	Year 4 =1998	Year 5 =1999		Year 7 =2001	Year 8=2002	Year 9=2003 8 502	Year 10=2004	Year 11=2005	_

10	
-111 185	
0	ation
	s of opera
	full years
	previous
1111 185	igure for
Total	*- Average f

^a Please convert values into global warming potentials, referring to annex 3 for conversion factors.

^b Including effects occurring outside the project boundary (leakage) as described in sections E.1.4, E.2.4, E.3.4 and E.4, as applicable.
^c Values that differ from those in table E.5.1 should be marked in **bold**.

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E.6 Mutually agreed assessment procedures

If the AIJ activity provides for mutually agreed assessment procedures, please fill subsections E.6.1 or E.6.2, as applicable.

E.6.1 Assessment procedures that use all or one of the following steps:

E.6.1.1 Initial independent assessment of the project activity:

- Has the project design been subject to such an assessment? (*Please underline*): Yes/No
- If yes, what organization(s) is/are involved: (Please indicate the type of organization(s) (consultancy, accredited certification body, government body, university, etc.) and provide their detailed contact information in annex 1 to this report).

E.6.1.2 Monitoring

- Does the project have a monitoring plan? (*Please underline*): Yes / No
- Summarize briefly the key elements of the monitoring plan (i.e. which parameters are being monitored, with what frequency, providing sampling intensities if appropriate, methods and equipment; associated uncertainties, etc.) (not more than 1 page)

STEM has continued its assistance in monitoring and reporting the projects in the host countries. Experts from STEM, as well as the Swedish consultancy company ÅF-International provided guidance in methodology. For the regular follow-up activities a special format has been developed to collect performance data from each plant for each heating season. The monitoring activities have continued by local experts for preparing Swedish AIJ reports.

The following monthly data are collected and monitored:

- Heat production on bio fuels;
- Heat production on fossil fuels;
- o Total heat production of the boiler house;
- o Bio fuels consumption;
- o Fossil fuels consumption:
 - Is the monitoring conducted by project proponents? (*Please underline*): Yes / No
 - If no, which organization(s) is/are involved: (Kindly indicate the type of organization(s) (consultancy, accredited certification body, government body, university, etc.) and provide their detailed contact information in annex 1 to this report).

E.6.1.3 Independent assessment of the project performance

- Is the activity subject to such an assessment? (*Please underline*): Yes / No
- If no, is such an assessment intended? (*Please underline*): Yes / No
- If yes, what organization(s) is/are involved: (Please indicate the type of organization(s) (consultancy, accredited certification body, government body, university, etc.), and provide their detailed contact information in annex 1 to this report. Indicate the frequency of the assessments, how many assessments have taken place to date, and whether the assessment report(s) is/are publicly available if requested).
- Summarize briefly the key elements of the assessment activities: (Please describe issues such as criteria used; the project design; project implementation; key project

parameters being verified; the frequency of assessment/surveillance; sampling approach applied by the assessing organization) (up to one page):

E.6.1.4 Provision of written statement by an independent entity regarding the performance of the project activity

(Please note that such a statement is not a formal requirement under the AIJ pilot phase (see also the note at the beginning of section E.6). If the project has made provision for such a statement, please indicate the name of the independent body and attach a copy of the written statement(s)).

E.6.2 Other form of mutually agreed assessment procedure (please specify):

E. 7 Cost (to the extent possible)

- E.7.1 The cost information is (*Please underline*):
- <u>Provided below</u>
- Not provided because the data are (*Please underline*):
 - Not yet available
 - Classified as confidential
- E.7.2 AIJ project activity costs

(a) Indicate the total incurred till the date of this report.

Country		Aluksne I BC	1994	1995	1996	1997	1998	1999	2000	2001	2005
			0	1	2	3	4	5	6	7	11
	Investmen t	1. Loan/debt to STEM	536000	572400	614500	643400	611400	622085	639590	566195	4657083
		2. Added costs	0	36400	42100	28900	14000	13266	20125	27675	0
		3.Technical assistance	65000	0	0	0	0	0	0	0	0
	AIJ/JI	4. Follow up	0	7000	8200	8500	2200	2267	2139	1265	2852
A. Sweden	costs	5. Reporting costs	0	0	0	851	0	744	301	282	810
		6. Administration	51000	0	0	0	0	0	0	0	0
		7. Difference in interest	4%	22896	24580	25736	24456	24883	25584	22648	186283
		8.Accum. costs for AIJ/JI	116000	145896	178676	213763	240419	268313	296338	320533	324195
		9.Total costs	652000	718296	793176	857163	851819	890398	935927	886728	
	Investmen t	1. Investment/amortization	0	0	0	0	46000	2581	2620	101069	0
Latvia	AIJ/JI	2. Reporting costs	0	0	0	0	0	0	0	0	0
		3. Other osts	0	0	0	0	0	0	0	0	0
	costs	4. Accum. costs for AIJ/JI	0	0	0	0	0	0	0	0	0
		5. Total costs	0	0	0	0	46000	48581	51201	152270	
1 USD=	10	SEK									

F. Financial additionally

Bearing in mind that the financing of AIJ shall be **additional** to financial obligations of Parties included in Annex II to the Convention within the framework of the financial mechanism, as well as to current official development assistance (ODA) flows (decision 5/CP.1):

Please list sources and the purpose:

Category of funding	Amount
(For each source one line)	(US dollars)
Loan from NUTEK/STEM	714 911 USD
Grant from NUTEK/STEM for technical assistance	86 077 USD

 $^{1 \}text{ USD} = 7.5 \text{ SEK}$

G. Contribution to capacity building, transfer of environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties

G.1 Identification of environmentally sound technology and know-how

- Name of manufacturer:) Järnforsen Energy System AB (main contractor of the combustion equipment)
- Place of manufacture (country):Sweden
- Model names and numbers of equipment (where appropriate):

The main parts of the delivery have been:

- Silo scrapers
- Hydraulic cylinders
- Scraper conveyor
- Fuel feeding system
- Prefurnace
- Multicyclone
- Flue gas fan
- Chimney
- Ash conveyors
- Ash container
- Boiler circulation pimps
- Heat exchanger pumps
- Boiler circulation pumps
- District heating pumps

-

• Any other relevant key specific technology characteristics:

^{*} From 1 January, 1998, the new Swedish National Energy Administration was established – from 1 January 2002 the name in English has been changed to the Swedish Energy Agency - has taken over the responsibility for the Programme for an Environmentally Adapted Energy System in the Baltic region and Eastern Europe (EAES Programme) from NUTEK (Swedish National Board for Industrial and Technical Development.

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An existing light oil boiler has been converted to bio fuels firing through installation a pre-furnace. Automatic fuel storage, flue gas cleaning equipment, wood chipper.

- Boiler Hot water
- Prefurneance moving inclined grate
- Boiler outout after conversion 5 MW
- Flue gas cleaning Multicyclone, <300 mg/Nm³
- Automated fuel store capacity 180m³
- Main fuel store capacity 1000 m³
- Estimated heat production 28 000MWh/year
- Total production of the boiler plant 30 000MWh/year
- Total conversion costs 5.6 MSEK
- Commissioned October 1994

Local companies took part in the project implementation phase (groundworks, building, civil engineering works), the main contractor for the equipment delivery has been company Järnforsen Energy Systems AB (Sweden)

• Where applicable, name and location of provider and nature of training:

Special training courses for boiler house operators were arranged by main contractor to give lessons on operation/maintenance of wood fuel burning plant.

Translation of manuals and safety regulations for boiler operation.

The staff from the boiler plant has been invited to different seminars and workshops, documentation for training has been handed over. The following seminars in Latvia have been organized by support from STEM:

- ♦ "Environmentally Adapted Energy Systems in Baltic States and Eastern Europe", Cesis, 23 November, 1994;
- "Prospects for small boiler conversion to biofuel in Latvia", Rauna, March, 1996
- "Possibilities for wood fuel utilization in Latvia", Broceni, 17 April, 1997;
- "Waste wood for boiler houses", Liepa municipality, 5 June, 1998

Presentation of book translated from Swedish to Latvian "Environmentally adapted local energy systems", author Niels Moe (STEM), seminars in Balvi, Jelgava, Saldus, 6-8 May, 1998

G.2 Characteristics of environmentally sound technology

The technology is (*underline* the option):

- At a research and development stage
- Being tested or demonstrated in similar conditions outside the host country
- At the initial stage of introduction into the world market
- At the initial stage of introduction into the host market
- Commercially available and deployed in the world market
- <u>Commercially available and deployed in the host market</u>
- Not characterized by the above options. *Please describe*:

G.3 Impact of the AIJ project on capacity-building and transfer of environmentally sound technology and know-how (up to two pages):

H. Additional comments

Complete as appropriate:

1) Any practical experience gained:

Heating company has been provided with new modern technology based on wood fuel utilisation. It is possible to use different wood fuels: wood chips, sawdust, as well as residues from the wood processing companies that was dumped out before project realisation.

2) Technical difficulties:

The human factor sometimes is more important than technical issues. When boiler house manager has left the plant it was difficult to find a new manager. It always takes time for education and training. Now this problem is solved and plant from the technical point of view operates well. There have been some problems with the heat exchangers (too big pressure drop), but since they were washed out by special solvents problems disappeared.

3) Effects encountered:

The project realisation gave:

- ♦ Reduced fuel costs;
- ♦ Improved environment;
- ♦ New working places for fuel supply, and plant operation;
- Reduced dependence from the imported fuel;
- Better economy for the local regional level;
- ♦ Co-operation between Baltic and Nordic countries;
- ◆ Involvement of local companies for project implementation;
- ♦ Ideas for new fuel conversion projects.

4) Impacts encountered:

5) Other obstacles encountered:

Due to limited demand from the consumer side during summer time the boiler operates with partial load, therefore loosing some efficiency.

Annex 1 to the revised uniform reporting format (URF 01)

PARTICIPANTS' CONTACT INFORMATION

Please provide contact information for <u>each</u> organization. Add rows as required (by copying and

pasting)

Name	Address ^a	Voice/Fax/E-mail
Organization(s) b: Swedish En- Function(s) within activityc: F		I
Officer responsible:	The System Analysis Department, Climate Change Division Kungsgatan 43 BOX 310 S-63104 Eskilstuna SWEDEN http://www.stem.se	Tel: +46 16 544 20 81 Fax: +46 16 544 22 64 E-mail: bengt.bostrom@stem.se
Contact person, if different from above: Gudrun Knutsson	Head of Section, Climate Investment Programme	Tel: +46 16 544 20 72 Fax:+46 16 544 22 54 E-mail: Gudrun.Knutsson@stem.se

Name	Address ^a	Voice/Fax/E-mail		
Organization(s) ^b : Ministry of the Environment of the Republic of Latvia				
Function(s) within activity ^c : Designated national authority/reporter				
Officer responsible:	Climate and Renewable Energy	Tel.: 371- 7026508		
-	Department	Fax: 371-7820442		
	Peldu str. 25;	Ingrida.apene@vidm.gov.lv		
	LV 1494, Riga;			
Contact person, if different	Senior official	Tel.: 371-7026508		
from above: Apene Ingrida		Fax: 371-7820442		
. 0		Ingrida.apene@vidm.gov.lv		

	Name	Address ^a	Voice/Fax/E-mail
Organization(s) b:	Borrower	AS "Simone", Municipal JSC;	+371 43 21793/+371 43 21793/
Function(s) within		Parka Street 2; LV-4300;	
activity ^c :		Aluksne; Latvia;	
Officer responsible:		Zālītis Guntis	+371 43 21793/+371 43 21793/
Contact person, if different from above:			

		Thanshe 2000		
Organization(s) b: SIA "Ekodoma"				
Function(s) within activity ^c : Local reporter				
Officer responsible:	Noliktavas 3-3;	Tel:371-7323212		
	LV 1010, Riga, Latvia	Fax:371-7323210		
		E-mail: ekodoma@ekodoma.lv		
Contact person, if different	Local project leader	Tel:371-7323210		
from above:		Fax:371-7323212		
Dagnija Blumberga		E-mail: ekodoma@ekodoma.lv		

^a Address should include: department; street; postal code; city; country and the Internet

Function	Description of function	
Project development	Designing/developing the AIJ project and/or submitting the AIJ project proposal	
Project operator	Implementing and administering the AIJ project activities	
Government regulation/oversight	Ensuring compliance of the project with laws and regulations	
Technical assistance	Providing scientific or other technical guidance or support for the purposes of project development and/or project administration, implementation, training and education activities	
Financing	Serving as a source of funding for the AIJ project	
Initial independent assessment of project activity	Assessing whether the project activity meets a given set of criteria	
Monitoring	Monitoring the environmental and/or socio-economic results of the project in accordance with a monitoring protocol	
Independent assessment of project performance	Assessing the performance (environmental and/or socio- economic) achieved by a project against pre-set criteria	
Providing independent written statement on performance	Providing written assurance that a performance is achieved and/or a set of criteria is met by an activity	
Designated national authority	Entity authorized to officially accept, approve or endorse the AIJ project	
Other (please specify)		

address of the organization (if available).

b Organization includes: institutions, ministries, government agency closely following the activity, companies, non-governmental organizations, etc. involved in the activity.

^c Function within activity: please use the following categories:

Annex 2 to the revised uniform reporting format (URF 01)

PROJECT TYPE DESCRIPTORS

To describe the type of project activity, please specify the sector(s) <u>and</u> activity(ies). Use a combination from the first column (sector) and one option from the second column (activity):

Sector	Activity	
Energy	Fuel-switching, renewable energy generation, alternative energy generation, improving energy efficiency, reduction of fugitive emissions from fuels, other (please specify)	
Industrial processes	Material substitution, process or equipment change, waste treatment, recovery or recycling, other (please specify)	
(Excluding GHG emissions from energy production)		
Solvent and other product use	Material substitution, process or equipment change, waste treatment, recovery or recycling, other (please specify)	
Agriculture	Livestock productivity management, livestock manure management, crop management, crop-switching, fertilizer management, fertilizer substitution, other (please specify)	
Land-use change and forestry	Afforestation, reforestation, forest preservation, agroforestry, silviculture (forest management), fire management, sustainable harvesting, reduced impact logging, manufacture of durable wood products, other (please specify) ^a	
Transport		
Waste	Solid-waste management, landfill methane recovery, waste- water management, other (please specify)	
Other	Please make a proposal for the sector and activities	

Note: One AIJ project activity may cover several project types.

^a Parties may wish to further revise these activity categories in the light of results of methodological work on land use, land-use change and forestry.

Annex 3 to the revised uniform reporting format (URF 01)

1995 IPCC GLOBAL WARMING POTENTIAL (GWP) VALUES^a BASED ON THE EFFECTS OF GREENHOUSE GASES OVER A 100-YEAR TIME HORIZON

Greenhouse gas	Chemical formula	1995 IPCC GWP		
Carbon dioxide	CO ₂	1		
Methane	CH ₄	21		
Nitrous oxide	N ₂ O	310		
Hydrofluorocarbons (HFC	Hydrofluorocarbons (HFCs)			
HFC-23	CHF ₃	11700		
HFC-32	CH ₂ F ₂	650		
HFC-41	CH ₃ F	150		
HFC-43-10mee	$C_5H_2F_{10}$	1300		
HFC-125	C ₂ HF ₅	2800		
HFC-134	$C_2H_2F_4$ (CHF ₂ CHF ₂)	1000		
HFC-134a	C ₂ H ₂ F ₄ (CH ₂ FCF ₃)	1300		
HFC-143	$C_2H_3F_3$ (CHF ₂ CH ₂ F)	300		
HFC-143a	$C_2H_3F_3$ (CF_3CH_3)	3800		
HFC-152a	$C_2H_4F_2$ (CH_3CHF_2)	140		
HFC-227ea	C ₃ HF ₇	2900		
HFC-236fa	$C_3H_2F_6$	6300		
HFC-245ca	$C_3H_3F_5$	560		
Perfluorocarbons				
Perfluoromethane	CF ₄	6500		
Perfluoroethane	C_2F_6	9200		
Perfluoropropane	C ₃ F ₈	7000		
Perfluorobutane	C_4F_{10}	7000		
Perfluorocyclobutane	c-C ₄ F ₈	8700		
Perfluoropentane	$C_{5}F_{12}$	7500		
Perfluorohexane	$C_{6}F_{14}$	7400		
Sulphur hexafluoride	SF ₆	23900		

^a As provided by the IPCC in its Second Assessment Report. Please refer to conclusions of the SBSTA at its fourth session (FCCC/SBSTA/1996/20) and decision 2/CP.3 (FCCC/CP/1997/7/Add.1).

Annex 4 to the revised uniform reporting format (URF 01)

For the text of the decision adopting the revised URF and requesting Parties to use this format see the report of the eighth sessions of the Conference of the Parties.

Decision 5/CP.1

Activities implemented jointly under the pilot phase

The Conference of the Parties,

Recalling that, in accordance with Article 4.2(d) of the United Nations Framework Convention on Climate Change, the Conference is required to take decisions regarding criteria for joint implementation as indicated in Article 4.2(a),

Noting that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs,

Acknowledging that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions,

Recognizing that,

- (a) According to the provisions of the Convention, the commitments under Article 4.2(a) to adopt national policies and to take corresponding measures on the mitigation of climate change apply only to Parties included in Annex I to the Convention (Annex I Parties), and that Parties not included in Annex I to the Convention (non-Annex I Parties) have no such commitments,
- (b) Activities implemented jointly between Annex I Parties and non-Annex I Parties will not be seen as fulfilment of current commitments of Annex I Parties under Article 4.2(b) of the Convention; but they could contribute to the achievement of the objective of the Convention and to the fulfilment of commitments of Annex II Parties under Article 4.5 of the Convention,
- (c) Activities implemented jointly under the Convention are supplemental, and should only be treated as a subsidiary means of achieving the objective of the Convention,
- (d) Activities implemented jointly in no way modify the commitments of each Party under the Convention,

1. Decides:

- (a) To establish a pilot phase for activities implemented jointly among Annex I Parties and, on a voluntary basis, with non-Annex I Parties that so request;
- (b) That activities implemented jointly should be compatible with and supportive of national environment and development priorities and strategies, contribute to cost-effectiveness in achieving global benefits and could be conducted in a comprehensive manner covering all relevant sources, sinks and reservoirs of greenhouse gases;
- (c) That all activities implemented jointly under this pilot phase require prior acceptance, approval or endorsement by the Governments of the Parties participating in these activities;
- (d) That activities implemented jointly should bring about real, measurable and long-term environmental benefits related to the mitigation of climate change that would not have occurred in the absence of such activities;
- (e) That the financing of activities implemented jointly shall be additional to the financial obligations of Parties included in Annex II to the Convention within the framework of the financial mechanism as well as to current official development assistance (ODA) flows;
- (f) That no credits shall accrue to any Party as a result of greenhouse gas emissions reduced or sequestered during the pilot phase from activities implemented jointly;
 - 2. Further decides that during the pilot phase:
- (a) The Subsidiary Body for Scientific and Technological Advice will, in coordination with the Subsidiary Body for Implementation, establish a framework for reporting, in a transparent, well-defined and credible fashion, on the possible global benefits and the national economic, social and environmental impacts as well as any practical experience gained or technical difficulties encountered in activities implemented jointly under the pilot phase;
- (b) The Parties involved are encouraged to report to the Conference of the Parties through the secretariat using the framework thus established. This reporting shall be distinct from the national communications of Parties;
- (c) The Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation, with the assistance of the secretariat are requested to prepare a synthesis report for consideration by the Conference of the Parties,

3. Further decides:

- (a) That the Conference of the Parties shall, at its annual session, review the progress of the pilot phase on the basis of the synthesis report with a view to taking appropriate decisions on the continuation of the pilot phase;
- (b) In so doing, the Conference of the Parties shall take into consideration the need for a comprehensive review of the pilot phase in order to take a conclusive decision on the pilot phase and the progression beyond that, no later than the end of the present decade.

10th plenary meeting

7 April 1995
