Project implementation plan

Promotion of energy-efficiency
by Voluntary Agreements in Turkish Industry

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Ministry of Economic Affairs (EZ) - The Netherlands

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Content

1. Project framework

The Environmental Facility of the G2G.NL programme (G2G/V) of the Netherlands Ministry of Economic Affairs aims to assist two new member states (Bulgaria and Romania) and two candidate member states (Croatia and Turkey) in meeting the criteria for EU membership through projects dealing with the (consequences of) implementation of European legislation.

The objectives of the G2G/V programme are:
1. to support the governments of Bulgaria, Croatia, Romania and Turkey with issues related to the transposition and/or implementation of EU legislation;
2. to foster bilateral relations on environmental issues considered relevant for The Netherlands:
3. to build intensive, structural public co-operation in environmental areas;
4. to enhance market conditions and facilitate access to foreign markets for Dutch entrepreneurs.

The G2G/V programme is implemented by the EVD, the International business and cooperation agency of the Netherlands Ministry of Economic Affairs. The EVD asked SenterNovem, the agency for innovation and sustainability of the Netherlands Ministry of Economic Affairs, to develop a project plan for following project.

Table 1

Project	Promotion of energy-efficiency by Long Term Agreements in Turkish Industry
Reference	G2G07/TR/9/2
Short title	G2G VA-EE Turkey project
Purpose	To increase the institutional capacity of the Turkish administration to organise and implement Voluntary Agreements on energy efficiency with companies in relevant Turkish industrial sectors.
Budget	EUR 400.000
Counterpart	General Directorate of Electrical Power Resources Survey and Development Administration (EIE) and Natural Energy Conservation Centre (NECC), part of the EIE under the Turkish Ministry of Energy and Natural Resources (MENR)
Beneficiary	Turkish Ministry of Energy and Natural Resources (MENR)
Duration	26 months[1]
Start	January 2008

A preliminary project implementation plan (PIP) has been approved by the EVD in December 2007. The present document contains a draft version of the revised project implementation plan. This revision is currently carried out in close consultation between EIE, SenterNovem and the EVD. The revised PIP will be submitted to the Project Advisory Committee (PAC) for approval during the first PAC meeting in Ankara on April 4th, 2008.

[1] SenterNovem proposes to extend the project duration with 2 months (see § 3.3).

2. Project design

2.1 Accession relevance and economic relevance

A clear policy and effective instruments for promoting energy efficiency in industry are of particular relevance for transposing the acquis communautaire in Turkey. Increasing the energy efficiency of industrial sectors will assist Turkey to improve its position with respect to following EU objectives:

- increasing competitiveness and promoting employment (central objectives of the Lisbon agenda)
- reducing greenhouse gas emissions and improving air quality (meeting Kyoto commitments, contributing to longer term objectives within the United Nations Framework Convention on Climate Change)
- ensuring security of energy supply on the long term.

Also, a number of EU Directives related to energy efficiency, sustainable energy and Greenhouse Gases Emissions will need to be transposed into national legislation by Accession Countries. Most relevant directives on energy efficiency are:

- Directive on energy end-use efficiency & energy services
- Cogeneration directive
- Energy performance of buildings directive
- Framework directive for the setting of eco-design requirements for energy-using products (EuP).

These directives trigger adaptations in many sectors of the society, ranging from energy supply to industry, housing, transportation and consumers.

Turkey actively started to transpose the acquis communautaire on energy efficiency. Important milestones in recent years are:

The National Programme for the Adoption of Acquis (NPAA)
Endorsed by Turkey on 24 July 2003, it states the following priorities under the Energy heading:

- PRIORITY 14.2: Establish a programme for the adoption of the energy acquis, particularly that concerning issues other than the internal market.
- Task 14.2.2: Harmonization with EU legislation in the field of energy efficiency.

Contribution to National Development Plan
The "Preliminary National Development Plan" which has been prepared by the State Planning Organization, made following statement on energy efficiency:

> "Work is carried on for ensuring the effective and efficient use of the energy. The National Energy Conservation Center, which was established within the Electrical Power Resources Survey and Development Administration to control and coordinate the studies in this field, has been executing a common project with EU. The final goal has been established as to increase the energy efficiency in Turkey and set up the administrative capacity to ensure the efficient implementation of the EU legislation in this field."

Reference to the Multi Annual Program (MAP)
"Implementation of an Energy Efficiency Strategy" has been adopted as Objective 2 for the year 2004.

Energy Efficiency Law
A new law on energy efficiency has been adopted by the Turkish Parliament on April 18th, 2007 (Law no. 5627). This law delegates new tasks and responsibilities to the EIE. EIE shall introduce new energy efficiency measures in the area of awareness raising, training and inspection in all relevant Turkish public and private sectors and create awareness among the general public. Part of this law introduces also the development and management of public-private partnerships on energy-efficiency with Turkish industrial sectors. The law introduces the possibility to provide governmental subsidies to companies that reduce their energy consumption to compensate for the investments made.

A Regulation on increasing efficiency in the use of energy resources and energy is currently drafted and is expected to enter into force in May 2008 (see further in § 2.2).

From an economic point of view, promoting a rational use of energy within industry will contribute to the modernization of Turkish industry and in the strengthening of its competitiveness. Also, realizing the energy efficiency potential of the Turkish industry is of utmost urgency in the actual context, where Turkey is likely to be confronted to electricity shortages in the coming years. These shortages are expected as a result of the steady increase of electricity demand due to the rapidly growing economy in combination with the limited capacity of the actual infrastructure for the generation and distribution of electricity.

2.2 Problem definition

Current situation

Import and transport of energy
Due to the rapid economical development, the energy consumption of Turkey is currently increasing with approximately 6% per year. Turkey depends on energy imports to an even bigger extent than the EU. Turkey imports about 70% of its total energy needs. At the moment, the largest part of the imported energy (both gas and oil) comes from Russia, followed by Iran.
Turkey is in close geographical proximity to countries possessing more than 70% of proven global gas and oil reserves. Its geographical location makes Turkey an important potential corridor in particular for gas and oil from Central Asia and other neighbouring countries to the EU.

Energy use in the Turkish industry
The Turkish industrial sector is very energy intensive, with a total share of 41% (2005) of the final energy consumption in Turkey. There are approximately 1.000 industrial establishments consuming over 1.000 Tonnes Oil Equivalent (TOE). The energy cost ratio of the total costs of many of these energy intensive industries is around 40 – 50%.
The high level of energy intensity of the Turkish economy may be a clear obstacle for competitiveness and sustainable growth. Improvement of energy efficiency is therefore very important but also is gives many challenges as it involves a large number of stakeholders.
Therefore, the Turkish government has to focus not only on the regulations side, but also on the facilitation and promotion of energy efficiency in relevant economic sectors. Industrial organizations need to be involved in disseminating information on good practices and energy saving techniques. Companies need to clearly understand which measures can be taken and should be stimulated in realizing energy efficiency improvement projects.

The role of EIE

For the last 20 years, EIE introduced several measures and conducted a whole range of activities to promote energy efficiency in the Turkish energy intensive sectors. In the past, the EIE conducted three Energy Conservation projects financed by foreign sources (Japan and the World Bank). All were mostly technical in nature and focused on energy audits, staff training, promotion and policy development. As a result of all these projects, EIE established its own energy conservation team of 25 persons trained by foreign experts and provided it with necessary equipment and vehicles (three Energy Buses and one Training Bus) to carry out various energy conservation activities in different regions. The main activities conducted by EIE/ NECC in the past years are listed below:

- Energy Bus Program

Under programme energy audits are conducted in various plants of the Turkish industrial sectors. The audits are aimed to create energy conservation awareness in the Turkish industry, to identify the energy saving potentials and to help the establishment of energy management in plants.

- Training Bus Program

The aim of this program is to give comprehensive technical training to the personnel of energy intensive industrial plants (500 people have been trained so far).

- Energy Manager Courses

In November 1995, a regulation was issued and enforced by MENR and EIE in order to increase energy efficiency in industry. With this regulation, industrial establishments with an energy consumption higher than 2.000 TOE should set up an energy management system, complete energy audits in three years, and monitor specific energy consumption of main products in their plants. NECC has been monitoring all these activities. NECC has also started to organize the Energy Management courses in 1997 and has given the authority to three organizations in Izmir, Istanbul and Eskişehir in order to provide these courses. Until now approximately 500 engineers from different industrial sectors have been trained as energy manager.

- Data Base Studies

To monitor the energy consumption in the industrial sector a data base program was established and surveys were made. The results for the years 1987, 1989 and 1991 were published so far. In cooperation with the State Statistical Institute, EIE started the compilation of a new data base system with information on plants consuming annually 500 TOE or more.

- Energy Conservation Promotion Studies

Under this activity energy conservation awareness campaigns have been set up that include an annual Energy Week (the second week of January), publicity material, contests for school children, TV spot films, etc.

- Training unit

The Energy Conservation Training Unit, which was established as a part of the "Energy Conservation Project" carried out in collaboration by EIE and JICA (Japan International Cooperation Agency), was opened in October, 2001. This Training Unit containing all energy consuming equipment is used for practical training in the Energy Manager Courses organized by EIE/NECC.

- Contribution to the new Energy Efficiency Law

Recently, Turkey took also important steps in bringing its energy efficiency laws in line with the EU energy Acquis. A new framework legislation and an energy efficiency strategy have been developed on energy efficiency with the assistance of EU experts, particularly in the framework of a Twinning project. This project was carried out with the

support of France and of the Netherlands (with SenterNovem as a junior partner). One of the results of the project was a draft for a new law on energy efficiency which has been adopted by the Turkish parliament on the 18th of April 2007.

- Draft regulation on increasing efficiency in the use of energy resources and energy

This draft regulation, also called secondary legislation on Energy Efficiency, has been published at the beginning of 2008. This draft is currently revised by MENR and it is expected to be approved in May 2008. This secondary legislation contains a detailed framework for the implementation of a programme of Voluntary Agreements on Energy Efficiency in the Turkish Industry (VA-EE). EIE will be responsible for the implementation of this programme.

In order to further strengthen the capacity of EIE to carry out energy efficiency promotion activities in industry, MNER requested new assistance from the Netherlands for the preparation and the roll-out of the Turkish VA-EE programme.

Project intervention

Project approach

Since the early 1990s, the Dutch Ministry of Economic Affairs has been concluding Voluntary Agreements on Energy Efficiency with numerous energy-intensive sectors. These are the so-called Long Term Agreements (LTA) which proved to be very successful in the past 15 years already. The LTA are part of the Dutch national energy policy and they make an important contribution to the commitments of The Netherlands to the Kyoto Protocol. Also in the rest of the European Union negotiated agreements like LTA are extensively used to achieve energy efficiency improvement and environmental protection.

Although this instrument is not yet well-known in Turkey, it is expected that it could significantly contribute to the realization of national targets on energy efficiency, to increase the competitiveness of industry by decreasing energy expenses and to lower the dependence of the country on energy imports. It would also help the country to better prepare Turkish companies to comply with possible future obligations within the EU (such as energy efficiency improvements targets as laid down in the Energy Service Directive and participation in the EU-Emission Trading Scheme).

In order de strengthen the capacity of EIE to develop and manage public-private partnerships on energy efficiency within the Turkish industry, SenterNovem will first share with EIE much of the know-how and experience gained through the Dutch LTA. The concept of voluntary agreements will then be adapted to the Turkish industrial context, through practical experiences with pilot companies. Finally, a large scale roll-out of the Turkish Voluntary Agreements on Energy Efficiency (VA-EE) programme will take place.

Revision of the Project Implementation Plan

Because the secondary legislation on energy efficiency specifies a detailed planning and organisation for the implementation of the VA-EE programme in Turkey, it has been necessary to introduce a number of adaptations to the preliminary project implementation plan. The main adaptations concern:

- the project planning
- the target group for knowledge transfer
- the purpose and the activities of result 3, and
- the structure of the project team of SenterNovem.

These adaptations are summarized in the table below.

Table 2

Adaptations	Preliminary project implementation plan	Revised project implementation plan
Planning	Pilot project between mid 2008 and mid 2009, followed by a dissemination phase during the last 6 months of the project.	Pilot project in 2008, followed by roll-out of the Turkish VA-EE programme starting on January 1st, 2009.
Target group for knowledge transfer	Principally EIE.	EIE and a selected number of Turkish Energy Efficiency consultancies involved in the pilot projects (2008), EIE and Turkish Energy Efficiency consultancies involved in the roll-out (2009).
Result 3	Dissemination programme on VA-EE.	Support to EIE during the roll-out of the Turkish VA-EE programme.
Structure team SenterNovem	Larger team of 7 specialists, structured in core team (3) and specialists team (4), and an additional PAC member.	More compact team of 5 specialists, all in the core team, and an additional PAC member.

The project is to enable EIE to implement Voluntary Agreements deriving from the Turkish energy efficiency law and the secondary legislation first within a limited number of pilot companies, and then on a larger scale within relevant Turkish industrial sectors.

In order to achieve this, the project will focus on the following three aspects.

- Firstly, the project will assist with the strengthening of the institutional structure and capacity of EIE in the field of Voluntary Agreements with industry. To this end, a series of trainings will be organized in the period 2008-2009. Special attention will be given to Dutch LTA experiences and to the specificities of the Turkish national context.
- Secondly, assistance will be given to carry out successful pilot projects on VA-EE. To this end, approximately ten industrial companies will be selected. The pilot projects will be carried out in 2008.
- Thirdly, the project will provide assistance to EIE during the roll-out of the Turkish VA-EE programme (starting on January 1st, 2009) and help evaluating the results of the start of the implementation of Voluntary Agreements in Turkey.

Related Initiatives

Two recent projects, the first one on energy efficiency in Turkey and the second on LTA in Central and Eastern Europe, are particularly relevant for the G2G LTA Turkey project:

- 'Improvement of Energy Efficiency in Turkey' (Phare Twinning project TR 0303.06)
  This project was carried out from July 2005 to October 2007. The project purpose was to establish the legislative and institutional framework in accordance with EU rules and best practices for a better design and implementation of energy efficiency programmes. The project has been implemented by EIE with the support of Ademe (France) and SenterNovem (The Netherlands).

- 'Integrated approach for Knowledge Transfer on LTA in Central and Eastern Europe' *(*PPA short project PPA06/MC/8/3*)*
  This project on LTA knowledge transfer was carried out by SenterNovem in 2007. The beneficiary countries were Bulgaria, Czech Republic and Poland. Also Turkish delegates (from EIE and Turkish industry) participated in the Multi-Country Event in November 2007 and could exchange information and experience with other countries involved in LTA projects.

2.3 Project purpose

The purpose of this G2G Turkey project is to increase the institutional capacity of the General Directorate of Electrical Power Resources Survey and Development Administration under the Turkish Ministry of Energy and Natural Resources to organise and implement Voluntary Agreements for improving the energy efficiency of companies in relevant Turkish industrial sectors (VA-EE).

2.4 Project results

The three main results of the G2G VA-EE Turkey project are:
1. Capacity building of EIE in conducting Voluntary Agreements on energy efficiency improvement in the Turkish industry;
2. A pilot project implemented on the use of VA-EE within approximately 10 pilot Turkish companies;
3. Support to EIE during the start of the roll-out of the Turkish VA-EE programme.

2.5 Project activities

The project implementation plan has been revised in the period January – March 2008 in close consultation by EIE, SenterNovem and the EVD. The revised PIP contains all activities to be carried out in the period April 2008 – February 2010, in order to achieve the project results as mentioned in § 2.4.

Table 3 below gives an overview of the project results and related activities, the methodology used, and the consultancy time of all personnel involved (excluding EIE).

Table 3

Results and activities		Methodology	Deployment (man-days)					
			SenterNovem		EZ	NLFI	NLSO	TEEC
			TUR	NL				
Inception phase	ECW1	WS	2	2				
	Adaptation implementation plan	IV, WS, RE	21	7				
	Project Kick-off	WS	4	1				
	Applications of companies	CM						
	PAC1	MT	3	1	3			
Project result 1	EIE training 1	LS, WS, TR	4	6				
	EEI training 2	LS, WS, TR	2	5				
	EEI training 3	LS, WS, TR	6	3				
	EEI training 4	LS, WS, TR	4	4		7		
	EIE training 5	LS, WS, TR	10	3				
	VA-EE workshops	LS, WS, TR	10	5		5		
Project result 2	Selection sectors, companies & consultancies	LS, IV, ME	10	3				
	Pilot Consultants training 1	LS, WS, TR	8	5				24
	ECA at pilot companies	LS, IT, RE	6	9				
	Field work 1	SV	15					50
	Pilot Consultants training 2	LS, WS, TR	6	8				24
	EEIP at pilot companies	LS, IT, RE	9	5			10	
	Field work 2	SV	18				10	50
	PAC 2	MT	6	1	3			
Project result 3	ECW2	WS	3	2				
	EE Consultants training	LS, WS, TR	12	4				
	Helpdesk EIE	LS, IV, RE	13	13				
	PAC 3	MT	6	1	3			
	PAC 4	MT	6	1	3			
Completion phase	VA-EE conference	WS	3	3				
	ECW3	WS	1	2				
	Reporting	IT, RE	0	9				
	PAC 5	MT	6	1	3			
	Evaluation with EVD	MT		0,5				
Subtotals			194	104,5	15	12	20	148

Financial support	(man-days SenterNovem)	20
Secretary support	(man-days SenterNovem)	15
Communication support	(man-days SenterNovem)	3

Methodology: LS = literature search, IV = interviews, WS = workshop/presentation, TR = training, MT = meeting, SV = site visit, RE = reporting, CM = communication

Deployment: EZ = Dutch Ministry of Economic Affairs, NLFI = financial instruments expert, NLSO = sector organisation experts TEEC = Turkish energy efficiency consultancies

2.6 Assumptions, pre-conditions, risk analysis and sustainability

Basic assumptions, pre-conditions and risks for the project have been identified using a logical framework approach. The Logical Framework Analysis is based on the results of a previous LFA workshop (see annex 1) and discussions between EIE and SenterNovem during the Inception Phase.

Basic assumptions are:

1. It is assumed that during the project implementation there is a continued political commitment in both the EU and Turkey to European integration. As regards the transposition, implementation and enforcement of relevant *acquis communautaire*, it is assumed that possible changes at political level will not interfere with capacities built and organisational improvements achieved under the project.
2. It is assumed that all Turkish parties involved (ministerial bodies, politicians, NGO's, sector organisations and individual companies, others) are willing to co-operate in the framework of the project, and will make available (human) resources in order to fully support the successful execution of the project *implementation activities* as well as the project *monitoring activities*.
3. It is assumed that the government of Turkey will make available sufficient national resources in order to ensure the sustainability of the project's results.

Basic pre-conditions are:

1. It is a pre-condition for effective and efficient project implementation that incoming and outgoing missions and other activities are timely planned. This means that both the Dutch and the Turkish experts have to take into account the regular tasks of the Turkish parties involved and the project activities in which they are engaged.
2. A pre-condition for project implementation is the availability of training facilities (rooms and equipment) both in Ankara and elsewhere and travel possibilities to the sites to be visited.

Possible risks and responses from the project team are listed in following table.

Table 4

Possible risks	Responses
Political or regional instability might cause delays in activities involving the government.	Targeted communication about the project (3 times during the yearly Energy Conservation Week, Project kick-off, Final Project Conference). Involvement of representatives of relevant ministries and industrial stakeholders in the Project Advisory Committee.
Lack of interest from sector organisations or companies might delay the start and the effectiveness of pilot projects in industrial sectors.	Many communication efforts during the Inception Phase (project announcement during ECW 2008, Project Kick-off on February 13th, 2008, mailing to companies in February 2008) resulted in approximately 200 applications of companies interested in participating in the pilot phase. Companies wanting to participate in the Turkish VA programme starting in January

Possible risks	Responses
	2009 can apply in June 2008.
A high work load or other priorities within the administration might limit the involvement of the Turkish counterpart and the sustainability of the project.	Next tot EIE staff, also Energy Efficiency consultant will be involved in trainings and field work at pilot companies in 2008. A larger number of EE consultants will be involved in trainings in 2009, in order to help matching the demand (number of companies applications received n June 2008) and the offer of Energy Efficiency consulting services.

Sustainability of the project intervention has been a major preoccupation in defining the project implementation plan:

- First of all, sustainability is built in the definition of the results themselves: capacity building of EIE, running a pilot phase before starting a large scale roll-out, support during the roll-out and evaluation of the first year of implementation.
- Both the accent on communication with many stakeholders and the set up and execution of additional training modules for Energy Efficiency consultants aim at creating at the same time a large demand from industry and sufficient capacity for carrying out successfully the Voluntary Agreement programme.
- Involvement of representatives of other ministries and of industry in the Project Advisory Committee creates a large support base for the project.

2.6 Promotion of business relations

The project will contribute to a more intensive co-operation between Turkey and The Netherlands. The will of both countries to co-operate on energy matters has recently been expressed in the Memorandum of Understanding between the Dutch Ministry of Economic Affairs and the Turkish Ministry of Energy and Natural Resources. There are also many fields for strengthening business ties between the two countries.

In particular, Dutch consultants might provide know-how on following subjects related to Energy Efficiency and Renewable Energy:

- Trainings on various subjects related to energy, like:
  - auditing
  - communication skills
  - project management
  - EU projects
- Energy consulting:
  - auditing and scans
  - Energy Efficiency (industry)
  - Energy Efficiency (buildings)
  - Innovation Scan
  - Sustainable Energy Scan
- Project management
- Specific energy studies, e.g.:
  - biogas production
  - solar energy (passive or active solar energy)
  - wind energy studies
  - general industrial sub-sector related studies (e.g. optimal combustion equipment for the bricks and tiles industry or highly efficient dying of textile yarn and cloth)
  - sector energy saving potential studies
- Workshops of all kinds (e.g. energy management; LFA)

- Coaching on Energy Management
- Governmental support (by ministry or agency)
    - monitoring of Voluntary Agreements
    - sustainability
    - IPPC

There are also commercial opportunities for Dutch providers of Energy Efficiency and/or environmental equipment, or for joint ventures between Dutch and Turkish companies. Possible fields of co-operation are:

- energy efficient techniques (hardware), e.g.:
    - furnaces, burners, combustion equipment, heat exchangers
    - electrical, electronic drives
    - high efficient motors
    - energy efficiency HVAC equipment
    - membrane technology
    - water treatment equipment
    - CVT (transmission)
    - energy efficient lighting
    - monitoring and targeting equipment
    - monitoring software (e.g. Erbis)
    - catalysts
    - boilers
- sustainable energy hardware, e.g.:
    - windmills
    - solar panels, passive collectors
    - biomass installations

Knowledge transfer and business relations between the two countries might be fostered by private initiatives and/or institutional support, like organisation of workshops and seminars for managers and tradesmen, presence on fairs, facilitation of internships, study visits, setting up working groups (e.g. technical, energy management, project management, etc.).

2.7 Logical Framework

The Logical Framework Analysis presented in annex 1 addresses many aspects of the present project, but not all of its components. This LFA will be completed during next project steps (possibly during a EIE training module).

Intermediary project evaluations will be made twice a year by SenterNovem together with EIE. During these evaluations all activities planned, the progress realised and the costs incurred so far will be set against the expected results. Also the project assumptions, pre-conditions and risks will be assessed again before planning new activities.

These intermediary evaluations will be planned as a preparation to the periodic reviews by the Project Advisory Committee (PAC). During the meetings of the PAC, the conformity of the execution of the project with its objectives and its action plan will be assessed, as well as strategic issues and its sustainability on the longer run.

3. Project organisation

3.1 Consortium composition and project team

Counterpart and beneficiary

Most activities listed in § 2.5 are in support of activities to be implemented by the respective beneficiaries. The institution building nature of this project requires that the counterpart, in co-operation with the respective beneficiary, assume full responsibility for the implementation of the activities to be supported by the project.

The EIE under the MENR, as counterpart and beneficiary will secure:

- the availability of sufficient manpower and expert inputs at beneficiary level so as to ensure the successful execution of project *implementation activities* as well as the project *monitoring activities*;
- successful execution of project monitoring by attending Project Advisory Committee (PAC) meetings;
- English translation of all relevant acts, regulations and directives (in writing);
- adequate working space for the Dutch experts carrying out the different activities under the project;
- support to the work of project experts otherwise (such as networking, involving beneficiary organisation, organising arrangements);
- the participation of a co-ordinator of this G2G project on behalf of MNER, who will be involved in day-to-day management of the project from the beneficiary's side and in dealing with relevant practical matters;
- transportation costs for Turkish project participants travelling from Turkey to county or districts locations or vice versa for planning and implementation of project activities.

The detailing and fine tuning of the input mentioned above will take place after the start of the project in close consultation between SenterNovem, the EIE and the EVD. The beneficiary/counterpart will appoint a representative who will be the daily contact person for the Dutch implementing organisation.

Dutch partner organisation

SenterNovem, the agency for innovation and sustainable development of the Dutch Ministry of Economic Affairs, will be responsible for the implementation of the project. Due to the combination of technical expertise, broad societal involvement, extensive know-how and experience with process implementation, and involvement in many international projects and networks, SenterNovem is a professional partner for counterpart organisations when designing and executing policy related to energy and sustainable development.

The team of SenterNovem consists of seven short-term experts, co-ordinated by the Overall Project Manager (OPM). Table 5 gives a list of the specialists involved.

Table 5

Overall Project Manager	Sr. expert (LTA)
Specialists	Sr. expert (financial instruments)
	Jr. expert (LTA)
	Sr. expert (Energy policy)
	Sr. expert (LTA / EPS / Monitoring)
PAC member	Team manager European Co-operation on Energy & Climate

Laurent Minère
SenterNovem, Team Network Enterprises & International
Sr. expert LTA
Overall Project Manager, PAC member
(previously co-ordinator of PPA short project PPA06/MC/8/3 'Integrated approach for Knowledge Transfer on LTA in Central and Eastern Europe')

Zsolt Lengyel
SenterNovem, International Sustainable Development
Sr. expert LTA and financial instruments
(previously involved in PPA short project PPA06/MC/8/3 'Integrated approach for Knowledge Transfer on LTA in Central and Eastern Europe')

Philippe van der Beesen
SenterNovem, Team Network Enterprises & International
Jr. expert LTA

Teun Bolder
SenterNovem, International Sustainable Development
Sr. expert energy policy
(previously involved in Phare Twinning project TR 0303.06 'Improvement of Energy Efficiency in Turkey')

Erik ter Avest
SenterNovem, National Climate Policy
Sr. expert LTA, EPS and monitoring
(previously involved in PPA short project PPA06/MC/8/3 'Integrated approach for Knowledge Transfer on LTA in Central and Eastern Europe')

Rob Kool
SenterNovem,
Manager Team European Co-operation on Energy & Climate
PAC member

The curriculum vitae of all experts involved in the project has been previously provided to the EVD. Administrative support to the team of SenterNovem will be provided mostly by Annemieke van Woudenberg (FEM - financial control), Aysel Atci-Kilikaslan (ASM - secretary support) and Monique Stavast (COM - communication).

3.2 Project Management

In order to ensure full co-ordination and integration of all technical operations and realisation of the project results, SenterNovem appointed Laurent Minère as Overall Project Manager. The OPM has the following tasks/responsibilities:

- ensure proper co-ordination between the various project (sub-)components and activities
- ensure proper co-ordination and collaboration with the counterpart and beneficiary

- ensure complementarity and avoid overlap with other assistance planned or under implementation (e.g. Phare, regular G2G programme)
- monitor project progress
- financial implementation of the project
- project reporting.

3.3 Project Advisory Committee

The monitoring of the project is a joint responsibility of the Dutch partner organisation, the project counterpart and beneficiary, the EVD and the Royal Netherlands Embassy. A Project Advisory Committee (PAC) has been established to guide and monitor the project.

The purpose of this steering committee is:
- to review the overall progress of the project
- to discuss the co-operation between all parties within the project
- to discuss and decide on any developments in Turkey and/or the EU that might affect the implementation of the project and therefore the implementation of the relevant EU legislation.

The PAC consists of project partners and officials who have the responsibility or the mandate to present the views of the Turkish and the Dutch authorities and of Turkish industrial stakeholders, and who can decide on issues which might influence the project. There will be a triangular relationship between the EVD, the implementing organisation and the beneficiary/counterpart, in which all parties communicate openly and transparently.

The PAC will meet five times during the project. The EVD will chair the PAC. SenterNovem will act as the PAC secretary and will be responsible for the organisational matters related to PAC-meetings (invitations, translation, minutes, location etc.).

The composition of the Project Advisory Committee should be agreed upon in the inception report. Based on a preliminary institutional analysis (see annex 2), we propose to include following parties directly involved in the project:

- the responsible Project Officer of the EVD (chair):
  - is responsible for monitoring the progress of the project as well as the budget expenditure on the basis of the biannual progress reports submitted by SenterNovem;
  - reports to the Dutch Ministry of Economic Affairs (G2G-projects).

- the Project Manager assigned by SenterNovem (secretary):
  - is responsible for the actual implementation of the project in close collaboration with the beneficiary;
  - submits an inception report to all parties listed here, which must be approved by: the EVD, the beneficiary and the counterpart;
  - submits biannual financial and progress reports to the EVD;
  - after approval from the EVD, sends copies of the progress reports (excluding financial details) to all parties listed below;
  - submits a final report to all parties listed here, which must be approved by: the EVD, the beneficiary and the counterpart.

- two representatives of the project beneficiary/counterpart (MNER/EIE), who will:
  - benefit from the technical assistance provided according to the ToR and the inception report;

- facilitate the implementation of the project in line with the inputs stated in the ToR and in the inception report;
- comment upon the biannual progress reports;
- give their formal approval to the ToR, the inception report and the final report.

- a representative of the Turkish Ministry of Finance, a representative of the Turkish Ministry of Industry, and a representative of TOBB (Union of Chambers of Commerce, Industry, Maritime Commerce and Commodity Exchanges of Turkey), who will:
  - assist MNER/EIE in facilitating the implementation of the project in line with the inputs stated in the ToR and in the inception report;
  - comment upon the biannual progress reports.

- a representative of the Dutch Ministry of Economic Affairs and the Manager of the Team European Co-operation on Energy & Climate (SenterNovem), who will:
  - assist the EVD in monitoring the project;
  - comment upon the biannual progress reports;
  - facilitate communication if any misunderstandings arise.

- a representative of the Royal Netherlands Embassy in Turkey, who will:
  - assist the EVD in monitoring the project amongst others on the basis of biannual reports.

3.3 Global work plan

Project activities started in the second week of January 2008, during the 27th Energy Conservation Week organized by EIE in Ankara (ECW1). Intermediate project results will be presented during the 28th Energy Conservation Week in January 2009 (ECW2), and the final project results during the 29th Energy Conservation Week in January 2010 (ECW3). Because ECW3 will give a very good opportunity to present the results of the project and to further promote Voluntary Agreements in many Turkish industrial sectors, SenterNovem and EIE proposed to extend the initial project duration from 24 months to 26 months, in order to include ECW1, ECW2 and ECW3 within the project. The last month (February 2010) is needed for a thorough completion of the project.

Table 6 below gives an overview of the planning of project activities over the whole project duration. Activities for the Inception Phase (first quarter of 2008), Result 2 (Pilot projects, 2008), Result 3 (Support during roll-out, 2009) and the Completion Phase (end 2009-beginning 2010) are sequential. Activities for Result 1 (Capacity building EIE) are distributed over 2008 and 2009.

The periods proposed for the five meetings of the Project Advisory Committee are given under the planning table. The main topics to be discussed in the different PAC meetings are listed below:

- The first meeting (PAC1) is scheduled in the first week of April 2008 (presentation of the revised project implementation plan).
- The second meeting (PAC2) will take place in September 2008 (mid-term review of the pilot phase).
- The third meeting (PAC3) is scheduled in January 2009 during ECW2 (evaluation of the pilot phase and start of the roll-out of the Turkish VA-EE programme).
- The fourth meeting (PAC4) will take place in June 2009 (mid-term review of the roll-out 2009, preparation of the project evaluation).
- The fifth meeting (PAC5) is scheduled in January 2010 during ECW3 (project evaluation and recommendations for follow-up activities).

Table 7 gives the breakdown of the consulting time of the team of SenterNovem per project result, per consultant, and per country.

Table 6

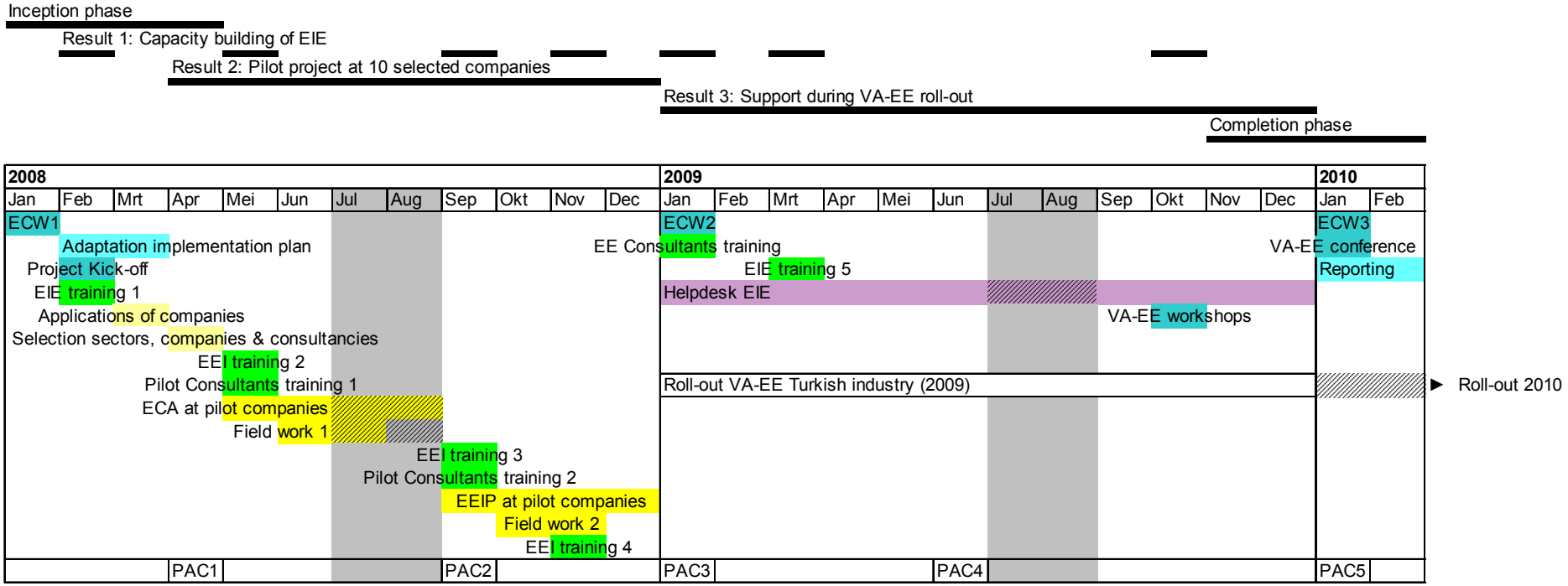


Table 7

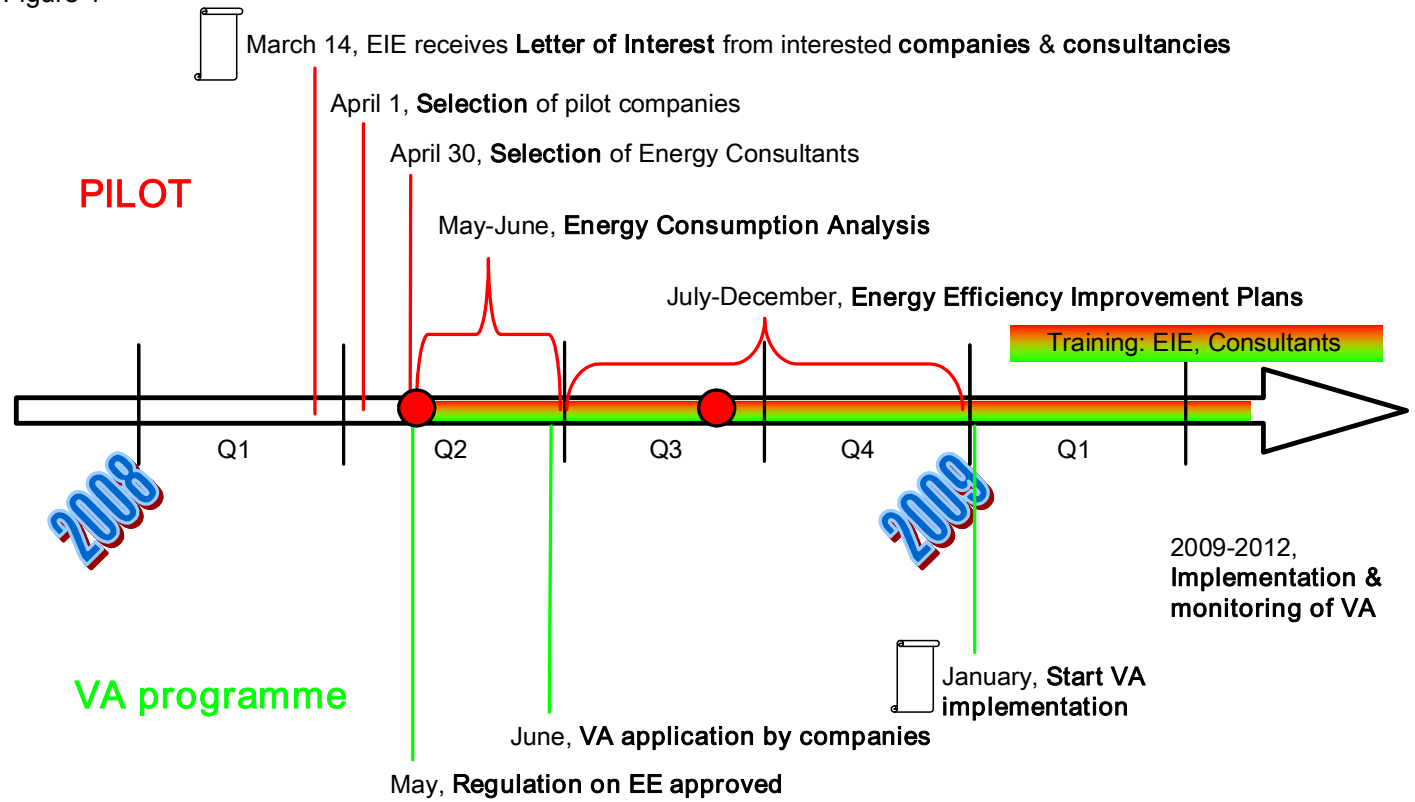
SN experts	Project					Inception		Result 1		Result 2		Result 3		Completion	
	dagen	inzet	# reizen	**NL**	**TUR**	NL	TUR	NL	TUR	NL	TUR	NL	TUR	NL	TUR
Laurent Minère	91,5	30,7%	7	**39,5**	**52**	6	11	8	9	9	22	9	8	7,5	2
Philippe van der Beesen	84	28,1%	7	**39**	**45**	4	4	8	12	12	18	8	10	7	1
Zsolt Lengyel	28	9,4%	3	**6**	**22**	0	4	4	8	1	6	0	3	1	1
Teun Bolder	16	5,4%	3	**2**	**14**	1	8	1	1	0	5	0	0	0	0
Erik ter Avest	52	17,4%	6	**18**	**34**	0	0	5	6	9	21	4	7	0	0
Laurent Minère (PAC)	15	5,0%	5		**15**		3		0		3		6		3
Rob Kool (PAC)	12	4,0%	4		**12**		0		0		3		6		3
Totalen	298,5	100%	35	**104,5**	**194**	11	30	26	36	31	78	21	40	15,5	10

Ratio Netherlands / Turkey	**35,0%**	**65,0%**

Most project activities will take place during the period April – December 2008. During this period, both the pilot phase of the G2G VA-EE project and the preparation of the roll-out of the Turkish VA-EE programme will take place simultaneously.

Project activities during the pilot phase are indicated in red in the following figure (above the time axis). Preparation of the roll-out of the VA-EE programme are indicated in green, under the time axis. The pilot phase will end on January 1st, 2009, when the implementation of the VA-EE programme will start.

Figure 1



Annex 1: Logical Framework Analysis

Annex 1 reports the results of a Logical Framework Analysis for setting up a Voluntary Agreement on Energy Efficiency with the Bricks and Tiles sector in Turkey. This LFA was carried out on April 25, 2007 during the Twinning Project referenced in § 2.2.
The present project is to some extent the follow-up of the Energy Efficiency track of the Twinning project.

Objective of the programme
The programme's objective is: 'The Bricks & Tiles industry together with EIE realise 10% Energy Efficiency improvement via Voluntary Agreements by 2010'.

Overall objectives
Overall objectives are goals on a larger scale than the objective of the programme. The goal of the programme supports reaching these higher level goals. The following overall objectives have been identified:
- Mitigation of climate changes
- Decrease of need for new energy investment
- Keep production and jobs in regions, better than big cement factories
- Improved global competition
- Energy import will decrease
- Cleaner Environment
- Cost efficiency
- Living environment will improve
- Channelling funds to other areas
- Advantage in terms of competitions
- Enhancement of product quality.

There are various parties for whom the overall objectives are of interest. The Ministry of Economy, for example, should be interested in the improved global competition, and the Ministry of Energy and the Ministry of Finance should be interested in decreasing energy import. It is possible to use the overall objectives of the programme to lobby at the parties for whom these objectives are valuable. This may help support for the programme and find funding.

Programme results
The following programme results were identified:
1. Bricks & Tiles industry are enabled to sign Voluntary Agreement
2. Voluntary Agreement Mechanisms for implementation are in place
3. Brick and Tiles industry is capable of Voluntary Agreement Implementation
4. EIE are enabled to manage VA process from start to finish
5. Ministry of Economic Affairs & State Planning Organisation & Ministry of Finance fully support EIE
6. Secondary legislation in place
7. Money became available.

This is a set of results that - once achieved - would mean that the implementation of the programme would have been a success.

Programme activities, priorities, ways and means for implementation
To reach the results, a number of activities has been identified. Table 8 below is derived form the 'Log Frame Matrix' established during the LFA workshop.

1A	**Bricks & Tiles Industry (BTI) are enabled to sign Voluntairy Agreement Willing: Awareness & Promotion**	**Priority Votes**
	Industry has been made aware of saving potential	●●●
	Convincing the "bosses"	●●●
	Turkey's energy intensity to decrease was revealed	●●
	All parties involved have discovered their benefits	
	Energy Efficiency analysis of situation potential in sector has been defined	
	Enegy Efficiency inventory of the sector was formed	
	First ideas have been explored with most important stakeholders	●
	Tiles and Brick industry got knowledged about voluntairy agreements	●
	Tükder organises study visits to factories having the best indication in Turkey (top 10) (a condition to get the YTL 100,000)	
	Able - activities Support - Training	
1B	**Bricks & Tiles Industry (BTI) are enabled to sign Voluntairy Agreement Able: Support & Training**	**Priority Votes**
	Local training sessions for energy saving techniques & tools in BTI	●
	The personnel employees in the sector were trained	●●
	Energy Efficiency capability in consultancy is developped and known	
	"Industry" has made plans	●
	Companies have installed a working Energy Action Team (EAT)	
	Association of Bricks & Tiles Industry has signed Agreement **EXPLORE**	
	Companies like the personal support of EIE	
	Announcing / Informing the other factories of successful results	●
	EIE & Tükder write a Guide Book for energy accounting in BTI and calculation of energy intensity in TOE per tonne product	●
	Tükder & KOSGEB local centers & EIE organise short courses in the main BTI regions about using the guidebook for energy accounting & energy intensity calculations	
	Tük-der collect from members their Energy Intensity Indicators - Tük-der & EIE put them on their website (factory identiefied by code or name)	
2	**Voluntairy Agreemeent Mechanisms for Implementaiton are in place**	**Priority Votes**
	(Technical) working groups have been installed (Monitoring, Management)	
	Simple Indicators defined and published (for Benchmarking) TOE/Tonne	●●
	(High) Subsidy Capacity of public bodies	
	A suitable Audit method has been made available	

3	**Bricks and Tiles Industry is capable of Voluntairy Agreement Implementation**	**Priority Votes**
	Use of efficient equipment, set up efficient industrial facilities	● ●
	New Technologies were implemented in the sector	●
	Create & Install energy efficiency companies throughout the country	
	Use of efficient device prototypes in training	
	BTI have (simple) system for day to day Energy Metering (= Monitoring & Targeting)	
	Factory staff will learn how to implement the action plans	
	Setting up a database for the general structure of the sector	● ●
	Providing technical support to ESCO's	
	Technical and Financial support to Factories	●
	Convincing the topmanagement of the importance of efficiency	●
	Collect, Extract and Translate Technical Documentation from EU, USA, Japan etc. on Energy Efficiency in Bricks and Tiles Industry	
4	**EIE are enabled to manage VA process - from start to finish**	**Priority Votes**
	EIE Staff have acquired specific negotiating skills	● ●
	Yearly monitoring processes & Tools are working	
	Training EIE staff on Voluntairy Agreements	
	EIE has networks (of people) up and running	
	Restructuring the EIE as to energy efficiency and increasing the number of the personnel	● ● ● ● ● ● ●
	Technical and financial support to EIE	
	To make the related unit of EIE autonomous	● ● ● ●
	EIE organises yearly "reporting & evaluation" meetings with each sub-sector	
5	**Ministry of Economic Affairs & State Planning Organisation & Ministry of Finance fully support EIE**	**Priority Votes**
	Involving the Energy Efficiency Coordination board	
	Setting up ann interministerial "steering committee" on Energy & Environment	
	Making a cost effectiveness analysis to the Ministries	●
	Keeping and/or developing contacts with related Ministries	
6	**Secondairy Legislation in place**	**Priority Votes**
	Required legislation was prepared	● ●
	Making secondairy legislation so that reaching objectives is facilitated	
	Setting up Working Groups for secondairy legislation	
	Examinsation of Best / Good practive in other countries	●
	Make a time schedule for the planning!	
7	**Money became available**	**Priority Votes**
	Investigating financial sources (National of International)	● ● ●
	Developing knowledge & Capacity in Financial (EIE Especially) Matters	● ●
	Cooperation activities with Financial Institutions	
	Developing Financial Mechanisms or Instruments	
	Setting up a team in charge of International Projects & Funds	

Table 8

The list of priorities from the LFA workshop is reported below. This list gives valuable information for the set up of the present project.

Priority list LFA workshop Bricks & Tiles sector

- Introduce the programme to the management of Bricks & Tiles companies. Important because the commitment of companies managers is needed to be able to work on energy efficiency. Urgent because without commitment and approval of management, the work cannot begin.
- Increase level of EIE capacity. Important because without proper capacity the EIE is unable to run a programme. Urgent because a programme can only start running properly once capacity is present.
- Selection of pilot area for a VA. Both urgent and important because it is essential to have a target group identified before an actual start can be made.
- Financing and plan towards financing & Investigating financial sources (National or International). Same as for capacity building.
- Identify a person who is responsible for setting up / managing the programme. Important because it should be clear who is responsible for organising the development and implementation of a programme. Urgent because work tends only to be done by people who feel responsible and have a clear target. And the work has to start rapidly.
- First ideas have been explored with most important stakeholders. Urgent because the stakeholders will need time to reflect on the ideas and there will be no actual progress during this time. Important because asking stakeholders about their opinions tends to create a cooperative atmosphere and this may increase the willingness to cooperate.
- Tiles and Bricks industry got knowledge about voluntary agreements. Same as above. Note: *all* companies have to get the knowledge.
- Training of EIE staff on Voluntary Agreements. Same as for capacity building.
- Involving the Energy Efficiency Coordination board. Urgent because getting approval, support, and backup from high level policy will improve the speed with which a programme can be developed and implemented. Important because 'high level' backup increases the authority and trustworthiness with which EIE can operate.

Conclusion: all issues with priority have to do with organisation and communication. None with technical issues.

Annex 2: Institutional and Power Field Analysis

This annex discusses - briefly - the involvement of organisations in the G2G project and their respective positions and anticipated roles in the project.

These roles are described in broad lines below. In a simplified Power Field Analysis Diagram (see table 9), the 'driving powers' and the 'restraining powers' are given for the main stakeholders. Figure 2 reports the results of a Stakeholders analysis for a Voluntary Agreement on Energy Efficiency with the Bricks and Tiles sector, performed on April 25, 2007during the Twinning Project 'Improvement of Energy Efficiency in Turkey' (see project reference in § 2.2).

It is stressed that the project is set up with the necessary flexibility, since setting up voluntary agreements is a dynamic and partly unpredictable process with many influencing actors and many changing circumstances. Therefore the roles of the various participating organisations cannot be fixed to the last detail during the inception phase of the project.

Institutional analysis

EIE (General directorate of electrical power resources survey and development administration, national energy conservation centre)
EIE is the beneficiary party of this G2G project. Within the Ministry of Energy and Natural Resources, 4 divisions of the EIE are mainly responsible for energy efficiency. EIE's main focus is on the industry (audits, and training of energy managers) and the building sector until 2008. EIE personnel consist of engineers, who are predominantly specialists in technical issues.

In the new Energy Efficiency Law numbered 5627, it is foreseen that EIE will get a more organisational and controlling role. The draft regulation on Energy Efficiency defined that it is necessary for EE consultant companies to get the authorisation or capacity to realise audits, to attend a training course and obtain the capacity to run energy efficiency audits. Furthermore, industrial establishments consuming energy of 1000toe and over could sign VA with EİE.

Ministry of Energy & Natural Resources, General Directorate of Energy Affairs, Energy Saving Division
The energy saving division is part of department of energy efficiency, environment and technologies. It is staffed with three people. Their main activity is overall coordination on energy policies including energy efficiency in cooperation with other bodies.

Ministry of Environment
The ministry of Environment is responsible for Air pollution regulation preparation/enforcement), Climate change strategy, CDM projects and Waste management policies presently they are working on large (industrial) combustion plants legislation. MoE is taking into consideration energy saving/efficiency because of climate change issues. A National Communication on climate has been prepared and issued in 2006.

Ministry of Industry and Trade
There are different DG's under the Ministry of Industry and Trade. Most relevant DG's for the G2G project are the DG of industry that they currently work on the following directives that are relevant for industry: pressure equipment, transport equipment, boilers and gas appliances and the DG Industry which is responsible for labelling.

Ministry of Industry and Trade is also responsible to prepare the minimum efficiency standards for boilers, burners, individual heaters, electrical motors, households, air conditioners and lamps in the new EE law numbered 5627.

Ministry of Finance
Because of tax construction on energy sources in Turkey, a certain involvement of the ministry of Finance may be needed. A substantial part of the national tax income comes from tax on energy. It is also under the authorization of this ministry to allocate the financial sources to the budget of EIE for the financial incentives for VA.

Treasury
Treasury is responsible for implementation of general investment encouragement program. In Energy Efficiency Law the Treasury Under-secretariat will support the projects with minimum investment sizes exceeding the amount determined by the Council of Ministers and the high efficient co-generation plants with new implementation involved.

SPO, State Planning Organisation (SPO)
The State Planning Organisation (SPO) under the Prime Minister is responsible for the development of 5 year national development programmes, decisions on public investments, decision on macro level policy and indicators, and the approval of foreign credits. There are various DG's within SPO, e.g.: Social Sectors, Environment and Economy. Energy is a responsibility of the DG Economy. One of its goals is to reduce the rate of increase of energy demand in Turkey (Energy demand predictions are made by the Ministry of Energy). A good coordination between SPO, Ministry of Energy and Natural resources and Ministry of Industry and Trade is needed for improving energy efficiency in the industrial sector.

Energy Efficiency Coordination Board
The EECB which is established under EE Law is a platform for the information exchange and implementation on the various policies on energy efficiency of related ministries and organisations. Within the EECB, information is shared on departmental energy efficiency activities; energy efficiency strategies and policies are developed and integrated; monitoring and evaluation of energy efficiency measures and programmes is evaluated. EİE is conducting secretarial works of this Board which is already held twice in 2007.

Intermediaries
Intermediaries may be necessary to carry out specific activities during the project. Intermediary organisations are: ESCO's, universities, research- and development institutes and consultants. Some, not all, of these activities could be carried out by commercial service. Examples of activities are: auditing, consulting, implementing measures, promotion of energy efficient equipment and energy efficient processes and to carry out the (yearly) progress-monitoring. Tübitak, the national research centre, will be an important intermediary. EE law envisages that RD projects on energy efficiency will be supported by TUBİTAK by giving priority.

KOSGEB
KOSGEB is a governmental organisation with many branches in Turkey. KOSGEB runs R&D studies in close cooperation with universities and have created a Technical Development Centre, together with 18 universities. The Centre can be hired by companies for R&D projects. KOSGEB can provide financing (usually credits) for R&D projects.

KOSGEB has a staff of 700 of whom 400 experts who work in technological development, business development and laboratories testing materials for industry and allowing certificates or testing reports for companies can get labels or others. The areas having

priority are; Biotechnologies, Genetics, Design, Material, Information and communication, Mechatronics, Nano technologies, under new EE Law energy efficiency services such as training, audit and consultancy will be supported financially by KOSGEB.

TOBB (Union of Chambers of Commerce, Industry, Maritime Commerce and Commodity Exchanges of Turkey)
TOBB represents more than 1,200,000 companies in Turkey. Within TOBB there are 364 chambers of commerce and 36 sectoral divisions. The main function of TOBB is lobbying. TOBB and EIE work together on energy efficiency, energy saving weeks, international EE conferences and a portal for EE in industry.

Regional, Provincial and Communal administrations
In the Netherlands, local administrations play an important role in the process of voluntary agreements. During the initial phases of the development of VA's in the Netherlands, this role was not obvious, and the administrations were initially not involved. Involvement of local administrations is one of the aspects of VA's in Turkey that will have to be studied during the G2G project.

Industrial Sectoral Organisations
Industrial Sectoral Organisations are of vital importance for the success of voluntary agreements by encouraging their members to participate in long term agreements. Some tasks can be to inform the members, to draw up a sector plan that contains the consolidation of individual company plans, to assist the promotion of extensive energy studies for the sub-sector and to appoint a representative to the coordination board of the G2G project.

Industrial Enterprises
VA's are designed to be of benefit for companies which are defined in EE Law as the industrial establishments consuming 1000 toe. Essential steps and activities for companies are to draw up an Energy Efficiency Plan, to take measures to realise an increase in energy efficiency and to monitor the progress in a quantitative way. EIE may provide tools for assisting companies to do these tasks in an efficient, effective and coordinated way.

SenterNovem
SenterNovem will act as independent expert. Its primary goal is to assist EIE in achieving capacity to initiate and successfully run voluntary agreements c.q. long term agreements. Special care will be given not to implement Dutch experiences without due consideration of the Turkish needs.

Power Field Analysis Diagram

Table 9

DRIVING POWER	INSTITUTION	RESTRAINING POWER
EIE is strongly motivated to develop VA's in Turkey by enforcement of recent EE Law. Project will build capacity within EIE to run VA's independently. EIE provides Energy Managers trainings.	*EIE (General directorate of electrical power resources survey and development administration)*	Limited number of staff. Limited availability of staff due to other obligations. No prior experiences with setting up and managing VA's.
Turkey has a shortage of electrical power plants and a reduction of energy demand will improve the security of the supply of electricity. Potential for RES is not yet fully used.	*Ministry of Energy & Natural Resources, General Directorate of Energy Affair*	Rapid economic growth and increasing standards of living generate a continuous increase in energy demand.
Improvement of energy efficiency will have positive environmental effects.	*Ministry of Environment and Forest*	Limited involvement of the Ministry of Environment in energy efficiency matters.
Increased energy efficiency improves the competitiveness of Turkish industry. The Ministry of Industry and Trade has a budget for industrial research.	*Ministry of Industry and Trade*	Turkish industry is energy intensive and has high energy costs in total production costs. There is only a very limited demand for energy efficient equipment.
Increased energy efficiency may reduce the need for investments in new power plants. Budget has been allocated for subsidy purposes.	*Treasury (Ministry of Finance)*	Reduced tax income. No (sufficient) economic drive for improving energy efficiency.
Turkey wants to comply with EU regulations.	*SPO, State Planning Organisation*	No (sufficient) economic drive for improving energy efficiency.
In the energy efficiency law, incentives for R&D, VA's and investments and Energy services for SME's on energy efficiency are foreseen.	*Energy Efficiency Coordination Board*	It is not yet clear what the motivations of the EECB will be and how it will operate. Budget allocation is not well defined in the Law to implement the EE programs.
Drive for the improvement of energy efficiency creates commercial opportunities for intermediaries. The national R&D organisation TÜBİTAK provides recourses for research on a project basis. Trainings will be available for the consultancy companies.	*Intermediaries*	Intermediaries are relatively inexperienced in the field of energy efficiency.

Subsidies for projects. Trainings, audits and consultancy services for SME's are subsidized by government. KOSGEB is a strong field partner for EIE. KOSGEB has a large network.	*KOSGEB*	
Increased energy efficiency improves the competitiveness of Turkish industry. Influential power is positive.	*TOBB (Union of Chambers and Commodity Exchanges of Turkey)*	
	Regional, Provincial and Communal administrations	50% of the consumption tax on electricity used within a city goes to the budget of the metropolitan municipalities.
Opportunity to extend and strengthen relationships with industrial enterprises. Opportunity to extend and strengthen relationships with local and national governmental bodies.	*Industrial Sectoral Organisations*	Influential power is limited.
Increased energy efficiency will reduce energy costs. There is 20% potential. Energy managers network is available. Design/redesign of energy efficient products will improve attractiveness of Turkish products. Government incentives for target setting. Government incentives for project implementation.	*Industrial Enterprises*	Relatively formal relationship between enterprises and government and administrations. Lack of top management commitment. Most companies have limited competence, infrastructure and time for energy efficiency and energy management. Wait-and-see attitude by companies may delay investments.
Promotion of the sector of energy efficient equipment and services.	*Providers of EE and RES equipment and services*	There is only a very limited demand for energy efficient equipment, lack of awareness.
Experience in facilitating VA's. Availability of EE knowledge (tools, sectors, etc). Neutral position.	*SenterNovem*	Limited insights about Turkish contextual factors, formal and informal relationships.

Stakeholders Analysis Diagram

Figure 2: Stakeholders analysis for Voluntary Agreement on Energy Efficiency with the Bricks and Tiles sector (Source: Twinning Project « Improvement of Energy Efficiency in Turkey»)