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Summary:

The present deliverable serves the aim of creating a network of stakeholders which are interested, or may be interested, in Solid Waste Management (SWM) for the production and utilization of Refuse Derived Fuel (RDF) / Solid Recovered Fuel (SRF). In particular, the scope of the deliverable is to describe the networking activities performed by CERTH/CPERI, the RCM and WATT SA in order to create a network of stakeholders involved in every step of the RDF/SRF utilization chain. After an introduction, the deliverable deals with the producers and end users of RDF/SRF and with the possible sources of funding for future projects relating to the utilization of RDF/SRF. Later, a specific reference to networking activities is made before the disclosure of the emerging conclusions and suggestions of the deliverable.

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LIST OF ABBREVIATIONS

CERTH/CPERI: Centre for Research and Technology Hellas / Chemical Process and Energy Resources Institute

EU: European Union

MBT: Mechanical Biological Treatment

MEECC: Ministry of Environment Energy and Climate Change

MSW: Municipal Solid Waste

OPESD: Operational Program Environment & Sustainable Development

PPP: Public Private Partnership

RCM: Region of Central Macedonia

RDF: Refuse Derived Fuel

RMBSW: Regional Management Body for Solid Waste

RMPSW: Regional Management Plan for Solid Waste

SRF: Solid Recovered Fuel

SWM: Solid Waste Management

SWOT: Strengths Weaknesses Opportunities Threats

WATT SA: Waste Applied Technologies and Transport SA

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1. Introduction

The purpose of the second workpackage of ENERGY WASTE project is to create a network of stakeholders which are interested, or may be interested, in SWM for the production and utilization of RDF/SRF. The scope of the Deliverable is to describe the networking activities performed by CERTH/CPERI, the RCM and WATT SA in order to create a network of stakeholders involved in every step of the RDF/SRF utilization chain. It is a more focused set of activities than the ones presented in Set of Actions 7, since it is focused on players that have a more direct involvement in the organization of a RDF/SRF network in Athens, Thessaloniki or others where there is potential for the production of RDF/SRF. The results of the project that were expected to draw the most attention are: a) the characterization and classification of the produced RDF from WATTs' Materials Recovery Facility (MRF) for possible future utilization in energy consuming industries, b) design and erection of a fluidized bed pilot plant with the capacity of inert material recirculation, c) gasification trials and gasification study of Refuse Derived Fuel produced in WATTs MRF.

Based on the SWOT analysis presented in Deliverable 1.3., different approaches for the creation of the networking plan were made. At first a series of assumptions regarding stakeholder and market behaviour were made according to the Strengths, Weaknesses, Opportunities and Threats. The SWOT analysis was based on both the RDF/SRF market and the forthcoming gasifier operational performance and evaluation. The issues examined were from the stakeholders' perspective, trying to exploit all the strengths of each output indicator and eliminating the weaknesses created. Secondly, a set of methods for approaching the target players was created, including meetings.

As is dictated from the SWOT analysis, the following points were taken into account for creating a plan: The gathered information was used to uncover the competitive advantages that guided the strategic focus selection; Collaboration with other areas by sharing information was pursued (other academia or organizations); The analyzed strengths were tried to be leveraged into capabilities, while the weaknesses were sought to be overcome. Opportunities and threats are not potential marketing actions. Rather, they involve issues and/or situations that occur outside the projects' environment and should not be ignored since they actively influence the markets behavior.

Among the expected results of the formulation of such a network are: The delivery of waste stream quantities from locations throughout Greece to the WATT SA factory for the production

of RDF/SRF and for testing in the pilot gasifier; The replication of similar initiatives in Thessaloniki or other areas of Greece; The identification of other end users for the RDF/SRF produced at WATT SA, towards the adoption of a integrated solution for the non-recyclable stream; To provide a starting point for further business ventures or research Projects that deal with RDF/SRF utilization.

2. Networking Plan

Based on the SWOT analysis presented in Deliverable 1.3 "Report on potential waste streams for RDF/SRF production and related business opportunities" [1], different approaches for the creation of the networking plan were made. At first a series of assumptions regarding stakeholder and market behavior were made according to the Strengths, Weaknesses, Opportunities and Threats. The SWOT analysis was based on both the RDF/SRF market and the forthcoming gasifier operational performance and evaluation. The issues examined were from the stakeholders' perspective, trying to exploit all the strengths of each output indicator and eliminating the weaknesses created. Secondly, a set of methods for approaching the target players was created, including meetings.

As is dictated from the SWOT analysis, the following points were taken into account for creating a plan [2]:

- The gathered information were used to uncover the competitive advantages that guided the strategic focus selection
- Collaboration with other areas by sharing information was pursued (other academia or organizations)
- The analyzed strengths were tried to be leveraged into capabilities, while the weaknesses were sought to be overcome
- Opportunities and threats are not potential marketing actions. Rather, they involve issues and/or situations that occur outside the projects' environment and should not be ignored since they actively influence the markets behavior.

2.1. Target players/Stakeholders

The choice of target players varied based on the different projects' outputs, as well as the maturity of each possible stakeholder for further development and future collaboration. Generally the six axes around which the market approach was made are the following:

A) Waste management companies and organizations (for introduction of alternative RDF utilization)

B) Industries utilizing RDF as an input fuel (for determination of RDF quality and gasification technology)

   a. Cement industries

b. Public Power Company (PPC)
c. Lime Industries
d. Brick production industries

C) RDF producers (mainly package waste streams)
D) Regional stakeholders for the implementation of the technology and waste management (traders)
E) Other research oriented partners for future collaborations for technology advances (Academia, RTDs, Institutes)
F) Associations

As presented in a projects' previous Deliverable "D.1.2 Report on RDF/SRF utilization applications and technical specifications" [3] the industries utilizing RDF as an input fuel would have an increased interest in the characterization and classification of the RDF produced in W.A.T.T. S.A. according to European Norms. Respectively other RDF producers would be interested in the current European Standards of CEN/TC 343 for the RDF classification and harmonization.

Another major output of the project is a novel technology and more specifically the gasification of RDF using a circulating fluidized bed gasifier. Two groups are targeted for the exploitation of this strength, each one for a different cause. The first group is composed of Regional stakeholders that will be interested to support the implementation and advance of the gasification technology for waste management purposes. The second group is composed of other research oriented partners. Though future collaborations, technology advances will take place therefore improving the technology.

2.1.1. End-Users Analysis in Greece and RCM

As mentioned in Deliverable 1.2 of the project, MBT plants produce RDF as a by-product of the process. According to the European Investment Bank [4] there are five existing MBT facilities in Greece. The first one started its operation in Kalamata in 1997 and the last two in Herakleion and Kefalonia in 2010. The total capacity reaches 632,000 tons of MSW annually.

However, according to the Managing Authority of Attica Region [5] the Ano Liosia MBT fails to process the quantities designed for, and has not overcome in full operating conditions a quantity of 280,000 tons per year. The plant in Kalamata is temporarily non-operational due to a legal battle between its constructors and operators.

Six more MBT plants are supposed to start their operation during 2014-2015 (ETC/SCP, 2013). According to the Managing Authority of Attica Region [5] new integrated waste management systems are planned to be constructed under PPPs and operated from the private sector at: The Regional Unit of Aitoloakarnania – Municipality of Agrinio; The Regional Unit of Ilia – Municipality of Ilida; The Region of Peloponnese; The Region of West Macedonia; The Regional Unit of Serres.

Currently there are 31 MRFs in Greece as reported from the Hellenic Recovery Recycling Corporation (HERRCO). Those include the following:

MRF of Alexandroupoli	MRF of Marousi	MRF of Aspropyrgos
MRF of Aspropyrgos (2)	MRF of Koropi	MRF of Elefsina
MRF of Thermi	MRF of Kallithea	MRF of Sindos
MRF of Tagarades	MRF of Herakleion	MRF of Chania
MRF of Kalamata	MRF of Korinthos	MRF of Patra
MRF of Lamia	MRF of Karditsa	MRF of Katerini
MRF of Kerkyra	MRF of Schimatari	MRF of Volos
MRF of Drama	MRF of Ioannina	MRF of Larisa
MRF of Ionia	MRF of Tripoli	MRF of Serres
MRF of Lesvos	MRF of Zakynthos	MRF of West Macedonia
	MRF of the Aegean islands	

Moreover, according to the European Investment Bank [4] the following are the existing and planned waste treatment facilities of Greece (Table 1), a fact which means that the potential for RDF production will increase and therefore an increased market for RFD utilization will gradually be formed.

Table 1: Waste treatment facilities under planning in Greece with the capacity of RDF production or consumption

Location	**Capacity tn MSW per yr**	**Capacity tn BMW per yr**	**Technology**
Hmathia	70,000	50,000	MBT
Serres	N/D	N/D	MBT
Zante Island	N/D	N/D	MBT
Aitoloakarnania	N/D	N/D	MBT
Fokida	N/D	N/D	MBT

Corfu Island	N/D	N/D	MBT
Rhodes Island	N/D	N/D	WtE
ILIA	N/D	N/D	MBT
Thiva	350,000	N/D	WtE
Ahaia (patra	120,000	80,400	MBT
Thesalloniki 1	400,000	301,000	Mixed Waste
Thesalloniki 2	350,000	N/D	Mixed Waste - MBT Biological Drying
Attiki Fyli 1	700,000	402,000	Mixed Waste – Mechanical Treatment
Attiki Fyli 2	400,000	280,000	Mixed Waste - MBT Anaerobic Digestion
Attiki Keratea 1	127,500	90,000	Mixed Waste - MBT Anaerobic Digestion
Attiki Grammatiko 1	127,500	90,000	Mixed Waste - MBT Anaerobic Digestion

2.1.2. MBTs and MRFs in the RCM

Currently there are no existing MBT facilities in the region of Central Macedonia. However, according to the approved RMPSW of Central Macedonia seven MBT facilities will be created in the near future in various Municipal Units (MUs) but also nine MRFs (Table 2). The construction of the planned MBT plants might contribute to an increase in recycling but that depends on their ability to generate recyclable waste (ETC/SCP, 2013). The MBT of Serres will be the end result of a Public Private Partnership (PPP).

Table 2: Planned MBT and MRF facilities as provided in the approved RMPSW of Central Macedonia

Regional Unit /Management Unit (MU)	**MRFs**	**MBTs**
Imathia (1 MU)		
Single MU	**1**	**1**
Thessaloniki (2 MUs)		
1st MU – NW Urban Complex & Province of Lagadas & West Province of Thessaloniki	**1** *(Efkarpia)*	**1**
2nd MU – NA Urban Complex & rest of the Organizations of Local Self government of the Prefecture of Thessaloniki	**2** *(Tagarades, Thermi)*	**1**
Kilkis (2 MUs)		
1st MU – Province of Paeonia & West Aksioupoli, Goumenissa, Evropos, Polycastro and Community of Livadia	**1**	**1**
2nd MU – Central Province and the rest of the Municipalities		
Pella (3 MUs)		
1st MU – Area of Almopia	**1**	**1**
2nd MU – Mountain area		
3rd MU – Lowland area		

Pieria (3 MUs)		
1st MU – North and Central part of the PU	**1** (pre-existing of the RMPSW)	**1**
2nd MU – South part of the MU (Municipalities of Litochoro, Dion, Petra, East Olympos)		
Serres (1 MU)		
Single MU	**1**	**1**
Chalkidiki		
1st MU – Kassandra	**1** **One** in tourism areas or service by the SCRM of Thermi. The Municipality of Kallikrateia is serviced by a unit in NE Thessaloniki	**-**
2nd MU – Anthemounta		
3rd MU – Polygyros		
4th MU – East Chalkidiki		
5th MU – Sithonia		
SUM	**9**	**7**

Source: Region of Central Macedonia

2.1.3. Other End – Users

Three major categories of other RDF end users are:

- The cement and lime industry,
- The existing power plants using fossil fuels and
- The waste (household and industrial) incineration plants.

However, it is the RDF's characteristics which determine its end users and additional fuel specifications (chemical and physical parameters) are usually laid down in the contract between the RDF supplier and user [6].

In Greece bureaucracy is also a problem that needs to be overcome. The municipal waste sector falls under different aligned Ministries (Ministry of Environment Energy and Climate Change, Ministry of Interior, Ministry of Development), causing difficulties to central administration in coordinating and providing leadership for the sector [7]. It must be noted that in the past large quantities of produced RDF were not utilized by the cement industries because these were not given the proper license for such a utilization. As a result the produced RDF ended up in sanitary landfills. Today that the proper licenses exist, RDF still ends up to the sanitary landfills because it contains high concentrations of chloride – for the needs of the cement industry - and moisture. Also, the Net Calorific Value is expected to be slightly higher [8].

The cement industries require the following characteristics of the RDF in order to accept it as fuel:

- Moisture content: 3-10%;

- Chloride content: 15%;
- Low bulk density;
- A comparative high calorific value (15-18 MJ/kg) [4].

Even if all the differences between the characteristics of the produced RDF and the desirable RDF by the cement industries ceased to exist, it is quite possible that the future MBT units will produce a surplus of RDF with no end users. Incineration or gasification facilities might be necessary. However, the planning of these facilities must be done after a thorough investigation of the existing, or possible future, framework. According to Psomopoulos et al. [9] a possible production of SRF can be utilized by the Kardia Power Plants by substituting 2-3% of lignite in one of the 3*300 MW units. The same scenario can also happen in the Peloponnese by using the Megalopolis III Thermal Power Station. If economic instruments, such as fees directly based on the amount of waste generated, will be applied, then the amount but also the composition of MSW might change. Incentive systems to favor prevention and participation to separate collection (PAYT schemes) might be used in the near future [10] and should also be evaluated before decision making [11].

2.4. Possible sources of funding

The Ministry of Finance is involved in the funding of waste management infrastructure Projects through: National funds; National and EU structural funds (National Strategic Reference Framework); National funds complementary to private funds via the Public Private Partnerships (PPPs) [4].

2.4.1. The National Strategic Reference Framework 2007-2013 and the Regional Operational Programmes

The Ministry of Environment Energy and Climate Change (MEECC) is managing the implementation of the National Operational Programme "Environment and Sustainable Development" (OPESD), with a total public budget of 2.25 billion € (of which 80% comes from the EU Structural and Cohesion Funds) for the period 2007-13. The programme focuses on: integrated solid waste management (Axis 4), rational use of water resources, modern wastewater facilities, protection of natural resources and the efficient tackling of environmental risks. OPESD will contribute to economic growth through a more efficient use of resources, such as re-use, recycling and recovery of waste.

The overall planned budget for environment-related investments in Greece for the same period, including funds earmarked from all related sectoral Operational Programmes, apart from OPESD

(e.g. those for agriculture, energy and transport) will exceed 6 billion €, representing 26% of the total available EU funding to Greece for the implementation of the county's overall National Strategic Reference Framework (NSRF) 2007-13.

For the Programming Period 2007-2013 Greece was divided in five Regions which correspond to five Regional Operational Programmes: Regional Operational Programme of Macedonia Thrace; Regional Operational Programme of Western Greece, the Peloponnese and the Ionian islands; Regional Operational Programme of the Aegean and Crete; Regional Operational Programme of Thessaly, Central Greece and Epirus; Regional Operational Programme of Attica.

Table 3: Funding from the structural funds for waste management facilities in the Regions of Attica and Central Macedonia

MSW and Industrial Solid Waste Management and Treatment						
Region	S.O.P. «Environment & Sustainable Development»			Regional Operational Programme		
	Cohesion Fund	National and/or Private matching funds	**SUM**	ERDF	National and/or Private matching funds	**SUM**
Region of Attiki	€ 72 M	€ 11 M	€ 83 M	€ 41 M	€ 9 M	€ 50 M
Region of Central Macedonia	€ 0 M	€ 0 M	€ 0 M	€ 65 M	€ 15 M	€ 80 M

Source: European Investment Bank (2010, p. 57)

The OPESD through the Cohesion Fund and the Regional Operational Programmes through the ERDF will cover the costs for the construction of transfer stations, treatment units and landfills including the costs for rehabilitation of all uncontrolled dumpsites throughout the country [4]. Table 3 presents the funding from the structural funds for waste management facilities in the Regions of Attica and Central Macedonia.

2.4.2. The National Strategic Reference Framework 2014-2020

The new Greek NSRF for the programming period 2014 – 2020 will have a budget of around 26 billion € with the EU contributing around 20.8 billion €. It will include four national OPs. The 2nd national OP is titled "Transportation infrastructure, environment and sustainable development" and has a budget of around 3.5 billion €. It has five Axes:

- Completion of the Trans-European road and rail network;
- Athens and Thessaloniki metro;
- Airport and port projects;
- Waste management;

- New infrastructures but also completion of previous NSRF projects.

Besides the national OPs there are 13 regional OPs, including the regional OP of Central Macedonia. The targets for the new programming period regarding waste management are a 68% of recovery and 32% of landfilling as compared to the 18% and 82% figures existing today. The key priorities include:

- Integrated management with the aim of promoting the waste hierarchy with resource recovery close to waste generation;
- Creation of infrastructure for preparation for reuse;
- Increase of high quality recycling of municipal waste;
- Reduction of landfill-based management;
- Adequate infrastructure for recovery and disposal of residual waste [12].

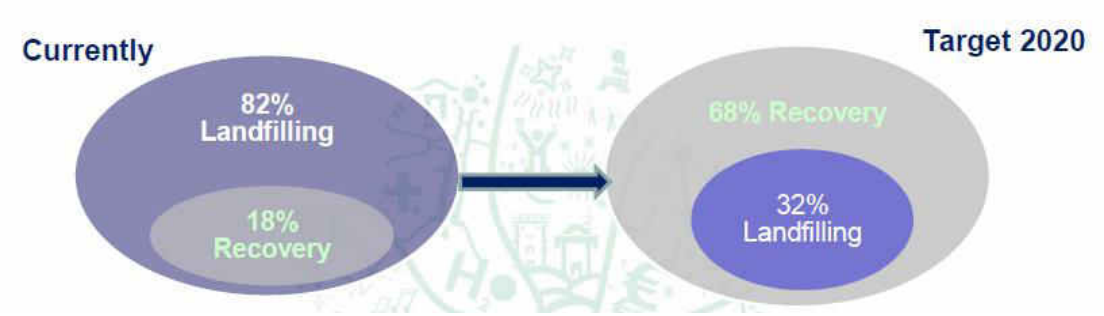

Figure 1: Waste management targets for the programming period 2014-2020 [12]

2.4.3. Funding opportunities in the Energy and natural resources field of the EU

The funding opportunities in the Energy and natural resources field may refer to three specific programs:

- Climate action;
- Energy;
- Intelligent Energy Europe (http://ec.europa.eu/contracts_grants/grants_en.htm).

Climate action: Grants are direct financial contributions to finance either an action intended to help achieve an objective forming part of a European Union policy or the functioning of a body which pursues an aim of general European interest or has an objective forming part of a European Union policy.

Energy: The EU provides funding programmes to help finance European energy projects. Ensuring competitive, sustainable, and secure energy in the years to come requires significant investment. The EU provides a number of funding programmes and lending schemes to help

companies, regions, and countries successfully implement energy projects (http://ec.europa.eu/energy/en/funding-and-contracts).

Intelligent Energy Europe: The Intelligent Energy – Europe programme (IEE) funds three different types of activities: projects pioneering sustainable energy ideas in practice; products and services procured to meet the needs of the European Commission and/or the EACI; and the project development assistance facilities to mobilise funds for investments in sustainable energy at local level.

2.4.4. Public Private Partnerships (PPPs)

As mentioned above EU legislation urges for environmental protection giving the stimulus through financial penalties for the proper separation, re-use, recycle and treatment of waste. However, the financial crisis has caused a deterioration of funding terms and spreads for waste management projects. Under such context the current trend for the procurement of waste management projects is through the competitive dialogue procedure Public Private Partnerships (PPPs). PPP schemes for waste management projects combine private resources and EU funds. The legal framework for PPPs is established by Law 3389/2005 [13] and modified by Law 3483/2006 [14]. The main advantage of PPPs is that they allocate risks. The Public Sector deals with the regulatory and legal framework and the Private Sector deals with the design, construction, financing, operation, maintenance and management risks.

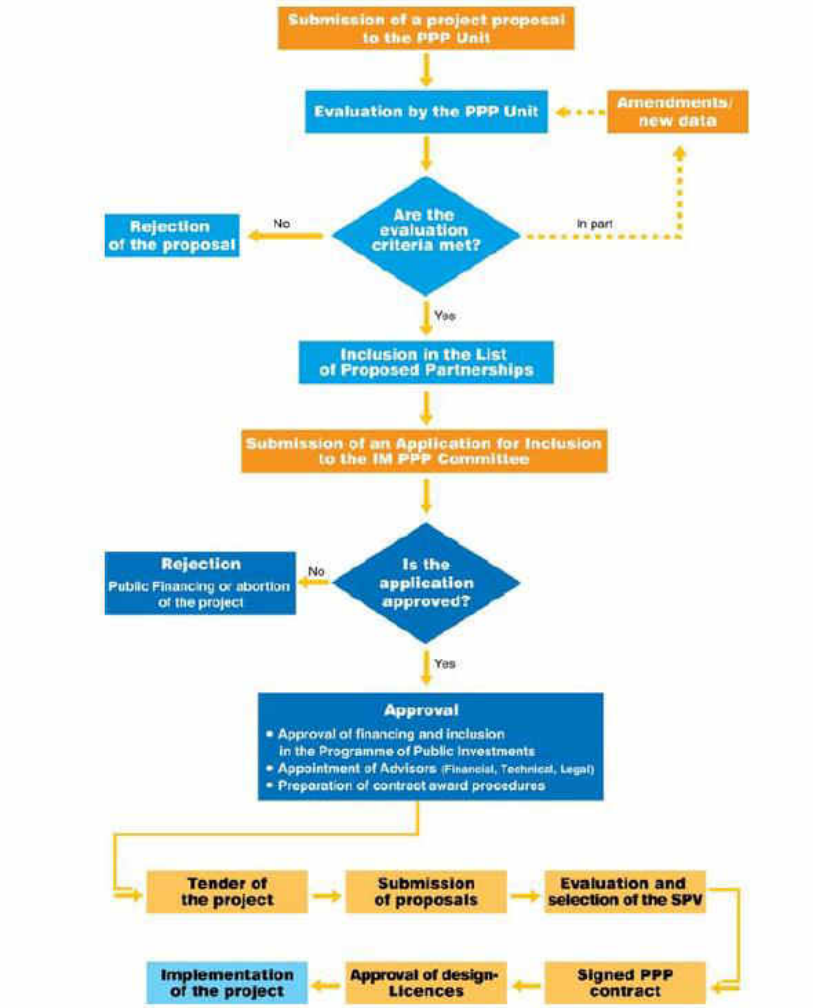

Figure 2: Flow chart for the implementation of a PPP Project regarding MSW [4]

The implementation of PPPs in the Hellenic municipal Solid Waste Management (MSW) follows a European pattern of planning and procurement of projects that secures and promotes competition, legitimacy of procedures and the implementation of operationally sound schemes (Figure 2). Consequently, priority was given to the proposed waste management projects from local authorities that showed a strong willingness to solve their waste management problem. A key factor to the continued effort to procure the waste management projects was the commitment of the central government and the local authorities to the PPP method. Local authorities have certainly been encouraged to follow the standards given by the Secretariat regarding PPPs.

With PPPs, the role of the market regulator is upon the state officials. The local authorities and central government are planning and implementing waste PPP projects in complete coordination with each other. For decades the choice of technology to manage waste was the apple of discord, delaying any advancement in municipal solid waste management.

In PPP waste management tender procedures in Greece, all available technologies are allowed, as long as they cover all goals set by EU directives, national and local policy, and they have a proven track record. Waste PPP projects, under the PPP law, involve the design, finance, build, maintenance, technical management and operation of integrated waste management plants for 25 years.

So far five projects have successfully completed the tender process and contractual agreements have been or will be signed until June 2015. These are: Waste management in West Macedonia; Waste management in the Peloponnese; Waste management in Ilia; Waste management in Serres; Waste management in Epirus. There are also eight projects which are under tender and planning processes. Therefore, PPPs seem to be an attractive instrument for the implementation of waste management Projects. It is noted [4] that the JESSICA initiative (Joint European Support for Sustainable Investment in City Areas) can help to utilize EU funds for PPP Projects. Within JESSICA target loans will complement public resources (EU and National) for actions within the Operational Programmes supported by the Structural Funds.

2.5. Methods Employed

For making contact with the possible stakeholders three methods have been employed. These methods among others were chosen due to their proximity to possible future stakeholders and partners:

i. ***Participation in conference stands:*** For the creation of stakeholders first contact an intention list was created. The stakeholders and other parties would leave their contact information in the list for future communication

ii. ***Participation in workshops:*** Participation in workshops of conferences and other projects, and especially in round table discussions is a means of attracting possible future stakeholders and other interested parties

iii. ***Meetings with possible stakeholders:*** The final and more direct method for approaching stakeholders is appointing meetings with them in which presentations regarding the projects' targets and progress were made.

iv. ***Participation in platforms:*** CERTH specifically participates in Renewable Heating and Cooling platform, where the promotion of the idea and targets of the project LIFE09/ENV/GR000307 – ENERGY WASTE was spread as a means for generation of heat and cooling in a future scenario.

3. Networking Results

3.1. Stakeholders intention list

During the participation of C.E.R.T.H./C.P.E.R.I., Region of Central Macedonia and W.A.T.T. S.A. in the conferences:

- *Corporate Waste and Recycling Conference* (June 26th 2012), OTE Academy Amphitheatre, Athens, Greece
- *ATHENS Conference 2012* (June 28-29 2012), City Hall of Papagos-Cholargos Municipality, Athens, Greece

and the workshops organized:

- 1st LIFE ENERGY WASTE workshop with the title "Refuse Derived Fuels production, characterization and utilization – Results of the ENERGY WASTE Project", (April 25th 2013), Ceremonies Hall of National Technical University of Athens Deanery, Athens, Greece
- 2nd LIFE ENERGY WASTE workshop with the title "Energy exploitation of non recyclable urban waste in a sustainable waste-to-energy market", (November 21st 2014), M.E.C. Expo Center, Attica, Paiania, Greece
- 3rd LIFE ENERGY WASTE workshop with the title "Alternative Management Methods and Energy Exploitation of Waste. Results of the ENERGY WASTE Project", (December 17th 2014), Aristotle University Research Dissemination Center (A.U.R.D.C.), AMPHITHEATRE II, Thessaloniki, Greece

an intention list was available in stands booked for the promotion of the projects' results. The list included contact information for future communication. In the following table (Table 4) the list of stakeholders is presented. Moreover, in the framework of the dissemination of the implementation of the plan, the RCM and CERTH/CPERI have developed a list of contacts (provided in Annex I) from Greece which are relevant to the concept of the Energy Waste Project for the dissemination of the Project results (through sending newsletters, invitations to the Project Conferences and exhibitions and for general Project dissemination purposes).

Table 4: Stakeholders from intention list

Type of stakeholder	Stakeholder	Interest in
Ministries and supervized Bodies	Ministry of Environment Energy and Climate change	Waste management
	RAE (Regulatory Authority for Energy)	RDF utilization schemes

	EOAN (Hellenic Organization for Recycling)	Waste management
	General Secretariat of the Decentralized Administration of Macedonia - Thrace	Waste management
	Intermediary Managing Authority (IMA) of the Region of Central Macedonia	Funding of waste management Projects
	Special Secretariat for PPPs	Funding of waste management Projects
Regional Authorities	Region of Central Macedonia	Waste management
	Region of Attica	Waste management
Regional Management Bodies for Solid Waste	Regional Management Body of Central Macedonia	Waste management
	Regional Management Body of East Macedonia & Thrace	Waste management
	Regional Management Body of West Macedonia (Diadyma SA)	Waste management
Municipalities	Association of Municipal Solid Waste Management of East Macedonia and Thrace	Waste management
	ACMAR (Association of Communities and Municipalities in the Attica Region)	Waste management
	Municipality of Marousi	Waste management
	Municipality of Volos	Waste management
	Municipality of Ilion	Waste management
	38 Municipalities of the Region of Central Macedonia	Waste management
	Central Union of Greek Municipalities	Waste management
MRFs	MRF of Tagarades (Thessaloniki)	Waste management – Recycling
	MRF of Thermi (Thessaloniki)	Waste management – Recycling
	MRF - Hellenic Waste Management SA (ELDIA SA) (Thessaloniki)	Waste management-Recycling
	MRF - Eco Trans Ltd. (Thessaloniki)	Waste management-Recycling
	MRF - ANAEMPO SA (Thessaloniki)	Waste management-Recycling
	MRF ECOSIP-Osipidis Recycling (Pieria)	Waste management-Recycling
	MRF of Georgios Nizamis (Serres)	Waste management-Recycling
Universities and R&D Bodies	Harokopio University	Collaboration in waste management schemes
	Aristotle University of Thessaloniki	Collaboration in waste management schemes
	NTUA – Unit of Environmental Science and Technology (UEST)	Collaboration in waste management schemes
	International Hellenic University (IHU)	Collaboration in waste management schemes
	National Center for Scientific Research "Demokritos"	Collaboration in waste management schemes

	NTUA – Unit of Environmental Science and Technology (UEST)	Collaboration in waste management schemes
	Agricultural University of Athens (AUA)	Collaboration in waste management schemes
	Technical Educational Institute of Kavala	Collaboration in waste management schemes
Companies	BSH (Bosch und Siemens Hausgeräte GmbH)	Energy saving
	Terra Nova Ltd	Environmental performance, planning and management
	Unilever Hellas SA	Waste disposal for energy production
	Agrocapital	Waste management
	Redeplan SA Consultants	Interest for a gasifier erection
	Lafarge – AGET Heracles	RDF utilization
	Eureka Hellas SA	Waste disposal for energy production
	Scin AB ScandInvestor	Waste to energy schemes
	Eco Magnetizer SA	Waste management
	Mesogeos Group	Waste management and RDF utilization schemes
	Terna Energy SA	Waste management and energy utilization
	Polyeco SA	Waste management
	Mechanologiki Hellas SA	Waste management
	Enviroplan SA Consultants and Engineers	Environmental performance and waste management
	Antipollution SA	Waste management
	Helector SA	Waste management and the gasification process
	Titan SA	RDF utilization
	Hellenic Recovery Recycling Corporation (HERRCo)	Waste management
	Aeiforos SA	Waste management - Recycling
	Re-battery SA	Waste management
	Anamet SA	Waste management
	GreenSteel	Waste management
	AKARPORT SA	Waste management
	ECOTERRA	Waste management and RDF utilization schemes
	Geoplan O.E.	Waste management
	MICHOS S.A.	Waste management
	Sigma Catalysts	Waste management
	Alter-Ego Facilities Management	Waste management
	Podimatas S.A.	Waste management
	Edil Hellas Group	Waste management

	Easy Energy	Waste management and RDF utilization schemes
	ECOROOTS SA	Waste management and RDF utilization schemes
	INTERGEO SA	Waste management schemes
	KISSOS S.A.	Waste management
	Fil-ECO Ltd.	Waste management equipment
	Vasalino Energy	Waste management schemes
	Gicon Advanced Environmental Technologies	Waste management
	Win consulting	Waste management
Organizations / Associations	HELLABIOM	Waste management
	IPTO ADMIE SA	Waste management and waste to energy schemes
	Hellenic Solid Waste Management Association (HSWMA)	Waste management
	The Waste to Energy Research and Technology Council (Synergia)	Waste management
	BGS (GütegemeinschaftSekundärbrennstoffe und Recycling E.V.)	Waste management
	Association of metal waste Recyclers	Waste management
	Association for Solid Waste Management of Central Macedonia	Waste management
Federations	SEPAN	Waste management and waste to energy schemes
Public companies	Public Power Company (PPC)	Waste to energy schemes
Websites	Energia.gr	Waste management and waste to energy schemes

As seen from the aforementioned stakeholders, the majority is located in Greece and specifically in the Regions of Attica and Central Macedonia. Following is a description of some of the target player companies and bodies that act in Greece and showed interest in the projects results.

BSH Hausgeräte GmbH is the largest manufacturer of home appliances in Europe and one of the leading companies in the sector worldwide. The Group's product portfolio spans the entire spectrum of modern household appliances. It extends from stoves, ovens and extractor hoods to dishwashers, washers and dryers, from refrigerators and freezers to small appliances (Consumer Products) such as vacuum cleaners, coffee machines, electric kettles, irons and hairdryers. Protecting the environment and the climate has been an integral part of the Group's corporate strategy for decades. BSH's energy- and water-saving household appliances make a significant

contribution toward conserving resources. The transfer of know-how within the BSH Group serves to set global standards on the environmental protection front too. BSH is committed to the Guidelines on Environmental Protection the principle of sustainability, and thus to the responsible handling of resources. The company is interested in energy saving.

Terra Nova Ltd. provides integrated services covering the whole range of environmental needs and concerns of the contemporary enterprises (environmental licensing; design and development of environmental management systems; environmental planning; consulting services regarding environmental issues; etc.). The company has participated in a number of National and European research and development Programs which dealt, among others, with the integrated waste management.

Unilever Hellas SA operates in the sectors of food, home care and personal hygiene. It is one of the largest companies dealing with non-durable consumer goods. The company tries to employ more environmentally sound practices (Unilever Sustainable Living Plan) and minimize the ecological footprint of its products by 50%. The company is interested in waste disposal for energy production.

Agrocapital is interested in waste management.

Redeplan SA Consultants provides holistic services dealing with the planning, decision making and the typical life cycle of Projects. Ideas and plans that respect the environment are being suggested. The company has shown an interest for a gasifier erection.

Lafarge – AGET Heracles is a world leader in building materials. It produces cement, concrete and aggregates. The company is committed to working in a sustainable manner (economic growth, social progress, environmental protection). According to its latest 6 month economic report (AGET Heracles, 2014) the company's factory in Milaki uses RDF fuel, while the company has renewed the environmental license of the company's factory in Volos, which includes the use of RDF or other alternative fuel. The company has been awarded the Gold Award of the 2015 Environmental Awards regarding its reduction of the GHG emissions.

Eureka Hellas SA is a part of Eureka Group of Companies which deals with consumer product manufacturing (home care, personal care and food). The company aims at the least possible environmental aggravation (energy and waste management, solid and liquid waste management, management of dust emissions from the products' processing, recycling of materials, disposal of materials). The company is a member of the Hellenic Recovery Recycling Corporation. The company is interested in waste disposal for the production of energy.

Scin AB ScandInvestor is an international investment company aiming to invest in various programs whose humanitarian and environmental benefits remain as a main and unrevoked purpose. The areas of investment include, among others, 'green' electricity production, waste processing, production of biogas and biodiesel. The company is interested in energy to waste schemes.

Eco Magnetizer SA is a company that is interested in waste management.

Mesogeos Group is one of the largest groups in the field of environmental protection in Greece. It is highly-positioned in the market of water and solid waste treatment as well as the sector of energy generation from renewable sources of energy. The company is ready to participate in thermal treatment projects in Greece. It is interested in RDF utilization schemes.

Diadyma SA is a company whose shareholders are the Municipalities of Grevena, Kastoria, Florina, Kozani and Ptolemaida and the local unions of the Municipalities of the four Prefectures of the West Macedonia Region. It aims at serving the needs for waste management in the Region of West Macedonia. Diadyma SA has been a partner in a research Program that dealt with waste management (EPEM SA, 2014). The company is interested in waste management.

Terna Energy SA is a vertically organized renewable energy sources company undertaking the development, construction, financing, and operation of renewable energy projects (wind, hydro, solar, biomass, waste management). The company is a member of EREF. The company is interested in waste management and energy utilization.

Polyeco SA provides integrated waste management services (cleaner and more economical waste management solutions for more environmentally friendly businesses). The company is interested in waste management.

Mechanologiki Hellas SA offers services to the whole frame of technical works, construction and erection from special industrial works to luxury constructions of commercial and residential buildings. The company is interested in energy saving projects and waste management.

EnviroPlan SA Consultants and Engineers is an independent private consulting firm which provides technical consulting, engineering and project management Services and is specialized in environmental management and engineering projects, emphasizing in waste management, where is considered as one of the leading companies in this sector in Greece, Cyprus, and Balkan Countries. The company is interested in environmental performance and waste management.

Antipollution SA is a part of the Vassiliades group of companies which invests in young scientists and new jobs in Greece. It provides sea and on-land services that deal with

environmental protection. The company is interested in waste management and alternative fuel production (RDF).

Helector SA is a company which deals with integrated waste management, energy and environmental protection. It is active in the fields of MBT, waste to energy projects and various research Projects. The company is interested in waste management and the gasification process.

Titan SA is a producer of cement and construction material. The company's cement plant in Thessaloniki has a rotary kiln designed to use alternative fuels at a high substitution rate. In 2011 the installation of a unit that can receive, store and feed alternative fuels was completed. By 2012 testing for the use of RDF/SRF was initiated (Ministry of Environment Energy and Climate Change, 2012), and the company aims at utilizing 300,000 tons of RDF/SRF per year. The company is interested in RDF utilization.

Re-battery SA is a company that operates in the fields of recycling and environmental management (alternative management system for used lead – acid batteries). Re-battery SA is a non-profit organization. It records the transport/recyscle of used lead – acid batteries, it cooperates with other alternative management organizations and is very interested in networking for environmental awareness. The company is interested in waste management.

Anamet SA is the leading metal recycling company in Greece, processing and trading ferrous and non ferrous scrap metals, since 1966. It also offers a wide range of integrated waste management services.

GreenSteel was founded in 2007 by Hellenic Halyvourgia with the aim of treatment, full recovery and marketing of all byproducts resulting from the production process of a steel production company. GreenSteel has two factories, in Aspropyrgos and Volos. The treatment procedures applied, lead to full utilization of byproducts and use Best Available Techniques, so as to minimize the environmental burden.

The Regulatory Authority for Energy (RAE) is an independent administrative authority, which enjoys financial and administrative independence. RAE was established on the basis of the provisions of Law 2773/1999 which was issued within the framework of the harmonization of the Hellenic Law to the provisions of EU Directive 96/92 for the liberalization of the electricity market. The main duties and responsibilities assigned to RAE include among others: The monitoring the operation of all sectors of the energy market (electricity, natural gas, oil products, renewable energy sources, etc.); The collection and processing of information from companies in the energy sector while respecting the principles of confidentiality; The participation under the form of a single opinion in the process for the granting and revocation of licenses for the

discharge of electricity activities; The imposition of financial sanctions, particularly fines to the violators of the primary and secondary energy legislation. RAE is interested in RDF utilization schemes.

The Hellenic Organization for Recycling (EOAN) is a Legal Entity governed by Private Law whose main purpose is the planning and implementation of policies for the alternative management of home appliances and other products.

SEPAN is the federation of recycling and energy recovery industries and enterprises. It was established by companies operating in Greece and engage in industrial activity in the area of waste recycling and recovery of by-products and secondary raw materials in accordance with the rules of the private sector, provided that they maintain industrial facilities either a) recycling-waste recovery, by-products and secondary raw materials waste treatment, or b) waste treatment to the production of recoverable materials or c) energy recovery.

IPTO or AMDIE SA is the Independent Power Transmission Operator which was established in compliance with Law 4001/2011 and EU Directive 2009/72 regarding the adoption of common rules in the organization of EU electricity markets. According to Law 4001/2011 ADMIE undertakes the role of Transmission System Operator for the Hellenic Electricity Transmission System and as such performs the duties of System operation maintenance and development so as to ensure Greece's electricity supply in a safe, efficient and reliable manner. Although a wholly owned subsidiary of the Public Power Company SA, ADMIE is entirely independent from its parent company in terms of its management and operation, retaining effective decision-making rights, in compliance with all relevant independence requirements of Law 4001/2011 and EU Directive 2009/72.

HELLABIOM is the Greek Biomass Association and its aims include the promotion, the research, the production, the technology and applications of biomass for the production of energy or other products.

The **Hellenic Solid Waste Management Association** is the National member of the International Solid Waste Association for Greece. It was founded in 2001 and is comprised by all the stakeholders of solid waste management (consulting firms, Universities, management authorities, etc.).

The **Waste to Energy Research and Technology Council** ('Synergia') was founded in 2008 by the Earth Engineering Center of Columbia University, U.S.A., members of the Thermodynamics and Transport Phenomena Laboratory, School of Chemical Engineering, the National Technical University of Athens, Greece, members of the Laboratory of Heat Transfer and Environmental

Engineering, Department of Mechanical Engineering, Aristotle University of Thessaloniki, Greece, and the Greek company INTRAKAT SA. The major objective of the Council is to bring together professionals from Universities, the Government and the industry who are interested in helping Greece to implement technologies for the recovery of energy from solid wastes and preserve valuable Greek land for the future generations.

HERRCo was founded in 2001 by industrial and commercial enterprises which either supply packaged products to the Greek market or manufacture different packaging items. HERRCo has developed and implemented the Collective Alternative Management System – RECYCLING (CAMS – RECYCLING) which has to do with the alternative management of the packaging waste.

Aeiforos SA was established in 2001 by SIDENOR SA initially for the recycling of steel manufacturing by-products, and expanded since then in the processing of other types of industrial by-products and wastes. Aeiforos SA processes a large range of steel manufacturing and metal processing by-products, recycling over 450,000 tons annually. The company operates two production plants in Greece, one located in Almyros with privately-owned port facilities, and one in Thessaloniki.

ELDIA SA has been actively involved in the field of waste management since 1997. Its activities cover the entire range of solid waste management of the municipal, industrial and commercial sectors (collection, transportation, sorting and processing of waste, recovery of recyclable materials). The company operates one MRF at Thessaloniki.

Eco Trans Ltd is a company dealing with the collection and management of waste and with the recycling of vehicles. The company operates one MRF at Thessaloniki.

ANAEMPO SA is a company dealing, among others, with the recovery of waste (plastics and metal). The company operates one MRF at Thessaloniki.

Georgios Nizamis is a company dealing with the retraction and recycling of vehicles. The company operates the MRF at Serres.

ECOSIP recycling SA is a company dealing with waste management. The company operates the MRF at Pieria.

Other stakeholders that have expressed an interest include local authorities (the Municipalities of Volos and Marousi, the ACMAR, the Association of Municipal Solid Waste Management of East Macedonia and Thrace), Universities (Harokopio, the NTUA, the Aristotle University of Thessaloniki), the Public Power Company SA and an informative website on energy matters (www.energia.gr). Other stakeholders include: the Ministry of Environment Energy and Climate Change, the General Secretariat of the

Decentralized Administration of Macedonia – Thrace, the Intermediary Managing Authority (IMA) of the Region of Central Macedonia, and the Special Secretariat for PPPs.

As foreseen, the projects results attracted various types of stakeholders, including amongst them companies, local authorities, research oriented organizations and other. The majority of the contacts were made from different types of companies declaring their interest in ENERGY WASTE project for various reasons, the most common the following:

- Consulting companies. The consulting companies were more interested in the application of the gasification process for power production and waste management. Their intention for approaching the projects' representatives during the workshops, was to discuss the possibility for expanding the capacity of the pilot plant for commercial use.
- Waste management / waste production companies: Waste management companies and companies with significant quantities of waste production showed an interest in both of the major parts of ENERGY WASTE as it was expected. Firstly, the interest was focused in their unutilized remains as a refuse derived fuel and its possible characterization/ standardization. Secondly their interest in gasification process as a future power production and waste managing scheme.

Local authorities, organizations and associations were mainly interested in the future extent of the project outcomes. The main subjects of the discussion were the about:

- The project implementation feasibility as an upscale for the proper implementation from waste management bodies
- Environmental viability of the gasification technology regarding the liquid effluents, solid remains and gas pollutants that derived from the implementation of such a technology. Indicatively, some waste streams that derive from the process are inert material and ash.
- The application of RDF standardization in plants located in the respective municipalities.

Regarding the universities and R&D bodies, their interest was mainly revolved around the results from the gasification process and the RDF analyses and its behavior as fuel.

2.3.2. Participation in workshops

CERTH/CPERI participated in two workshops (other than the ones that were organized during ENERGY WASTE), in the framework of networking activities:

- **21/05/12 – Athens, Greece: workshop on India**. The Hellenic Federation of Enterprises organized in the framework of the programme co-funded by European Union “European Business and Technology Centre”; a workshop to highlight the potential of large and dynamically growing Indian market.

- **15/11/2012 – Muenster, Germany: BGS workshop**. Implementation of Incineration Emissions Directive in thermal power plants. Presentation of the novel CFB RDF gasification technology with the production of easy cleaned syngas, a fuel with potential.

2.3.3. Meetings with possible stakeholders

Regarding networking activities, W.A.T.T. S.A., CERTH/CPERI and RCM participated in a series of meetings with potential stakeholders in both national and international level. In the following table (Table 5), a list of the meeting held is given:

Table 5: List of meetings for networking activities

Date	Place	Name of stakeholder or B2B meeting	
28-29/02/2012	Wels, Austria	Work Sustainable Energy Days	CPERI
31/05/2012	Athens, Greece	SEVIAN	WATT
11-12/06/2012	Bucharest, Romania	"GO International"	CPERI
13/07/2012	Athens/Kamari, Greece	TITAN S.A.	WATT
16/07/2012	Aspropyrgos, Greece	ANAMET S.A.	WATT
23/07/2012	Athens, Greece	AGET S.A.	WATT
31/08/2012	Aspropyrgos, Greece	CHALIPS CEMENT S.A.	WATT
19/10/2012	Athens, Greece	Greek Regulatory Authority for Energy	CPERI
22/10/2012	Volos, Greece	Green Steel S.A.	WATT
15/11/2012	Muenster, Germany	BGS Workshop	CPERI
25/05/2013	Athens, Greece	1st Energy Waste Workshop	CPERI / WATT
24/3/2014	Neuemunster, Germany	WTT Gmbh, Bilfinger	WATT
31/03/2014	Thessaloniki, Greece	Region of Central Macedonia	CPERI, RCM
3/7/2014	Syros, Greece	Organizations for Solid Waste Management	WATT
21/11/2014	Athens, Greece	2nd Workshop ENERGY WASTE	CPERI, WATT, RCM
17/122014	Thessaloniki, Greece	3rd workshop ENERGY WASTE	RCM, CPERI, WATT

The outcome of these meetings cannot be instantly quantified, since any intention for implementing results from the project will be scheduled as a long-term action.

2.3.4 Participation in platforms

During the second half of the project duration, CERTH/CPERI has been participating more actively in networking technology platforms. More specifically in the Renewable Heating & Cooling European Technology Platform / Biomass Technology Panel. The target was threefold a) promote the general idea of waste with high biogenic content (over 50%) as a fuel, b) promote the novel technology of circulating fluidized bed RDF gasification and finally c) discuss possible utilization of such a technology for heat production in localized industries or for District Heating. In the following table (Table 6)

Table 6: List of platform meetings for networking activities

Date	Place	Name of the platform meeting
21-23/04/2013	Dublin, Ireland	Participation in RHC platform
11-13/06/2013	Brussels, Belgium	Biomass Panel Steering Committee
28-30/10/2013	Brussels, Belgium	Biomass Tech Panel
20-21/01/2014	Torino, Italy	Participation in DHC Conference
02-03/04/2014	Brussels, Belgium	Participation in joint working group between EBTP & RHC
20-23/05/2014	Brussels, Belgium	5th Annual Event of the RHC platform
30-31/10/2014	Dusseldorf, Germany	6th European Networking Event

4. Conclusions

The correspondence received from future possible stakeholders and partners, showed that there is a clear trend for cleaner and greener technologies.

More specifically, regarding the utilization of the RDF an interest was expressed regarding its biogenic content and calorific value. However in every meeting, quantity and quality warranties was a subject of conversation, a thing that led to conclude the importance of implementing standardization practices to the produced RDF and harmonize its' characteristics according to European or other Norms.

As far as the implementation of the gasification process is concerned, two were the major questions that were posed even up to the last workshop:

- The capacity for scale up along with its environmental efficiency. These two questions are the base for an environmentally feasible investment

- The legislative framework for power production from waste in Greece. The present situation for pricing the electricity produced from Refuse Derived Fuel is not clarified, and this acts as a drawback in the decision making procedure of possible investments.

Some conclusions that derived from the communication with the possible stakeholders and the design of the networking activities, are given bellow.

Concerning the MBT facilities:

- Their number in Greece keeps increasing. This may mean a higher production of RDF in the future;
- This possible increase in the production of RDF requires a fine-tuning between supply and possible demand;

Concerning the possible end users:

- In Greece nowadays the best demand option for the near future is the cement industries. However, the cement industries have specific requirements concerning the produced RDF and therefore more work needs to be done to make ends meet. Otherwise the produced RDF will end up in landfills as is the situation nowadays;
- The use of RDF by incineration plants and power plants must not be ruled out. However, the creation of incineration plants or the modification of the power plants in order to be able to use the RDF is beyond the scope of this report;
- The list of private companies, local authorities, Universities, etc. which have expressed an interest in the Waste Energy Project shows that there is great potential for future Projects dealing with RDF/SRF, especially through PPPs. This list is rather indicative rather than exclusive, therefore more stakeholders may also express an interest. The full list is found on Annex I.

Concerning the public:

- The citizens should be better informed in order to improve the recycling rates. The RCM may play an important role informing the public and disseminating the results of the Energy Waste Project to the citizens of Central Macedonia.

Concerning the sources of funding:

- The collaboration between the Public and the Private Sectors through PPPs seems to be very promising. As it has already been written, there are 13 Projects in the making that deal with waste management through PPPs.

Concerning the spatial planning:

- The revision of the NMPSW and the RMPSWs must be concluded so that the necessary provisions for the various projects (MRFs, MBTs, etc.) must be made. This is also expected to increase the quantity of the produced RDF;

- The revision of the NMPSW and the RMPSW of the RCM is expected to be concluded within 2015-2016 when the new framework regarding the management of MSW, at the country level but also at the regional level, will be defined.

4. Literature

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Annex I: The complete list of potential stakeholders

Type of stakeholder	Stakeholder	Web address
Ministries and supervized Bodies	Ministry of Environment Energy and Climate change	www.ypeka.gr
	Ministry of Public Order and Citizen Protection	www.mopocp.gov.gr
	RAE (Regulatory Authority for Energy)	www.rae.gr
	EOAN (Hellenic Organization for Recycling)	www.eoan.gr
	General Secretariat of the Decentralized Administration of Macedonia - Thrace	www.damt.gov.gr
	General Secretariat of the Decentralized Administration of Attica	www.apdattikis.gov.gr
	Intermediary Managing Authority (IMA) of the Region of Central Macedonia	www.pepkm.gr/web/guest/contact
	Special Secretariat for PPPs	www.sdit.mnec.gr
Regional Authorities	Region of Central Macedonia	www.pkm.gov.gr
	Region of Attica	www.patt.gov.gr
Regional Management Bodies for Solid Waste	Regional Management Body of Central Macedonia	www.anakyklosi.gr
	Regional Management Body of East Macedonia & Thrace	www.diaamath.gr
	Regional Management Body of West Macedonia (Diadyma SA)	www.diadyma.gr
Municipalities	Association of Municipal Solid Waste Management of East Macedonia and Thrace	
	ACMAR (Association of Communities and Municipalities in the Attica Region)	www.pedattikis.gr
	Municipality of Marousi	www.maroussi.gr
	Municipality of Volos	www.dimosvolos.gr
	Municipality of Kifissia	www.kifissia.gr/
	Municipality of Agia Paraskevi	www.agiaparaskevi.gr/portal/
	Municipality of Orestiada	www.orestiada.gr
	Municipality of Kavala	www.kavala.gov.gr
	Municipality of Didymoteicho	www.didymoteicho.gr

	Municipality of Thassos	www.thassos.gr
	Municipality of Komotini	www.komotini.gr
	Municipality of Xanthi	www.cityofxanthi.gr
	Municipality of Alexandroupoli	www.alexpolis.gr
	Municipality of Topeiros	www.topeiros.gr
	Municipality of Drama	www.dimos-dramas.gr
	Municipality of Veria	www.veria.gr
	Municipality of Naoussa	www.naoussa.gr
	Municipality of Alexandria	www.alexandria.gr
	Municipality of Ampelokipi-Menemeni	www.ampelokipi-menemeni.gr
	Municipality of Volvi	www.dimosvolvis.gr
	Municipality of Delta	www.dimosdelta.g
	Municipality of Thermaikos	www.thermaikos.gr
	Municipality of Thermi	www.dimosthermis.gr
	Municipality of Thessaloniki	www.thessaloniki.gr
	Municipality of Kalamaria	www.kalamaria.gr
	Municipality of Kordelio-Evosmos	www.kordelio-evosmos.gr
	Municipality of Lagadas	www.lagadas.gr
	Municipality of Neapoli-Sykees	www.dimosneapolis-sykeon.gr
	Municipality of Pavlos Melas	www.pavlosmelas.gr
	Municipality of Pilea-Hortiatis	www.pilea-hortiatis.gr
	Municipality of Chalkidona	www.dimos-chalkidonos.gr
	Municipality of Oraiokastro	www.oraiokastro.gr
	Municipality of Kilkis	www.e-kilkis.gr
	Municipality of Paionia	www.municipalityofpaionia.gr
	Municipality of Almopia	www.dimosalmopias.gov.gr
	Municipality of Edessa	www.dimosedessas.gov.gr
	Municipality of Pella	www.giannitsa.gr
	Municipality of Skydra	www.skydra.gr

	Municipality of Dion-Olympos	www.dion-olympos.gr
	Municipality of Katerini	www.katerini.gr
	Municipality of Pydna-Kolindros	www.pydnaskolindrou.gr
	Municipality of Amfipoli	www.dimos-amfipolis.gr
	Municipality of Visaltia	www.dimosvisaltias.gr
	Municipality of Emmanouil Pappa	www.empapas.gr
	Municipality of Iraklia	www.dimosiraklias.gr
	Municipality of Nea Zixni	www.dimos-neaszixnis.gr
	Municipality of Serres	www.serres.gr
	Municipality of Sidiki	www.sidiki.gr
	Municipality of Aristoteli	www.dimosaristoteli.gr
	Municipality of Kassandra	www.kassandra.gr
	Municipality of Nea Propontida	www.nea-propontida.gr
	Municipality of Polygyros	www.polygyros.gr
	Municipality of Sithonia	www.dimossithonias.gr
MRFs	MRF of Tagarades (Thessaloniki)	
	MRF of Thermi (Thessaloniki)	
	MRF - Hellenic Waste Management SA (ELDIA SA) (Thessaloniki)	www.eldia.gr
	MRF - Eco Trans Ltd. (Thessaloniki)	www.eco-trans.gr
	MRF - ANAEMPO SA (Thessaloniki)	www.echamber.pcci.gr/eChamber/login.php?action=sMember&registerID=39484&back=kad&kad=37&page=0
	MRF ECOSIP-Osipidis Recycling (Pieria)	www.osipidisrecycling.gr
	MRF of Georgios Nizamis (Serres)	www.odan.businessclub.gr
Universities	Harokopio University	www.hua.gr
	Aristotle University of Thessaloniki	http://www.auth.gr/agrofor
	NTUA – Unit of Environmental Science	www.ntua.gr/

	and Technology (UEST)	
	University of West Macedonia	www.uowm.gr/
	Dimokritio University of Thrace	www.duth.gr
Companies	BSH (Bosch und Siemens Hausgeräte GmbH)	www.bsh-group.com/laender/gr
	Terra Nova Ltd	www.terranova.gr
	Unilever Hellas SA	www.unilever.gr
	Agrocapital	www.agrocapital.gr
	Redeplan SA Consultants	www.redeplan.gr
	Lafarge – AGET Heracles	www.lafarge.gr
	Eureka Hellas SA	www.eureka.com.cy
	Scin AB ScandInvestor	www.issuu.com/scin_ab
	Eco Magnetizer SA	www.ecomagnetizer.gr
	Mesogeos Group	www.mesogeos.gr
	Terna Energy SA	www.terna.gr
	Polyeco SA	www.polyeco.gr
	Mechanologiki Hellas SA	www.apexengineering.gr
	Enviroplan SA Consultants and Engineers	www.enviroplan.gr/
	Antipollution SA	www.antipollution.gr
	Helector SA	www.helector.gr
	Titan SA	www.titan.gr
	Hellenic Recovery Recycling Corporation (HERRCo)	www.herrco.gr
	Aeiforos SA	www.aeiforos.gr
	Re-battery SA	www.re-battery.gr
	Anamet SA	www.anamet.gr
	GreenSteel	http://www.sepan.gr/index.php/el/green-steel
	Climax plus	www.koispe.org/index.php/el
	Pan-Metal recycling company	www.pan-metal.gr
	Karatsialis Bros and Co	www.karatsialis.gr
	Draxis Environmental Technologies	www.draxis.gr

	Geodynamiki Ltd	www.geodynamiki.eu
	Redplan Konstantinidis I. and Co	www.replan.gr
	Gaia SA	www.gaiasa.gr
	KartECO	www.karteco.gr
	Triaseco	www.triaseco.gr
	Kamparis Bros	www.kamparis.com
	Michos I. SA	www.anakiklosi-thessalonikis.gr
	Ecoterra	www.eco-terra.gr
	Geoplan GP	www.geoplan.gr
	Alter Ego SA	www.alter-ego.gr
	Intergeo Ltd	www.intergeo.gr
	Fil-Eco Ltd	www.fil-eco.gr
	Sigmacatalyst Partners	www.sigmacatalyst.gr
	Edil Hellas SA	www.edil.gr
	Wien Energie	www.wienenergie.at
	Vasalino Energy	www.vasalino-energy.gr
	Easy Energy	www.easyenergy.gr
	Gicon Advanced Environmental Technologies	www.gicon.de
	Omikron Ltd	www.omikron-ltd.gr
Organizations	HELLABIOM	www.hellabiom.gr
	IPTO ADMIE SA	www.admie.gr/
	Hellenic Solid Waste Management Association (HSWMA)	www.eedsa.gr
	The Waste to Energy Research and Technology Council (Synergia)	www.wtert.gr
Federations	SEPAN	www.sepan.gr
Public companies	Public Power Company (PPC)	www.dei.gr
Websites	Energia SA	www.energy.gr
	Ecotourism Greece	www.ecotourism-greece.com
Others	The Goulandris Natural History Museum	www.ekby.gr/
	Society for the protection of Prespa	www.spp.gr