



Biomass energy register
for sustainable site development for
European regions

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BEn

**BEN – Biomass energy register for sustainable site
development for European region (BEn)
Intelligent Energy – Europe (IEE)**

Horizontal action: Bio Business Initiative

**Deliverable D5.2:
Status reports of selected actions**

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1. Introduction

The deliverable describes first activities regarding the bioenergy actions selected in the model Regions and approved by the Regional bioenergy Networks during the local meetings, in agreement with decision makers and stakeholders.

The first part is a status report of the actions since the selection stage has been completed (November 2010), that describes progresses and goals reached.

The second part is a description of some action performance indicators selected from BEn team:

- progress of the actions: the indicator describes what level of progress the action reached (feasibility study, designing, approved by public bodies, action completed), the starting point of the action and future improvement after the end of BEn project.
- importance for the Region: the indicator describes if the project helps the weaknesses identified, if the project could be repeated, and everything connected with the bioenergy sector development in the Region.
- stakeholders and decision makers involvement and interest: the indicator describes the level of actions approval from the Network member; the percentage of satisfied members has been evaluated by a questionnaire during Regional network meeting, by phone interview or by e-mail.

2. Reports of selected actions in the model Regions

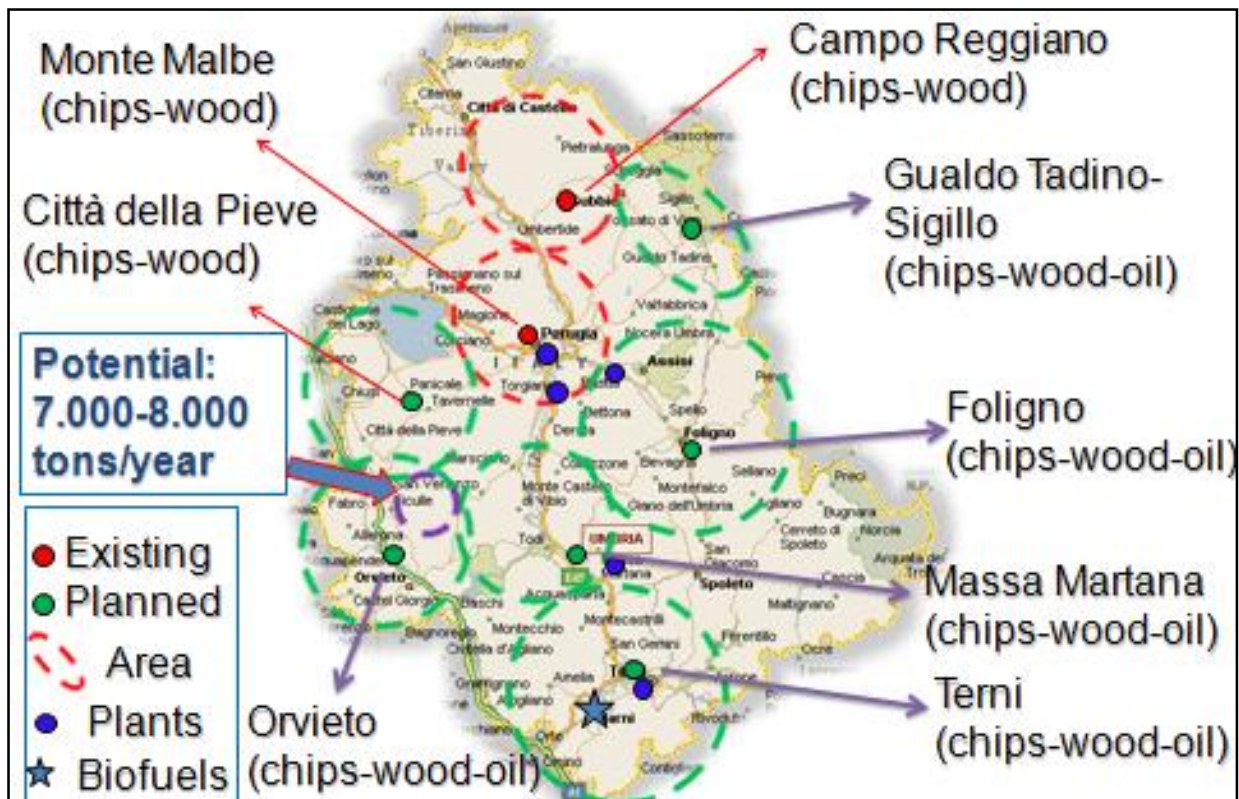
2.1. Umbria Region

Action 1: Project BiPlaN – Bioenergy Platform Network

The activities of action “BiPlan” in the period November 2010 – October 2011 have been:

- bioenergy Platform Network Updating;
- focus on an area (south-west of the Region);
- evaluation of the local biomass availability in the area;
- selection the area of the local platform;
- platform designing;
- preparation of a relation regarding the project for the Regional authority.

The bioenergy platform Network has been updated, in particular a new platform (Città della Pieve) has been added to the map and a potential biomass producer in that area added to the regional Network.



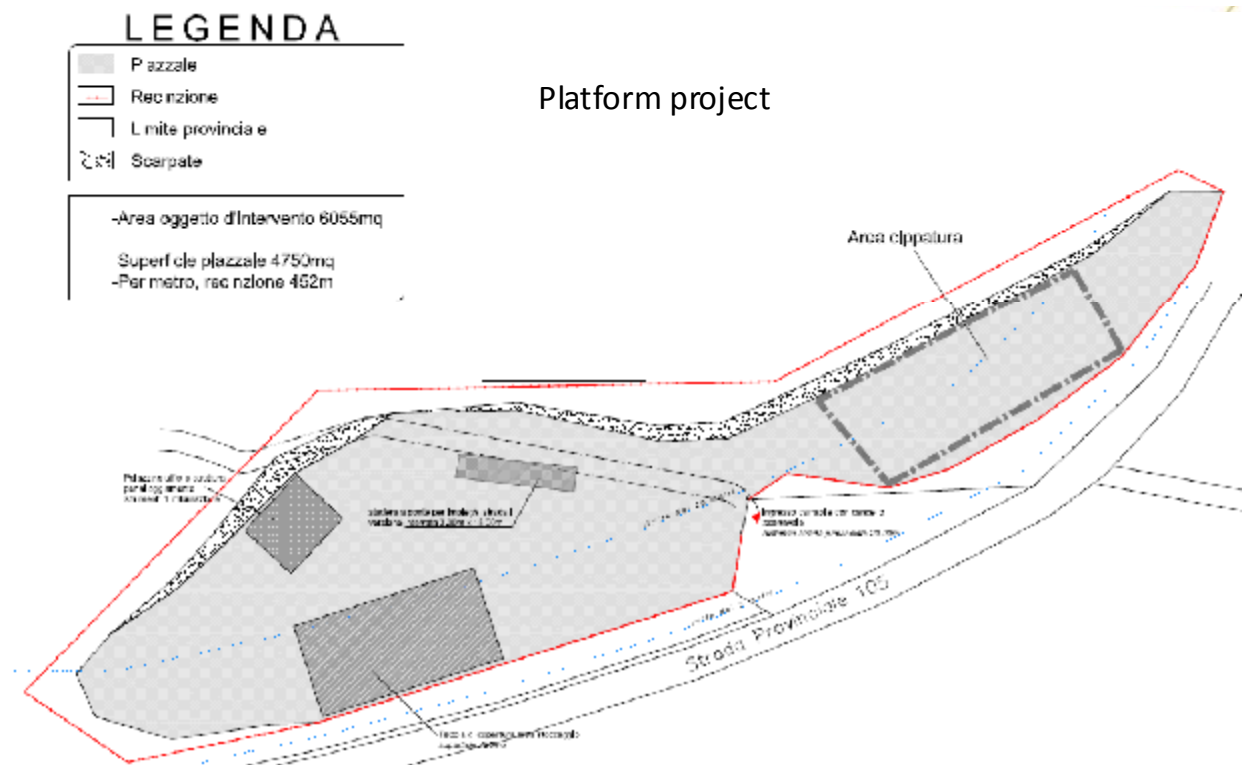
Bioenergy platform map.

Regarding the other platforms, one of these (Orvieto in the south-west of the region) has been studied on detail, evaluating the local biomass availability (approximately 7.000-8.000 tons/year), selecting a potential area for the platform building and starting with the platform designing.

The platform, shown in the following picture, and fitted to the territory conformation, is approximately 6.000 m² and consists of some areas:

- area for trucks weighing and unloading;
- biomass storage and chipping area;
- shelter for chips storing;
- office for managing and control.

The estimated capacity (8.000 tons/year) could be sufficient to supply one biomass plant for heat and power production and the heating district for some municipal buildings (school, swimming pool) and private houses.



Orvieto bioenergy platform design.

Action 2: Support for the building of a vegetable oil cogeneration plant

The activities of action “Support for the building of a vegetable oil cogeneration plant” in the period November 2010 – October 2011 have been:

- renovation of the building that will lodge vegetable oil plant;
- seeds movement and charging system building;
- vegetable oil tanks buildings installed inside two rooms;
- seeds milling system installed under the shelter; the press has a milling capacity of 300 Kg/h seeds, equivalent to 100 Kg/h vegetable oil;

The following pictures shows the redecorated locals; the building, property of the University was originally a tobacco drying kiln. Moreover the other picture shows some plant sections just installed, in particular seeds charging system from the outside unloading area to the internal silo. This section is the only one visible from outside; all the other parts of the system, included seeds and vegetable oil tanks, are perfectly integrated into the historical building.

By the end of the year also the vegetable oil cogenerator, the monitoring system and the connections with the national power grid will be installed, so to set up and start up the bioenergy plant and the experimentations.



Redeclared building and seed charging system.

2.2. Emscher-Lippe Region

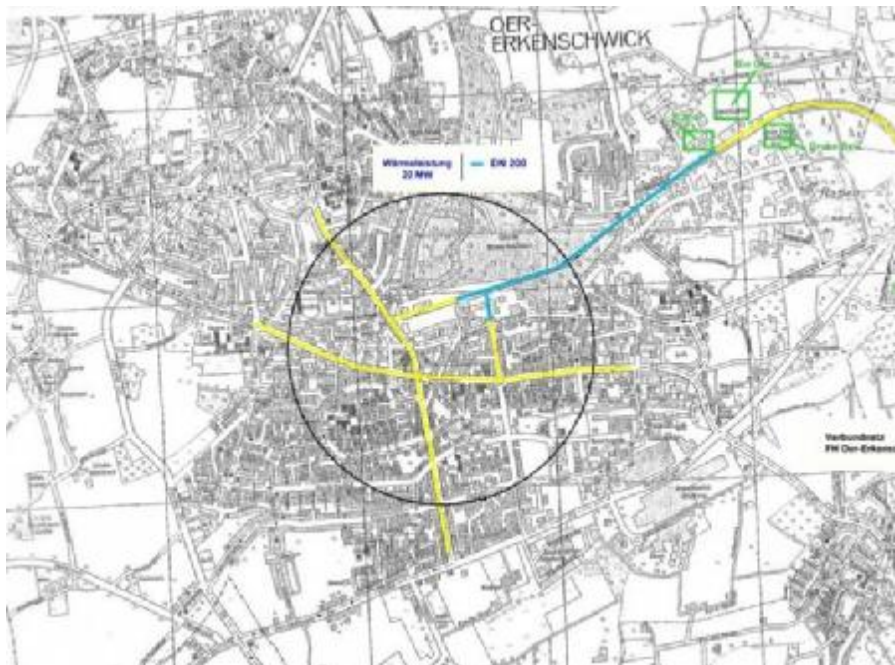
Action 1: FOE – Setting up a bioenergy heat station with a district heating system for the town of Oer-Erkenschwick

Starting situation

Four stakeholders in the Bioenergy Network – after the first network meeting in BEn – launched a cooperative effort to supply public and residential buildings and industrial companies.

1. FOE – project steering
2. STW Haltern – controlling, operation
3. HVG – provider of wood chips
4. Stadtentwicklungsgesellschaft Oer-Erkenschwick – political support

The town of Oer-Erkenschwick is not connected to the long distance heating systems in our region. These systems are served by hard coal fired power plants. Heat supply for households and industry is provided through NG (natural gas), fuel oil, hard coal and wood logs. Through the cooperation of these stakeholders in the Bioenergy Network and the town of Oer-Erkenschwick a company was founded (FOE, Fernwärmegesellschaft Oer-Erkenschwick) to develop a project to supply properties with heat generated from biomass. Planning for the first step involves building a wood chip fired boiler generating 1.5 MW, to feed a district heating system. It is to incorporate the waste heat from a power plant fired with mine gas. The project is to be expanded gradually with additional plants and networks.



Running of pipes district heating.

Data collection for the Emscher-Lippe Region

The woody biomass available in the Emscher-Lippe region has not yet been fully marketed. In some cases the materials are shredded and blown across the land; they may also simply be left to decompose. Thus the market would be able to supply larger volumes of suitable inputs. There is lively import and export activity for biomass at the regional level. The dictates of supply and demand and of the contract terms are the factors that govern the situation (contracts are often concluded for a five-year period).

One may fundamentally note that at present woody biomass – such as wood chips – can be purchased at reasonable cost. The data recorded during WP4 shows considerable potential for the entire Emscher-Lippe region in the forestry sector.

Data collection for the town of Oer-Erkenschwick, FOE Plant

The situation in Oer-Erkenschwick was analyzed by undertaking investigations in the town's catchment area. The HVG (Haus Vogelsang GmbH), located in the town of Datteln about 8 km away, is a company that collects and processes biomass and makes it available to users. It offers management services for green spaces and residential buildings and, as well, handles weed control along traffic arteries. This firm could be profitably included in the development and installation of a district heat concept in the town of Oer-Erkenschwick, using an energy contracting concept as the instrument. The required quantity of wood chips – 15,000 t/a – could be supplied by HVG.



Mine gas plant nearby buildings.

In Oer-Erkenschwick there is a mine-gas-fired power plant in the immediate vicinity of the projected site for the heating plant. This prompted discussion about the idea of using and incorporating the waste heat. Talks took place in meetings with the plant operator – the Minegas Corporation – coordinated by WiN. The result is that a contract has been concluded stipulating that this waste heat, at levels of up to 1.2 MW, will be fed to the projected district heating network. In this way the profitability of the plant is to be secured over the coming ten years in this feasibility study.



Minegas

The required amounts of thermal energy will be supplied from the following sources:

Energy balance FOE							
	Thermal power (kW)	Power-on hours (h/a)	Energy content, wood chips kWh/t	Amount required (t/a)	Demand for forest (ha)	Available forest in ELR (ha)	CO ₂ reduction t/a
Boiler 1.5 MW	1500	3500	3000	1750	175	22 200	1350
Waste heat from mine gas plant	1000	3500	n.a.	n.a.	n.a.	n.a.	1230
Total (thermal) power	2500					Total:	2580

Summary

The combination of two energy sources – biomass and the waste heat of mine gas power plants already in operation – is innovative and especially climate-friendly. Thanks to a favourable price structure for the waste heat being used here, the project will continue to be competitive in the future.

The depletion of the mine gas fields after about ten years represents a risk factor. This can be countered, however, with timely expansion of the plant. This is already foreseen in current planning.

In order to secure the project's success, WiN will provide support during further negotiations and when working out of contract terms among the partners.

Thus successful realization of the plant, as demonstrated, is in progress.

Action 2: Biogas plant, dry fermentation type, in an outlying area of Dorsten with a wood pre-treatment and storage plant

Starting situation

Two stakeholders in the Bioenergy Network – after the first network meeting in BEn – launched a cooperative effort to supply public buildings in the town of Dorsten with heat generated from biogas.

During the initial operating phase the feedstock will be regional – derived from energy crops, manure, dry residues and fractional wet residues. The feedstock is obtained from nearby farms. In the second phase – after one or two years – the use of “energy weeds” will be favoured since these are more environment-friendly than maize.

Germany is encountering ever greater problems with the cultivation of maize:

- Soil depletion
- More fertilizer needed to achieve the same results
- More pesticides needed to protect the plants against new vermin
- Soil erosion
- Reducing the population of insects such as bees

These problems can be avoided by growing “wildflowers” – the more politically correct term for “weeds” – and by utilizing the advantages of these species. A suitable mixture of wildflowers has to be identified so as to achieve the same energy content as maize. The stakeholders are very much interested in pursuing this idea.

This is actually a major challenge for our region because few stakeholders are familiar with these advantages.



Growing energy weeds, wild flowers.



Biogas plant, dry fermentation type, batch system.

Data collection for the Emscher-Lippe region

In the Emscher-Lippe region most of the energy crops already find buyers in the market. The market is, however, not clearly delineated. There is lively import and export activity for biomass at the regional level. The dictates of supply and demand and of the contract terms are the factors that govern the situation (contracts are often concluded for a five-year period). One may determine in principle that energy crops – such as maize or other harvest residues – can currently be purchased at reasonable cost. In efforts to counteract future problems that will arise from intensive maize cultivation, additional alternatives such as grass silage, horse manure and wildflowers, in particular, are to be taken under consideration. The purpose of this feasibility study is to ensure the profitability of the energy-generating system in the future.

The data collected shows considerable agricultural potential for the entire Emscher-Lippe region in the (cultivated crops) but also that the large majority of that production has already found buyers on the market. Sufficient biomass products such as agricultural wastes (solid manure) and materials resulting from landscape maintenance (such as grass and green cuttings) are also present, are available for use and could be further expanded. Cultivation of wildflowers began in 2010. Initial results are quite promising. That is why cultivation at larger scale will gradually be implemented.



Wood pre-treatment and storage plant.

Data collection for Dorsten

The situation in Dorsten was analyzed by undertaking investigations in the town's catchment area. The available potentials that can be made available for the plant include 146 hectares of maize, manure from 1050 horses (kept for recreational purposes), 129 hectares of grass and 7 hectares of wildflowers.

Thus the composition of the substrate according to current planning is as follows.

Phase 1 – Biogas plant, dry fermentation type, Dorsten					
	Energy content kWh/t FM	Amount available (t/a)	Power-on hours (h/a)	Power el (kW)	Demand for land (ha) or number of animals
Maize	300	7300	7500	292	146
Horse manure	120	8820	7500	141	1050
Grass, grass silage	172	450	7500	10	129
Wildflowers	200	200	7500	5	7
Power (el) from CHP, total				449	

Sustainable layout

In the interest of setting up the plant so that it will be ready for any changes in the future, the recommendation is to include substances not previously used and stemming from the maintenance of roadside vegetation, including grass and other roadside clippings. The employment of maize should be gradually scaled back while expanding the share of wildflowers.

An essential economic prerequisite is the use of substances that are found in a radius of about ten to fifteen kilometres from the generation plant's site. Short transportation routes and thus lower costs for logistics are to ensure the plant's viability and profitability and make it "future-proof". The following is recommended as the target composition.

Phase 2 – Biogas plant, dry fermentation type, Dorsten					
	Energy content kWh/t FM	Amount available (t/a)	Power-on hours (h/a)	Power el (kW)	Demand for land (ha) or number of animals
Maize	300	3500	7500	140	70
Horse manure	120	8820	7500	141	1050
Grass, grass silage	172	5000	7500	115	1429
Wildflowers	200	2000	7500	53	67
Power (el) from CHP, total				449	

Summary

The composition of the input substances in the first operating phase ensures both profitable and environment-friendly operation.

The viability of the plant's operations, especially in regard to reduced environmental impact and greater profitability, is ensured by the composition of the feedstocks in the second operating phase.

The stakeholders – including but not limited to, the farmers, Environmental Committees, Office of the Environment at Dorsten, Apiculturists' Organization, Hunting Association – are prepared to promote increased cultivation of wildflowers is on hand. This is reinforced by active contributions to the work of WiN. This lays the foundation for restoring biodiversity at least in the rural areas surrounding Dorsten. Transferring this idea to other locations and further refining its tenets will be two of the many tasks shouldered by WiN in the BEn Project. The realization of the plant is in progress.



2.3. Gostynin Lake Region

Action 1: Supporting activities addressing farmers interested in the use of biomass for energetic purposes in individual installations.

- 1) Initial investments financed for model cases by LEADER initiative (financial scheme for model cases).
 - a. The Regional Development Strategy set a budget for projects related to the development of renewable energy. The budget is of 200 thousand PLN (50 thousand EUR)
 - b. Submission of three proposals to Local Action Group for funding of two installations of biomass boilers (pellets) and one installation of solar panels (January 2011).
- 2) Establishing of broad financial mechanism for farmers in the Region.
 - a. Contacts with Foundation for the Development of Polish Agriculture (FDPA) – development of the idea on new scheme to be developed in Poland (January 2011).
 - b. Contacts with AAEN Poland & Co on the proposal on Joint Implementation Project for the region (May 2011).
 - c. Contacts with Mazovian Fund for Environmental Protection and Water Management concerning new financial instrument addressed to individuals investing in small installations based on renewable energy sources (solar, biomass, biogas) to be introduced at the second half of 2011 (May, June 2011).
- 3) Training courses and advisory on selected (within BEn project) solutions.
 - a. Finalizing opportunity studies on following investments (March 2011):
 - individual heat production boilers (20 kW - 1MW) for farms (10 – 200 ha) located in the region,
 - medium sized biogas installations (up to 1,0 MW) operated by the major husbandry farm owners and food producers,
 - briquettes production for regional use in individual boilers (15-20 kW).
 - b. Delivering of analysis to farmers interested in new bio-energy investments (March, 2011).
 - c. Pre-feasibility study on individual heat production boilers (20 kW - 1MW) for farms (10 – 200 ha) located in the region.
 - invitation of bid for preparation of the pre-feasibility study (May 2011).
 - choosing of the contractor and signing of the contract (May, June 2011).
 - starting the preparation of the pre-feasibility study (June, 2011).
 - d. Information campaign on selected within BEn project solutions:
 - initial information on selected model bio-energetic solutions was included in brochure (1200 copies) edited by Stowgmin (December 2011),
 - feasibility studies on selected investments were presented to representatives of municipalities (members of Stowgmin) (March 2011).
 - information on selected model bioenergetic solutions was disseminated within Regional Network's members during the third network meeting (December 2011),
 - feasibility studies on selected investments were put on Stowgmin separate section's dedicated to BEn project (June, 2011),
 - information on selected model bioenergetic solutions was disseminated during regional events (April, May, June 2011).
 - e. Preparation of model investment schemes of the selected biomass solutions – discussion will be held during the fourth Regional Network meeting (30.06.2011).

f. Preparation and submission to Mazovian Fund for Environmental Protection and Water Management an application for funding of supporting activities addressing farmers interested in the use of biomass for energetic purposes in individual installations (May 2011).

Action 2 Preparation of the documentation (feasibility studies with financial and economic analysis) for following investment: Expansion of municipal boiler house in Łąck (a biomass boiler - for straw and karpin - storage tank, storage shelter and storage yard).

Activities:

- 1) Preparation of the opportunity study of the investment by expert (March 2011).
- 2) Invitation of bid for preparation of the pre-feasibility study of the investment (May 2011).
- 3) Choosing of the contractor and signing of the contract (May, June 2011).
- 4) Starting preparation of the pre-feasibility study for the investment (June, 2011).
- 5) Preparation of bidding procedure for the implementation of the technical design for the investment (June, 2011).
- 6) Choosing of the contractor and signing of the contract (2011).
- 7) Starting the preparation of a architectonic and building design of the investment.

2.4. North East of England Region

Action 1: Expert Seminar “Biomass and Planning” - Information event for planners

Activities:

- Planning the content of the seminar with partners;
- Organising relevant expert speakers;
- Publicising the seminar to Local Authority planning departments and biomass consultants;
- Running the seminar on the 14th September;
- 26 delegates and 4 speakers attended the seminar;
- Evaluation of the seminar;
- Taking follow-up enquiries from delegates after the event;



Due to the complexity of the UK planning structure, it is not uncommon for planning officers to be a) completely unaware of biomass and b) unaware of all the legislation and strategies specifically relating to the use of biomass. This therefore causes significant obstacles and delays to the initiation and progress of potential projects. Therefore the seminar was vital to impart information regarding the use of biomass and the legislation and government strategies which support bioenergy in the UK, to planning officers and those consultants work in this field.

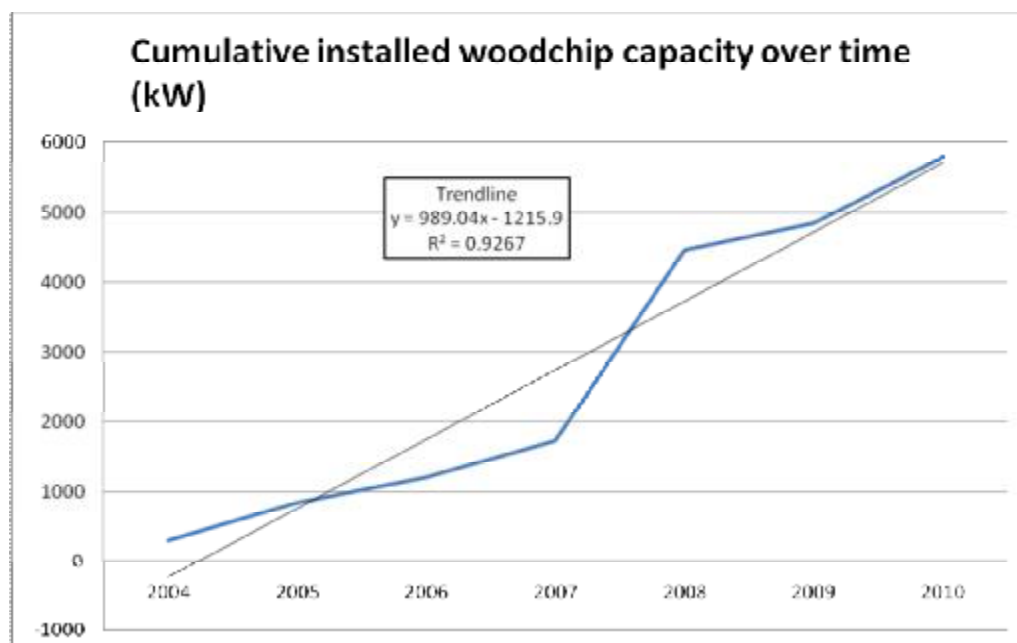
Action 2: Support for proposed CHP biomass drying facility

Due to the commercial sensitivity and confidentiality of some aspects of this action, we have limited ourselves to commenting on the parts which do not compromise this confidentiality

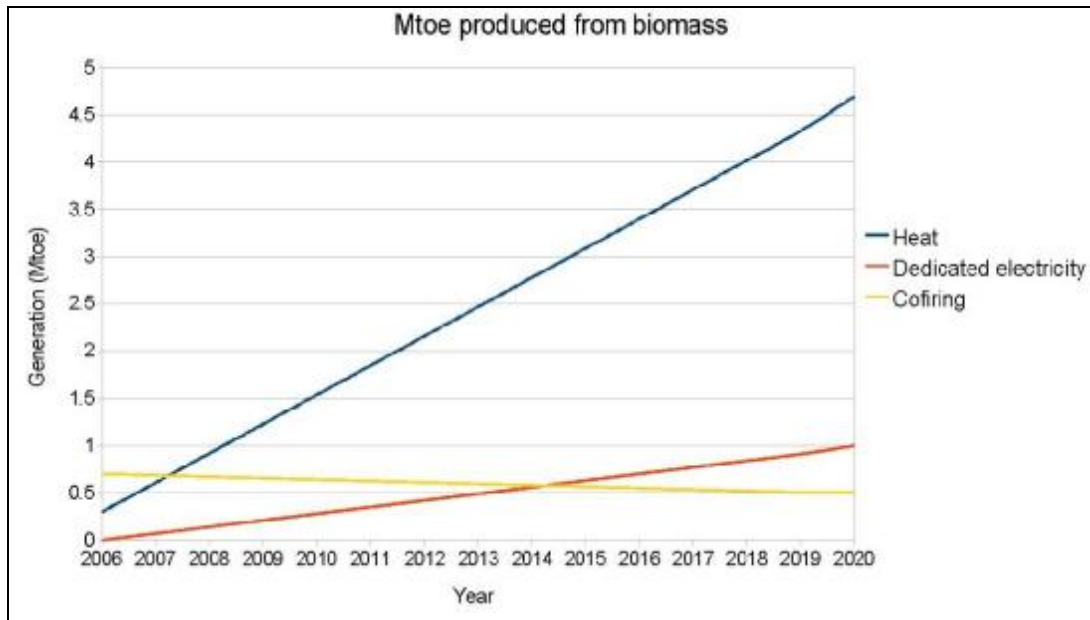
Activities:

- Agree a “Scope of Works” with the partner;
- Research on “Good Quality CHP (GQCHP)” scheme criteria to receive elevated ROC payments;
- Collate data on over 300 existing biomass heating feasibility studies to help project the effect of the RHI on “real world” potential projects, and therefore produce realistic market acceleration due to the RHI;
- Calculations on required storage space for roundwood and dried chip;
- Calculations on heat requirement in the drying facility based on likely fuel requirement in the target area;
- Analysis of available resources (forestry roundwood) in the target area;
- Analysis on the likely vehicle movements in and out of the plant, to help inform local planners for planning permission constraints;
- Research into likely alternatives for heat use at the site to increase proportion of heat used from the CHP unit;
- Interim reports and information to partner to enable them to prepare a planning application;
- Input into changes in the design and layout as a result of initial discussions with the planning authority;

Below is an example of the data analysis we provided.



North east cumulative installed capacity over the last 6 years (kW).



Predicted increase in UK biomass activity, 2006 to 2020.

3. Description of performance indicators

3.1. Umbria Region

Action 1: Project BiPlaN – Bioenergy Platform Network

Follows the descriptions of the performance indicators selected.

PROGRESS OF THE ACTION: The action started from the remark that bioenergy power plants can develop only together with bioenergy infrastructures, mainly in the small size category; unfortunately Umbria Region shows a lack of these kind of infrastructures. For this reason a preliminary study on the biomass resources in the region and on the number and position of the bioenergy platforms has been prepared. After the preliminary study, has started the feasibility study, that optimized the platforms Network and started a first detailed design of one platform. Future improvements are the close project examination and the presentation of a technical report to the Regional authority (by the end of 2011) in order to give a technical support to the elaboration of the new regional bioenergy master plan and put in practice the experience gained in the project.

IMPORTANCE FOR THE REGION: The action should plug an heavy gap in the Region, come out from the SWOT analysis of the Region and during the bioenergy Network meetings: the lack of a good logistics for the recovery, production and supply of the biomass available in the Region.

The proposed action gives to the Region the following benefits:

- allows the development of the biomass-to-biofuel energy chain for bioenergy plants supply;
- allows biomass power plant stakeholders to prepare business plans and make investments without uncertainty on the biomass availability;
- gives the opportunity of new jobs in the sector of biomass harvesting, transport and production, bioenergy platforms designing and management, biomass trading, etc.

STAKEHOLDERS AND DECISION MAKERS INVOLVEMENT AND INTEREST: The idea of the action started from the Regional bioenergy Network, and the whole Network agreed that this action is crucial for the development of the sector; also the preliminary study has been prepared with the support of the Network and the idea to make the study operative in the incoming regional energy Master plan.

For this reason 100% of Network members are aware of the progress of the action.

Action 2: Support for the building of a vegetable oil cogeneration plant

Follows the descriptions of the performance indicators selected.

PROGRESS OF THE ACTION:

The action regards the support of a bioenergy action started before Ben project, where CRB together with other companies aims at developing a local vegetable oil energy chain.

During Ben project duration, the design of the vegetable oil cogeneration plant has been optimized and the building stage reached the completion of the building renovation and the installing of some plant parts. Future activities are the completion of the plant (between end 2011 and beginning 2012) and, afterwards, the experimentation stage supporting Network members interested at the results.

IMPORTANCE FOR THE REGION:

The action should support the efficiency improvement of the vegetable oil bioenergy chain, giving available to the Bioenergy Network members a complete plant (from seeds storing and milling, to vegetable oil combustion in a cogenerator engine), furnished with all the necessary measuring and monitoring systems, where leading experimentation on different seeds and oil (sunflower, rape, soy, palm, thistle), on milling stage and on engine combustion performances and energy production. The plant, giving the possibility to test all the bioenergy chain stages, should replicate the small size system in several local realities.

STAKEHOLDERS AND DECISION MAKERS INVOLVEMENT AND INTEREST:

The action regards a particular bioenergy chain (liquid biomass from vegetable oil) and for this reason not every network member can be involved or interested. The members of the sectors involved in the action are decision makers (interested at environmental aspects and biomass availability) and stakeholders oriented in the vegetable oil plants building (interested in the experimentation of new vegetable oils and at the engine performances).

The progress of the action should come to the plant start up by the first months of 2012 and all the Network is looking forward to see the plant working and to have the first results of the experimentations.

For this reasons approximately 90% of Network members are aware of the progress of the action.

3.2. Emscher-Lippe Region

Action 1: FOE – Setting up a bioenergy heat station with a district heating system for the town of Oer-Erkenschwick

Follows the descriptions of the performance indicators selected.

PROGRESS OF THE ACTION:

The action was started because the town of Oer-Erkenschwick is not connected to the long distance heating systems in our region. These systems are served by hard coal fired power plants. Heat supply for households and industry is provided through NG (natural gas), fuel oil, hard coal and wood logs. Through the cooperation of these stakeholders in the Bioenergy Network and the town of Oer-Erkenschwick a company was founded (FOE, Fernwärmegesellschaft Oer-Erkenschwick) to develop a project to supply properties with heat generated from biomass. Planning for the first step involves building a wood chip fired boiler generating 1.5 MW, to feed a district heating system. It is to incorporate the waste heat from a power plant fired with mine gas. The project is to be expanded gradually with additional plants and networks.

Following the needs to convert the energy supply of the town of Oer-Erkenschwick WiN supported, continuously in developing , planning and in approval planning.

IMPORTANCE FOR THE REGION:

This is an example to show that the combination of biomass use and combining other technologies such as the mine gas energy use can be economic, innovative and protect the environment.

As the woody biomass available in the Emscher-Lippe region has not yet been fully marketed is this the first step that almost all the biomass in our region could be utilised . In some cases the materials are shredded and blown across the land; they may also simply be left to decompose.

STAKEHOLDERS AND DECISION MAKERS INVOLVEMENT AND INTEREST:

Four stakeholders in the Bioenergy Network – after the first network meeting in BEn – launched a cooperative effort to supply public and residential buildings and industrial companies. The reason why they cooperated was simply the economic view of the action and as such helpful to boost the use of biomass use in the Region.

1. FOE – project steering
2. STW Haltern – controlling, operation
3. HVG – provider of wood chips
4. Stadtentwicklungsgesellschaft Oer-Erkenschwick – political support

All of the other network members and the public were aware of this action through wide publicity before and during the realisation and subsequent feedback during network meetings.

Action 2: Biogas plant, dry fermentation type, in an outlying area of Dorsten with a wood pre-treatment and storage plant

Follows the descriptions of the performance indicators selected.

PROGRESS OF THE ACTION:

The town of Dorsten is in the north of the Region which is largely rural and is home to the largest contiguous woodlands in the Ruhrgebiet. The location of this plant is well situated to cover short distances between biomass sources and energy production plants and the nearby town gives the opportunity to use the heat at high efficiency.

IMPORTANCE FOR THE REGION:

As the Region showcases the entire spectrum of biomass conversion technologies – apart from dry fermentation – was this the opportunity to close this gap.

As the woody biomass available in the Emscher-Lippe region has not yet been fully marketed is this the second step that almost all the biomass in our region could be utilised . In some cases the materials are shredded and blown across the land; they may also simply be left to decompose.

STAKEHOLDERS AND DECISION MAKERS INVOLVEMENT AND INTEREST:

Two stakeholders in the Bioenergy Network – after the first network meeting in BEn – launched a cooperative effort to supply public buildings in the town of Dorsten and to use the surplus heat not being used to dry wood from the associated wood pre-treatment and storage plant. The reason why they cooperated was simply the economic view of the action and as such helpful to boost the use of biomass use in the Region.

All of the other network members and the public were aware of this action through wide publicity before and during the realisation and subsequent feedback during network meetings.

3.3. Gostynin Lake Region

Action 1: Supporting activities addressing farmers interested in the use of biomass for energetic purposes in individual installations.

Follows the descriptions of the performance indicators selected.

PROGRESS OF THE ACTION:

Action was developed step by step. Regional Network Meetings, informal meetings with stakeholders, site visits as well as discussions with experts were fundamental for shaping the action. The opportunity studies prepared for selected types of investments and disseminated among local stakeholders gave interested farmers the initial knowledge on environmental, economic and social aspects of these installations. Promotion and educational actions (campaigns, brochures, tours, etc) hold in the region were focused on selected types of investments chosen as the most reasonable for the local community. Up to now there is a lack of financial support for regional farmers and enterprises meeting their expectations. Limited local financial support, provided by LEADER initiative is available for bioenergy investments only in small enterprises. Discussions on creating new financial support schemes were undertaken with regional and national financial institutions. The activities carried out are meant to be continued after the end of the project

IMPORTANCE FOR THE REGION:

There is a big potential of biomass and at the same time moderate interest in bioenergy investments. There is a need for reliable information, expert advice and know-how. The action was selected within Regional Bioenergy Network meetings on the basis of SWOT analysis prepared for the region.

The proposed action brings the following benefits for the Region:

- provides information, good examples with model investment cases and expert advice on biomass technologies
- encourages stakeholders to undertake sensible decisions for biomass use for energetic purposes,
- stimulates activities aimed at supporting development of bio-energy sector,
- gives possibilities for creating local jobs in biomass value chain (foresters, biomass suppliers, operators),
- gives opportunities for carbon dioxide reduction.

STAKEHOLDERS AND DECISION MAKERS INVOLVEMENT AND INTEREST:

The idea of the action emerged during the Regional Bioenergy Network meetings and interviews. The members of the network acknowledged that this action is crucial for the development of the bio-energy sector in the region. For this reason all network members are aware of the progress of the action.

Action 2 Preparation of the documentation (feasibility studies with financial and economic analysis) for following investment: Expansion of municipal boiler house in Łąck (a biomass boiler - for straw and karpin - storage tank, storage shelter and storage yard).

Follows the descriptions of the performance indicators selected.

PROGRESS OF THE ACTION:

The municipal boiler house in Łąck has capacity of 1200 kW. Boilers are adapted to burn wood slivers delivered by local suppliers. Existing power will be increased by about 2 MW to meet local energy demand and local plans. The first step of action was to prepare, by experts, opportunity study of the investment. This analysis well describes the opportunities and confirms the reasonability of the action. The pre-feasibility study for this investment provides detailed information on technical and economical aspects. The third stage of this action will be preparation of technical project and design. The completion of the documentation is scheduled on October 2011. The documentation will be further used preparing financial montage. The documentation will serve as a basis to apply for funding of the investment.

IMPORTANCE FOR THE REGION:

The action was selected within Regional Bioenergy Network meetings on the basis of regional SWOT analysis.

The proposed action brings the following benefits for the Region:

- expected economic development of the region: ecotourism, recreational activities, influence on development of community centers,
- enhancement of ecological image of the town,
- development of local jobs in biomass value chain (foresters, biomass suppliers, operators).
- the Mayor's of Łąck investment could serve as a good practice example for promoting this approach.

STAKEHOLDERS AND DECISION MAKERS INVOLVEMENT AND INTEREST:

The idea of the action emerged during the Regional Bioenergy Network meetings. The members of the network acknowledged that this action is interesting as a good example in the region which can be replicated in other settlements. For this reason all network members are aware of the progress of the action.

3.4. North East of England Region

Action 1: Expert Seminar “Biomass and Planning” - Information event for planners

Follows the descriptions of the performance indicators selected.

PROGRESS OF THE ACTION:

The action was started due to a “weakness” spotted in the SWOT analysis carried out as part of the master plan development. Several stakeholders contacted during the SWOT analysis stated planning confusion as a problem to bioenergy projects, with little consistency between the different local authorities in the region. The seminar was prepared and was delivered in September.

IMPORTANCE FOR THE REGION:

Applying for planning permission for bioenergy projects can require a great deal of resource, both in time and money, this is not helped by inconsistencies and lack of understanding in the decision making bodies. The action not only disseminated valuable information directly from experts, but also allowed networking between decision makers and consultants. Many contacts were made at the event which should help planners contact the correct people should they require specific information in any future bioenergy related planning applications.

STAKEHOLDER AND DECISION-MAKERS INVOLVEMENT AND INTEREST:

The activity was agreed and supported with the BEn network, even those stakeholder who would not be involved with the seminar directly, as they saw this as an important problem in the bioenergy sector. Decision-maker involvement was always going to be crucial to this seminar, and often planners are difficult to make direct contact with, therefore we had to use a wide range of contacts in the BEn network to make contact with the key people.

All of the network members were aware of this action through wide publicity before the training event and subsequent feedback during network meetings.

Action 2: Support for proposed CHP biomass drying facility

Follows the descriptions of the performance indicators selected.

Due to the commercial sensitivity and confidentiality of some aspects of this action, we have limited ourselves to commenting on the parts which do not compromise this confidentiality

PROGRESS OF THE ACTION:

The action was started when a member of the network approached us with specific problems regarding a potential biomass CHP project they were working on. These problems required specialist knowledge of the bioenergy supply chain and funding legislation.

The proposed CHP project was in early feasibility stages when the action was started, we were involved with the analysis of potential supply chain and markets aspects of the plant, both incoming raw material (forestry roundwood) and outgoing dried wood chip, this information was required to directly inform the total size of the plant. We also provided information on technical aspects relating to optimising the funding payments received from the RO.

IMPORTANCE FOR THE REGION:

In the UK, with its wet climate, drying biomass (specifically woodchip) involves prolonged drying times of well over a year, which in turn has heavy cash-flow implications for woodfuel supply businesses, and also can sometimes result in higher moisture content fuel than desired. Therefore a facility which not only produces renewable electricity but also provides a significant proportion of the region with a carbon neutral, sustainable drying service, can only benefit the supply chain and the end user.

STAKEHOLDER AND DECISION-MAKERS INVOLVEMENT AND INTEREST:

The activity involved project at the early stages with a high level of investment and an element of confidentiality. For this reason, we have presented the specific action at early and subsequent BEn Network meetings and have also involved key members of the Network team (the network Steering Group) throughout the development of this specific action, all of whom saw the benefit of this project, and fully supported it. All members of the network were invited to input into the development of this specific action.