

SUCELLOG: IEE/13/638/SI2.675535

D6.7b

**Report on the local-scale meetings
carried out within the auditing service in
France**

24.03.2017



About SUCELLOG project

The SUCELLOG project - Triggering the creation of biomass logistic centres by the agro-industry - aims to widespread the participation of the agrarian sector in the sustainable supply of solid biofuels in Europe. SUCELLOG action focuses in an almost unexploited logistic concept: the implementation of agro-industry logistic centres in the agro-industry as a complement to their usual activity evidencing the large synergy existing between the agro-economy and the bio-economy. Further information about the project and the partners involved are available under www.SUCELLOG.eu.

Project coordinator



Project partners



About this document

This report corresponds to a part of the D6.7 Report on the local-scale meetings carried out within the auditing service in France of the SUCELLOG project. It has been prepared by:

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1. Introduction

SUCELLOG supports the creation of biomass logistic centres inside agro-industries covering the gap of knowledge faced when willing to start this new activity. Within WP6, SUCELLOG provides an auditing service facilitating the decision making to agro-industries interested in becoming a logistic centre. As part of the auditing service and with the purpose of showing to the agro-industries the most promising paths to start-up their new activity, local-scale meetings have been carried out with interested stakeholders such as potential biomass suppliers and consumers, equipment manufacturers and so on.

This document includes a collection of these reports of these meetings classified by agro-industry and carried out in France with a total of 36 stakeholders-external companies/actors (49 participants).

2. Reports of local-scale meetings in France

2.1. Axereal-Lallemand

2.1.1. Leroux & Lotz local-scale meeting

2.1.1.1. General data of the meeting

Date: 05/04/2016

Auditor's data:

Name: Dancert Benoît Organization: Coop de France Rhône Alpes Auvergne

Place: Bureau de Coop de France Rhône Alpes Auvergne

2.1.1.2. Attendants

2 external persons participated in this meeting.

2.1.1.3. Summary of the meeting

Following a request from our contact within the TENERRDIS cluster, we got the contact details of director of Research and Development unit in Leroux & Lotz boiler manufacturer. After a first contact (by mail), we had a meeting with another person from the company (by phone).

The company is developing an agro-pellets burner (BAMBI project). Following the success of the pilot installed in VEOLIA, the manufacturer is looking for a site to build a demonstrator as well as agro-pellets suppliers. If the demonstrator is built, Leroux & Lotz would need about 3,000 to 4,000 t of agro-pellets.

The person we met wants more information about agro-pellets produced by the SOFRAGRAIN cooperative, including PCI, humidity and ash content, available quantity and prices. The company can first test the pellets to assess the quality.

After this meeting, the SOFRAGRAIN had a contact with the person we met. The tests were performed on agro-pellets SOFRAGRAIN that prove to be of very good quality.

SOFRAGRAIN is now expected a return on the progress of the implementation of the demonstrator Leroux & Lotz.

2.1.1. Bioenergy international local-scale meeting

2.1.1.1. General data of the meeting

Date: 04/11/14

Auditor's data: Camille Poutrin

Place: by phone

2.1.1.1. Attendants

2 persons participated in this meeting.

2.1.1.1. Summary of the meeting

The aim of this meeting was having an overall point of view of the biomass market in France to be able to perform the logistic center analysis with Luzéal but also the other regional analysis during the audit stage, mainly in Bourgogne Franche-Comté where the site is placed.

From 10 years, in France, we are talking about agropellets development but nothing happened. He participated to normalization for agropellets.

The properties of agropellets are the main problem : they are not so much less expensive with more problem in comparison with wood. The place is not easy to find on the market : there is too much problems with agricultural biomass for individual consumers and it is not competitive for industrial unit. It only works when using it is loose residues production.

Its main advices :

- Mix biomass to reduce problems and be careful with sanitary products used on the crop
- Improve working conditions of boilers users
- Work on the boiler cleaning and ash uses.

Even if the market is not developed, this sector will probably succeed in growing in some years.

2.2. INTERVAL

2.2.1. Compte'R local-scale meeting

2.2.1.1. General data of the meeting

Date: 04/01/2016

Auditor's data:

Name: Dancert Benoît Organization: Coop de France Rhône Alpes Auvergne

Place: Bureau de Coop de France Rhône Alpes Auvergne

2.2.1.2. Attendants

2 persons participated in this meeting.

2.2.1.3. Summary of the meeting

After meeting with SCDF one year ago, the representative of Compte'R was interested in having a vision of the project in Auvergne Rhône Alpes. A meeting was thus organized in Lyon, in Coop de France Rhône Alpes Auvergne office.

Compte'R company produces biomass boilers able to use wood or agricultural byproducts. With 200 installations throughout France, the company has a good vision of the French market. Nevertheless, some of its projects face the forest resources organization in the territory. It is therefore interesting in finding new biomass resources to ensure the supply of some ongoing or developed projects.

Wood pellet is a product rather consumed by households because of its high purchasing price. Compt'R would like to have agro-pellets at a price (€/kWh) similar to the wood chips one. Agro-pellets do not need to be standardized, the purchase will be compared to a formulation and the price will be set depending on kWh.

Before pellet purchase, a test phase is necessary and would be organized by Compte'R. 4-5 m³ of pellets are needed as well as elemental analysis. This test phase will be considered during the market study, later this year.

After this first meeting, we contacted again (email and phone) Compte'R society to know test phase methodology. Nevertheless, this option was quickly discarded because of the important financial contribution requested by Compte'R (3,000 to € 5,000 / day of test).

2.3. SOFRAGRAIN

2.3.1. ADIL 26 local-scale meeting

2.3.1.1. General data of the meeting

Date: 06/04/2016

Auditor's data:

Name: Dancert Benoît Organization: Coop de France Rhône Alpes Auvergne

Place: Bureau de Coop de France Rhône Alpes Auvergne

2.3.1.2. Attendants

2 external persons participated in this meeting.

2.3.1.3. Summary of the meeting

After a contact (by email) to the community of municipalities of Valencia Agglo - South Rhône-Alpes labeled TEPOS / TEPCV (energy positive territory), we had the contact to the Executive Assistant to ADIL 26 which is one of the two energy information spaces in the Drome department. After a first contact (by mail), we organized a meeting with a biomass energy referent to talk about the SUCELLOG SUCELLOG (by phone).

Unfortunately, biomass boilers in operation on the territory are wood boilers. Indeed, the company is working on the development of the miscanthus sector on the department. Currently, the only market for these ten hectares is either self-consumption or the use for animals bedding.

The main obstacle for the development miscanthus or agro-pellets sector is the fear of authorities to implant multi-fuel boilers, considered as a new technology with not enough feedback.

Before continuing the promotion of the biomass combustion sector, ADIL 26 is fighting for the position of regional institutions concerning the aids dedicated to multi-fuel boilers.

2.3.2. Dalkia Rhône-Alpes local-scale meeting

2.3.2.1. General data of the meeting

Date: 24/04/2016

Auditor's data:

Name: Dancert Benoît Organization: Coop de France Rhône Alpes Auvergne

Place: Bureau de Coop de France Rhône Alpes Auvergne

2.3.2.2. Attendants

2 persons participated in this meeting.

2.3.2.3. Summary of the meeting

After a request from our contact in EDF, we were able to contact a responsible person for biomass purchasing in Dalkia to talk about his interest on agro-pellets (by phone).

The Dalkia Company operates only boilers with woody biomass (chips or pellets) in Rhône Alpes and more generally in France.

The development of agro-pellets sector is not possible - according to him – because of the lack of multi-fuel boilers in the territory.

In addition, Dalkia has no possibility to carry out tests on operating boilers for two reasons. On the one hand, boiler manufacturers lock through the manufacturer's warranty fuels which can be burned in boilers. On the other, the company faces consumers' refusal who do not allow for test in boilers in operation (an operation stop is always a problem).

The representative of Dalkia focused our attention in the fact that it is - a priori - not possible to burn the agro-pellets in an automatic wood chips boiler because of the low humidity content of pellets (<20%)

He thinks it can be interesting to contact :

- Hargassner – boilers maker
- Ambene – Operating cogeneration boilers in France and Spain

2.3.3. Hélianthe local-scale meeting

2.3.3.1. General data of the meeting

Date: 24/04/2016

Auditor's data:

Name: Dancert Benoît Organization: Coop de France Rhône Alpes Auvergne

Place: Bureau de Coop de France Rhône Alpes Auvergne

2.3.3.2. Attendants

2 persons participated in this meeting.

2.3.3.3. Summary of the meeting

Hélianthe (energy information space of the Ain) was contacted after the presentation of the SUCELLOG project in front of PoBE (Rhône Alpes Biomass Energy Pole). After a first contact by email, we met a person responsible for biomass boilers in Ain.

The association has a biomass boilers database in the Ain department. It is possible to know what type of fuel is consumed and the quantity; nevertheless, it is not possible to know whether the boilers are one-fuel or multi-fuel boilers.

The representative of Hélianthe focused our attention in the fact that there are currently few new biomass boiler projects and even less running with pellets, reserved to households or small collective heating. Locally, the wood industry is decreasing for 1 year because of to the successive mild winters and difficulties to organize the forest exploitation at low cost. Indeed, municipalities generally want a very local wood supply (<40 km). In addition, the price decline of fossil fuels at the national level has stop ongoing projects.

Finally, she told us that it is difficult to envisage a supply change during the year or during a season because it would require boilers setting.

2.3.4. Bloomoon local-scale meeting

2.3.4.1. General data of the meeting

Date: 7/04/16

Auditor's data: Camille Poutrin

Place: Services Coop de France office

2.3.4.2. Attendants

2 external people participated in this meeting.

2.3.4.3. Summary of the meeting

Bloomoon is a company working in innovation in the agroindustrial sector. They propose a support to find new solutions in industrial processes.

The aim of this meeting was having a first contact with this company and analyzing the possible uses of residues.

They presented the company, there references. Their aim is too proposed new solutions. For biomass, it can be analysed into two ways: help cooperatives to develop a market or help them to find new products to be sold.

They have a strong network to help agricultural biomass project carriers to there development.

The contact when then presented to Sofragrain which has an interesting innovation strategy.

2.3.5. Agronergy local-scale meeting

2.3.5.1. General data of the meeting

Date: 15/03/16

Auditor's data: Camille Poutrin, Marine Leblanc

Place: Agronergy office in Paris

2.3.5.2. Attendants

3 persons participated in this meeting.

2.3.5.3. Summary of the meeting

Agronergy is a company consuming agricultural biomass. Services Coop de France met them at the beginning of the project and they were interested in working with several cooperatives to diversify their supply.

They were thus interested in having more information on the project to develop their projects, mainly near Lyon with Sofragrain and near Paris.

The different results of the SUCELLOG project was thus presented, depending on the different cooperatives and different local analysis. Contacts were given in several cooperatives to start working together and find a market.

2.4. LA CAVALE

2.4.1. IDEX local-scale meeting

2.4.1.1. General data of the meeting

Date: 1.07.2016

Auditor's data:

Name: Camille Poutrin Organization: Services Coop de France

Place: Phone (1 hour)

2.4.1.2. Attendants

2 persons participated in this meeting.

2.4.1.3. Summary of the meeting

The contact was given by SUCELLOG project partner RAGT.

Idex is selling energy, using its own boilers (as energy suppliers). It belongs to EDF group.

This contact was aware about agro-pellets markets and projects and engaged in this topic. His main problem was the price which is generally too important in comparison with wood chips.

Several cooperatives in the SUCELLOG project seem to be able to produce agro-pellets with a very interesting price, competitive with wood chips. SCDF thus sent him contacts from SOFRAGRAIN, la Cavale et Lallemand to be able to negotiate a potential supply.

SCDF presented him the 10 cases developed in France, the SUCELLOG concept in general, the state of art and what we are planning after the project.

SCDF propose him another meeting in end-September to develop the evolution of the project, at the end of the 10 audits.

Idex is a very interesting potential consumer, more interested in agricultural biomass than Cofely and Dalkia.

2.4.2. La Cavale stakeholders local-scale meeting

2.4.2.1. General data of the meeting

Date: 28/06/2016

Auditor's data: Benoit Dancert

Place: videoconference

2.4.2.2. Attendants

6 persons participated in this meeting.

2.4.2.3. Summary of the meeting

Purpose of meetings: have a clear vision of the biomass market in the Aude department (Cooperative La CAVALE).

PAN SAS is the company working with la Cavale to produce pellets in its own pelletising line (wood production line).

The pole Energy 11 is the local agency of energy and climate in the Aude, supporting project development. Nevertheless, they can only support global territory projects but not individual ones.

In the Aude department, sawdust is a rare resource and it would be hard for the cooperative to find around 2 000 tons needed for its pellets production. Pan SAS had another opinion: according to this company, it is possible, without any problem, to find the needed resources; or, if needed, wood residues may be produced from pallets.

A discussion was then realised about local biomass prices.

Then, technical analysis were discuss: pellets performance, ash content, use of ash in boilers, contamination regulation.

2.4.3. Etia local-scale meeting

2.4.3.1. General data of the meeting

Date: 27/1015

Auditor's data: Camille Poutrin, Jérémie Descours, Services Coop de France

Place: Services coop de France office

2.4.3.2. Attendants

2 external persons participated in this meeting.

2.4.3.3. Summary of the meeting

The aim of this meeting was analysed the different biomass technologies available in gasification.

Etia presented its biogreen solution with a demonstration film. This solution is a pyrogazeification process, producing “char” which is an organics amendment produced during the pyrogazeification process. It works without O₂ from 300°C to 900 °C. It can be used with a large range of waste, including agricultural biomass.

With agricultural biomass, a 2,5 MW production can be expected.

This solution was analysed for la Cavale cooperative which is working on a gazeification process to consume a part of its pellets production (as analysed in the SUCELLOG audit).

2.4.4. Engie local-scale meeting

2.4.4.1. General data of the meeting

Date: 27/10/16

Auditor’s data: Camille Poutrin, Services Coop de France

Place: Le Gouessant cooperative, Lamballe

2.4.4.2. Attendants

2 external people attended this meeting.

2.4.4.3. Summary of the meeting

Engie was working with le Gouessant cooperative for a gasification process. During a visit on the Gouessant site, Services Coop de France discussed with them about gasification technologies available on the market for agricultural biomass as this kind of tests was performed by Engie.

3 technologies were analyzed in this meeting:

- ETIA : (cf associated local scale meeting) : this technology is not the best one to produce energy. Its use is recommended if having a solution to use the “biochar” (pyro-gazification product for organic amendment) but the efficiency of this technology is quite low (60%)
- COGEBIO : Cogebio is a good solution to treat biomass pellets but not for loose biomass.
- NESAS : Nesa is a good solution to produce loose biomass but this technology can normally treat electronic waste so is really expensive to treat biomass which can be used in a normal boiler.

These solutions were communicated to la Cavale which is currently studying a gasification solution using pellets produced using the SUCELLOG concept / results.

2.4.5. NESA local-scale meeting

2.4.5.1. General data of the meeting

Date: 10/11/16

Auditor's data: Camille Poutrin, Jérémie Descours, Services Coop de France

Place: Skype meeting

2.4.5.2. Attendants

2 persons participated in this meeting.

2.4.5.3. Summary of the meeting

The aim of this meeting was analysed the different biomass technologies available in gasification.

This solution was analysed for la Cavale cooperative which is working on a gazeification process to consume a part of its pellets production (as analysed in the SUCELLOG audit).

Gauthier Cottenier presented thus the NESA solution. This process is a pyrogazification process producing gas which can be used for energy.

The feasibility with agricultural biomass was study. Nevertheless, this process is generally use for electronic residues as in incineration plant for waste. It can be used as a biomass boiler but it is not its first aims. The price is thus not adapted. This technology is quite expensive for a biomass use even if its work well.

The information were thus gave to la Cavale cooperative but this solution is maybe not the best one to use agricultural biomass for energy.

2.5. NATURA PRO

2.5.1. HESPUL local-scale meeting

2.5.1.1. General data of the meeting

Date: 13/04/2016

Auditor's data:

Name: Dancert Benoît Organization: Coop de France Rhône Alpes Auvergne

Place: Bureau de Coop de France Rhône Alpes Auvergne

2.5.1.2. Attendants

2 persons participated in this meeting.

2.5.1.3. Summary of the meeting

After a solicitation from the head of sustainable development service in the union of municipalities of the Ouest Rhôdanien, we contacted a person responsible for project technical expertise in HESPUL association specializing in the development of renewable energy projects.

This person worked with a company on a project based on coffee grounds pellets. These pellets also require multi-fuel boilers but are sold at a price similar to wood pellets. Unfortunately we did not get the contact of this project manager.

As wood energy referent he monitors some biomass boilers (pellets or chips) and their supply. Even if the supply is sometimes tense, either because of prices or because of the delays, they have never faced shutdown boiler because of a lack of fuel.

Interested in the project, the person will pass the information in HESPUL newsletter about the 10th June workshop, destined to professionals and supported municipalities.

Finally, the association participated to a study about the importance of developing a logistic chain for vine pruning collection for feeding automatic boilers on the Rhone (resources, harvesting method, energy value, fumes ...). The conclusion is that the main obstacle to this development is the pruning harvesting method. Investment in the collecting equipment is possible only on large vignonbles (> 15 ha / year) or with a group of farmers in CUMA.

2.5.2. Marie de Courtenay local-scale meeting

2.5.2.1. General data of the meeting

Date: 14 et 15/04/2016

Auditor's data:

Name: Dancert Benoît Organization: Coop de France Rhône Alpes Auvergne

Place: Bureau de Coop de France Rhône Alpes Auvergne

2.5.2.2. Attendants

2 external people attended this meeting.

2.5.2.3. Summary of the meeting

One of the persons at the meeting is a farmer and elected energy referent for the FRCUMA. He was contacted because of his work on several energy-related projects (by phone). The purpose of the meeting was to have his opinion on the agro-pellets sector.

He followed the project to produce agro-pellet of the Dauphinoise cooperative that was abandoned due to the non-existing market. Shares in the pelletising plant were sold to partners who now manufacture wood pellets.

He thinks that agro-pellet is not enough known by manufacturers due to a market turned to wood chips, mainly for price reasons.

Finally, he thinks that the town of Courtenay might be interested in diversifying its supplies and proposed us to contact another person.

After this meeting, we asked suggested person to know his interest on agro-pellets (by phone). Unfortunately, and despite his interest in a local and sold-at-a-good-price fuel, he has not the technical knowledge to know if the municipal boiler is a one-fuel or a multi-fuel boiler. In order to inform him, we sent him an email containing agro-pellets presentation.

2.5.3. SIEL 42 local-scale meeting

2.5.3.1. General data of the meeting

Date: 01/06/2016

Auditor's data:

Name: Dancert Benoît Organization: Coop de France Rhône Alpes Auvergne

Place: Bureau de Coop de France Rhône Alpes Auvergne

2.5.3.2. Attendants

2 external people participated in this meeting.

2.5.3.3. Summary of the meeting

After a conference on wood energy in which one of the participants explained his work of support in project management and operation of boilers in the department of the Loire, we contacted the SIEL 42 (Intermunicipality energy union of the Loire department) to know their interest in consuming agro-pellets (by email). A representative of SIEL 42 was interested in the project and wanted to organize a meeting (by telephone).

The SIEL 42 supported municipalities of the Loire for the establishment of 48 wood boilers (10 with pellets and the rest using pallets). SIEL 42 is now providing the operations.

This union is also mandated by the municipalities to perform tests on in-operation boilers. It also assessed the economic profitability of a supply of made-from-coffee-grounds pellets (not profitable due to the important contamination of boilers).

The representative we contacted would like to get more information about agro-pellets produced by the cooperative SOFRAGRAIN including PCI, humidity and ash content, available quantity and price delivered in the Loire. It would be possible (with the agreement of its management) to present a test project during one year to the municipalities.

2.6. Tereos

2.6.1. ETA LEMAIRE local-scale meeting

2.6.1.1. General data of the meeting

Date: 01/06/2016

Auditor's data:

Name: Cyril FLAMIN Organization : Coop nergie

Place: phone interview

2.6.1.2. Attendants

2 persons attended this meeting.

2.6.1.3. Summary of the meeting

ETA Lemaire is producer of straw in the area around Tereos. That is why Coopernergie contacted it.

This company collects between 3 000 and 4 000 tons of cereal straw from Beauvais, in Oise, in Picardie to Calais in the North of France (Nord-Pas-Calais) per year.

It buys straw in windrow and then presses it, stores it and transports it.

It particularly exports straw in Holland.

Straw is bought between 25 € and 30 € (format windrow on the field). This price is less expensive near Amiens (between 20 and 25 €).

According to him, there is a potential of 1000 tons in the area around Tereos.

Straw is hard to mobilize in the area because of the breeding pressing.

The moisture content is under 15 %

2.6.2. Agriopale Services local-scale meeting

2.6.2.1. General data of the meeting

Date: 03/06/2016 and 20/06/2016

Auditor's data:

Name: Cyril FLAMIN Organization : Coopénergie

Place: phone interview and office of AGRIOPALE services in 8 chemin Bouvelet 62780 CUCQ

2.6.2.2. Attendants

2 persons participated in this meeting.

2.6.2.3. Summary of the meeting

According to the information received during the meeting, 40 000 tons of green waste may be valorized per year (ligneous material).

This material is between 30 % and 40 % of moisture content.

Find between 3 000 tons and 6 000 tons of wood waste would not be a problem.

Agriopale can deliver biomass directly on the Attin site (site of Tereos)

Contracts can be done for 5 years depending on quantity, quality. Price would be fixed by indexation.

The price would be 30 – 35 € (ex-factory price) with 50 % moisture content.

This small wood is rich in minerals elements.

2.6.3. OPALIN local-scale meeting

2.6.3.1. General data of the meeting

Date: 20/06/2016

Auditor's data:

Name: Cyril FLAMIN Organization : Coopénergie

Place: office of OPALIN in route nationale 62270 LE PARCQ

2.6.3.2. Attendants

2 persons participated in this meeting.

2.6.3.3. Summary of the meeting

OPALIN is a flax producer. Process produce by-products (linen shives) which could be used as fuel.

Annual production of 8 000 tons of shives. $\frac{1}{4}$ of this production can be dedicated to the Tereos supply (2 000 tons).

The product is very dry (less than 10 % moisture content).

The price is 60 € / t (price ex-factory).

Contract for 3 years with fixed price + indexation.

2.6.4. Scierie LAFONTE local-scale meeting

2.6.4.1. General data of the meeting

Date: 31/05/2016

Auditor's data:

Name: Cyril FLAMIN Organization : Coopénergie

Place: phone interview

2.6.4.2. Attendants

2 persons participated in this meeting.

2.6.4.3. Summary of the meeting

This company is producing wood residues from its main activities.

It can sell short wood shavings and bundle from waste from the sawmill (2 m to 2,5 m length – 2m³ per bale).

2.6.5. ORIACOOP local-scale meeting

2.6.5.1. General data of the meeting

Date: 27/06/2016

Auditor's data:

Name: Cyril FLAMIN Organization : Coopénergie

Place: phone interview

2.6.5.2. Attendants

2 persons participated in this meeting.

2.6.5.3. Summary of the meeting

Oriacoop is a rape trituration industry, working 24h / 24h, 7 day per week.

This company is producing 180 t of rape cake per week, 8 to 9 % of moisture content with 12 % of oil, 30 % of proetins and 6-7 % of mineral matter.

The market price is around 250 – 260 € ex factory but this market' prices are very variable (280 € the day when Cyril Flamin called Oriacoop).

Sunflower seed trituration is in development. Cake is richer in oil (14 %) with a lower moisture content 9,5 to 11,5 %) but with less proetis (22 to 23 %).

The price is around 190 € / t (20€ more than the price of cake from Rouen)

Cake are deliver in pellets format. The transporting cost is around 10 € / t.

2.6.6. Maison du bois de Aulchy Lès Hesdin local-scale meeting

2.6.6.1. General data of the meeting

Date: 31/05/2016

Auditor's data:

Name: Cyril FLAMIN Organization : Coopénergie

Place: phone interview

2.6.6.2. Attendants

2 persons participated in this meeting.

2.6.6.3. Summary of the meeting

They are using wood from forest, bocage and municipalities as short circuit (less than 50 km from any boiler).

They are working on small projects, from agriculture or municipalities, small or medium power (20 kW to 500 kW).

They as not producing pellets and they are not planning to produce some. This is not in the local biomass energy plan (sector contract Forest-Wood).

2.7. UCAC

2.7.1. Albedo local-scale meeting

2.7.1.1. General data of the meeting

Date: 29/09/16

Auditor's data:

Name: Cyril FLAMIN Organization : Coopénergie

Place: The meeting was done during the days of ecotechnologies in Normandie.

2.7.1.2. Attendants

2 external persons participated in this meeting.

2.7.1.3. Summary of the meeting

Albedo is an engineering office working on assistance with construction work for the tertiary sector and multi-dwelling. They realize thermic analysis, heating study, high environmental quality audits etc.

This company already propose agricultural biomass in its projects depending on the needs and the available resources in the area.

Nevertheless, they did not know the possibility to use agricultural residues as solid biomass before this meeting. They were only working with miscanthus projects.

The main problem for them is the storage places which are missing in the territory.

Moreover, they cannot use agricultural biomass since it is not use in specific software used by engineering or architectural offices.

2.7.2. Certam local-scale meeting

2.7.2.1. General data of the meeting

Date: 29/09/16

Auditor's data:

Name: Cyril FLAMIN Organization : Coopénergie

Place: The meeting was done during the days of ecotechnologies in Normandie.

2.7.2.2. Attendants

2 external persons participated in this meeting.

2.7.2.3. Summary of the meeting

CERTAM is a center of research in aero thermic an engineering.

They already tried to work on solid biomass for energy, mainly for combustion. They realize some measurement on particle emission during these tests. They had some issues with the NOx and SOx emissions etc.

They thus discussed of technical aspect and about their respective experiences on biomass combustion.

2.7.3. Valbae local-scale meeting

2.7.3.1. General data of the meeting

Date: 29/09/16

Auditor's data:

Name: Cyril FLAMIN Organization : Coop nergie

Place: The meeting was done during the days of ecotechnologies in Normandie.

2.7.3.2. Attendants

2 persons participated in this meeting.

2.7.3.3. Summary of the meeting

VALBAE is a company specialized in additives for solid biomass in order to improve the environmental balance of emissions, directly on coal or mix of agricultural raw materials (only or with petroleum residues).

This company is interested in the project but the problem is that pellets are very expensive. The use of loose biomass would be more interested for industrial stakeholders, with a mix of cool.

With their additive, they can reduce SOX and NOX emission and increase de ash softening temperature.

In any case, they will support the project as this is a really good opportunity for the agricultural sector to diversify its activities.

2.8. Noriap

2.8.1. Noveatech local-scale meeting

2.8.1.1. General data of the meeting

Date: 29/09/16

Auditor's data:

Name: Cyril FLAMIN Organization : Coop nergie

Place: The meeting was done during the days of ecotechnologies in Normandie.

2.8.1.2. Attendants

2 persons participated in this meeting.

2.8.1.3. Summary of the meeting

NOVEATECH is an association which develops innovative projects with biomass for chemistry, energy and material.

They already worked with the UCDV cooperative who tried to develop an agropellets activities from Miscanthys but did not find any market.

There is two main actors to be contacted in Normandie to develop the sector: biocombustible SA and the biomass energy association but it will not be easy as there is quite no market and the competition with wood is very strong in the area.

Moreover, boilers cannot have local aids if they use agricultural biomass in Normandy.

2.8.2. Energie Normandie local-scale meeting

2.8.2.1. General data of the meeting

Date: 29/09/16

Auditor's data:

Name: Cyril FLAMIN Organization : Coop nergie

Place: The meeting was done during the days of ecotechnologies in Normandie.

2.8.2.2. Attendants

2 persons participated in this meeting.

2.8.2.3. Summary of the meeting

Energie Normandie is an Association in Normandie working on the energy sector (with EDF, TOTAL, EXXON, ENGIE, small supply companies, producers and territories).

Its aim is to answer different issues on jobs creation, training, energy knowledge and sustainable energy sector structuration (wind, solar and gas energy) and on energy efficiency.

They work with Noveatech on the agricultural sector and support collectivities.

They are interested in follow the results of the project in Normandy.

2.9. SOAL – Sud Ouest Aliment

2.9.1. Scierie Labadie (Labadie sawmill) local-scale meeting

2.9.1.1. General data of the meeting

Date: 15/02/15

Auditor's data: Jérémie Descours, Services Coop de France

Place: Roquefort

2.9.1.2. Attendants

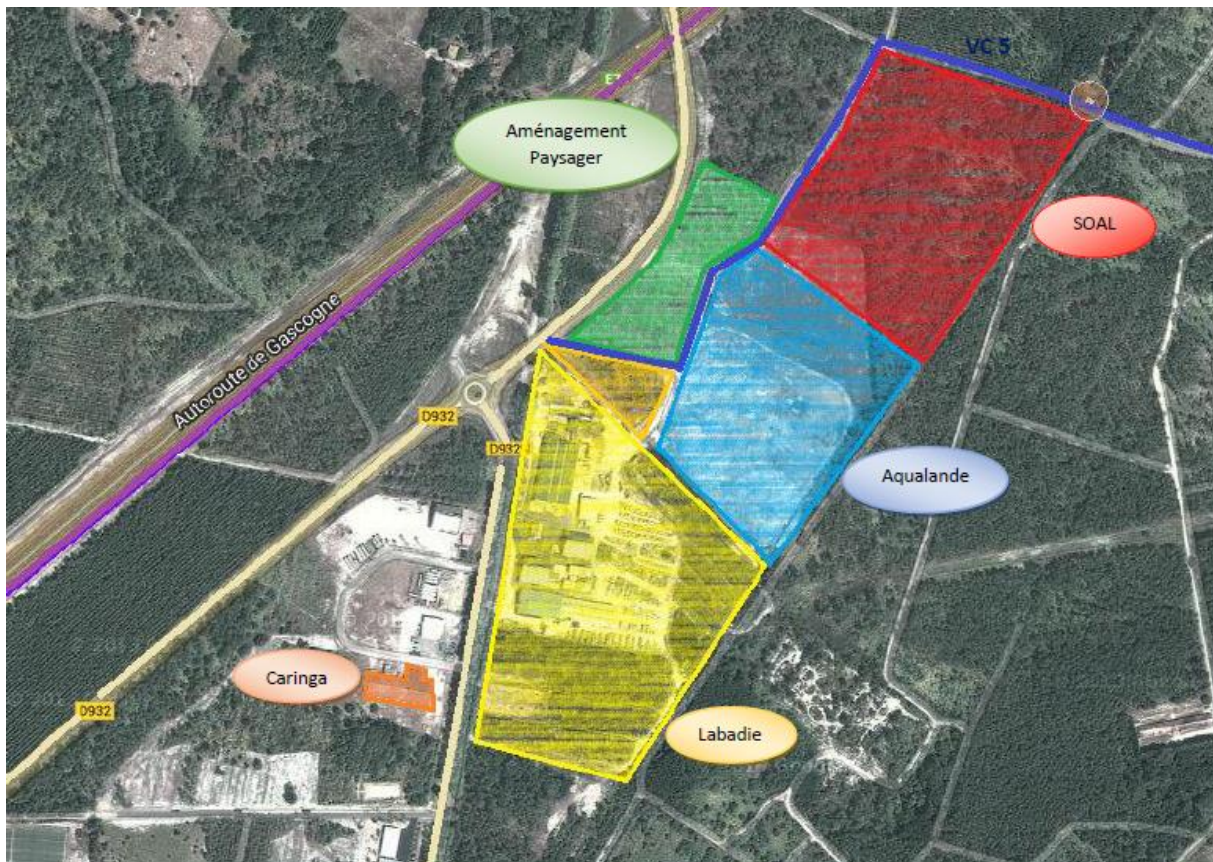
2 external persons attended this meeting.

2.9.1.3. Summary of the meeting

The aim of this meeting was the integration of the Labadie sawmill in the global energy project of Sud Ouest Aliment. Representative from Services Coop de France did a first visit on site to analyze available equipment and resources. The SUCELLOG concept is a cornerstone of this global energy improvement on the Roquefort site of SOAL.



The SOAL site is producing food pellets for fishes (around 1 000 tons) and consumes steam, using natural gas. The site can thus produce pellets for energy during a part of the year. Very closed to this SOAL site, a sawmill can supply wood for the project (see map below).



The Labadie sawmill would like to begin a sustainable development projects. They are producing 12 000 tons of wood chips to produce paper (65€/t) and sell 6 000 tons of bark at 55€/t. They also produce 500 tons of dust and are thinking in producing

pellets or briquettes. That is why a partnership can be probably be built between the cooperative and the sawmill. This data is integrated in the audit.

2.9.2. France Biomass local-scale meeting

2.9.2.1. General data of the meeting

Date: 23/03/16

Auditor's data: Camille Poutrin, Jérémie Descours, Services Coop de France

Place: Services Coop de France office

2.9.2.2. Attendants

3 persons participated in this meeting.

2.9.2.3. Summary of the meeting

France biomass is mainly working with wood. They are installing entire pelletizing lines. We exchanged about the requirement specifications when building to be able to install the pelletising line.

For a 25 000 tons production per year, 3,5 million euros have to be invested. They can propose from 500 kg to 5 000 kg per hour of flow.

The aim of this meeting was to analyse the cost of a production line for pellets for cooperatives interesting in investing in a new line, mainly Sud Ouest Aliment. We thus mainly exchanged on technical aspects and price.

We also get information documents from this company to communicate with interested cooperatives.

2.9.3. Locogen local-scale meeting

2.9.3.1. General data of the meeting

Date: 29.02.16

Auditor's data: Camille Poutrin, Jérémie Descours, Services Coop de France

Place: Services Coop de France office

2.9.3.2. Attendants

3 persons participated in this meeting.

2.9.3.3. Summary of the meeting

Locogen is a company based in Edinbourg in Scotland, working mainly with wind solutions for energy. The aim of this meeting was to analyse the different possibility of sustainable energy on one cooperative site for a global solution analysis as Sud Ouest Aliment is planning to perform.

This company has reference on 40 to 50 projects and can propose, for wind, a 10 MW production for 15 M€ production and 300 000 euros of revenues per year. They are also working on solar solution.

Services Coop de France is studying the feasibility of an energy positive site, for with solar panel, wind mill and biomass. These 3 solutions have to be analysed together.

The most interesting synergies are with the solar energy, integrated solar panel in a biomass production site. The dust production has to be analysed in this case

2.9.4. ADEME Bordeaux local-scale meeting

2.9.4.1. General data of the meeting

Date: 22 June 2016

Auditor's data: Marine Leblanc, UCFF

Place: Phone

2.9.4.2. Attendants

Two persons participated in this meeting.

2.9.4.3. Summary of the meeting

The ADEME does not have a clear position about agropellets, which is quite an unknown product. It represents a new issue, born few years ago.

Some studies were realised to study the use of prunings and wood stocks and vine marc with stems and seeds. Studies were also realized for the formulation of agropellets but without real impact / development after that.

A multifuel boiler can be paid by the Head fund of the ADEME.

Nevertheless, methanation is in development and biomass stakeholders are mainly working on this topic.

2.9.5. SER local-scale meeting

2.9.5.1. General data of the meeting

Date: 26 October 2016

Auditor's data: Marine Leblanc, UCFF

Place: Phone

2.9.5.2. Attendants

2 persons participated in this meeting.

2.9.5.3. Summary of the meeting

No a real vision of the agropellets product.

She does not have any information about the use of agropellets.

Before having a real position about agricultural biomass, more information has to be accessible:

- Which role the agropellets can play in the energy mix?
- What is the current production in France?

Members of the SER (syndicate of sustainable energy) are interested in having this information.

2.10. Durepaire

2.10.1. Européenne de biomasse local-scale meeting

2.10.1.1. General data of the meeting

Date: 5/12/14

Auditor's data: Camille Poutrin, Jérémie Descours

Place: Pollutech conference

2.10.1.2. Attendants

3 persons participated in this meeting.

2.10.1.3. Summary of the meeting

The aim of this meeting was better understanding the Européenne de biomasse activity and how they can integrate the SUCELLOG project, supporting cooperatives involved.

The meeting took place in the Pollutech conference in Lyon, in the Européenne de biomasse stand.

Européenne de biomasse presented its activities: its pellets produced from agricultural biomass raw materials mixed with coal, some cooperatives which used to work with them and their production sites.

They are looking for some sites to produce pellets.

Finally, they already worked with cooperatives which were not satisfy on their cooperation. There were thus not included in the SUCELLOG project.

2.10.2. ADEME Poitou Charentes local-scale meeting

2.10.2.1. General data of the meeting

Date: 20 June 2016

Auditor's data: Marine Leblanc, UCFF

Place: Phone

2.10.2.2. Attendants

2 people participated in this meeting.

2.10.2.3. Summary of the meeting

The person encountered during the meeting is responsible on Positive energy territories.

Positive energy territories are working only with wood.

This can be see for example in several association of municipalities: communauté du Thouarsais or communauté d'agglomération d'Angoulême who are using bocage wood.

Many studies are done on available resources, trying to analyse the best use of wood to develop the conception.

There is no project mobilizing agricultural biomass identified in contracts done with the ADEME to develop sustainable energy.

Positive energy territories should be contacted directly.

2.10.3. Ganulaquitaine local-scale meeting

2.10.3.1. General data of the meeting

Date: 20 June 2016

Auditor's data: Marine Leblanc, UCFF

Place: Phone

2.10.3.2. Attendants

Two people participated in this meeting.

2.10.3.3. Summary of the meeting

The company is sited in Gironde

This company does not know very well the agropellets product. It does not have any demand for this project and neither for associated business. Wood pellets are the most important demand for the moment.

Its mains consumers are households.

Brand Edilkamin (Italy): multifuel boilers arrived on the market this year (used with olives pits and nut shells). Granulaquitaine sends particularly this brand.

2.10.4. WEISS local-scale meeting

2.10.4.1. General data of the meeting

Date: 21 November 2016

Auditor's data: Marine Leblanc, UCFF

Place: Phone

2.10.4.2. Attendants

2 persons participated in this meeting.

2.10.4.3. Summary of the meeting

This boiler maker does not have any experience about agropellets but is watching the experiences of its competitors realised on straw or other residues. There is a risk of damage when using this type of fuel on households' stoves (too thin, too dry).

He agrees with the fact that targeting boilers are the industrial ones for this type of product. He then asked for targeted consumers of SUCELLOG (product, performance, volume). He was very interested in the experience in other countries (performance of residues used).

The WEISS R & D department is working on a concept of a fluidized bed boiler (polybiom) and has interest in B to B exchanges.