



# GATE 1 - DRAFT FID NECC

01-03-2022

# Agenda

1. Executive summary
2. Project overview
3. Financials
4. Financing
5. Legal
6. Appendices





# Executive summary

NECC

## NECC

### Introduction

A green field project initiated in France with a group of 9 farmers. Our partner the Cooperative Dijon Cereales, will not be part of the shareholders but will be in charge of the Agricole supply chain (from fields to AD Plant). Dijon Cereales is also in charge of the digestates valorization chain. The cooperative EMC2 will have the same position than Dijon Cereales (even if this coop joined the project at a later stage)

The 9 farmers expect to be co-shareholders, 49% of the shares, in the project.

NE can expect that the financing of the project could be executed by Crédit Agricole & Unifergie after a necessary Due Diligence process.

The environmental permit has already been launched and the Permit to build requires some engineering resources to be completed.

### Plant and biomasses

The biomasses will be delivered by different sources : farmers's group, Dijon Cereales, EMC2 and potentially some additional suppliers (borkers of established feedstock suppliers). The biomasses are crops and residues from agriculture sector, no livestock manure is expected to be fed in the plant.

The anaerobic digestion plant is based on standard components already deployed on NE's facilities. The Gas Upgrading is a Pressure Swing Absorption type (PSA) coupled with a de-oxyder system to reach the oxygen level in the grid. The digestate will be valorized as a "raw" digestate.

### Strategic rationale

Attractive subsidy regime - Subsidies are offered at 1.01 EUR/m<sup>3</sup> of bio methane, which is roughly 23% higher than the average price in Denmark.

The certificates generated by the project are not pre-empted by the State since we still get benefits of the old subsidies' regime. It offers the possibility to generate an extra revenue stream.

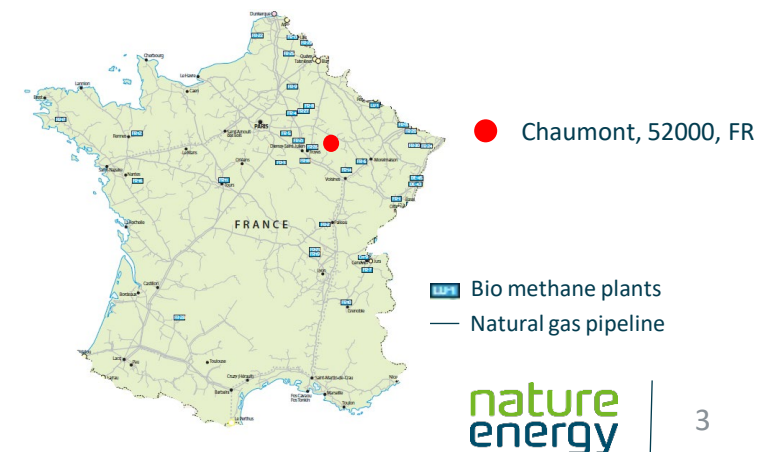
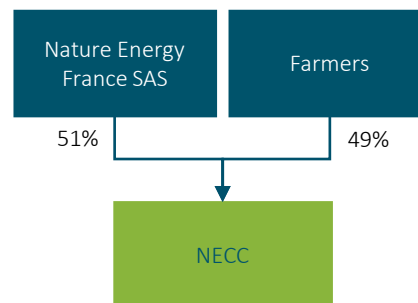
## Preliminary key figures

### Base case

CAPEX ['000 EUR / '000 DKK]	49,500 / 368,775
Production [m m <sup>3</sup> ]	14.1
Production [MWh]	152,546
EBITDA ['000 EUR]	9,873
Unlevered project IRR [40 years] <sup>1</sup>	10.6%
Gross equity IRR [40 years] <sup>1</sup>	17.5%

<sup>1</sup> Excluding EPC profit.

## Current ownership and location





## Partner 1 – Farmers (shareholders)

**9 farmers at the origin of the project:** Local farmers used to work together

- Agrifyl's : Thierry, Vincent, Paul-Henry LAHAYE ; Jérôme YUNG ; Jérôme FERRAND
  - Skills and recognized experience though their biogas plant in Chaumont (200 nm<sup>3</sup>/hr)
  - Skills and experience on intermediate crops production
  - Skills in digestate spreading organization and use
- GIE Mennouroche : Alan, Florent RENARD ; Walter, Jean Paul KIHM
  - Created and exploited by AgroKMR for 14 years
  - 20000ha farm in Ukraine
  - Recognized skill on big farm business

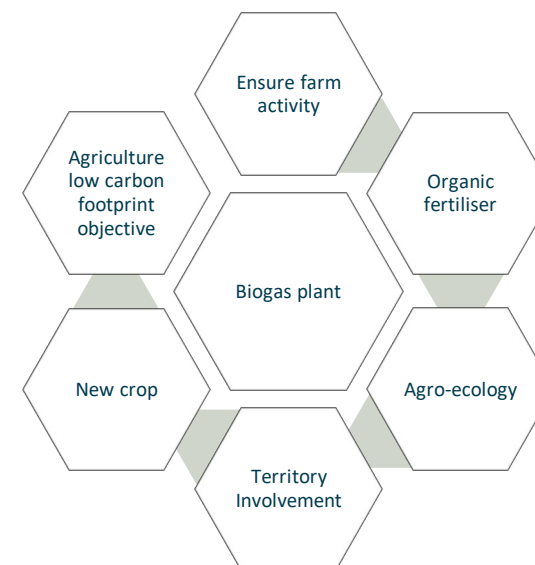


**Through their visit end of 2018, this group understood advantages to co-develop a project with Nature Energy**

## Partner 1 (bis) – New group of farmers

**5-10 farmers located West of Chaumont (Aube department limit),**

- Contact made mid 2021 when their own project became not feasible : problem on land
- Can supply intermediate crops (15-25000 T) if shareholders of NECC with attractive/acceptable BC
- Presentation of BC important for biomass securization





## Partner 2– Dijon Cereales – Commercial partner

### Introduction

Dijon Cereales is part of Alliance, a French cooperative based in eastern part of France, founded in 2018. Alliance consist of three cooperatives, where Dijons Céréales is the largest.

It is a combined cooperative with more than 3,800 farmers as members and 620 employees.

Dijon Céréales, cooperative's main businesses are:

- Cereal collection [937k tons]
- Merchandising
- Fertilizers
- Crops medicine
- Seeds, onions and vegetables
- Animal food
- Equipment

In the NECC project, DIJON CEREALLES will mobilize some of its core businesses :

- Crops production including R&D for its farmers
- Experience and skills linked to Chatillon project

## Key financial figures (2019)

Key figures	mEUR
Annual Turnover	331
Consolidated Turnover	446
Net Result	2.2



## Partner 3 – EMC2 – Commercial Partner

### Introduction

EMC2 is a French cooperative based in eastern part of France. EMC2 is the 15<sup>th</sup> largest cooperative in France

It is a single cooperative with more than 3000 farmers as members and 378 employees. EMC2 group counts 693 employees

EMC2, cooperative's main businesses are:

- Cereal collection [920k tons]
- Merchandising
- Fertilizers
- Crops medicine
- Milk collection
- Animal food
- Equipment
- Biogas
  - 2 biogas plants built (Landres and Villers-La-Montagne)
  - 40 farmers involved
  - 7 biogas plants in project

### President of the cooperative Phillipe Mangin:

- Mister Mangin is a farmer himself : 250 ha (wheat, barley, rapeseed, potatoes, etc...)
- **Deputy president of Grand Est Region Council**
- **President of Invivo (group of 192 cooperatives)**

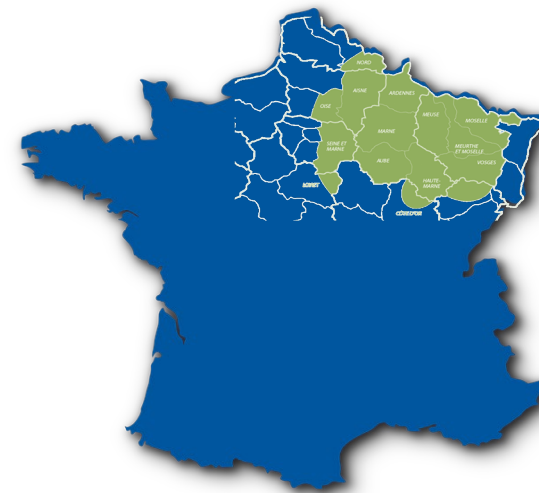
In the NECC project, EMC2 will mobilize some of its core businesses :

- Crops production including R&D

## Key financial figures

Key figures (EMC2 group)	mEUR
Annual Turnover	559
Equity	127
Net Result	7,4

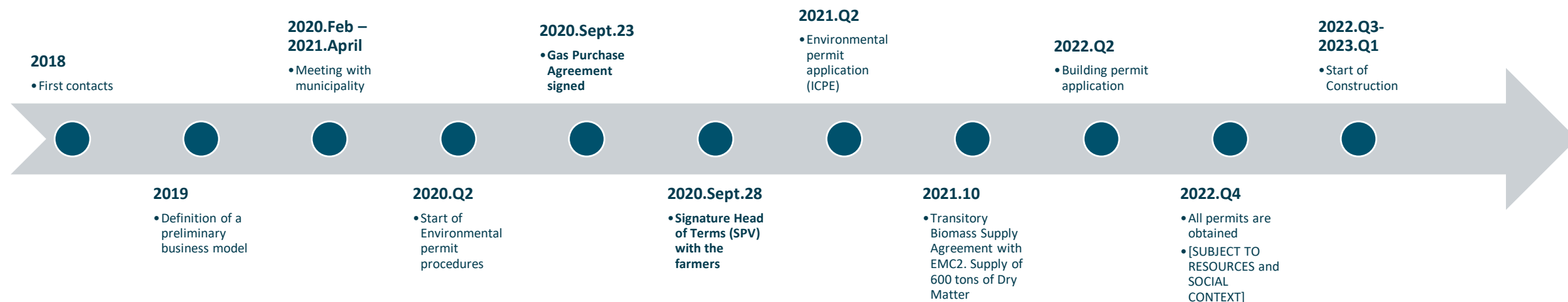
## Current location





# Project History

NECC



## Project development - Status

- Project initiated in 2018 and contacts made through Dijon Céréales. The original partners team (9 farmers) wanted to develop a project they would not have to operate. The initial size was only about 60000 T that we gradually increased to reach a possible Business case for Nature Energy. The level of CAPEX reached end of 2020 beginning 2021 compared to previous calculation made the project not profitable. This slowed everything down on project development.
- Our partner cooperatives went through the area and advised that it is not possible at this stage to secure more biomass on intermediate crops ; All parties on the agricultural network agree that intermediate crops contract will be possible again once construction/operation are initiated.
- The long development phase combined with the permits procedure (especially around spreading permit) is a challenge to keep farmers interested in the project; partners pushed for crops to be seeded in 2021 for harvest in 2022:
  - 1100 to 1200 T DM contracted by DC (no signed contract between NECC and DC)
  - 600 T contracted by EMC2 (signed contract between NECC and EMC2)

	GPA	SPV HoT	SHA	SLA	IVA	LAND PURCHASE OPTION	BIOMASS SUPPLY AGREEMENT	OTHER AGREEMENT (S)	GAS TO GRID SIGNATURE
Agrifyl (NECC)			 To be negotiated	 To be negotiated	 To be negotiated		 TERM SHEET AND CONTRACT UNDER PREPARATION	N.A	<b>Q2</b> 2022
Comment	No negotiations with the partners since September 2020.								

## GAS GRID CONNECTION

- In July 2020, a new feasibility was initiated for 2300 nm<sup>3</sup>/hr and completed in November 2020. New application was logged but not granted as new tariff appeared on 23/11/20 => Gas Grid can support 2300 nm<sup>3</sup>/hr (probably less in summer)

## GPA

- SECURED
- Signed on the 7.sept.2021 : adjusted to 1360 nm<sup>3</sup>/hr and selected BUP (originally on Amine)
- Period of 36 months
- Duration 15 years
- Annual max. production : 128,628,888kWh
- Type of Biomasses declared :
  - Intermediate crops
  - Cereal waste and straw chaff
  - Plants co-products

## LAND PURCHASE AGREEMENT

- Signed on the 14<sup>th</sup> October 2020
- Surface of 12,10 Ha
- Price of 235.000EUR.
- Gas grid [transport] available on the plot
- Distance from the nearest house : 530 m
- Suspensive conditions of purchase agreement,:
  - Non-obtention Environmental and building permits
  - No FID with IRR 18 %
  - Loan on 18<sup>th</sup> years min and 2,5 %interest max
  - Time Limit : 31-12-2025



# Stakeholders Management

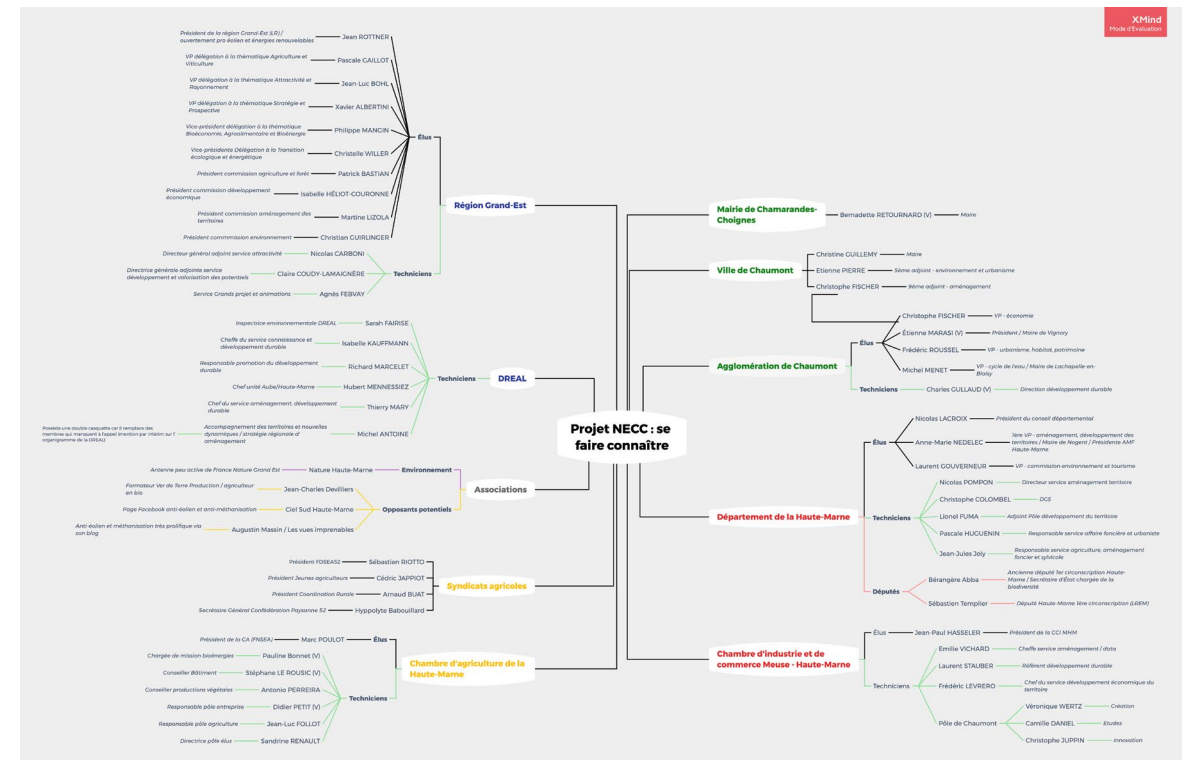
NECC

## Status

- Project initiated during the COVID-19, many meetings were postponed or canceled due to the sanitary context in 2020 and 2021 especially with the Communauté de Communes. Despite this context, stakeholders management was articulated around 3 axes:
  - Territorial diagnostic (TACT); Autumn 2020
    - Mayor of Chamarandes-Choignes :Bernadette Retournard
    - Vice-president of Communauté de Communes : Etienne Marasi
    - Agriculture chamber : Didier Petit, Pauline Bonnet
  - individual meetings;
    - Council of Chamarandes Choignes (January 20 and April 21)
    - 2 vice president of Communauté de Communes ; Marasi and Roussel (June 21)
  - Local farmers:
    - 2 public meetings (February 2020 and December 21)
    - 1 crop platform at the future biogas plant site (Sept 20)
    - Individual meetings with farmers through the cooperative partners (DC and EMC2)
- On a general note, project is quite well accepted but the level of knowledge around the project needs improvement. We have support from the mayor of Chamarandes-Choignes and Vice president for sustainable development of Communauté de Communes : Etienne Marasi
- Our partner famers (especially T. Lahaye) are quite well established in the politic community of Chaumont
- Connections are already in place with other industrials operating in the area; for e.g. Carrière Boureau
- NE's shareholder partners (9 farmers) create jealousy as they became the biggest farmers in the area. The Cooperatives indicated that some farmers don't want to engage biomass in the contract because of this element.

## Next steps

- Improve awareness of the project:
  - Meetings with Communauté de Communes and Mairie de Chaumont
  - Meetings with local deputies, department and region
- Prepare for public hearing
- Finalize the water connection construction contract (offre de concours)





# Executive summary

NECC

## CONTEXT

*Describe the situation and context*

- Environmental permit is fixed for 120,000 T of biomass split in 2 categories:
  - Intermediate crops
  - Co-products and waste from transformation of plants
- Current biomass secured by partners:
  - 25000 T by partners
  - 17000 T by Dijon Cereals
  - 10000 T by EMC2
  - 5000 T of barley grain and cereal waste (by DC and EMC2)
- Current GPA is 12 M / year
- Max flow to be injected into Grid evaluated by GRT to be 2300 nm3/h depending on season ≠ from GPA (1360 nm3/hr) max
- Plot Located in Agricultural area

## CHALLENGE

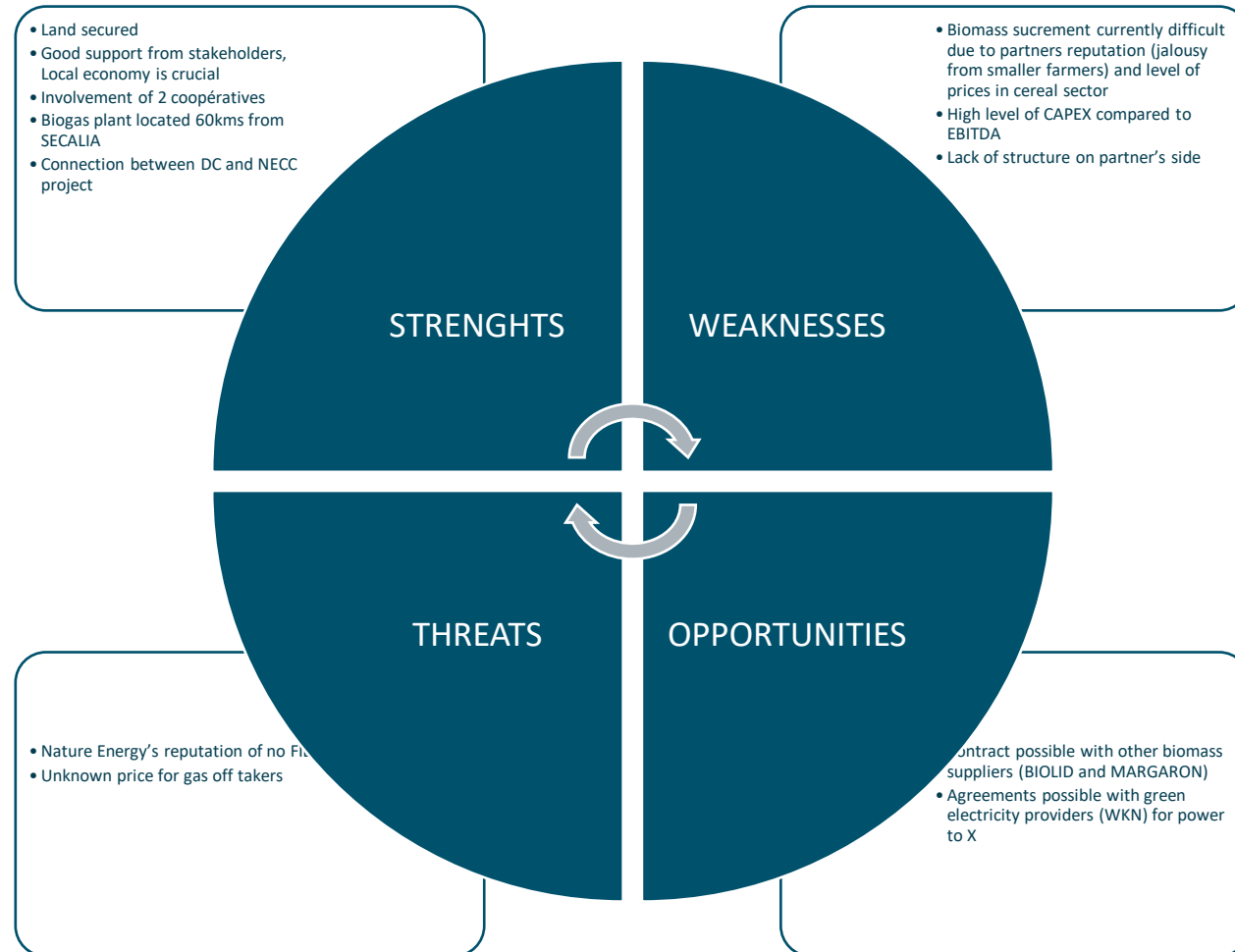
*Describe why action is required*

- Not possible to increase this total amount has spreading permit is currently not capable to take in more digestate
- **Not possible** to accept high quantity of dusty biomass in current design (to low biomass for high capex)
- **Possible** to secure another 20,000 T of crops with another farmer's group (Aube-Partner 1 bis) depending on BC as they would like to be shareholders
- Discussions onjoning to secure more biomass with dealers : BIOLIDE, MARGARON
- IRR with base case evaluated at 10,6 % only
- Access to water connection (since in agriculture area)
- NECC's majority owns by NE : issue for authorities

## RECOMMENDATION

*Required action/recommendation*

- Increase spreading permit and intake biomass in phase 2
- Find the better mix of biomass for gas yield of biogas plant with procurement department depending on permit possibility:
  - Organic digestate
  - By-products amount
- Show plant's possibilities and evolution
- Legal support with LPA (already initiated)



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# Scenarios : base case to high case (3 phases)

## 1. Low case (12 M)

- GPA is limited to 12mio.Nm<sup>3</sup>CH<sub>4</sub>/y
- Max. 120.000 tons (current Limitations being spreading permit capacity)
- No crane building
- CAPEX = 53,070 k€

## 2. Base case (14 M)

- GPA + 2 mio.Nm<sup>3</sup>CH<sub>4</sub>/y (Gas to market) ; Max of BUP and digester line
  - Find the best mix of external biomass to reach 14 M
- Permit from 120.000 tons to 135.000 tons
  - Requires increase spreading permit or digestate accreditation
- Crane Building but no dusty line
- CAPEX = 55,300 k€

## 3. High case (20 M)

- Max for Gas Grid = 2.300Nm<sup>3</sup>/h max. (=20mio.Nm<sup>3</sup>CH<sub>4</sub>/y)
  - -> 45.000€ included from 12.0mio.
  - -> Need for an increase also of the GasUpgrading
- 1 extra piece 9500m<sup>3</sup> Primary Digester
- **Require to buy extra piece of land -> +2.0Ha**
- Requires to increase permit IPCE (current max. 120.000tpy WW) + Spreading Permit (incl. storage tanks)
  - + 1 Ha. Concrete platform
  - + Solid intake systems (SECALIA incl. tanks)
  - + Dusty biomasses
  - + 1pc. Extra PD
- CAPEX = 58,990 k€



<https://margaron.fr/index.php/produits-pour-la-methanisation>

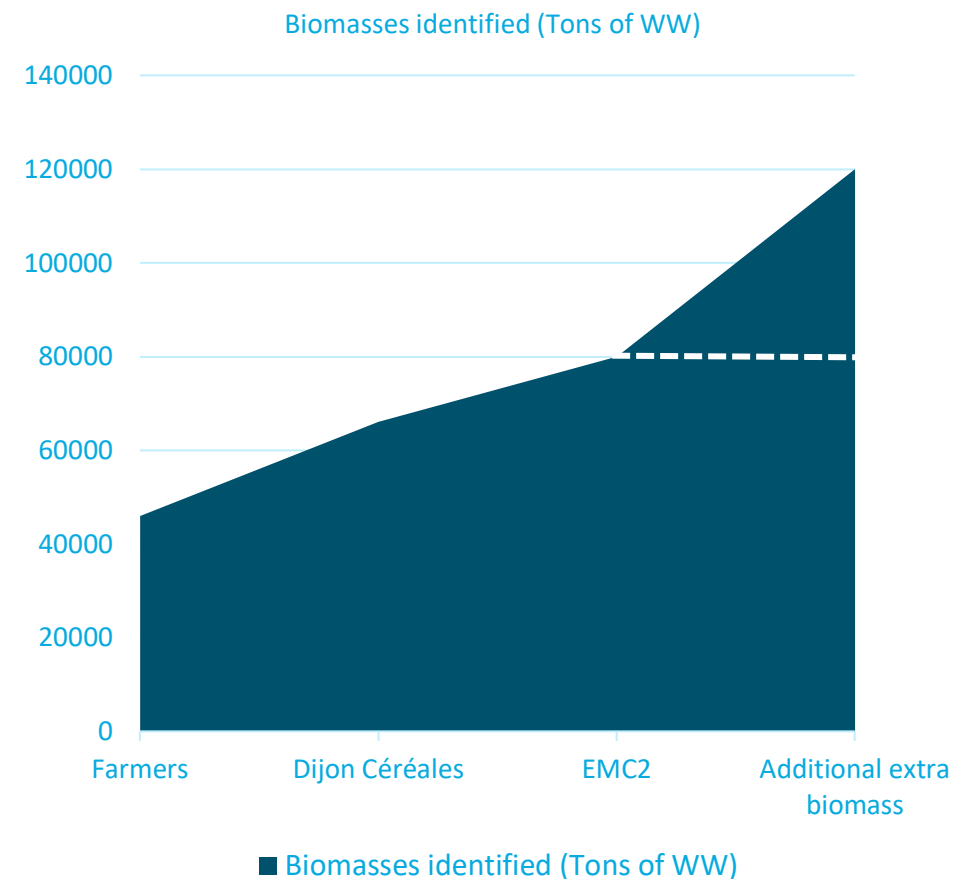
- Company core business: feedstock for agriculture
- Type of biomasses : mainly co-products and other crops and waste
- Type of contract : spot and 1-3 years contract possible
  - No direct talk yet but partners initiated contact. Company interested to supply biomass to us



<https://www.biolid.ch/>

- French and Swiss company; French side made > 5 M turnover
- Type of biomasses ; crops, waste and co-products
- Type of contract : spot but possibility to contract 10-15 kTons for 3-5 years
  - **Contact initiated**

Others : High energy and fats



## Preliminary approach on Biomass opportunities (Low case)

Scenario 1	m3 CH4/FW	m3 CH4/TS	TS	volume/yr	Category	Total gas (FW)	Total gas (TS)	Pris (€)/t
Apple pomace/pulp	90,00	405,00	23%	5000	Solids	450000	2.025.000,00	
Potato pulp (seasonal)	58,00	293,00	21%	5000	Solids	290000	1.465.000,00	15,00
Eaux de cassage	93,45	267,00	35%	1456	Liquids	136063,2	388.752,00	
Corn gluten feed	112,00	307,00	41%	5000	Solids	560000	1.535.000,00	
Lecithine	800,00		99%	360	High Energy	288000		
Food waste	64,00			6000	Liquids	384000		22,00
Non-suited grain	120,00			2000	Solids	240000		
Sugar products	200,00			2000	Liquids/High Energy	400000		
Starch biomasses	250,00			2000	Solids	500000		
Diary industry residues	65,00			3000	Liquids	195000		
			Total	31816		3.443.063,20		

- In order to reach base case :
  - First years with high energy biomass in order to reach 5,8 Millions with 40,000 T
  - **Following years with Hybrid Rye when increased biomass permit capacity is reached (Total of 135,000-140,000 T)**



# Project overview – Biomasses 1/2

NECC

	Cover crops (ensiled rye and alfalfa, rye, clover)	Cereal waste	Spring barley grain	Straw Chaff/chopped
Base Price	EUR 80 / ton of DM not harvested	EUR 50 / ton of DM EXW DIJON CEREALES, price to be discussed with EMC2	Has to be discussed	<ol style="list-style-type: none"><li>1. Feasibility of the sector in the Eastern region has to be studied,</li><li>2. Action plan has been defined,</li><li>3. Feasibility will be known beginning of April 2022,</li></ol>
Price adjustment grid	Price adjustment grid mechanism has been defined but need more result analysis to be set up	NA	Has to be discussed	
Calculation method of the cost between field and biogas plant	Direct cost to NECC	Fixed price	Probably Based on the MATIF	
Cost from the field to the biogas plant	Currently evaluated at 67,4 € with SLA cooperative at 7,5 €/T ( <b>originally at 10 € and will need to be agreed</b> ) and for 70 000 T (harvesting, transport, storage, losses, etc.)	NA	NA	
Biomass Indexation	<ul style="list-style-type: none"><li>- 0% per year for the period of Year 1 (2022) to Year 5,</li><li>- 0.75% of Base Price, for the period from Year 6 to Year 10,</li><li>- 1% of the Base Price, for the period from Year 11 to Year 15.</li></ul>	Not discussed yet with partners	Based on the MATIF	
Duration of the agreement	15 years	15 years	15 years We will buy it only if the price is good for NE	
Quantity [ton per year]	Rye silage : 61,000 Rye (70 to 80 %) + Alfalfa or purple clover silage (20 to 30 %) : 11,000 Alfalfa silage : 5000T	3000	Depending if we have dusty biomass intake line	
Expected quality	DM = 27.9 % and a range between 26.1 and 31.9 % of DM, Minimum DM = 24 %, Maximum DM = 35 %, VS = 93.5 % of DM, Biomass Methane Potential ("BMP") = 365 (in Nm3 CH4/tonne of VS) ; has to be discussed and agreed	Fixed price whatever the quality but has to be discussed	Has to be defined regarding the last analysis results	





# Project overview – Biomasses 2/2

NECC

	Cover crops (ensiled rye and alfalfa, rye, clover)	Cereal waste	Spring barley grain	Straw Chaff/chopped
Storage	For 70000 T of silage, an extra 1,5 ha of decentralized platform needs to be organized	Not possible on site	n/a	Feasibility of the sector in the Burgundy region has to be studied, 2) Action plan has been defined, 3) Feasibility will be known beginning of April 2022
Responsibility	Partners will be obliged to supply the quantity noted above	Partners is obliged to supply the quantity noted above	n/a	
Logistic	NECC has to organized logistic (shareholder partner's role).	DDP NECC	DDP NECC	
Next steps	Pivot values (% of DM, BMP, etc.) have to be verified Price adjustment grid mechanism has been defined but need more result analysis to be set up	NA	Pricing mechanism has to be described precisely	



# Project overview – Digestates 1/2

NECC

	Raw Digestate
Av. price of Fertilizers last 10 years	The average price of the fertilizers for the last 10 years (up to and including June 2021) communicated by DIJON CEREALES: NH4+ = 0,71 EUR/kg, P2O5 = 0,83 EUR/kg, K2O = 0,57 EUR/kg, SO3 = 0,15 EUR/kg, MgO = 0,86 EUR/kg, Humus = 0,11 EUR/kg,
Unit Price (value)	Base price to start the Project: 1. Raw digestate: 8 EUR/tonne + 4 EUR/tonne for spreading
Quality	The concentration of the nutrients and humus will be measured at the outlet of the Biogas Plant. The concentration of the, nutrients will be measured at the outlet of the Plant,
Quantity	Quantity forecasted : Raw digestate: 96,344 ton,
	Real quantity will be determined according to the weigh bridge located at the Biogas Plant.
Price indexation	Will be indexed the same as for the CIVE silage: - 0% per year for the period from Year 1 to Year 5, - 0.75% of Base Price paid per year, for the period from Year 6 to Year 10, - 1% of the Base Price paid per year for the period from Years 11 to Year 15.
Commercial value	The expected digestates revenue is estimated to 0,75 mEUR
Responsibility	Biomass supplier agree to buy digestate back
Transport	Logisitic is performed by NECC



## Plant design

ton / year

*The plant has been designed based on the following biomasses:*

Solid biomass capacity (alfalfa / winter ryegrass)	27,000 / 153,000
Straw wheat chopped	12,960
Spring barley grain	6,480
Water	20,000
<b>Total</b>	<b>219,440</b>

**TO BE UPDATED**

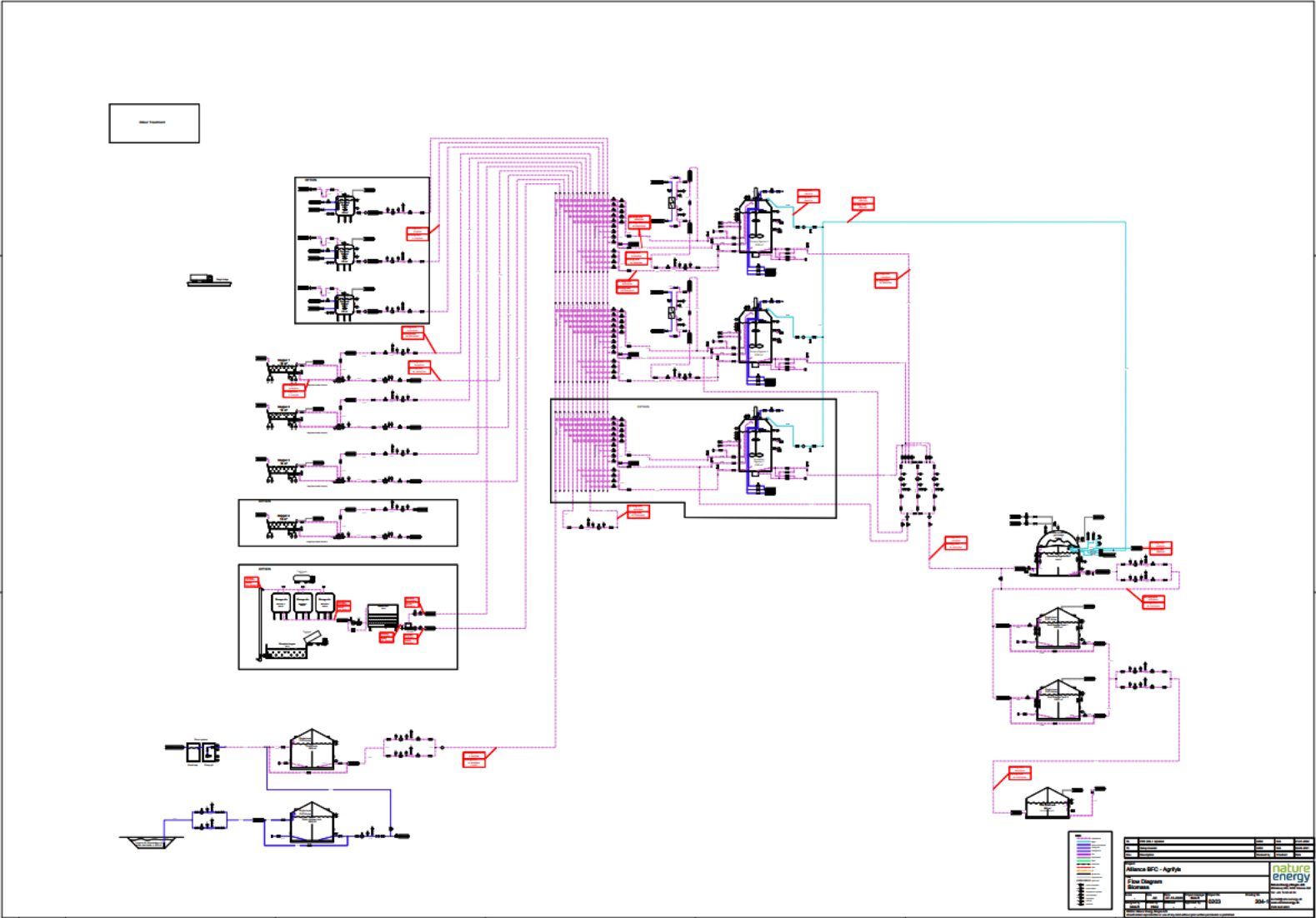
## Main components (Low case and base case)

### Main components

The plant consists of the following main components:

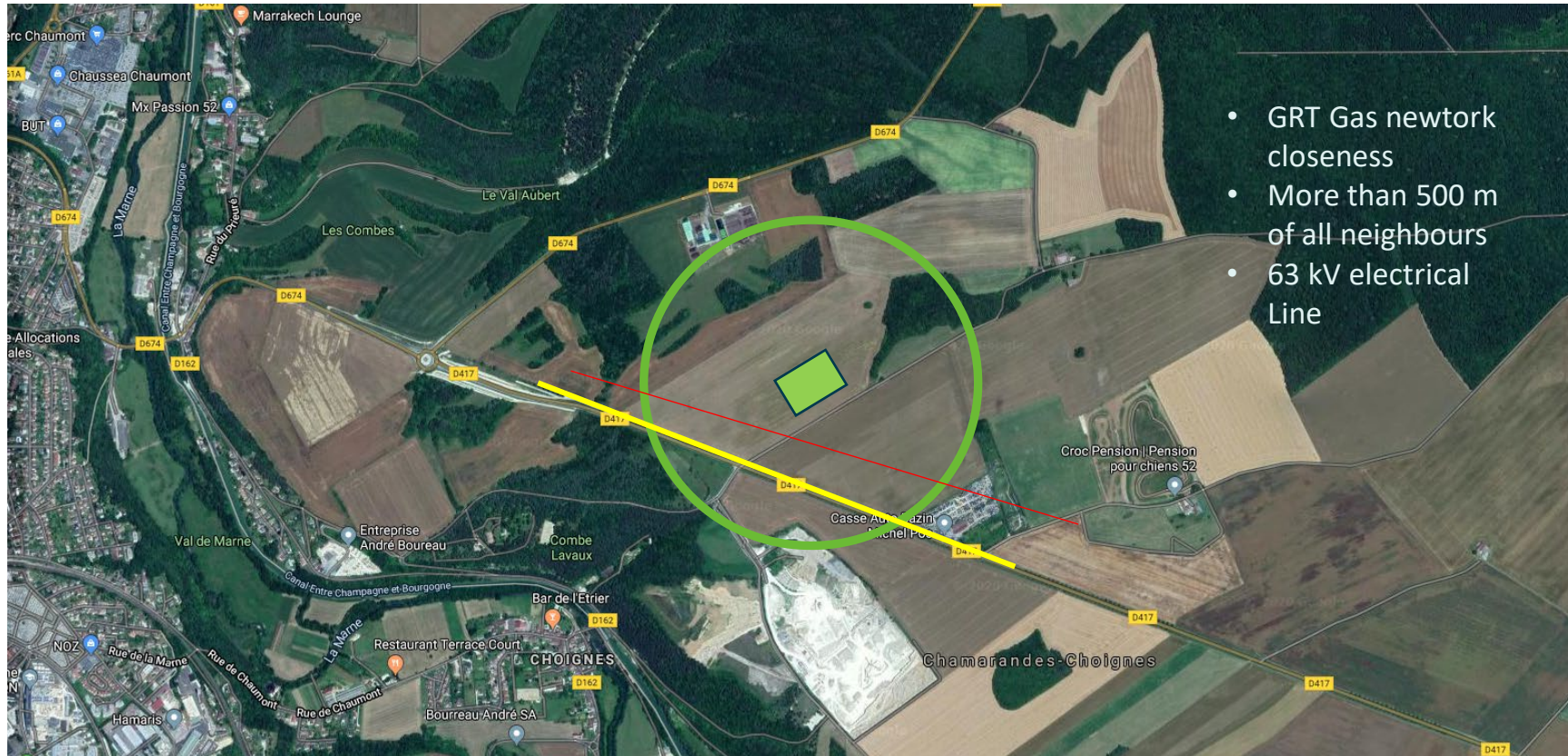
- 3 pcs. Silos each 6,475 m<sup>2</sup>
- 1 pcs. Weight bridge
- 2 pcs. 9,500 m<sup>3</sup> bolted primary digesters
- 1 pc. 6,000 m<sup>3</sup> concrete secondary digester
- 2 pcs. Concrete Storage tanks each 6,000 m<sup>3</sup>
- 1 pc. Concrete Storage tank 3,500 m<sup>3</sup>
- 1 pc. Pre-tank Liquid Storage tank 1000 m<sup>3</sup>
- 3 pc. Big mix 120 m<sup>3</sup> for solid intake/one crane intake building with 3 BVL hoppers
- 1 pc. Biogas cleaner 4,000 Nm<sup>3</sup>/h
- 1 pc. BUP 4,000 Nm<sup>3</sup> biogas/h
- 2 pcs. High pressure compressors (70 bars)
- 1 pcs. Flares
- 1 pc. Boiler and 2 heat pump plant for process heat
- 1 pc. Prefilter and Biofilter to treat air from building, and storage tanks
- 1 pc. Administration building
- 1 pc. Workshop, storage and lab
- Civil works

Flow chart



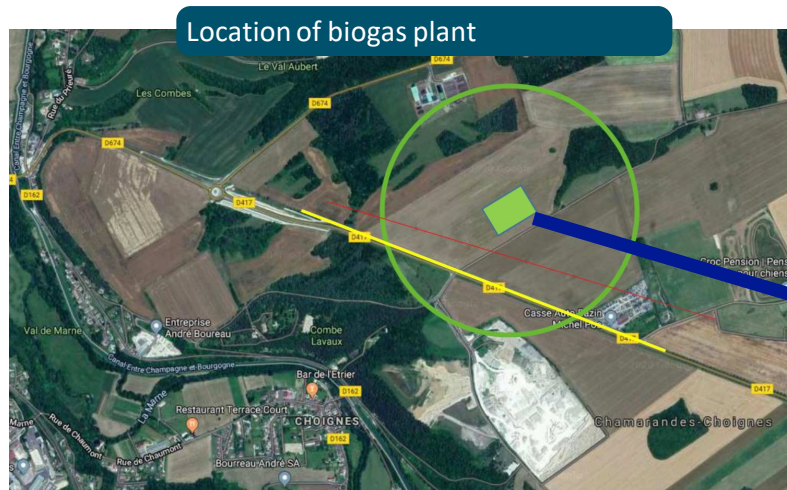
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15	Setup Header	HMU	N/A	04-05-2021
Rev.	Description	Revised by	Checked	Date
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## Plot

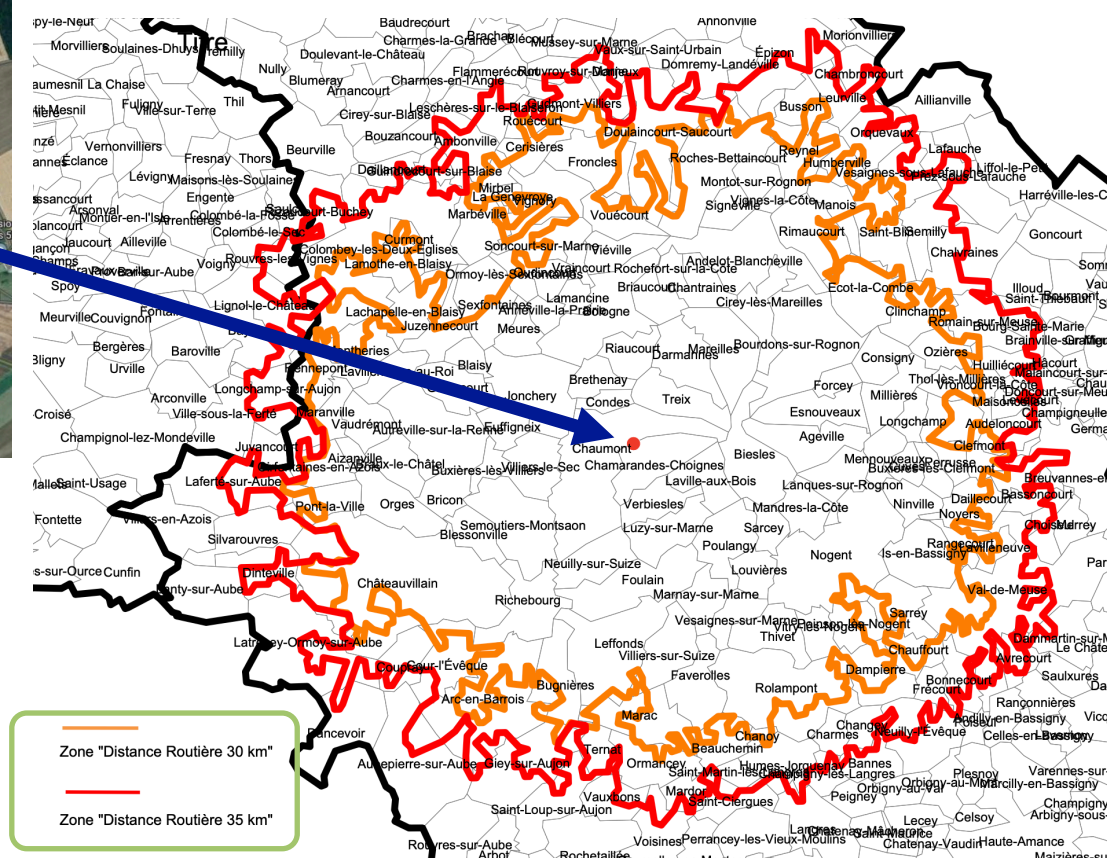




## Plot



### Zone potentielle de collecte de biomasse

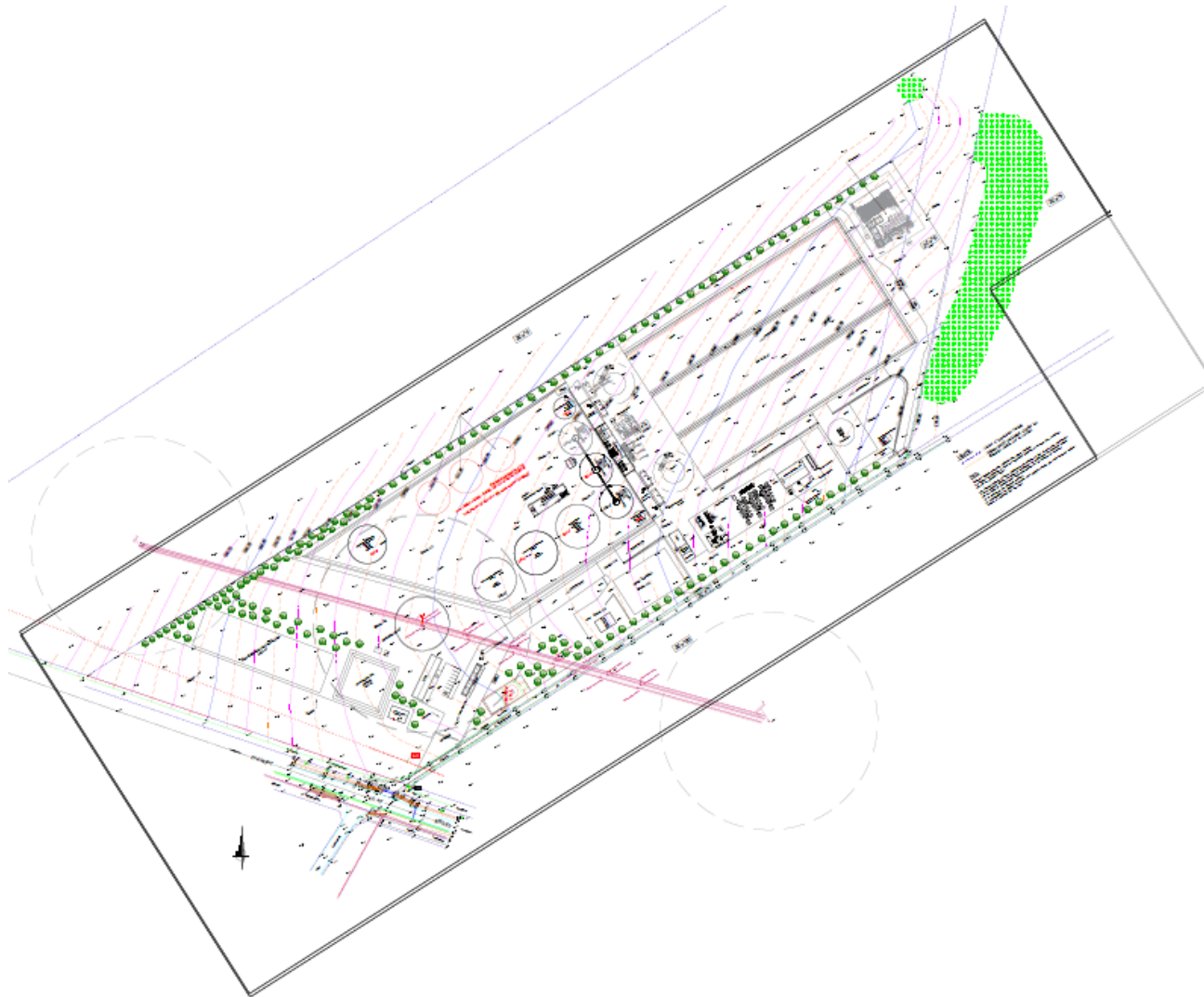




# Project overview – Design

NECC

## Site layout – Last version



V	Redesign	MALR/HML			21.01.2022
Rev.	Description	Revised by	Checked	Date	
<b>Project</b> Agrifyls					
<b>Title</b> Site Layout					 NATURE Energy Biogas A/S (Brøhavevej 260, 5220 Odense Øst) Tel: +45 70 22 40 00 kontakt@natureenergy.dk www.natureenergy.dk CVR 34614091
Scale	Size	Date	Project manager	Project No.	
1:750	A0	14.07.2020	MALR	0203	
Designed by	Drawn by	Checked	Approved by	Drawing No.	
TDJ	TDJ			911-1	
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## Status ICPE

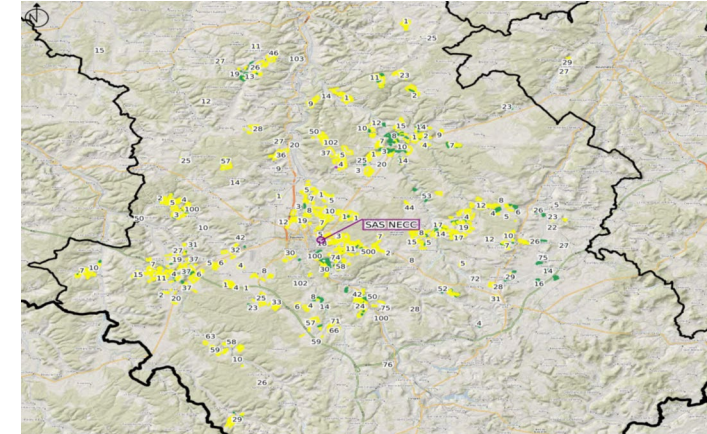
- Faunistic and Floristic study carried out in 2020 and finished in 2021
- 1st application on 30/06/21**
  - 105,000 T of intermediate crops
  - 15,000 T of co-products
- Archeological survey in September 21 => nothing has been found -> Conclusive
- 1st questions received on 18th of January 21:
  - Authority sees NECC as **not** an agricultural company since NE owns majority of shareholder => incompatibility of project and plot classification (agricultural area)
  - Provide area/region of waste intake and more studies on external storages
  - Provide more inputs on biodiversity impact measures
  - Other minor questions

## Next steps ICPE

- Answer questions from authorities
- Update permit with new design (site layout, PiD diagram, Business Case, etc.)
- Update/complete design for building application

## Status, Spreading

- 1<sup>st</sup> application on 30/06/21
  - 10166 Hectares (Many exclusions with Natura 2000, Znieff areas)
  - 127 communes
  - 40 farmers
  - 8 external storages (with spreading permit) = lagoons
- 1<sup>st</sup> questions received on 18<sup>th</sup> of January 21 :
  - Biodiversity protection: more exclusions
  - Hydrogeologist for drinking bore water protected areas
  - More soil analysis
- Raw digestate only. Presently the raw digestate is eligible to Organic farming



## Next steps, Spreading

- Search for 3-4 lagoons (with partners) or declare more storage inside biogas plant ; minimum of 18000 m3 of storage
- Finalize soil analysis and hydrogeologist study
- Update spreading permit with new farmers (4) from EMC2
- Potential integration of new farmers (Aube group) spreading permit

- Permit application expected to be fully completed by Q2.2022
- Permits could be expected by Q4.2022
- Spreading permit is currently limiting factor for biomass intake increase



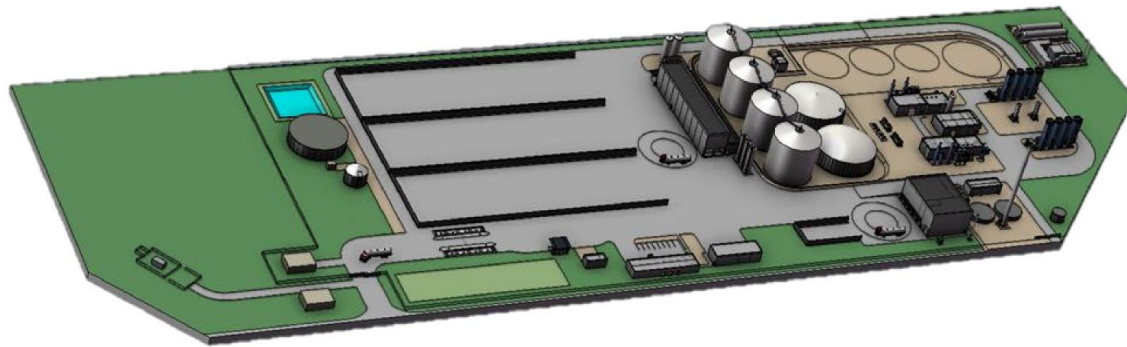


# Permit to build

NECC

## Status, permit to build

- Permit initiated Q1-2 2021
- Same Company used in SECALIA : Seturec
- Not finalized as too many uncertainties appeared
  - Building or no building for solid intake
  - BUP and wood boiler (with amine)



## Next steps, permit to build

- Complete update with new design and layout
- Finalize options on water supply with industrial neighbour : “Carrière Boureau SAS” => link with stakeholders is absolutely necessary
- Take into account local rules in term of color and building shape



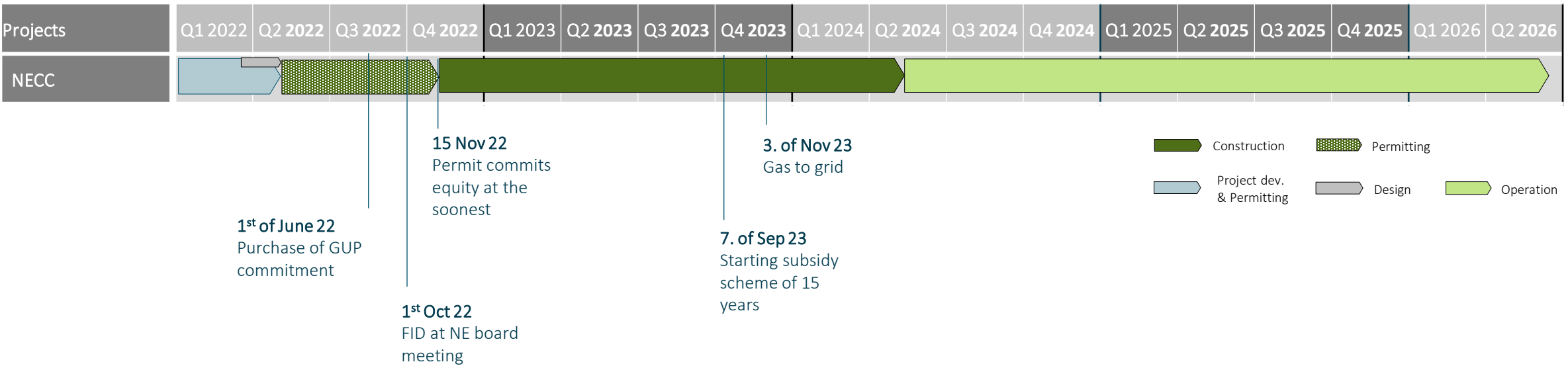
SETUREC MOE	arkos ASSOCIÉS	Nature Energy	Construction d'une usine de méthanisation RD 417 - 52000 Chamaranthes Choignes	20075	APS
					23.03.2021

First 3D drawing and views from previous design



# Project overview – Timeline (base case)

## Timeline



*Above timeline is exposed to external factors related to our partners securing and committing their equity financing*

*Important to finalize permit application with current Low case*



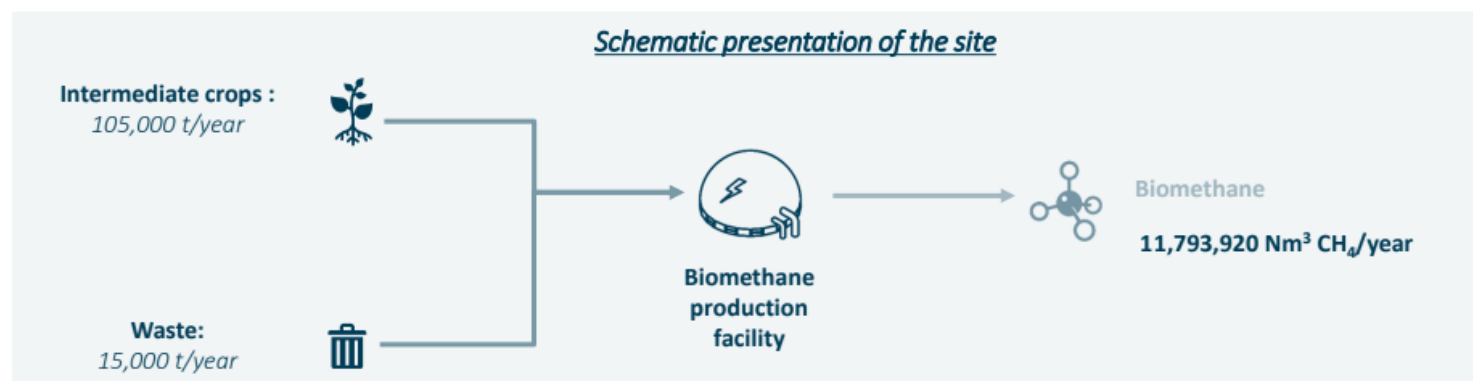
# Project overview – CI score Low case

NECC

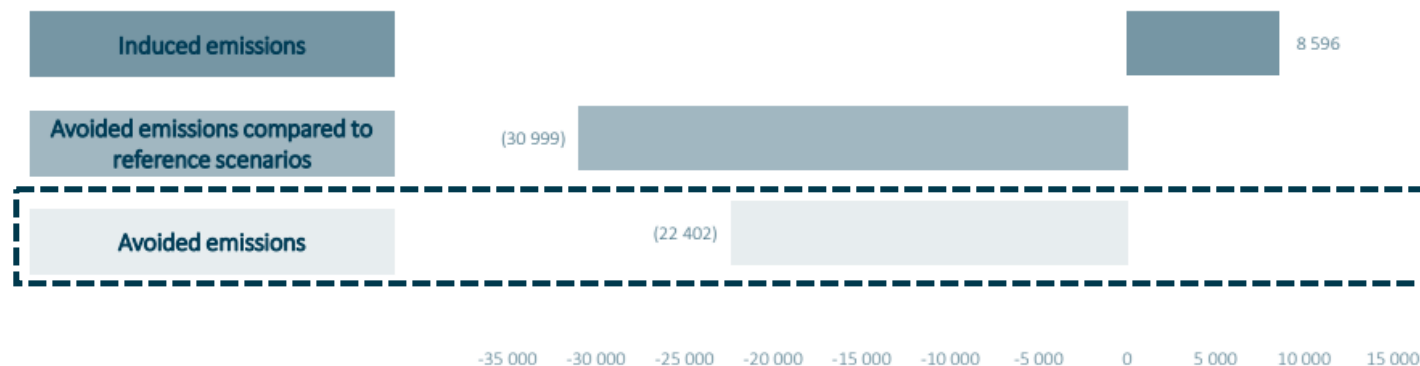
## CI Score evaluation – 11.8mioNm3 biomethane



Overview of Nature Energy Charamandes Choignes's annual GHG emissions



*Induced and avoided GHG emissions (tCO<sub>2</sub> eq/year)*



Nature Energy  
Charamandes Choignes

Impacts generated over project  
lifetime

Total induced emissions  
8 ktCO<sub>2</sub>eq/year

Avoided emissions compared to  
reference scenarios  
31 ktCO<sub>2</sub>eq/year

Total avoided emissions  
(22 ktCO<sub>2</sub>eq/year)

Will need update for Base  
case

Calculation excluding  
Biogenic CO<sub>2</sub> valorisation

# Agenda

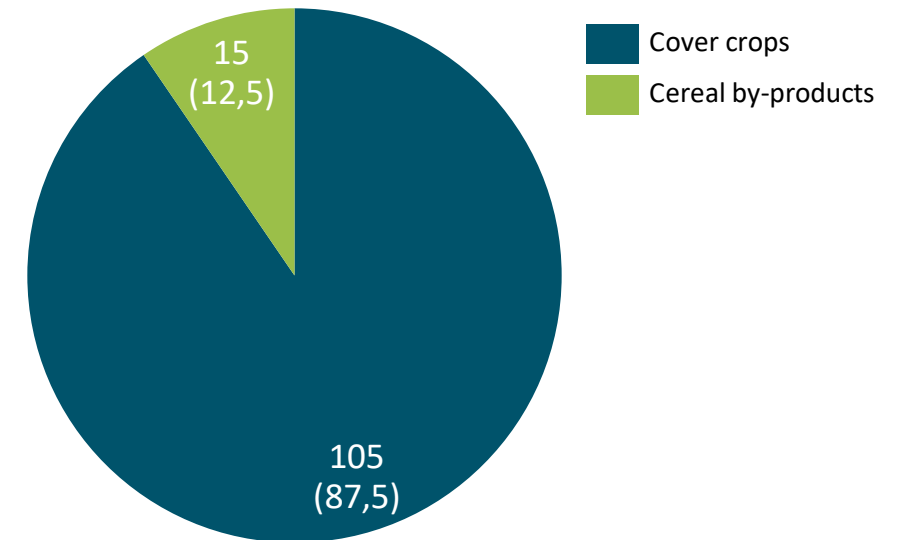
1. Executive summary
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## Biomasses for Low case

- The permit consists only of cover crops and cereal by-products.
  - A total of 115k tons of biomasses plus 5k tons of water for recirculation.
- Due to seasonal deviations in the harvest yield, it is estimated that an extra of 50% of biomass should be stored to secure low harvest production.
- Partners will supply the biomasses from their own farms.
- The SPV's does not currently have a biomass HoT
- We will use tests analysis done by Nature Energy for SECALIA to validate the theoretical gas potential of the biomass.

## Biomass availability : currently pre-secured

- Partners will provide 25.000 T of biomass (CIVE)
- Dijon Céréales will provide 17.000 T of biomass (CIVE)
- EMC2 will provide 10.000 T of biomass (CIVE)
- These 2 cooperatives could provide 5.000 T of barley grain/dusty biomass
- A significant amount of the farmers surface is necessary to spread digestate



## Case assumptions

Scenario	14m Plant (Base)	12m Plant (Low)	20m Plant (High)
Operation efficiency	96%	96%	96%
EUR/ton DM	148.7	148.7	148.7
Utilities	100%	100%	100%
Separation	B	B	B
Digestate revenue EUR/ton	8	8	8
EPC	49,500	47,270	57,550
O&M	1,313	1,157	1,571
Electricity consumption mWh	20,928	18,145	25,040
FTE	6	6	7
<b>Biomass</b>			
Alfaalfa (fresh) <b>11K secured (**)</b>	11,000	11,000	15,950
Hybrid rye <b>61K secured (**)</b>	86,000	61,000	121,000
Alfaalfa fresh (Mix) <b>5K secured (**)</b>	5,000	5,000	7,250
Cereal waste <b>5K secured</b>	3,000	3,000	4,350
Apple pulp	15,000	15,000	21,750
Corn Gluten feed	15,000	15,000	21,750
<b>Total</b>	<b>135,000*</b>	<b>110,000</b>	<b>192,050</b>
Production m m3	14.1	11.7	20.0
EBITDA (2025)	6.4	4.9	10.3
IRR unlevered (40)	10.6%	8.1%	15.1%
IRR levered (40)	17.5%	12.4%	27.7%

## Financials – case variations

IRR unlevered [40y]	Key constraint	Base case
Base 14m Plant	120K biomass permit	10.6%
Low 12m Plant	12m CH4 GPA	-2.5%
High 20m Plant	20m CH4 gas grid	+4.5%

### All scenarios include

Lifetime of 40 years with refurbishment CAPEX after 20 years of 25% of the original CAPEX inflated 2% annually

Sale of CO2

Certificates at 4 EUR/MWh, net – upside from excess GPA CH4, as that would not be subject to the 75% tax, however there is also uncertainty for the price of the CH4 itself that is not covered by the GPA

\*Before we can change the permit we intend to use molasses that will be changed to more rye - will happen over 3 years as we need to change the permit to allow a higher amount of biomasses than 120K tons

\*\* Amounts already include biomass from potential new partners (partners bis can provide 15 to 25,000 T of biomass

# Agenda

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## Status

- Legal discussions to resume with partners' lawyer
- Nine individual farmers propose to become shareholders in NECC. NE to again propose that the farmers establish a joint holding company so that NECC only has two shareholders (NE France SAS and the farmers' holding Co.). This proposal has previously been rejected by the farmers.

Legal agreements	
Regarding SPV	
Shareholders' Agreement	Discussions on draft agreement to resume
Investment agreement	Discussions on draft agreement to resume
Articles of Association	Revised Articles in substantially final form with few outstanding matters
SPV Structure (NECC)	NECC incorporated Feb. 2020 (share capital EUR 1,000). NE France SAS presently sole shareholder. NEF to have 51% shareholding when partners enter the company.
SPV Governance	President is appointed by NEF (presently Ole Hvelplund) Board of Directors is proposed of 5 persons, 3 members appointed by NEF (including the President). NE to have control of budget.
Misc. contracts	
Service Level Agreement	Discussions on draft agreement to resume. Amendment required to fixed price (not hourly rate) and include operation and maintenance. Risk: Credit Agricole will maintain demand for performance guarantee to be included in the O&M section.
Operation & Maintenance Contract	N/A if accepted to include O&M in Service Level Agreement
Insurances	Request for proposals not initiated
Gas grid connection	Awaiting draft of standard agreement.
Site	Site purchase option agreement signed 14-10-2020 (expires 31-12-2025).





Legal memos	
Regarding EPC	NOT INITATED
Parties	
Contract value	
Payment terms	
Conditions precedent	
Tariff and subsidies	
Tariff & Subsidies	Gas Purchase Agreement signed on 7 September 2020. Upgrading technology stated is amine. Main commercial terms are : [ ] – missing input from Trading

# Agenda

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## Subsidy - gas price

Subsidy contracts are granted for a 15 year production period.

When the subsidy contract is signed, there is a 3 year period to commission the biogas plant.

Any delays in the 3 year commissioning period will be reduced in the 15 year period.

The subsidy level is indexed annually based on:

- Hourly cost index of mechanical and industrial industries.
- Producer price index for the entire French industry and business services.

The price increase from 2019 to 2020 was 1%.

The subsidy is not linked to the gas price on the market. Therefore the price of bio methane is a fixed price.

For the BC it is estimated that the price of gas including subsidies is 0.09316 EUR/KWh, which is equivalent of 1.01 EUR/m3.

## Subsidy - CAPEX

There are no CAPEX subsidies in current discussions.

There will be initiated discussions regarding CAPEX subsidy later.

## Comparison of subsidy schemes

	Denmark	France
Length	20 years	15 years
Indexation	Annually by partial inflation	Annually by inflation
Price [EUR/m3]	0.78 EUR Fixed	1.01 EUR Fixed
Link to gas price	1 year time lag	None

Illustration compares the price in EUR for 1m3 of gas between long term price in Denmark and current price level in France.

The combined subsidy and gas price is 22.8% higher in France.

