

Value chains : Prime mover and Main Characteristics

- Stakeholder Type
- | | |
|---|---|
| <input type="checkbox"/> Farmer | <input type="checkbox"/> Agrarian Cooperative |
| <input type="checkbox"/> Public Institution | <input type="checkbox"/> Agro-Services |
| <input type="checkbox"/> Final Consumer | <input type="checkbox"/> Farmer Association |
| <input type="checkbox"/> ESCO | <input type="checkbox"/> Agro Industry |
| <input type="checkbox"/> Pellet Producer | <input type="checkbox"/> Biomass Supplier |
| <input checked="" type="checkbox"/> Electric power generation plant | |

Location of Prime Mover

Municipality : Huelva

Latitude : 37.300838

Longitude : -6.866456



- Type of Residue used in value chain
- Pruning Plantation Removal Both
- Crop Species used in Value Chain
- | | | | |
|-------------------------------------|---|-------------------------------------|----------------------------------|
| <input type="checkbox"/> olives | <input checked="" type="checkbox"/> vineyards | <input type="checkbox"/> apples | <input type="checkbox"/> pears |
| <input type="checkbox"/> peaches | <input type="checkbox"/> apricot | <input type="checkbox"/> nectarine | <input type="checkbox"/> plum |
| <input type="checkbox"/> cherries | <input type="checkbox"/> oranges | <input type="checkbox"/> tangerines | <input type="checkbox"/> lemons |
| <input type="checkbox"/> grapefruit | <input type="checkbox"/> hazelnuts | <input type="checkbox"/> chestnuts | <input type="checkbox"/> almonds |

Total Plantation Area involved in the Value Chain (ha)

Fruit trees _____

Typical APPR biomass production (tonnes/year) _____

Start Date of the APPR value chain (Month-Year) 2016

Factor Group	Description	Check the influence in success:(0)-Not relevant;(1)-May have influenced;(2)-Important for success;(3)It was crucial;(?)-Unknown					Check the 3 most crucial factors in WHOLE table
		0	1	2	3	?	
Logistics Chain	There were pre-existent collaborations established between farmers sector and biomass cosumers/traders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The introduction of new technologies (machine, handling systems, logistic chain) supported the implementation of new chains	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Private investment for entepreneurs was incentivised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Short summary of the initiative (<100 words)

Summary of the value chain

Since 2016, ENCE has made a turn around in its supply strategy, betting on more local biomass, of agricultural or agroindustrial origin, and which had hardly any use at present and represented a management problem for most farmers. ENCE has made a commitment to the re-orientation of its supply, dedicating an important effort. This radical shift has been facilitated by the high availability of agricultural biomass in the area, as well as the work of alignment of actors in the agricultural sector to release different types of agricultural residues.

ENCE Huelva 2

VALUE CHAIN ACTORS		Farmers	Farm cooperative / agro productive organization	Agro services Company	Techno-logistics services in agriculture	Biomass energy plant builder /dealer	Energy service company	Biomass consumer / energy user
VALUE CHAIN PROCESSES	APPR biomass producer	1						
	Harvesting & conditioning			2				
	Biomass 1 st haulage/ Transport			2				
	Pretreatment & Storage							3
	Biomass further processing							3
	Biomass transport							3
	Energy conversion							3

- 1 Farmers
 2 Agro Services Company
 3 ENCE Huelva 2

Fuel Specifications

Final form of Biomass prior to Exploitation

- Bales of branches
 Hog fuel-shredded

- Wood chips
 Pellets

Moisture content (%) :

40%

Max Content of Ash (% a.r.) :

Min LHV (kj/kg a.r.) :

Value Chain Details and Prices of fuels

End-users

- Self-consumption
 Public-private buildings
 Biomass to Market
 Electric power generation plant 50 MWe

- Industrial heating
 Distributed heat networks

Distance between biomass production and its final use (km) :

Up to 100 km (average is around 30-60 km)

Storage options

- On-farm storage
 Intermediate storage prior transporting to end user
 Direct delivery and storage at final user
 No storage

Ownership of the APPR harvesting machinery

- Farmer
 Leasing
 3rd party-private
 Agro service company

- Farmer's community
 Municipality-public

Prices of fuels sold
to final consumers

- Price of APPR biomass (€/t) _____
- Price of regular woodchips (€/t) _____
- Price of ENPLUS pellets (bulk-€/t) _____
- Price of domestic heating gasoil (€/l) _____

Have you filled the questionnaire about
mechanized pruning/plantation removal ?

Yes

No

If yes, please provide the name or e-mail you have
used on that questionnaire

Contact Data

Name : _____

Email : _____

Phone : _____

Company/Organisation : Complejo Energético Ence
Huelva 2

Website (of the company or the APPR initiative) : www.ence.es

Logo of the company : _____

Country : Spain

The following are the main keys that have allowed the initiative to be implemented and be successful:

- The change in the biomass support framework made that ENCE redirected its supply strategy (initially oriented towards the implementation of forest energy crops), looking for available resources in the short term.
 - Quick reorientation of ENCE to include all types of agro biomass that until now were largely under utilized.
 - Solvency and trajectory of ENCE as a biomass consumer, which generate confidence in the intermediate companies when facing new activities and investments (consumption of agrobiomass ensured to suppliers).
 - High experience of ENCE in forest biomass logistics. The new agro biomass logistics is simpler than forestry, although it needs more speed to be removed from the field so that farmers can continue with their agronomic operations.
 - Very high potential of agro biomass in the area.
 - Existence of companies with knowledge and devices to mobilize agro biomass in the area (companies engaged in forestry work or previously dedicated to coal).
 - ENCE's extensive knowledge of the biomass sector, as well as contacts with key agents in the area for its mobilization.
 - Farmers are aware that they cannot continue to burn their residues. They prefer to use them for energy, as long as it does not cost them money.
- External link: www.up-running.eu/wp-content/uploads/2019/05/4.-ENCE-presentacion-ence-bruselas-v7.pdf



