

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"/> Power plant | |

Location of Prime Mover

Municipality : Miajadas

Latitude : 39.157114

Longitude : -5.884247



- Type of Residue used in value chain
- Pruning Plantation Removal Both
- Crop Species used in Value Chain
- | | | | |
|--|------------------------------------|-------------------------------------|----------------------------------|
| <input checked="" type="checkbox"/> olives | <input 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) 160

Typical APPR biomass production (tonnes/year) 1000

Start Date of the APPR value chain (Month-Year) 2015

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 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 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 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

Miajadas plant consumes yearly circa 100000t of biomass, with a share of 55% of wood and 45% of straw. Acciona Energia started the plant operation based on straw and forest log wood. Among them 1000 t come from olive tree pruning. Year 2015 was the first time that this material was supplied to the Miajadas plant. The initiative started from the entrepreneurial spirit of AREX Medioambiental. This company had been involved from 2010 in obtaining the residual wood from the pruning and clearing works executed to the "dehesas". The agreement with farmers was simple: AREX would harvest their biomass, and the farmers would only have to place the pruning aligned in the rows to facilitate the harvest. The work for farmers increased slightly respect their current practices. And AREX could execute the harvest sufficiently fast so that the prices in the market allow a reasonable profit margin for them. So the supply chain was organised as next: AREX utilised a tractor with a fork in front, to haul the branches out of the fields. The branches were placed in piles of up to 4 meters, being the branches orientated in the same direction. The piles were left for 3 months at the field side, without incurring any costs, neither AREX nor the farmers. After the storage, a large chipper was moved next to the piles for chipping the biomass directly to trucks or to the soil. The biomass trucks were directly sent to the power plant .

ACCIONA ENERGIA (Miajadas)

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							
	Biomass further processing			2				
	Biomass transport			2				
	Energy conversion							3

1 Farmers

2 AREX Medio Ambiente

3 ACCIONA ENERGIA power plants

Fuel Specifications

Final form of Biomass prior to Exploitation

- Bales of branches
 Hog fuel-shredded

- Wood chips
 Pellets

Moisture content (%) :

25

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
 Power plant

- Industrial heating
 Distributed heat networks

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

60

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

- 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



