



Forestry supply

Álvaro Eza

Chief Procurement Officer

Ence Investor Day 2015

19th November 2015



Agenda

- **High quality wood** availability 2015 - 2020
- **Efficient**, sustainable, and affordable wood supply
- **Committed** to sustainability with FSC/PEFC
- **Professional** forestry supply management
- **Latest technology** in forestry management
- **Leader in Biomass sourcing** in the Iberian Peninsula

Enough wood of highest quality for future expansions 2015-2020

- Ence consumes **2.8 million m³/year** of **eucalyptus** wood, **100% sourced domestically**
- 66 M m³ of eucalyptus plantations in NW Spain; abundance of Globulus, **best eucalyptus for pulp** production
- > **600,000** of landowners in the NW Spain with a plantation surface of < **0.5 Ha**



Wood (,000 m ³ sc/yr)	Growth	Harvested	Excess
Asturias + Galicia	6,000	4,500	1,500
Portugal	6,700	6,600	0,1

Wood	Spain	Nordic Countries	Brazil
Age (years)	12-15	60	7-9
Spec. Cons. (m ³ /tAD)	3	5	4

Efficient, sustainable, and affordable wood supply



Efficient, sustainable, and affordable wood supply

('000 m3/year)	2015	%	2020	%
Own plantations	66	2%	0	0%
Direct purchases landowners	827	30%	1,300	39.5%
Suppliers				
Small	1,270	45%	1,300	39.5%
Big	637	23%	700	21%

Wood Certification FSC/PEFC: Ence is firmly Committed to sustainability

- 1 **Ence is committed to sustainability**, and this is translated to the different stages of pulp production , **from our plantations to the final product**
- 2 An increasing number of our **European pulp customers are requesting certified pulp** and, as the origin of our activity, **wood certification is a priority**
- 3 **FSC (Forest Stewardship Council)** and **PEFC (Program for Endorsement of Forest Certification Schemes)** are voluntarily certification systems that aim to ensure a high level of forest management techniques by checking sustainability indicators
- 4 Both systems are divided into two subsystems: **SFM (Sustainable forest management)** and **CoC (Chain of Custody)**. Both link the forest products from the forest to the consumer

Wood Certification FSC/PEFC: Ence is firmly Committed to sustainability II

FSC	PEFC
<ul style="list-style-type: none"> Protection and increase of the certified areas 10% of the total surface dedicated to natural ecosystems Certification for 5 years, with annual auditing Management plan required Covers both certified and non certified surfaces (last ones with general regulation) 	<ul style="list-style-type: none"> Protection of the certified areas Surface dedicated to natural ecosystems is not required Certification for 5 years, with annual auditing Management plan required Covers only certified surface

Certified wood (m3sc/yr)	2014	2015	(% incr)
FSC	645,000	974,000	51%
PEFC	572,000	730,000	28%

Professional forestry supply management

Ence Capabilities

- Ence has over **60 years of experience** in forestry supply management
- Leading procurement and operations team** on the ground and located in different areas of Spain
- Management of all the different stages** of the supply chain (procurement + harvesting + logistics) increases flexibility and market knowledge



Forestry Supply Team (personnel)

Forestry supply	10
Direct purchases to landowners	35
+	
Operations/planning	9
Harvesting	40
+	
Logistics	6

|| Total forestry personnel = **100 people**

Latest technology in Forestry Management

Direct Purchases to landowners

- 🌿 **Mobile App** for landowners and wood suppliers
- 🌿 **On-line registration of landowners and plantations info** (tablet + Xone system)
- 🌿 **Customized CRM** for commercial optimization of plantations
- 🌿 **GIS registration** of all plantations
- 🌿 **Call center** + marketing actions

Logistics

- 🌿 **Daily wood deliveries to pulp mills of almost 600 trucks**
- 🌿 **> 950 trucks with GPS** to track the origin of the wood
- 🌿 **Central console + logistics App** for direct communication with truck drivers and planning of deliveries

Leader in Biomass sourcing in the Iberian Peninsula

Biomass		(green ton/year)
Navia	37 MW	219,000
Pontevedra	16 MW	104,000
Mérida	20 MW	215,000
Huelva	40 MW	158,000
Huelva	50 MW	390,000

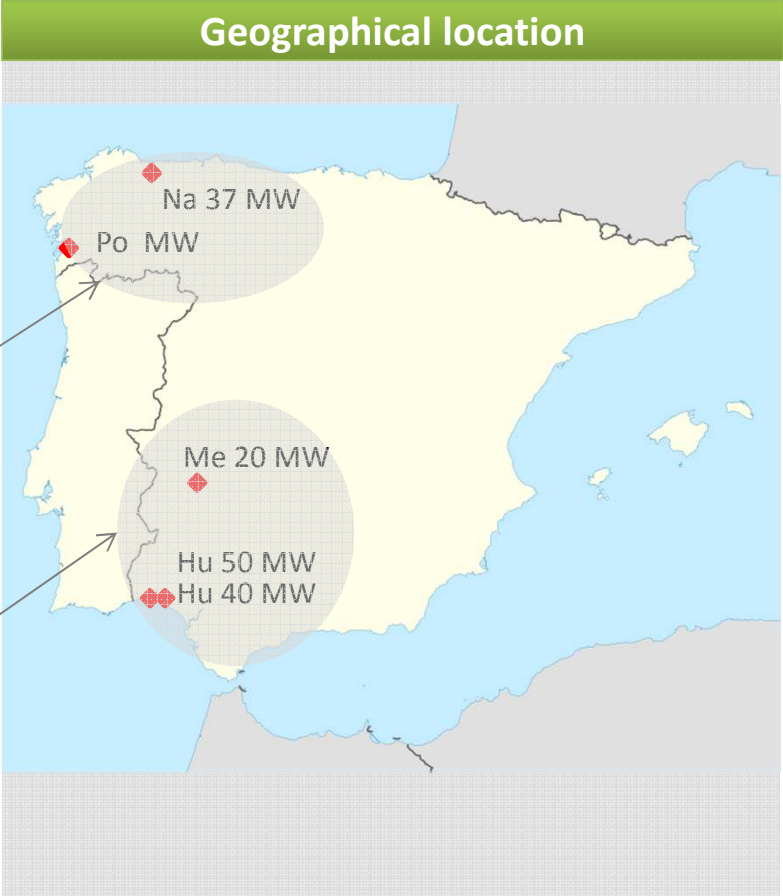
North of Spain

Total utilization of the tree: wood (pulp production) + biomass (bark, branches for energy production)

South of Spain

Waste Wood (pine, olive tree, orange tree)

Waste wood + **waste from agriculture** (corn and wheat straw)



As a summary: Ence's advantages

- 1 **Excess wood availability in NW Spain TRIPLES our growth requirements** (500,000 m³/year during 2015-2020)
- 2 **FSC/PEFC certified eucalyptus globulus surrounding our pulp mills (lower logistics costs)** avoids expensive imports from South America
- 3 **In House Forestry know-how, skilled team and newest technology** provides great information about wood location, productivity and growth
- 4 **Management of the entire supply chain** allows us better flexibility and competitiveness
- 5 **Leader in biomass energy** with a wide range of sources of supply

Thank you

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