

POWER GENERATION WITH APPR's

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ENCE at a glance

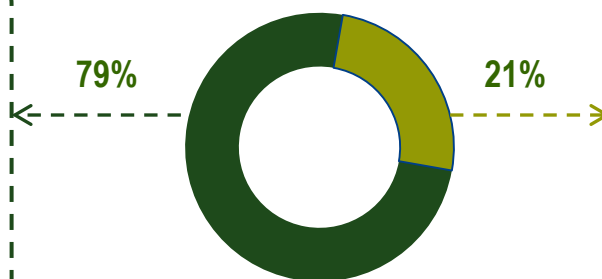
Two complementary and independent businesses

Eucalyptus pulp production



- **European leader producer** with **1,1 million tons** of installed capacity
- **85%** of the production is **sold abroad**.
- ENCE has **two factories** for pulp production in North Spain (Pontevedra and Navia).
- ENCE has strong experience in terms of **certified wood supply chain** and sustainable forest management.

Ence Business



Location of facilities



Biomass Power Generation



- **Largest biomass operator** in Spain with 170 MW of installed capacity.
- **1.815,4 GWh** produced in 2018.
- **Two new power plants** under construction in **Huelva** and **Puertollano** (96 MW) and some more under permitting.
- **Fuel supply:** 70% agricultural by-products, 30% forestry by-products according to the Decalogue for the Sustainable use of biomass of ENCE.
- Strong operational **know-how** in biomass energy with 10 years of experience.

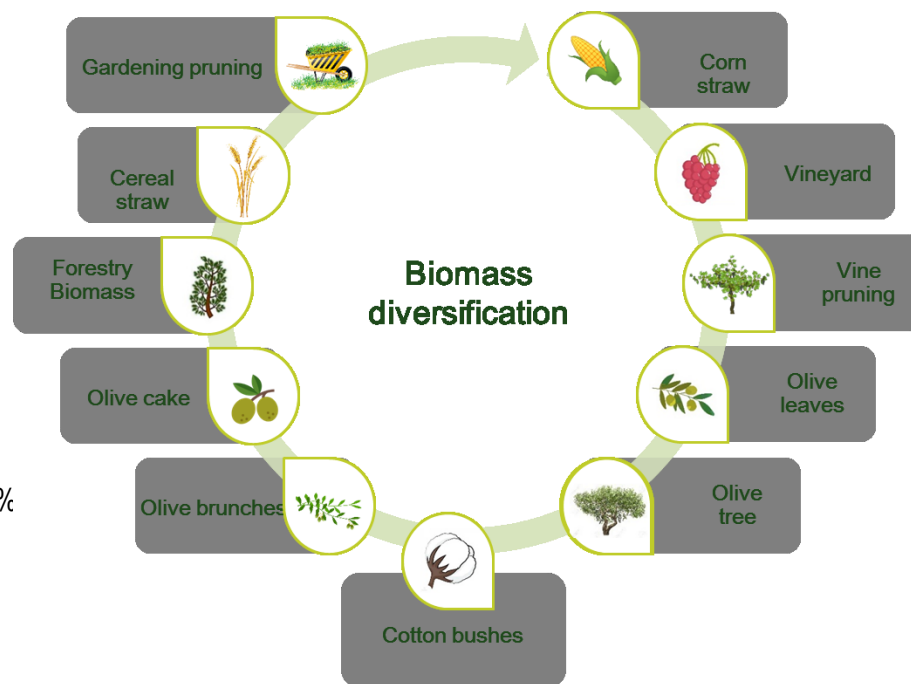
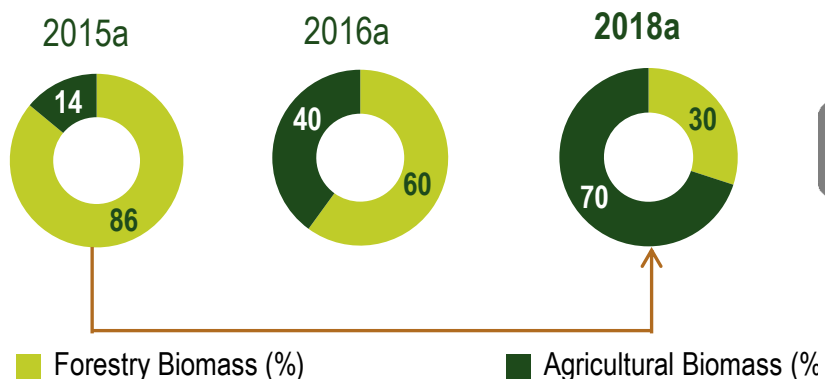
266 MW by 2020 (96 MW under construction)



Successful diversification towards agricultural biomass

Ence's key competitive advantage in the Energy business

Weight of the use of forest and agricultural biomass



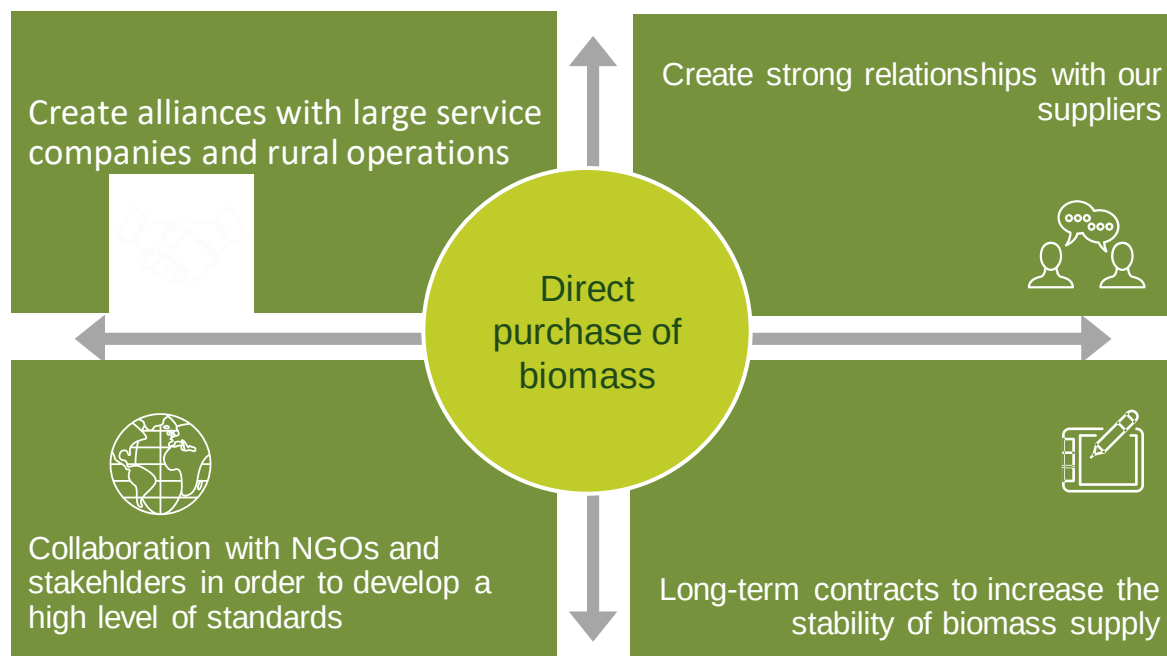
The diversification towards agricultural by-products increases the availability of biomass around our plants, reducing their cost

Direct access of the biomass on the fields

Initiatives on-going

We are the largest biomass manager in Spain. We buy more than 1 Mn t per year

Always according to our Decalogue for the Sustainable use of biomass



ENCE's DECALOGUE FOR THE SUSTAINABLE USE OF BIOMASS



1· It shall respect the natural environment:

Biomass management shall respect -at all times- biomass resource's renovation capacity, soil quality, and shall not produce damage to the natural environment.



2· It shall be compatible with sustainable agricultural and forestry practices:

Ence's activity shall be compatible with the good agricultural and forestry practices manuals for all crop and species.



3· It shall not burn roundwood:

Ence shall not use forestry roundwood of more than 10 cm in diameter as a fuel, and wood will not come from invasive species.



4· It shall respect biomass priority uses:

Biomass used by Ence shall not compete with other possible biomass sustainable and priority uses (food, construction, furniture,...)



5· It shall not use biomass that is in competition with food crops:

Ence shall not use biomass that comes from energy crops plantations on land suitable for food agriculture and production.



6· It shall only take advantage of surplus agricultural biomass:

It shall only use residual agricultural waste and that do not involve lowering amounts intended for livestock feeding.



7· It shall respect laws and human rights:

Biomass collection shall always be undertaken respecting current legislations, human rights and the community.



8· It shall apply the best available technology:

Ence shall permanently apply the best available techniques to transport, store and produce biomass energy in order to minimize environmental impacts and maximize energy efficiency.



9· It shall minimize carbon emissions:

It shall envisage the overall carbon footprint, considering the balance of greenhouse gas emissions throughout its life cycle, and will limit the collection distance of agricultural and forestry waste.



10· It shall always pursue the highest energy efficiency:

Ence shall promote maximum energy efficiency through the development and application of technology to use waste useful heat from its plants for other industries and local uses.

Shared benefits between farmers and ENCE

- ☐ Effective support to the agriculture:
 - ☐ Increase the quality of the field for the next plantation.
 - ☐ Cleaning of the lines between plantations.
 - ☐ Reduce plagues risks and other diseases.
 - ☐ Economic agricultural savings.
 - ☐ Fire risk mitigation.
 - ☐ Reliable and fast services as it is demanded by the farmers.
- ☐ Generation of new stable jobs in rural areas.
- ☐ Sustainable source of biomass and stable over time.

Olive tree pruning

1



2



3



4



5



Vineyard pruning

1



2



3



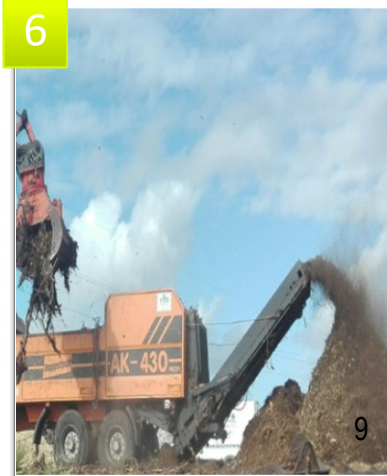
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6



Olive plantation removal

1



2



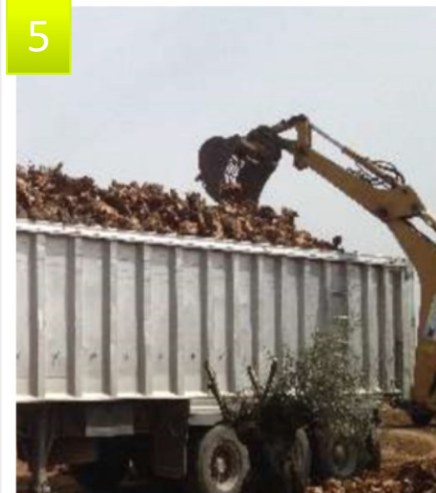
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Fruit tree plantation removal



