

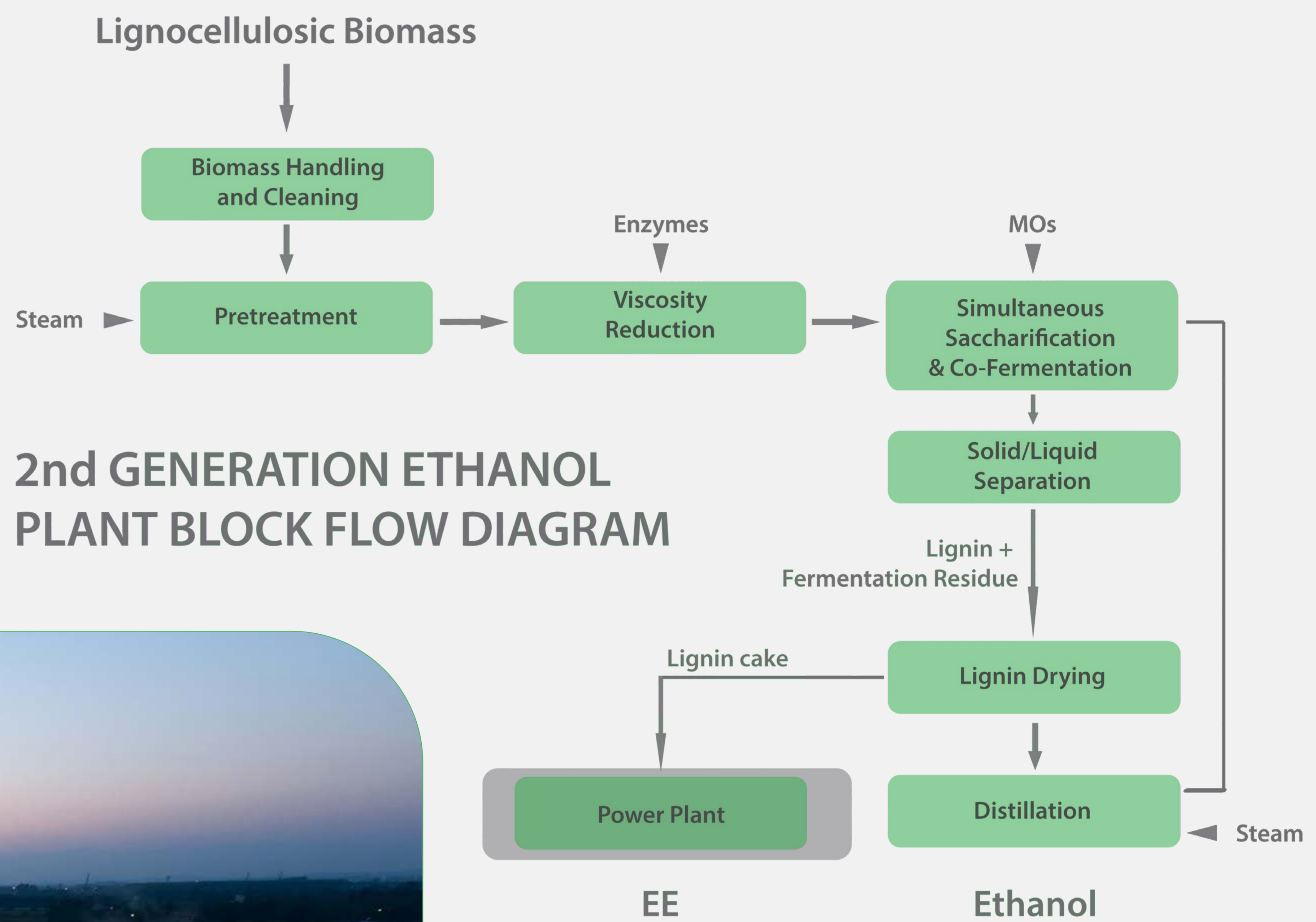
- ✓ COMETHA is a collaborative project started in 2014 and co-funded by the 7th Framework Programme of the European Union
- ✓ The scope of COMETHA is the construction and operation of an integrated industrial facility for the production of second generation bioethanol and other co-products from lignocellulosic feedstock
- ✓ The plant will be the first of its kind at pre-commercial scale based on the PROESA® technology

Biorefinery approach

COMETHA will demonstrate the integration of second generation processes into a full industrial-scale biorefinery.

Key innovative elements will be:

- a proprietary biomass pre-treatment unit;
- SSCF technology;
- use of novel high-performance enzymes;
- high-efficiency integrated distillation and dehydration system;
- valorisation of secondary streams and process integration



Large-scale efficient and sustainable biomass supply

COMETHA will develop an agro-industrial biomass supply chain based on dual feedstock: dedicated energy crops and agricultural residues. Different biomass sources with non contemporary harvesting times to ensure constant supply and regular functioning of the plant. The biorefinery will be fed with fresh biomass from *Arundo donax* and agricultural residues in the seasons when they will be readily available from the fields.

Environmental performance

COMETHA will develop a detailed life cycle assessment of the bioethanol flagship plant in order to demonstrate the actual GHG emission savings of second generation ethanol and the overall sustainability of the technology and of the supply chain.

Partners



Project coordination construction and start-up of the biorefinery, management of the biomass supply chain



Environmental assessment and policy-making component.



Viscosity reduction, commercial-scale enzymatic hydrolysis processes development of enzyme cocktail.



Communication and dissemination of results.

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