



Biomass distribution to end consumers with an innovative logistics model

Project partners



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Pilot project concept

The essence of the project is to reduce transport costs when distributing biomass to small scale woodchip boilers. The company undertake a feasibility study to test new processes and equipment's. The ultimate goal is to commercially implement an automatic and remote-controlled solid biofuels dispenser for distribution optimisation.



The pilot project happens in Catalonia and aims to serve clients located nearby, around 200 Km, the woodchip plant. Nowadays, these clients are served with a single stage logistics model that carries expensive distribution costs. This new model allows to attend unserved clients that currently face prohibitive transport costs to turn into biomass.

The project brings new technologies such as RFID, prediction systems and Internet-of-Things to traditional and environmental-friendly business to boost sustainable energies.

Partners

Sala Forestal – the pilot project coordinator - is a forest operator and manufacturer and supplier of secondary (bio-) fuels and raw materials, originating mainly from their own forest operations. Both the fuel and the raw materials are marketed in a sustainable and professional manner in Spain and France. Other partners are the Catalan Agriculture Authority that granted and recognized the project as an innovative solution to spur bioenergy in the energy.

Activities

Activities centred on three main issues 1. Estimate savings in transport cost and CO2 emissions with the new logistics model 2. Prototype machinery, equipment's and processes required to deploy the innovative logistics model. 3. Identify the best localization in Catalonia to deploy the first new logistics model.

SecureChain partners



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Results

The project has yielded an accurate insight in the quantity of woodchip that can be mobilized when the new logistics model is applied. The project developed economic analysis models that size the investments required to deploy the new technology and proof economic returns to the company.

The economic analysis conclude that the proposed logistics model would cut transport costs up to 30% and reduce CO2 emissions between 20 - 40% compared with the current distribution model.

The project accelerates the technology development and step-up company's confidence to pursue the business opportunity. Secure chain activities were helpful to decide how to protect the technology, better communicate the value proposition and identify the right partners to make it happen.

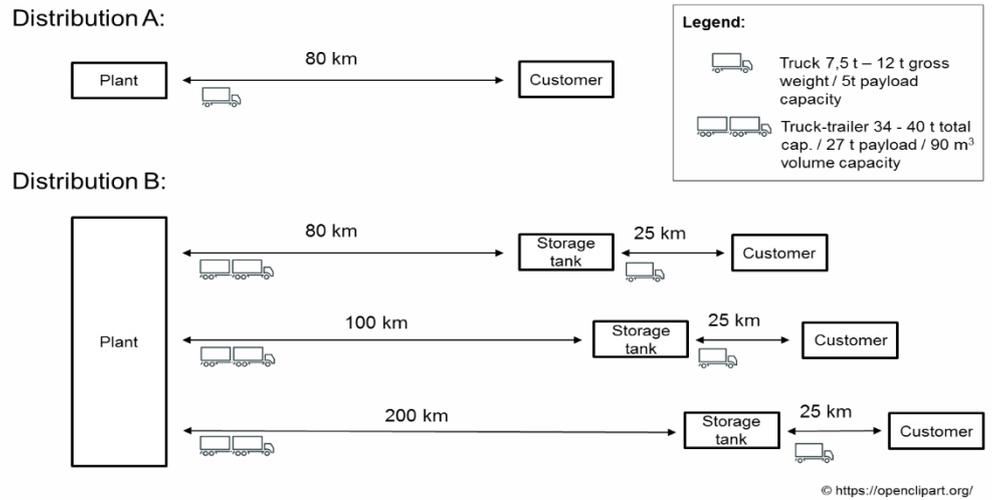


Figure: Example for the calculation of transport emissions

Follow-up

The company aims to build a commercial prototype in 2019 and validate expected benefits in a commercial environment. The company pretends to fully deploy the innovative logistics model in 2020.

This case study shows how crucial is transport cost to make biomass competitive. Investments on transnational biomass transport infrastructures are required to compete with fossil fuels that count with favourable transports costs due to transnational transport infrastructures such us LNG Pipelines.