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# Cost-effective transformation of a highly-efficient, advanced, thermal ultra-super-critical coal-fired power plant into a CHP by retrofitting and integrating an ARBAFLAME biomass upgrading process

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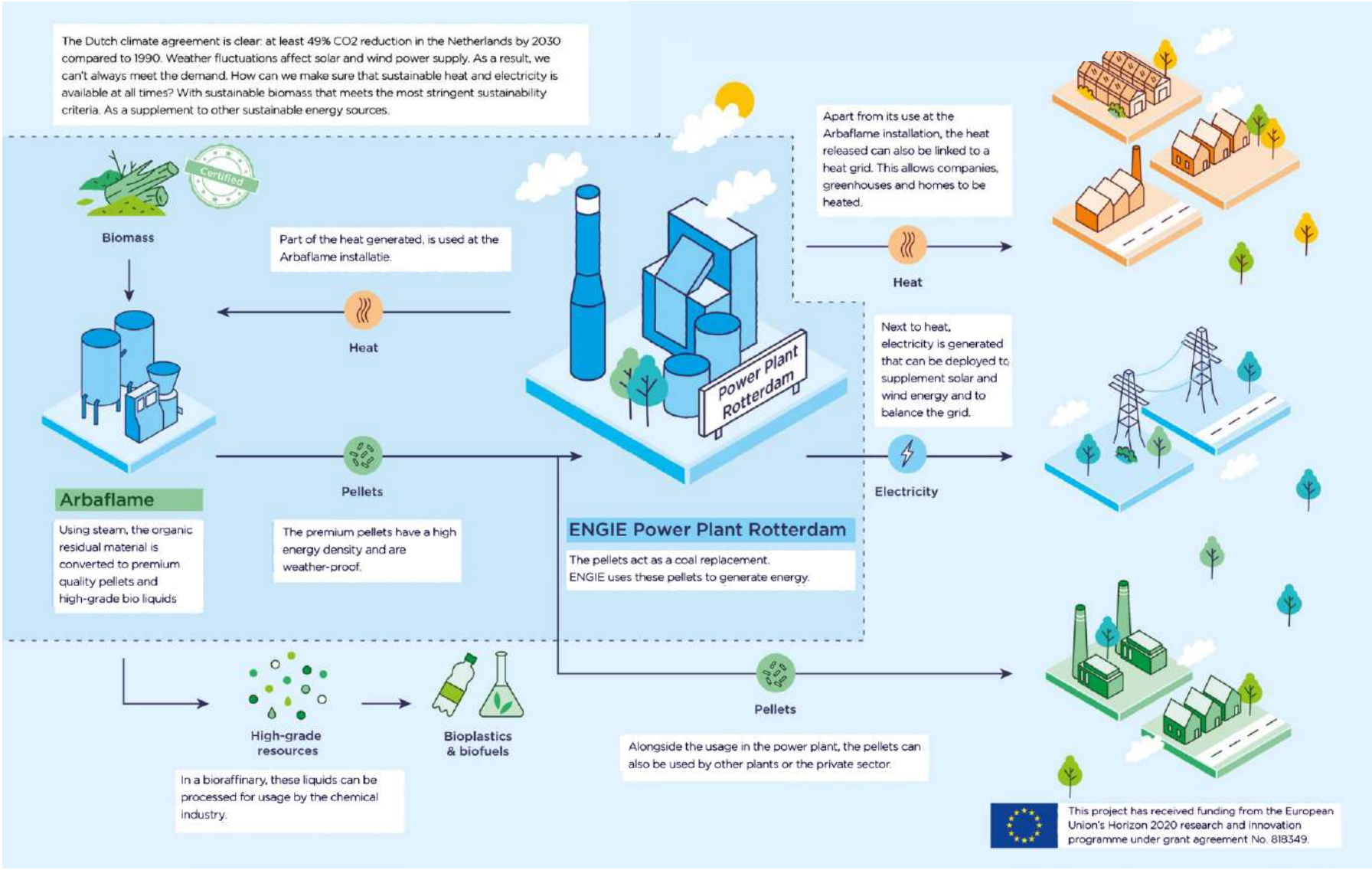

**Project Acronym:** ARBAHEAT **Project Number:** 818349 **Call:** H2020-LC-SC3-2018
**Topic:** Demonstrate solutions that significantly reduce the cost of renewable power generation
**Project title:** Cost-effective transformation of a highly-efficient, advanced, thermal ultra-super-critical coal-fired power plant into a CHP by retrofitting and integrating an ARBAFLAME biomass upgrading process

**Main Category of the Project:** Bioenergy, CHP

**TRL:** TRL5 to TRL 7

**Keywords:** Renewable energy, Combined Heat and Power, Conversion, Demonstration, Steam explosion, Thermal treatment, Biomass

**Technological approach of the Project:** In the ARBAHEAT project an existing 731 MWe Ultra-SuperCritical coal-fired power plant of ENGIE will be transformed into a biomass-fired Combined Heat and Power plant by partially repowering with thermally-treated biomass produced on-site

**Expected Impact of the Project:** This demonstration of an integrated very low-costs concept in large-scale energy production will pave the way to subsequent multiplication in commercial industrial projects, thus increasing the EU capacity for renewable power and heat generation

**Highlights (technological/non-technological):** The thermal biomass upgrading process of ARBAFLAME will deliver biomass fuel with handling and milling characteristics approaching that of coal, allowing for retrofitting with minimal adaptations to the existing power plant

**What is needed in future:** Availability of local low grade feedstock that can provide the right handling and milling characteristics after thermal treatment and that allows for further cascading of all chemical components into green products in biorefineries

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