Press Release – 10 May 2021

Launch of the EUCANWin! Partnership

European-Canadian partnership for climate positive heat and power generation through improved biomass feedstock supply and innovative conversion technologies

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The EUCANWin! project held its kick-off meeting today, beginning its ambitious mission to improve forestry biomass harvesting, and develop more efficient conversion technologies in combination with CO_2 capture.

Climate change is widely recognised as the most significant challenge facing humanity today, with a strong push needed for uptake of renewable energy. Bioenergy will play an essential role in the energy mix, being one of the few renewables that is not intermittent, but further work is needed in sustainable resource evaluation and cost-efficient mobilisation. Further, to meet our climate obligations, biomass energy with improved conversion efficiency and carbon capture are needed.

"EUCANWin! has three ambitious goals," explained project co-ordinator Anna Sager, from RISE – Research Institutes of Sweden. "Firstly, to increase the viability of the biomass supply chain from forests by involving artificial intelligence, secondly, to increase the electrical efficiency of combined heat and power through Biomass-fired Top Cycle technology (BTC), and lastly, to achieve this in combination with negative carbon emissions."

Specifically, EUCANWin! will:

- Support the knowledge transfer of biomass availability information (Forest Biomass Atlas) to Canada, as an open service to support the bioeconomy;
- Investigate opportunities to transfer tree-length harvesting expertise from Canada to Europe;
- Develop a prototype On-Board Intelligent Biomass Analyser, including artificial intelligence and self-learning capabilities, to improve logistics and allocation;
- Double the efficiency of electrical conversion via the Biomass-fired Top Cycle (BTC) concept;
- Determine the most effective Bio-CO_2 capture technology for the BTC process;
- Provide an economic and environmental assessment of the biomass supply chain;
- Carry out a social impact assessment of the proposed technologies to support a fair and equitable low-carbon transition.

EUCANWin! will provide benefits on both sides of the Atlantic and give valuable inputs into the policy-making process. It will provide data and results on sustainable and cost-efficient value chains to inform Research & Development and Energy Policies, in support of the European Green Deal and the Canada's Climate Plan. The project takes place in the frame of Mission Innovation, a global initiative of twenty-four countries and the European Commission, which seeks to double public investment in clean energy Research, Development & Demonstration (RDD) by engaging with the private sector and fostering international collaboration.

"Our project will strengthen the European-Canadian technology base by improving biomass supply chains and increasing the share of plannable, renewable power from biomass," added Susanne Paulrud, scientific co-ordinator at RISE. "In the long-term, it will contribute to the secure supply of power and decarbonisation of the energy system in both Europe and Canada."

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Notes

EUCANWin! will run from April 2021 to March 2025. Additional information on the project can be found at the European Commission's CORDIS page. The project website will launch in mid-2021.

Partnership

- Belgium: Greenovate! Europe EEIG
- Canada: Faculty of Forestry & Faculty of Applied Science, University of British Columbia (UBC); Royal Institution for the Advancement of Learning-McGill University
- Finland: Natural Resources Institute Finland (LUKE); Puumit OY
- Hungary: Geonardo Ltd.
- Spain: Research Centre on Energy Resources and Consumption (CIRCE); Zabala Innovation Consulting SA
- Sweden: Research Institutes of Sweden (RISE); Phoenix Biopower AB

Contacts

- Co-ordinator: Anna Sager – RISE / anna.sager@ri.se
- Communication: Simon Hunkin – Greenovate! Europe / s.hunkin@greenovate-europe.eu

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