



Climate Change **Solutions**



INDUSTRIAL ENERGY & ECO-EFFICIENT TECHNOLOGIES

Canada 

Canada is home to a dynamic and world-class environment industry. A key component of this industry is a well-established group of resourceful companies that offer climate change solutions – “services and technologies that enhance competitiveness, increase productivity and reduce environmental impacts, while at the same time prevent, reduce, mitigate or sequester greenhouse gas (GHG) emissions”. In essence, Canadian ingenuity represents additional value to customers.

- Advanced Process Design & Product Substitution
- Digitalized Information Platforms
- Industrial Biotechnology
- Biofiltration & Membrane Separation
- Variable Speed Electric Motors
- Heat Recovery Systems
- Co-generation & Alternative Energy
- Intelligent & Automated Control Systems
- Pinch Technology
- Demand-Side Management
- Advanced Building System Technologies
- New Generation Multifunctional Reactor Technology
- Conversion of Low Grade Waste Heat to Electricity

Canada’s industrial sectors vary extensively – from the facility size, age and location to the types of products they produce. This variation, along with increasing global competition, has created a strong and vibrant industry that provides specialized solutions to improve corporate productivity and competitiveness. Specifically, Canadian firms have developed niche technologies and expertise – that when applied to industrial challenges, result in enhanced efficiency of conventional equipment (e.g. motors, lights, boilers, etc.), improved process performance (e.g. handling,

distribution, manufacturing, etc.) and/or minimize waste materials and the energy and resource intensity of manufactured goods.

Canadian industrial expertise is particularly strong at adapting technologies to address cross-sectoral challenges and developing tailor-made solutions for resource intensive industries such as forestry, mining and minerals, agricultural, up and downstream oil and gas production, chemical manufacturing, automotive, and the like. Examples of technological innovation range from the continuous improvements made to electric motor drive efficiencies to the use of expert systems and laser-based moisture sensing devices to reduce energy inputs, improve product quality and gain monetary savings.

Other areas where Canadian companies are providing leading edge solutions include employing energy recovery systems to capture untapped heat in the plant’s flue gas, implementing more efficient (e.g. cogeneration) or alternative energy supply systems, integrating advanced materials into equipment and products to extend their life and applying biotechnology to improve catalytic reactions and product yields.

Canada is also active in the area of ECO-Industrial Networking, integrating industrial material waste and feed streams.

For more information:

**WWW.
cleanenergy.gc.ca**