



## Climate Change **Solutions**



## RENEWABLE AND ALTERNATIVE POWER GENERATION 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.

- Biomass
- Micro, Mini & Small Hydro
- Wind
- Site assessment & Project Development
- Wave / Tidal
- Photovoltaics
- Active, Passive & Thermal Solar
- System Integration

For decades, Canadian renewable and alternative power generation companies have developed and delivered a diverse range of innovative market-ready technologies, services and systems that harness renewable energy sources including wind, solar (active, passive, thermal and photovoltaic applications), water (small hydro and wave/tidal applications) and biomass (including co-generation, direct energy, bio-fuels and landfill gas). These technologies not only offer a more sustainable energy solution to meet rising global energy demands, they also provide a broader energy mix, reduce air pollutants and all but eliminate greenhouse gas emissions.

Innovative Canadian companies are turning organic materials and agricultural byproducts such as straw, wood residues, sewage sludge and landfilled waste into cleaner fuels and direct energy. With highly-skilled and qualified

experts in biomass processes such as fermentation, gasification, anaerobic digestion and pyrolysis, Canadian companies are helping communities and industries across Canada and around the world convert this renewable resource into a value-added non-GHG emitting energy resource.

Recognized as a world leader in small, mini and micro hydropower technology, Canada has well established and internationally competitive companies that provide state-of-the-art products, services and technologies with respect to all aspects of the site design and operation from site assessment, engineering, design, turbine manufacture and installation, automated control, monitoring and energy output optimization.

These are just a few of the many innovative clean energy solutions available from Canada’s renewable and alternative power generation technology sector. Canadian innovation is also strong in many niche areas such as the manufacture of component parts for utility-scale wind turbines including blades, towers and nacelles, the integration and application of solar systems in remote and cold-weather areas, and leading edge tidal and wave technologies.

**For more information:**

**WWW.  
cleanenergy.gc.ca**