

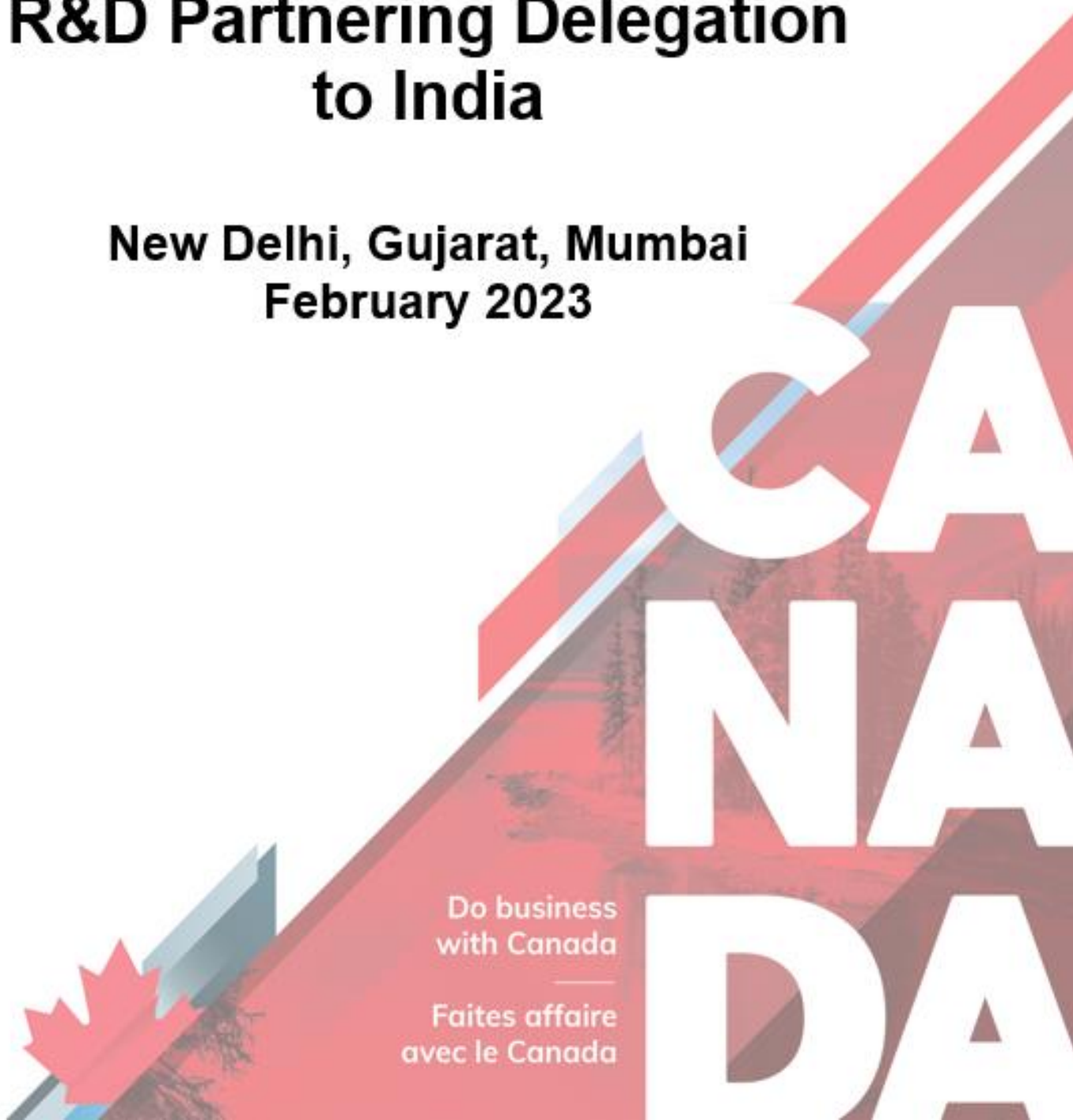
Canadian Clean Energy R&D Partnering Delegation to India

New Delhi, Gujarat, Mumbai
February 2023

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CANADA



ABOUT THE CANADIAN TRADE COMMISSIONER SERVICE

The Canadian Trade Commissioner Service (TCS), part of Global Affairs Canada, Government of Canada, is comprised of a network of more than 1,000 trade professionals based in regional offices across Canada as well as Canadian Embassies, High Commissions, and Consulates located in 161 cities around the world.

Canada: India's Infrastructure Partner

Canadian companies are recognized globally for excellence in infrastructure, high-level project management, specialized technical skills, and development of environmentally friendly, innovative solutions.

While several Canadian companies are already active in this region, many more are in search of the right partners and projects.

Canadian architects, designers, and project managers are known for their creativity. When it comes to engineering services, Canadian firms are recognized for their high levels of experience and familiarity with and access to proprietary technologies.

By choosing to partner with Canada, you are choosing world-class firms that have contributed to building some of the most exciting and innovative development projects around the world.

The Canadian Trade Commissioner Service can help connect Canadian and Indian firms for exploring partnerships and collaboration.

We encourage you to reach out to us at india.commerce@international.gc.ca to connect with Canadian technological expertise, cutting-edge design with exceptional levels of quality and long-lasting functionality.



PROFILES

- [Daanaa Resolution Inc](#)
- [Efficiency Capital Inc.](#)
- [Eneritics Inc.](#)
- [Power HV](#)
- [Quadrogen Power Systems Inc.](#)
- [SolarACM Systems Corporation](#)
- [Thermalfrost International](#)
- [Zen Electric Bikes Inc.](#)

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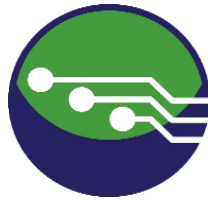
Company Name	Daanaa Resolution Inc. Energy Untethered™
Corporate Profile	<p>Daanaa is the only chip-based technology that allows energy to be transferred freely, sagely and efficiently. The company partners with ambitious global manufacturers to overcome energy challenges constrained by the limitations of physical hardware.</p> <p>Daanaa's brand-new, medium free and modality free chip-based power transaction technology transfers energy and data in DC\DC, DC\AC, AC\AC modalities, using proprietary bi-directional action in wired, wireless or using structures between many devices simultaneously, allowing for distribution and aggregation of power dynamically.</p> <p>Daanaa's core technology augments, manipulates, and controls the near field reactive electromagnetic space to transmit power and data, in order to introduce efficiencies based on parallel connection while eliminate copper, converters and inverters.</p>
Looking to meet with	<ul style="list-style-type: none"> • Partners in the solar domain to commercialize and market its integrated nano-inverter technology. • Partners in the EV and BMS to commercialize its bi-directional wireless charging systems.
Contact us	Udi Daon - CEO www.daanaa.com



<p>Company Name</p>	<p>Efficiency Capital Inc. Energy-as-a-Service</p>
<p>Corporate Profile</p>	<p>Energy-as-a-Service company upgrading energy and net-zero infrastructure (efficiency, generation, storage, EV). Efficiency Capital offers businesses technical and financial solutions for an array of net-zero projects (energy efficiency, renewable generation, and energy storage) for their buildings and facilities. These projects usually encounter challenges around insufficient funding, technical complexity, and long-term performance risk. Efficiency Capital solves this.</p> <p>Its unique deep-retrofit investment solution, originally developed by The Atmospheric Fund (TAF), has been deployed in over 55 installations, saved over \$30M and over 25Kt of GHG to date.</p> <p>Efficiency Capital has over \$100M to deploy in energy upgrade projects, including a \$50M commitment from the Canadian Infrastructure Bank, backed by the Canadian Government.</p>
<p>Looking to meet with</p>	<p>Technology partners who have solutions that Efficiency Capital Inc can adapt to its needs as it scales its platform, including building automation and controls, integration of renewables and energy storage into the built environment, remote monitoring and analytics, energy and carbon accounting, compliance, risk and asset management of net-zero infrastructure, etc.</p>
<p>Contact us</p>	<p>Chandra Ramadurai – CEO www.encycap.com</p>



Company Name	Enertics Inc. Asset Performance Management & Predictive Maintenance
Corporate Profile	<p>Enertics provides patent pending technologies for critical industrial assets, with a goal to increase asset/process uptime and reduce emergency repair costs and lost production from unexpected failures. Enertics helps customer monitor, diagnose and predict early stage health issues of their critical infrastructure, allowing them to prevent catastrophic failures at their facilities.</p> <p>Enertics' value proposition is the accuracy, reliability, and flexibility of the solution, which leverages multi-variate sensing technologies, advanced analytics and flexible cloud- or on-perm based solutions.</p> <p>Enertics' current customer base includes large multinational and PSU industrial firms in the Steel, Infrastructure, Power Plants, Manufacturing, Food Processing and Water Waste-water sectors.</p>
Looking to meet with	<ul style="list-style-type: none"> • Enertics Inc. goal is to form joint R&D and technology validation partnerships with the right partners in India in order to jointly develop projects and/or test new technologies that impact the environment and have an impact on their carbon footprint. • Partners who are end-users of technologies to optimise processes (i.e. Power plants, oil & gas refineries, power utility companies, equipment OEMs for rotating and static industrial machines as motors, EVs, transformers, switchgear, etc.).
Contact us	Bobby Sagoo – President & CEO www.enertics.ca



Company Name	Power HV Smart Efficient Asset Performance Management
Corporate Profile	<p>Since 2014, Power HV has been providing Performance Asset Management solutions to help utilities reduce fires and maximise transformer lifespan and availability by monitoring partial discharge, thermal profile and other variables that enable users to visualise a digital twin of their assets.</p> <p>Their small sensor integrates partial discharge detection, analytics, telecoms and oscilloscope, allowing for accurate measurements without the need for wires.</p>
Looking to meet with	<p>Its goal is to demo transformer monitoring asset performance management technology on 3 sites and then build a user case to demonstrate return on investment, when deployed at scale.</p> <p>Power HV would like to partner with Engineering firms that maintain and test transformers, or electrical utilities, or transformer manufacturers or municipalities that own transformers.</p>
Contact us	<p>Dr. Sizwe Dhlamini - CEO</p> <p>www.phv.ai</p>



Company Name	Quadrogen Power Systems Inc.
Corporate Profile	<p>Quadrogen produces renewable products and recover waste streams into saleable biofuels and green energy. Some applications of Quadrogen’s technologies include reformat gas, and industrial waste gas polishing and recovery to produce hydrogen; carbon capture from boiler flue gas, industrial waste gases and CO2 fertilization; and renewable natural gas production from gas from wastewater treatment plants, landfills, SSO digesters, and agriculture digesters.</p> <p>The Quadrogen team has over 100+ years of combined past experiences for innovation, design, engineering, scaling up and commercialization, and sound understanding of details and nuances.</p> <p>Their 100,000+ sq. ft. manufacturing shop in Pune, India, is a certified ASME shop with qualified engineers for PED/CE certified jobs</p>
Looking to meet with	Looking to connect with Indian organizations to conduct research and development activities within the bio methane and hydrogen (or other associated) fields, specifically for the Indian market.
Contact us	<p>Nelson Chan - Vice President Business Development</p> <p>Srishti Birla - Process Engineer EIT</p> <p>www.quadrogen.com</p>



Company Name	<p>SolarACM Systems Corporation Solar power plants operations & maintenance</p>
Corporate Profile	<p>SolarACM's Smart Robotic Cleaning and Inspection System (SRCIS) provides effective and efficient solutions for the two most prominent operations and maintenance issues facing mid- to large-scale solar plants: soiling losses and solar cell defects detection, using state-of-the-art technologies (robotics, sensing and control, wireless communications, cloud computing, and AI algorithms).</p> <p>SolarACM's SRCIS aims to offer the most comprehensive, economical and reliable solution that can adapt to various solar power plant implementations.</p> <p>As one of the earliest companies developing robotic PV panel cleaning solutions for mid- to large-scale solar power plants, SolarACM has a high-quality team of professionals with a deep understanding of the market requirements/challenges, as well as broad knowledge and extensive experience in business management, product R&D, and marketing.</p>
Looking to meet with	<p>SolarACM is seeking a wide range of knowledge and expertise for R&D collaboration to advance the technology and achieve an optimal smart robotic cleaning and inspection solution for mid- to large-scale solar power plants. They welcome R&D and business partners from India, including solar power plant owners or operators, EPC companies, tracker companies, and IT companies.</p>
Contact us	<p>Harry Pan - CEO Zhipeng Wang - Chief Technology Officer www.solaracm.com</p>



Company Name	Thermalfrost International Waste repurpose & energy storage
Corporate Profile	<p>Thermalfrost repurposes waste heat, even from renewables, to apply to thermal applications including cooling, heating and hot water. Together with partners, they have strong capabilities to store this thermal energy through phase change materials.</p> <p>In terms of power generation, using thermoelectric semiconductors, Thermalfrost can harness high grade heat to generate electricity. They can store this (or other) electricity in their super capacitors, known for their long product life and fast charge/discharge rates. Benefits include increasing energy efficiency for end-users and decreasing peak demand from the grid and even independence from the grid altogether.</p> <p>Experienced in recovering heat for chilling applications, Thermalfrost is broadening its commercial portfolio of products to include Waste Heat Recovery (WHR) power generation and super capacitors to store the generated electricity. It has strong R&D capabilities utilizing strong partnerships with companies like Hyundai.</p>
Looking to meet with	<p>Thermalfrost is seeking partners interested in combining WHR and power generation, especially for distributed applications.</p> <ul style="list-style-type: none"> • Energy management and power control companies will be complementary to its capabilities and ambitions. • Technologies that also interface with flue gases for the purpose of sequestering or neutralizing harmful emissions. • Partnerships with materials companies with expertise in anti-corrosive coatings and metals.
Contact us	Steven Donaldson - President and CEO www.thermalfrost.ca



<p>Company Name</p>	<p>Zen Electric Bikes Inc. Ultra-long lifetime battery technology and e-mobility products</p>
<p>Corporate Profile</p>	<p>Zen Electric is a clean energy company involved in the design and manufacturing of Li-ion batteries and E -mobility products such as electric bikes.</p> <p>The battery technology, commercialised out of Dalhousie university, offers 5X more longevity and effectively reduces GHG emissions by 500% compared to the incumbent technology.</p> <p>This enhanced lifetime reduces the cost of ownership of electric vehicles, E-waste coming into the market and increases the adoption rate. Food and cargo delivery fleet operators would greatly benefit from reduced operating costs. The battery technology would be rolled out as Energy-as-a-Service model.</p> <p>The company is led by engineers with decades of experiences in the EV industry and advised by world's top battery scientists.</p>
<p>Looking to meet with</p>	<p>The proposed collaboration is between Zen Electric and Indian companies involved in vehicle manufacturing and energy storage solution providers (solar/home energy). The battery technology would be adaptable to current products in India and to be cost competitive. Zen Electric plans to build a manufacturing facility in India along with a co-innovation partner. They anticipate the partner to have supply chain and product expertise within the Indian market.</p>
<p>Contact us</p>	<p>Ravindra Kempaiah - CEO & Director www.zenebikes.com</p>

ABOUT THE NATIONAL RESEARCH COUNCIL OF CANADA

For 75 years, the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) has been stimulating economic growth through technological innovation. It provides Canadian small and medium-sized enterprises (SMEs) with customized business solutions, financial assistance, expert advice, and access to national and international networks in all industry sectors.

NRC IRAP's international initiatives are focused on providing support in a number of key areas, including direct support to SMEs with international interests, technology partnering and joint research and development projects.

India and Canada have signed an agreement to coordinate funding from both governments for collaborative research and development projects between a Canadian and Indian partner.

The Canada International Innovation Program (CIIP)

The [CIIP](#) is a funding program designed to promote industry-oriented innovation partnerships with countries with which Canada has a Science, Technology and Innovation (STI) Agreement, including India. It is jointly delivered by Global Affairs Canada and NRC-IRAP, in partnership with Department of Science and Technology.

How does the program work in India?

The CIIP supports industrial R&D partnerships and matchmaking activities between Canadian and Indian companies with a view to accelerating commercialization and facilitating market access. The CIIP has two principal activities:

- **Partnership Development Activities:** facilitates identification of specific projects or partnerships between Canadian and Indian companies that could lead to industrial R&D cooperation.
- **International Collaborative R&D Projects:** funding for Canadian companies participating in R&D projects with an Indian entity that will lead to adoption and/or adaptation of innovative or technology-driven new or improved products, services or processes up to their commercialization.
- **Eligibility for International Collaborative R&D Projects:** companies operating in Canada, particularly Small and Medium-Sized Enterprises (SMEs), where the potential applicant has demonstrated that it will carry out a bilateral project with a partner in India. Canadian companies' partners for CIIP projects may be companies or research organizations in India. Eligible Indian companies will engage with Canada's CIIP local partner in India, which is to be announced soon.

Contact information:

**High Commission of Canada
New Delhi**

Ms. Deborah Rojas
Second Secretary (Commercial) and Trade Commissioner
Deborah.Rojas@international.gc.ca

Ms. Meeta Kak
Trade Commissioner
Meeta.Kak@international.gc.ca

Ahmedabad, Gujarat

Mr. Joachim Rocha
Trade Commissioner
Joachim.Rocha@international.gc.ca

Mumbai

Ms. Yasmine Dubash
Trade Commissioner
Yasmine.Dubash@international.gc.ca

National Research Council of Canada Industrial Research Assistance Program

Mr. Wei Ning
Industrial Technology Advisor
Wei.Ning@nrc-cnrc.gc.ca

Mr. Neil Kochar
Industrial Technology Advisor
neil.kochar@nrc.gc.ca



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