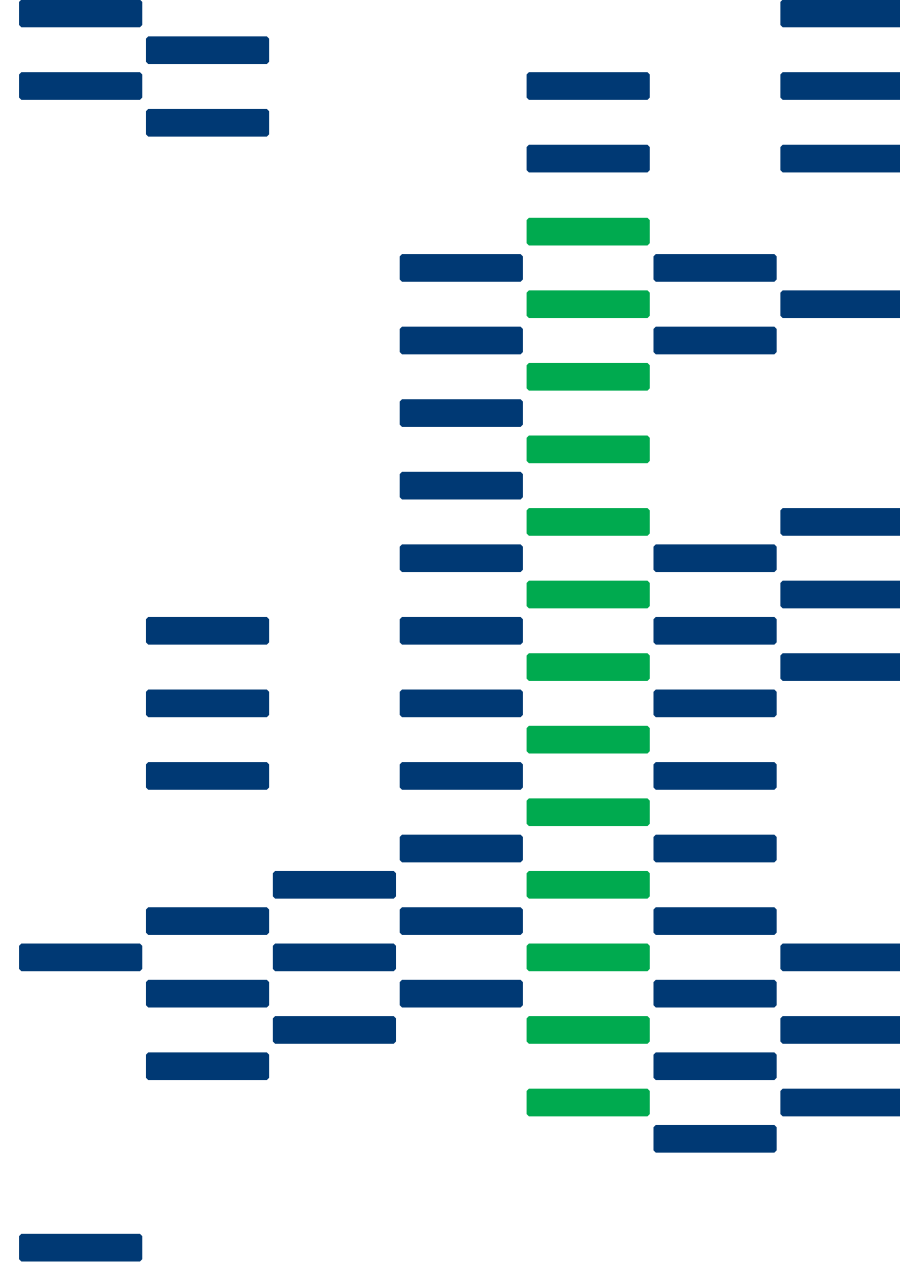
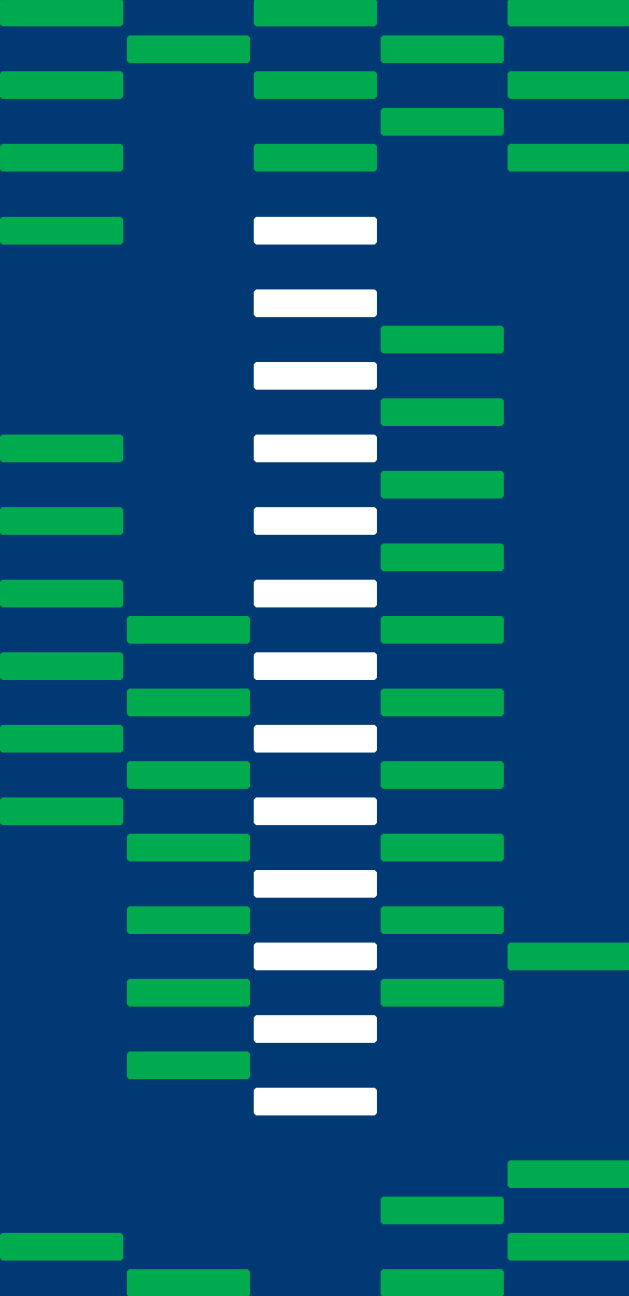


CLEAN ENERGY zone





Empowering energy entrepreneurs



The energy sector is transforming – the threat of climate change, the commercialization of renewable energy sources and the impact of big data are leading to rapid change. The Clean Energy Zone is at the forefront of this transformation.

Founded in 2012, the Clean Energy Zone, housed in Ryerson University's Centre for Urban Energy, is an incubator focused on clean, sustainable energy innovations, including electric vehicles, renewables, energy storage and distribution, microgrids and net-zero city building. We bring researchers, students and industry partners together to commercialize sustainable solutions to address societal needs and provide real environmental, cultural and economic impact.

Benefitting from Ryerson's unique zone learning model, members of the Clean Energy Zone develop their idea while learning new skills to improve their business acumen and technical expertise. Through our relationship with the Centre for Urban Energy, we also offer our zone members access to state-of-the-art research labs, co-working spaces and curated mentorship from industry partners and academic researchers and faculty.



Zones & zone learning

Zone learning is a distinct model of experiential learning pioneered at Ryerson, developed to prepare students for the workplace of the 21st century by working on real projects, causes, companies and startups at one of Ryerson's 10 zones. Each zone focuses on a specific industry and offers students access to resources and mentors to develop their own ideas or contribute to someone else's. Zone learning includes hands-on experiential education, workshops, Startup School, continuing education opportunities and an optional specialization.

In the Clean Energy Zone, you will work at the forefront of multi-billion-dollar energy-based industries to develop new products, explore innovative solutions or embark on ventures to change the world. Working in one of the most vibrant and diverse cities in the world, you can develop critical collaboration and project management skills valued by employers, gain real-world experience for resumes and portfolios, or even graduate with your own company.

Programs offered

Startup School

Startup School helps students and zone members develop the mindset and skills required to manage the entrepreneurial process. Top industry experts, thought leaders and seasoned entrepreneurs lead free workshops on topics including design thinking, business plan development and managing investors.

Zone learning community

Access resources, community programs, workshops, competitions and networking or industry events from any area within Ryerson's zone network. For example, Sandbox, the community arm to the DMZ at Ryerson, North America's top university-based technology incubator, provides free career development programs that help entrepreneurs master skills in web design, social media, coding or photography.

Optional specialization

Completing four terms of enrollment in zone learning earns students a specialization to appear on your transcript.



Centre for Urban Energy

The Centre for Urban Energy (CUE) at Ryerson University is a world-class academic-industry research and technology demonstration centre devoted to the discovery and commercialization of innovative, practical solutions to urban energy issues.

CUE was created in 2010 with supporting funds of \$7 million from our founding sponsors: Hydro One, IESO, and Toronto Hydro. CUE houses state-of-the-art research and testing facilities, including a smart grid laboratory – the first of its kind at a Canadian university.

Today, CUE partners with over 45 of Canada's top industry leaders in the energy sector including the Ontario Ministry of Energy and Schneider Electric. CUE researchers and faculty members frequently publish reports and recommendations on topics including: electric vehicles, energy storage, utilities and infrastructure efficiency, and electric grid improvements.

All facilities and resources at CUE are available for Clean Energy Zone member use. Zone mentors are often researchers, faculty or partners involved with CUE.

Centre for Urban Energy founding sponsors:



Benefits for zone members

Funding opportunities

Competitive grants and programs provide lucrative funding opportunities for Clean Energy Zone members. For example, through OCE programs, startups can access 1:1 matching funding of up to \$250,000.

- Government of Ontario: Ontario Centres of Excellence
- OCE Campus-Linked Accelerators
- OCE SmartStart Seed Fund
- Ryerson Futures
- David McFadden Energy Entrepreneur Challenge
- Norman Esch Engineering Innovation & Entrepreneurship Awards
- National Research Council of Canada-Industrial Research Assistance Program

Industry mentors

Zone members are matched with mentors — established industry thought leaders working with energy utilities, technology firms and businesses — that work in a field as close as possible to the venture.

Mentors provide entrepreneurs with expert guidance and networking opportunities throughout the innovation pathway from ideation to commercialization, helping them accelerate initiatives that have real potential for social or economic impact.



Incubation process

The Clean Energy Zone supports the startup journey between ideation and market growth.



Ideation

Focus on solving a problem or exploring an opportunity



Development

Look for validation of a defined idea



Startup

Seek industry connections and funding for a prototype or concept

Get real-world experience and learn new skills

Success requires the development of soft skills like time management, collaboration and communication. Gain new experience and develop new skills on the job while bringing a clean energy solution to life.

- Collaborate and build ideas with other entrepreneurs within Ryerson's zone network
- Mentor with an industry thought leader to help improve the chances of your innovation's success
- Test your prototypes in our state-of-the-art research labs
- Take advantage of opportunities to win funding through lucrative awards and grants
- Learn on demand with workshops and startup courses offered through Ryerson's zone learning community



The pre-graduate startup

Electrical Engineering students Bolis Ibrahim and Oleh Zhyinas created award-winning solar energy startup, Argentum Electronics, developing clean energy chargers for high-end consumer electronics. They've just completed their working prototype for a solar charge controller – a device that harvests energy from solar panels more efficiently than other alternatives currently available on the market.

Having mentored with several faculty and industry experts, Bolis and Oleh also benefitted from the Clean Energy Zone's co-working space and technical testing facilities. Their startup won the David McFadden Energy Entrepreneur Challenge at the Ontario Centres of Excellence Discovery conference, winning a prize of \$25,000 and a suite of business services to help them advance their winning concept. This financial boost added to their previous wins of all three stages of the Norman Esch Engineering Innovation and Entrepreneurship Awards, totalling \$38,000, and is helping Bolis and Oleh take their idea from prototype to a commercial product.



“Not everything that runs on a computer simulation is viable in real life. At the Clean Energy Zone, we worked with real components to produce a physical, working model, and it was a good learning experience. I like being in Ryerson's zone learning ecosystem. There are always high-profile leaders from the power industry and potential investors available to bounce ideas off of.”

– Bolis Ibrahim



Incubate ideas and catalyze passion

Focus on your passion, while taking your project from idea to impact.

- Participate in clean energy-focused events and benefit from a wealth of networking opportunities
- Tap into an integrated ecosystem of world-leading industry connections and academic researchers
- Gain market insight from industry experts and mentors to define business opportunities
- Take advantage of the opportunities of working location in the heart of downtown Toronto
- Leverage the diverse talent pool of Ryerson students via zone match-making and co-founder pairing events



“The Clean Energy Zone provided Plug’n Drive with a home, right in the heart of downtown Toronto during our critical startup years. The zone introduced us to project partners, helped us leverage outstanding student talent and resources, and cross-promoted our brand and message, helping us achieve media attention and drive awareness.”

– Cara Clairman

The cleantech champion

Plug’n Drive is a non-profit organization accelerating the adoption of electric vehicles in Canada by providing unbiased information on electric cars and charging stations. Specializing in education and outreach programs, Plug’n Drive partners with electricity distribution companies to increase, electric vehicle research and engagement with all levels of government.

At a critical time for growing her business, Plug’n Drive president, CEO and founder Cara Clairman turned to the Clean Energy Zone for key government and industry connections. Additionally, Cara turned to a team of Ryerson students to help with market research, outreach, and graphic design, allowing her the time to focus on developing her business plan.

Now a nationally-recognized NGO, Plug’n Drive has partnered with the Government of Ontario to open the new Electric Vehicle Discovery Centre (EVDC) in 2017. The EVDC creates new space for electric vehicle education, where interested buyers can compare models and gather information in a sales-free, no-pressure environment.

Lead change with impactful solutions

Transform industries by building bold solutions that create real change. Lead the future of your movement and work with mentors to guide your growth.

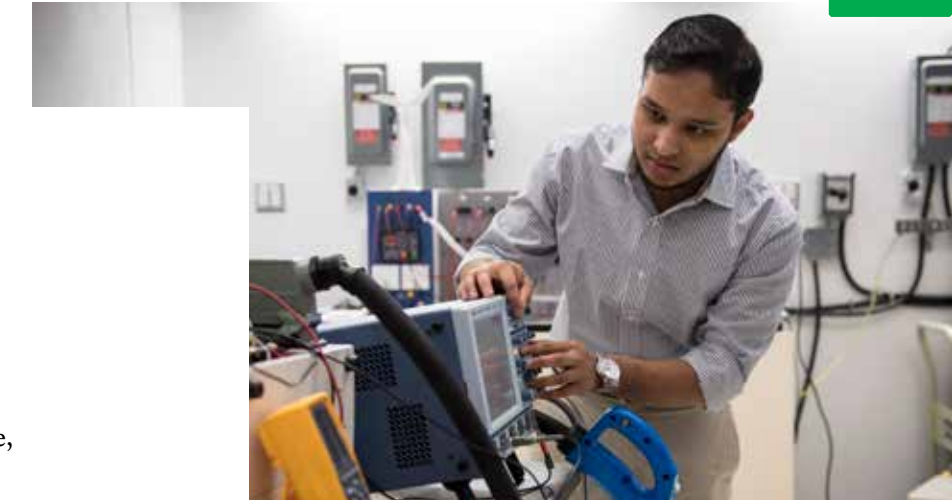
- Spark social change for benefits bigger than profits
- Respond to the rapidly-evolving needs of society
- Get matched with a mentor with industry experience directly related to your project
- Graduate with hands-on experience creating economic environmental or social impact
- Make a difference: Help create a more sustainable world by transforming our energy systems



The industry disrupter

Ahsan ul Alam, a Ryerson Electrical Engineering graduate, co-founded Electrefy, a Clean Energy Zone startup that developed the first, low-power electric vehicle charging station that can recharge up to 80 per cent in under 20 minutes using a standard outlet. Set to solve one of the biggest hurdles to electric vehicle adoption, this cost-effective system is poised to transform not only the environmental impact but also the economic and social impact of electric vehicle adoption by redefining the cost and accessibility of charging stations – shaking up the automotive industry as we know it.

Along with co-founders, Joseph Tam and Sabbir Ahmed, Ahsan developed the technology behind Electrefy by leveraging influential research from Ryerson's Centre for Urban Energy. The Clean Energy Zone's incubation process and industry and faculty zone mentors helped ensure controlled and calculated growth for this startup, bracing it for exponential growth in the face of major industry change.



“In an industry that has typically been defined by incremental innovations, I wanted to make a significant change that would remove barriers and accelerate the adoption of electric vehicles. I really wanted to solve the problem that there are not enough chargers available to meet increasing demand. The experience at the Clean Energy Zone is phenomenal. The industry connections and being part of the ecosystem are important and give us credibility.”

– Ahsan ul Alam

Clean Energy Zone graduates



“The Clean Energy Zone offered a collaborative and innovative work environment with access to the people and resources we needed to launch our company. As a masters student at Ryerson, graduating with my own startup definitely gave me several advantages when considering career options.”

– Matt Tokarik, Founder of 2nd Lot



“The Clean Energy Zone played an integral role in supporting DanTeb through the process of building our own ‘Made in Canada’ product. We met some of our suppliers through the network and we are still partnered with them today. It was a great place for idea sharing and learning from mentors.”

– Laura Miller, Co-Founder of DanTeb Enterprises

Clean Energy Zone by the numbers

2012

Founded

+\$3M

Funding raised to date

50+

Number of jobs created in new startups since 2012

100+

Number of zone learners in 2016

14 13

Current number of startups

Number of graduated enterprises



Visit **ryerson.ca/cue** today
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the Clean Energy Zone



Centre for
Urban Energy



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