Magna International Facility Emissions Challenge Program Guide

Driving Down Emissions for Year-Round Facility Comfort

Introduction

The Magna International Facility Emissions Challenge invites innovators to present solutions to reduce Scope 1 emissions from Magna's manufacturing facilities. This initiative aligns with Magna's ambitious sustainability goals and allows participants to collaborate with one of the world's leading automotive manufacturers. By developing scalable, reliable, and innovative technologies, participants will be critical in driving facility efficiency and advancing Magna's path toward a net zero future.

Background

Magna International, a global leader in automotive manufacturing, is committed to achieving net zero emissions by 2050. A significant portion of its Scope 1 emissions arise from make-up air units used in facility ventilation. These units exhaust conditioned air, resulting in substantial energy loss and increased emissions. Through this Challenge, Magna seeks innovative, cost-effective solutions to address these inefficiencies and reduce its environmental impact.

Magna International Facility Emissions Challenge Overview

Magna seeks to implement innovative technologies that minimize facility Scope 1 emissions while maintaining operational reliability and comfort. Solutions may include energy recovery systems, alternative fuels, efficient ventilation designs, or heat pumps. These technologies should align with Magna's operational and budgetary constraints and have the potential for scalability across its global facilities.

The ideal successful technology will:

- Effectively reduce Scope 1 emissions from facility heating systems.
- Demonstrate cost efficiency with a clear return on investment within 2-3 years.
- Integrate with existing infrastructure without significant operational disruptions.

- Provide year-round benefits, including cooling capabilities for summer months.
- Exhibit scalability across various facility sizes and configurations globally.
- Require minimal maintenance and ensure long-term reliability.

The challenge team is not interested in solutions that:

- Are first-of-a-kind or unproven technologies with no track record of reliability.
- Require significant modifications to existing infrastructure or disrupt current operations.
- Have high upfront capital costs without a clear case for return on investment.

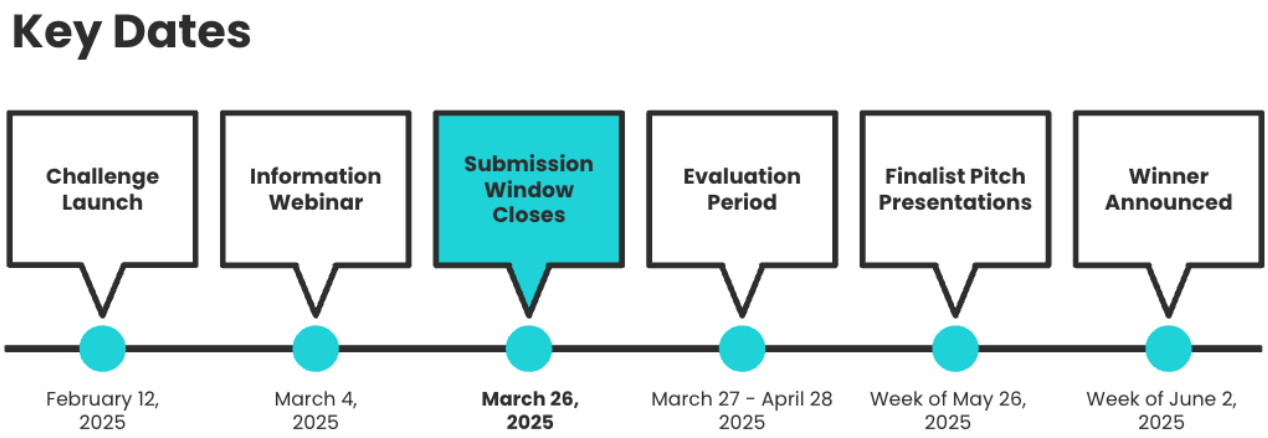
See Appendix 1 for additional background information on Magna's operational needs and constraints.

Challenge Outcomes

Successful applicants will have the opportunity to collaborate with Magna, a global leader in automotive manufacturing, to deploy their solutions in a Southern Ontario facility. Successful innovations can lead to scalable implementations across Magna's global network, offering visibility and credibility in the industry. Participants will gain valuable insights and connections to drive future growth and innovation.

Timeline

The Challenge will be open for seven weeks. Key dates of the Challenge are provided below.



Eligibility

To be considered, solutions must:

- Be at a Technology Readiness Level (TRL) of 7+
- Meet Magna's safety, compliance, and operational standards
- Be commercially deployable and adhere to facility-specific regulations in Southern Ontario

This Challenge is open to Canadian or international applicants.

Evaluation Criteria

All eligible and complete submissions will be evaluated by a panel of technical experts on the following key success indicators:

- **Cost-Effectiveness**
  - Strong business case with a short-to-medium-term return on investment
- **Emission Reduction Impact**
  - Demonstrated capability to reduce Scope 1 emissions effectively
- **Reliability**
  - Proven performance with minimal maintenance requirements
- **Scalability**
  - Potential for implementation across multiple Magna facilities globally
- **Innovation**
  - A unique but not first-of-a-kind demonstration is encouraged

About the Challenge Partner

Magna International is a global mobility technology company with a presence in over 30 countries and over 170,000 employees. The company is at the forefront of innovation, offering products and systems for nearly every vehicle on the road. Magna's commitment to sustainability is evident through its ambitious net zero emissions goal by 2050 and a focus on integrating renewable energy and energy optimization strategies into its

operations. Through collaborations with over 10,000 suppliers and partners, Magna drives industry-leading advancements in sustainable manufacturing.

Terms and Conditions

Registration and application submission

To participate, applicants must register on the Challenge website. Once registered, applicants must complete the Application Form in full to be considered for award. All applications must be submitted in English and adhere to the requirements specified in the various sections of the online form (including the requisite attachments to support the submission).

Applications must respect the requirements to be accepted.

The application submission deadline is **11:59 pm EDT, March 26, 2025**. All applications must be submitted through the Challenge's application platform. Any submissions sent to the Challenge mailbox or made after the deadline will not be accepted. Applicants are encouraged to complete their submissions well in advance of the deadline. Partial or incomplete submissions will not be eligible for review. All required content must be uploaded and entered into the Challenge platform. The submission must be finalized by completing all necessary online steps for the application to be considered complete before the deadline.

Only the information requested in each application section will be reviewed. Any links to additional material or information submitted outside the application form will not be considered during the evaluation. Applicants will receive an email confirming receipt of a complete submission.

Project-specific feedback will not be provided to unsuccessful applicants.

Intellectual property

Proprietary information belonging to the manufacturer/solution provider will not be shared outside the project team. Only information required for evaluating submissions or other necessary competition functions will be shared within the project team.

Confidential information that is collected, used, or disclosed by Foresight will be handled in a manner that recognizes both the right of the individual to have their confidential information protected and the need of Foresight to collect, use, and disclose such information to determine the Challenge winners and ensure a fair process.

Contact

If you have any questions regarding this Challenge, please send them to: challenges@foresightcac.com

Appendix 1: Additional Background Information

Applicants should carefully review the following technical bullets to ensure their proposed solutions align with Magna's operational needs and constraints:

- Make-up Air units are typically direct-fired.
- Make-up Air airflow range: 40,000 – 100,000 CFM
- Make-up Air heating range: 4 – 10 MMBTUh (4,000,000 – 10,000,000 BTUh)
- Exhaust Fan airflow range: 10,000 – 30,000 CFM
- Weight of rooftop mounted systems will need to be provided by the solution provider
- Interior temperature must not drop below 18 degrees celsius (setpoint temperature typically 19 degrees celsius)