Atlantic Canada Opportunities Agency

Sponsor

Atlantic Canada Opportunities Agency (ACOA) in partnership with Impact Canada

Program

Hull Design Efficiency Challenge

For More Information

More information regarding this opportunity can be found at the following links:

- Hull Design Efficiency Challenge [1]
- Application Guide [2]
- Application Form [3]
- Frequently Asked Questions (FAQ) [4]

Description

The Atlantic Canada Opportunities Agency (ACOA) is challenging boat builders to develop an innovative hull that maximizes energy efficiency, lowers operational costs and reduces greenhouse gas emissions. The hull is one of the most important parts of a boat because it has direct contact with water. The shape of a boat's hull determines the amount of drag (pull) and how the boat will handle at different speeds and in different water conditions. The hull designs submitted in this Challenge must:

- meet the needs of the Atlantic Canadian inshore fishing industry (boats under 15 m/50 ft)
- focus on innovations to hull design while keeping the rest of the boat largely unchanged
- meet relevant Canadian and provincial regulations for commercial fishing vessels

The Hull Design Efficiency Challenge will:

- encourage out-of-the-box thinking when designing fishing boat hulls
- fuel innovation in the boat building industry

Eligibility

The Challenge is pan-Atlantic (New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland & Labrador) in scope and is open to commercial and non-commercial organizations in Atlantic Canada as listed below:

- Small or medium-sized business or other for-profit organization incorporated in Atlantic Canada;
- Small or medium-sized business or other for-profit organization incorporated under legislation in effect in Canada that is registered to do business in and has its principal place of business in Atlantic Canada;
- Not-for-profit organization incorporated in Atlantic Canada or incorporated under legislation in effect in Canada and has its principal office in Atlantic Canada;
- Indigenous organization or group located in Atlantic Canada; and
- Post-secondary/academic institution located in Atlantic Canada.

An applicant may partner with organizations outside of Atlantic Canada provided the primary applicant meets one of the eligible categories listed above and complies with this Guide.

Applicants must meet one of the categories of eligible applicants listed above in order to apply for the Challenge and be awarded the prize funding, and the winner will need to be able to operate in Atlantic Canada to be eligible for the contribution agreement. The outcomes and results of the contribution funding will need to be of primary benefit to Atlantic Canadians.

Failure to meet any of the below criteria will render your application ineligible.

- Hull designs must be for a small fishing vessel under 15m/50ft.
- Submissions must focus on innovations to the hull design while keeping the operation of the topside of the fishing boat largely unchanged, as this exceeds the scope of this Challenge.
- Applicants' hull designs must meet relevant Canadian and provincial regulations for commercial fishing vessels at point of application.

Maximum Project Value

Stage 2: ACOA will cover the cost of computer simulation evaluations for up to 10 semi-finalists selected after the first stage screening valued at approximately $6,000 each, to be carried out by the National Research Council’s Ocean, Coastal and River Engineering Research Centre.

Stage 3: ACOA will cover the cost of construction and testing of scale models for up to three finalists selected after the computer simulation screening valued at approximately $60,000 each, to be carried out by the National Research Council’s Ocean, Coastal and River Engineering Research Centre.

The Grand Prize winner will receive a non-repayable contribution of $500,000, subject to entering into a contribution agreement with ACOA, to support further basic research and development of their design through pre-commercialization activities, such as prototype testing,

etc.

Indirect Costs

To be determined

Deadlines

If College-level review is required, your College will communicate its earlier internal deadlines.

Type	Date	Notes
Internal Deadline	Wednesday, August 21, 2019 - 4:00pm	Applicants should submit their signed OR-5 form and full application package to research.services@uoguelph.ca [5].
External Deadline	Saturday, August 31, 2019 - 12:00pm	Applicants should submit their completed application package directly, along with any required supporting documents.

How to Apply

There is a three-stage, gated application process for this program:

1. Stage 1: Application (August 31, 2019)
    - Online application.
2. Stage 2: Up to 10 semi-finalists will be selected
    - Submission of technical plan and digital design files (e.g. .iges, .stp files) for simulation at NRC's Ocean, Coastal and River Engineering Research Centre in St. John's, NL.
3. Stage 3:Up to 3 finalists will be announced in January 2020.
    - Selected applicants will need to develop scaled self-propulsion boat hull models with NRC; NRC will provide each applicant with a stock propeller. Applicants' designs will be towed and evaluated in the Ocean, Coastal and River Engineering Research Centre tank and the results compared between entries.

The detailed criteria and requirements for Stage 2 and Stage 3 will be provided to the applicants

selected for those stages by way of Supplements to the Applicant's Guide.

The final grand prize winner will be announced in the July of 2020.
For Questions, please contact
Please direct questions regarding this opportunity to: acoa.cleantechimpact-impacttechpropre.apeca@canada.ca [6]. They will respond to your query within two within two business days.

Office of Research

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Alert Classifications**Category:**
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Disciplines:
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Links
[1] https://impact.canada.ca/en/challenges/hull-design-efficiency/connect-with-us
[2] https://impact.canada.ca/challenges/hull-design-efficiency/application-guide
[3] https://impact.canada.ca/challenges/hull-design-efficiency/application-form
[4] https://impact.canada.ca/challenges/hull-design-efficiency/frequently-asked-questions
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