2025 Hydrogen Innovation Fund

Application Guideline – Draft for Stakeholder Engagement
Stream 1

September 2025

ieso
Connecting Today.
Powering Tomorrow.

Table of Contents

1. Overview **2**

1.1 Process and Timelines 3

1.2 Stream 1 Objectives 4

1.3 Project Type and Categories 4

1.4 Key Performance Indicators (KPIs) 5

1.5 Project Requirements, Final Report & IESO-Prescribed Testing 5

2. Project Evaluation **6**

2.1 Stage 1: Eligibility Screening 6

2.2 Stage 2: IESO Evaluation Criteria 8

2.3 Stage 3: Canadian Status Policy 10

2.4 Ranking 12

3. Administration **12**

3.1 Application Process 12

3.2 Funding Disbursement 13

4. Standards Authorities **13**

4.1 Technical Standards and Safety Authority (TSSA) 13

4.2 Electrical Safety Authority (ESA) 14

Appendices **16**

Appendix A: Key Performance Indicators (KPIs) 16

Appendix B: Technology Readiness Levels (TRL) 17

Appendix C: Eligible and Ineligible Expenses 18

Appendix D: Submission Documents 19

1. Overview

The Hydrogen Innovation Fund (HIF) enables the IESO and project applicants to test existing and emerging technologies with a view to objectively determine how hydrogen resources can support reliability, affordability and sustainability of Ontario's electricity system, as well as broader decarbonization efforts in heavy industry and transportation.

The 2023 HIF Call for Applications ("2023 HIF Call") supported projects spanning from electrolytic hydrogen production to the use of hydrogen blended with natural gas for electricity generation. Early findings from these projects have identified key opportunities and challenges for integrating hydrogen into Ontario's electricity system.

On July 31, 2025, the Minister of Energy and Mines ("the Ministry") directed the IESO to launch a 2025 HIF Call for Applications ("2025 HIF Call") in support of Ontario's Low-Carbon Hydrogen Strategy.

The 2025 HIF Call aims to support innovative hydrogen pilot projects focused on two separate $15 million streams:

1. **Stream 1** – Demonstration projects supporting the integration of low-carbon hydrogen into the electricity grid to increase electricity supply, capacity, or storage, which could include peak demand management, ancillary services, and long-term/seasonal storage of surplus renewable energy.
2. **Stream 2** – Demonstration projects directly or indirectly enabling broader applications of low-carbon hydrogen, such as new industrial and transportation sector applications including innovative hydrogen fueling infrastructure, as well as creating hydrogen "hubs" that connect producers with end users.

The purpose of this guideline is to provide prospective **Stream 1** applicants an overview of the requirements and application process of the 2025 HIF Call.

Up to $15 million in total funding over three years is available for approved **Stream 1** projects.

Please carefully review this document in its entirety before submitting an application.

Note – The IESO recognizes that some proposed projects may deliver benefits that align with both streams. However, applicants may only apply to one stream (Stream 1 or Stream 2) per project. To assist in this determination, applicants should review the project categories and evaluation criteria for each stream and submit their project under the stream that aligns best with their project attributes. The selected stream should reflect where the majority of benefits and outcomes are expected, noting that Stream 1 funding must remain within its objective of delivering direct electricity system benefits. If applications for the same project are submitted under both streams, IESO will notify applicants pursuant to the rectification process, as set out in Section 2.1 below, the applicant will have **two business days to inform the IESO which submission should proceed for review.** On receipt

of a rectification notice, applicants that fail to inform IESO which submission should proceed for review within the allotted time will be removed from further consideration.

Potential applicants are welcome to contact the Hydrogen Innovation Fund team at hydrogeninnovationfund@ieso.ca with questions about their application before January 27, 2026.

1.1 Process and Timelines

The 2025 HIF Call consists of six stages, as illustrated and described below.

Note – Proposed timelines below are subject to change.

1. Public Stakeholder Session (October 1, 2025): The IESO presents the program design including scope, eligibility requirements, and evaluation criteria for stakeholder feedback. To register for the session, please visit the IESO's Stakeholder Engagement website - Hydrogen Innovation Fund (HIF).

2. Open Submission Window (November 4, 2025 – February 11, 2026): The IESO publishes final versions of the guideline and other application documents. Applicants form teams, develop their project applications, and submit applications to the hydrogeninnovationfund@ieso.ca. Applicants are welcome to contact the HIF team with questions about their application before January 27, 2026, and the IESO will provide a written response by January 30, 2026. Applications will not be accepted after 11:59 p.m. on February 11, 2026. See Section 3 for more details.

3. Application Evaluations (February - April 2026): The IESO evaluates applications per the evaluation process outlined in Section 2 below.

4. Notification of Project Selection (May 2026): Applicants are notified of the funding decision on their project. Applicants whose projects are selected for funding may also be notified of any Indigenous consultation identified by the Ministry, as appropriate.

5. Contracting (May - July 2026): The IESO enters into a HIF funding agreement with each of the successful applicants (the "Contribution Agreement"). During this stage, the IESO and applicant work together to ensure project activities and deliverables are clearly captured. See Section 3 for more information.

6. Project Execution (August 2026 – August 2029): Projects commence and start to incur project related costs. The IESO will setup kick-off meetings with the successful applicant project teams, followed by bi-monthly touchpoint meetings. Successful applicants are encouraged to connect with TSSA and ESA after contract execution, see Section 4 for more information.

1.2 Stream 1 Objectives

The purpose of Stream 1 is to build on 2023 HIF and investigate, evaluate and demonstrate low-carbon hydrogen technologies that support further integration into Ontario's electricity grid. The goal is to support balancing and strengthening the electricity system while contributing to broader decarbonization and innovation across the hydrogen and electricity sectors.

Stream 1 is similar in scope to 2023 HIF and is intended to build from the learnings of the 2023 HIF call. The 2023 HIF call supported various projects spanning from exploring electrolytic hydrogen production applications to the utilization of hydrogen blended with natural gas for electricity generation.

The high-level objectives of Stream 1 include:

1. Enhance **electricity system flexibility** through innovative integration of hydrogen-based load, generation, and storage with the electricity grid.

2. Support **hydrogen production technology advancement** in areas such as production, efficiency, cost, purity, etc.

3. Support and accelerate **decarbonization and emissions reduction** of Ontario's electricity system and economy.

4. Support hydrogen sector development and evolution through **collaboration and knowledge sharing** of lessons learned and key project findings.

1.3 Project Type and Categories

The 2025 HIF will consider applications for demonstration projects that are at least at the Technological Readiness Level 7 (TRL 7). These will be real-world projects located in Ontario involving physical assets/equipment, construction, field operations and testing.

Stream 1 is seeking demonstration projects that focus on commercializing technologies or solutions and include at least one of the following project categories as part of the project scope. Examples of applicable projects are also provided below each category, but do not represent a fulsome list.

Note – Applicants are allowed to include more than one of the below categories as part of their project scope.

Category 1A- Grid support services from hydrogen production loads

1.A.1 Demonstration of how a hydrogen production facility participates in the energy, operating reserve, and capacity markets in Ontario, including analysis of hourly price-quantity pairs (as defined in IESO Market Rules Chapter 11, Definitions), price sensitivity and responsiveness, load profile, seasonal and monthly variations, average capacity factor, ramp rates, etc.

1.A.2 Demonstration of how a hydrogen production facility might participate in peak-reduction and/or capacity programs including participation in the Industrial Conservation Initiative (ICI) or demonstration of demand reduction capabilities.

1.A.3 Demonstration of how a hydrogen production facility would provide ancillary services to the IESO, such as frequency regulation.

1.A.4 Integration with renewable energy or large industrial loads to support active power smoothing and demand management. This includes increasing hydrogen production during surplus generation or low-demand periods, to demonstrate the ability to smoothen energy production or usage and follow an IESO market dispatch signal.

Category 1B- Customer-sited peak demand management

1.B.1 Demonstration of how behind the meter hydrogen fueled electricity generation or hydrogen related-load can support customer-sited demand management such as peak shaving, load shifting, electricity pricing arbitrage, capacity market participation, etc.

Category 1C – Hydrogen Energy Storage

1.C.1 Performance of energy storage using hydrogen including round trip efficiency (RTE), hourly price-quantity pairs, charge/discharge profile (i.e. when is it economic to charge and discharge), ramp rate, availability, energy management, storage duration, operational/logistical constraints, etc.

1.4 Key Performance Indicators (KPIs)

Key performance indicators (KPIs) have been developed to measure the ability of successful projects to meet the objectives outlined in Section 1.2 above, and to measure the overall success of the 2025 HIF Call. Applicants will outline their methodology for each KPI listed in Appendix A to present how the objectives will be achieved, using publicly recognized/standardized methodologies where appropriate. Applicants are encouraged to propose additional KPIs aligned with demonstrating the achievement of the HIF objectives. Refer to Appendix A for details.

1.5 Project Requirements, Final Report & IESO-Prescribed Testing

The proposed projects should focus on gathering, analyzing and disseminating insights to help achieve the objectives of the 2025 HIF Call. To support applicants, the IESO has streamlined the application process based on stakeholder feedback received, including updates to required templates. The IESO will also provide guidance to assist applicants in completing and submitting their applications in a timely manner.

Using the 2025 HIF Application template for Stream 1, parts A and B, each proposed project should be structured around a maximum of three milestones. After completion of each milestone, the applicant will be required to submit a milestone report that includes a summary of the project

progress, the percentage of completion of the 2025 HIF Call KPIs, information on lessons learned to date, and technical achievements thus far.

Additionally, Stream 1 projects will be subject to a suite of IESO-prescribed tests designed to assist with the electricity system flexibility objective from Section 1.2 above, and explore the technical capabilities of hydrogen technologies to provide simulated wholesale market and ancillary services.

For each milestone, applicants should identify all potential risks and propose corresponding mitigation measures. Each milestone should be specific, measurable, realistic and relevant to the project objective(s). All milestones and their associated activities should follow a logical sequence, including the timelines and/or duration of each, as well as detailed descriptions. Examples of potential milestones may include engineering, procuring and construction/commissioning in place, required permits and licenses, etc.

Please note, applicants whose projects are selected for funding may also be notified of any Indigenous consultation identified by the Ministry as appropriate, which must be carried out by the applicant. The Ministry or the IESO may request additional information about a project. Applicants must provide such requested information within the time specified.

At the end of the project, applicants are required to submit a final report using an IESO provided template. In addition to any key deliverables identified by the applicant, the final milestone shall include IESO-Prescribed testing, a completed testing framework, and a final report documenting project analysis, outcomes, etc.

A link to the 2025 HIF Testing Framework is included in Appendix D. Applicants should familiarize themselves with the framework and ensure the testing period is accounted for in the project scope and budget.

Note - Testing scope to be fully funded by the IESO. Refer to Section 3.2 for more information on funding disbursement.

2. Project Evaluation

To determine if Stream 1 applications qualify for funding, the IESO conducts a three-stage evaluation process: (1) screened for eligibility and (2) reviewed by the IESO's Technical Review Committee (TRC), and (3) Canadian Status evaluation, as described below.

2.1 Stage 1: Eligibility Criteria

In this stage, applications are checked against key eligibility requirements, and a review that the applicants have submitted the application to only one stream for funding, as described below. The project must meet all eligibility criteria to proceed to Stage 2 of the evaluation process. Please refer to Appendix D for all required documents.

To allow for administrative flexibility during screening, the IESO may, at its discretion, email a rectification notice to the main applicant identifying specific deficiencies in an application. **Applicants will have a limited window of two business days to correct the issue.** This process is intended only for minor administrative or technical errors and will not permit changes to project scope, partners, or funding requests. Applicants that fail to rectify identified deficiencies within the allotted time will be removed from further consideration.

2.1.1 Project Type and Timeline

To be eligible for funding under the 2025 HIF, the project must meet the following project type and timeline requirements:

CRITERIA	REQUIREMENT
Project Location	Ontario
Project Length	36 months maximum
Data Collection	6 months minimum
TRL[1]	7 or higher

Projects involving electrolysis must record and submit 8760 hourly kWh load profile energy data for the production equipment and balance of plant equipment, separately.

2.1.2 Project Applicant

Eligible applicants include non-profit and for-profit incorporated entities. Funding is not available to individuals, including incorporated individuals, sole proprietorships, partnerships, trusts, or joint ventures. The applicant must be the main beneficiary of the project.

Applicants are required to secure a minimum of one partner to participate in the project. Additional partners are encouraged to strengthen the project team and will be considered in the evaluation criteria. For purposes of HIF, a project partner is defined as any company that is contributing either cash or in-kind to the project – refer to Section 2.1.3 for details.

At the time of submission, the applicant must provide audited financial statements and signed letters of support specifying the contribution amount and the type of contribution (cash and/or in-kind) from all financial contributors to the project to demonstrate the ability of the project team to carry out their financial obligations associated with the project.

Applicants who are IESO Market Participants or are under contract with the IESO for participation in the IESO administered markets or other related programs must be in good standing to be eligible to receive funding under HIF.

[1] See Appendix B for a method for assessing the maturity of proposed technology

2.1.3 Project Funding

Stream 1 has a total budget of $15 million over three years. Applicants are required to submit a budget as part of their application, detailing the project financials including a breakdown of how each expense is funded. Eligible projects must meet the following funding requirements:

CONTRIBUTION	REQUIREMENT
IESO	$1M to $4.5M and up to a maximum of 50% of total project value
Applicant	Minimum cash contribution of at least 15% of total project value
Applicant and Partners	Minimum combined cash contribution of at least 30% of total project value

Any remaining project costs are accounted for via in-kind contributions from the applicant and/or project partners.

In-kind contributions are defined as eligible non-monetary resources that can be provided by the project applicant or partners. These are assets and services that are essential to the project that would have otherwise been purchased by the applicant and may include capital items that partners donate to the project, professional services and training.

Eligible cash contributions are expenses for the direct costs of activities that are directly related to achieving the objectives and deliverables for which the HIF funding was awarded.

Grant stacking with other *non-IESO* sources of funding is encouraged so long as there is no duplicate funding for project expenses (e.g. for a given expense, the sum of funding from all sources cannot exceed the cost of the expense). Applicants receiving additional grant funding for their project will be required, as part of the application process, to attest that there is no duplication/overlap in funding of IESO-supported tasks.

Eligible and non-eligible expenses are described in further detail in Appendix C. All budgeted expenses using IESO funds are subject to audit. Examples of eligible expenses include the cost of electrolyzer equipment (proton exchange membrane/alkaline/solid oxide electrolyzer cell), labour for installation and integration of technology, safety and control systems, and energy and design services directly related to system integration.

2.2 Stage 2: IESO Evaluation Criteria

Applications meeting all the eligibility requirements in Stage 1 will advance to Stage 2: IESO Evaluation Criteria, where they are assessed against the evaluation criteria listed below. The IESO's TRC, a group of internal subject matter experts across various IESO business units, will evaluate the applications that proceed to Stage 2.

Projects that achieve a minimum of 70 points in Stage 2 of the evaluation will advance to Stage 3: Canadian Status policy evaluation. Refer to Section 2.3 for more details.

CATEGORY	EVALUATION CRITERIA	WEIGHT
Project Team (Applicant + Partner(s)) and Engagement	• The application clearly demonstrates that the project team (comprising the applicant and the partner(s)) possesses a diverse and complementary skillset with sufficient hydrogen expertise to successfully execute the proposed project. Partnerships and experience across the hydrogen supply chain from producer to integrator to off-taker are evident. The team is well-positioned to scale/commercialize the project, building on the learnings and successes from the pilot phase. (15 points) • The project team has demonstrated experience in delivering innovative, large-scale strategic projects. (10 points) • Relevant, early, and meaningful engagement with municipalities, and/or communities and Indigenous communities are evident (such as consultation, capacity-building, equity, employment, or shared benefits). Demonstrated strong partnerships (e.g. past engagements, MOUs, partnerships, etc.) are rewarded due to their added capacity and credibility. (5 points)	30
Project Design	• The project's scope and schedule are clear, reasonable, and logically structured to meet Stream 1 objectives. Work plan and tasks are well defined and support successful project execution, including clear descriptions of how they are being executed. The proposed deliverables demonstrate how the project will enable the IESO to better understand the opportunities and challenges of hydrogen in the electricity system. The project clearly outlines the commercialization activities and strategy that the organization plans to take post-project demonstration/piloting. (20 points) • Budget items are appropriately allocated to proposed project activities, and risk is	30

CATEGORY	EVALUATION CRITERIA	WEIGHT
	appropriately distributed among the partner(s). (5 points) • The approach to measure and validate at least two relevant KPIs for each project objective is clearly stated and uses publicly recognized/standardized methodologies where appropriate. (5 points)	
Project Impact and Innovation	• The project outlines innovative technology, utilization model, service, or business approach not yet deployed in Ontario. The project outlines a clear and credible plan for maturing the proposed technology (advance the TRL), and clearly articulates its competitive advantage (e.g. efficiency, cost-competitiveness) over alternatives. (15 points) • The project cost-effectively supports and benefits Ontario's evolving electricity system. The project demonstrates savings to ratepayers, produces efficient market outcomes and/or enhances electricity system reliability/operability. Clear metrics are included in the application indicating how ratepayer savings, market efficiencies and reliability/operability will be assessed. The project demonstrates the ability to integrate into the IESO-administered markets to provide system reliability or resiliency, where applicable. (15 points) • The project demonstrates net annual GHG emissions reductions over the course of the project. The project evaluates the potential GHG emissions impact if the proposed solution is to be implemented across the province. (10 points)	40
TOTAL SCORE		**100**

2.3 Stage 3: Canadian Status Policy

In response to ongoing international tariff and trade tensions, the Government of Ontario introduced the Protect Ontario by Unleashing our Economy Act, 2025, which among other things, provides the

government the authority to prioritize businesses with Canadian ownership in Ontario's energy sector. The Government of Ontario aims to support and strengthen Ontario's energy transition and economic resilience by implementing a Canadian Status policy. This will be addressed in the HIF through rated evaluation points for having and maintaining "Canadian Status".

To be eligible to receive evaluation points for having Canadian Status, the applicant must provide supporting documentation through the form of an attestation from an authorized representative of the applicant, that confirms that the applicant, and where applicable, the person that ultimately controls it, satisfies the Canadian Status definition.

CATEGORY	EVALUATION CRITERIA	WEIGHT
Canadian Status	• The applicant has provided an attestation form from an authorized representative of the applicant [in the form provided by the IESO], that confirms the applicant, and where applicable, the person that ultimately controls it, satisfies the "Canadian Status" definition	5

An applicant has "Canadian Status" if the following requirements are met:

(a) If the applicant is not Controlled by any other Person, the headquarters or main office of the applicant are located in Canada; or

(b) If the applicant is Controlled by any other Person, other than a natural person, both the applicant and the Person that ultimately controls the applicant meet the requirements set out in (a) above; or

(c) If the applicant is Controlled by a natural person, the applicant meets the requirements set out in (a) above and the natural person that ultimately controls the applicant is ordinarily resident in Canada.

For the purpose of attesting to Canadian Status:

(d) "Control" means, with respect to any Person at any time:

- holding, whether directly or indirectly, as owner or other beneficiary (other than solely as the beneficiary of an unrealized security interest), securities or ownership interests of that Person carrying votes or ownership interests sufficient to elect or appoint fifty percent (50%) or more of the individuals who are responsible for the supervision or management of that Person, or
- the exercise of de facto control of that Person, whether direct or indirect and whether through the ownership of securities or ownership interests, by contract or trust or otherwise.

(e) "Person" means a natural person, firm, trust, partnership, limited partnership, company or corporation (with or without share capital), sole proprietorship, governmental authority, or other entity of any kind.

Please note, if the applicant attests to having Canadian Status, it (and its ultimate parent, where applicable) must have and retain Canadian Status for a minimum of six months following execution of the HIF contribution agreement. The contribution agreement may be terminated if Canadian Status is not retained for this period.

The Canadian Status criteria will apply only to the applicant (the project partners will not be assessed). The applicant and, where applicable, the person that ultimately controls the applicant, will need to maintain their Canadian Status for a minimum of six months following the execution of the HIF Contribution Agreement.

2.4 Ranking

Applications will be ranked based on a combined score from Stage 2 and Stage 3 evaluations. Applications are selected for funding by ranking order (highest to lowest) until the funding is fully accounted for.

Successful applicants will then proceed to the contracting phase, where they will enter into Contribution Agreements with the IESO. Refer to Section 3 for more details.

3. Administration

3.1 Application Process

Potential applicants are welcome to contact the HIF team at hydrogeninnovationfund@ieso.ca with questions about their application during the open submission window.

The IESO will accept for consideration applications submitted via email to hydrogeninnovationfund@ieso.ca between November 4, 2025, and February 11, 2026, with "Hydrogen Innovation Fund Application" in the subject line. See Appendix D for a list of all submission documents. Applications **will not be accepted after 11:59 p.m. on February 11, 2026**.

The IESO will respond by email to each applicant to confirm receipt of the submission within two business days.

Applicants must not engage in any unethical conduct, including lobbying or other inappropriate communications, offers of gifts or benefits of any kind to IESO employees, officers or board members, deceitfulness, submitting applications containing misrepresentations or other misleading, fraudulent or inaccurate information, or any other conduct that compromises or may be seen to compromise the integrity of the applicant, application or the 2025 HIF Call process. The IESO will

disqualify an applicant from the 2025 HIF Call if that applicant engages in any of the foregoing activities or conduct, or if that applicant's application contains a misrepresentation or any inaccurate, fraudulent, misleading or incomplete information (including as it relates to the disclosure of financial or in-kind contributions).

Please note, that by submitting an application, you agree that the IESO may also share your application with the Government of Ontario on a non-confidential basis.

3.2 Contribution Agreement and Funding Disbursement

Successful applicants will be required to enter into the Contribution Agreement, in the form provided in Appendix E, which may be subject to further revisions by the IESO.

Note: **this agreement is non-negotiable**; the IESO will not make changes to the agreement at the request of successful applicants.

Funding is disbursed on a milestone basis as projects complete key deliverables identified in the application and by the IESO. Submitted applications must set out the number, content, timing, and budget of proposed milestones in their application.

The final milestone will be fully funded by the IESO and must represent a minimum of 25% of the total IESO contribution.

4. Standards Authorities

4.1 Technical Standards and Safety Authority (TSSA)

TSSA is supporting Ontario's transition to a low-carbon hydrogen economy through an enhanced hydrogen safety framework. The framework is designed to ensure the safe use of hydrogen across various sectors, helping to unlock its potential as a cleaner fuel.

TSSA regulates areas of hydrogen infrastructure such as refueling station design, pipeline installation, and high-pressure piping in accordance with these key regulations and codes:

- O. Reg. 214/01: Compressed Gas regulates the safe handling, storage, and transportation of hydrogen, covering the licensing and permitting requirements for the installation, operation, and maintenance of facilities and appliance that use hydrogen as a fuel.
- CAN/BNQ 1784-000/2022 Canadian Hydrogen Installation Code: Requirements for hydrogen generation, usage, storage, and associated piping systems.

Applicants should consider the following TSSA requirements of safe adoption of hydrogen technology (Hydrogen Safety):

Licensing Requirements to Transport Compressed Hydrogen in Bulk Containers

Licensing of Existing Hydrogen Facilities

Licensing of New Hydrogen Facilities

Refueling Stations

Maintenance and Conversion Facility

High-Pressure Piping

Hydrogen Contractor Registration

Hydrogen Technician Certification

4.2 Electrical Safety Authority (ESA)

Applicants should consider the following Electrical Safety Authority (ESA) codes and standards when drafting their application.

The Electrical Safety Authority (ESA) regulates and promotes electrical safety in Ontario. The Ontario government has given ESA a mandate to improve public electrical safety. The ESA administer Part VIII of the Electricity Act and oversee these four related regulations:

Ontario Electrical Safety Code (Regulation 777/21) — sets out how to do electrical work.

Licensing of Electrical Contractors and Master Electricians (Regulation 570/05) — sets requirements for businesses and certain people who can do electrical work.

Electrical Distribution Safety (Regulation 22/04) — provides objective-based electrical safety oversight and sets out the accountabilities of companies licensed to distribute electricity.

Electrical Product Safety (Regulation 438/07) — governs pre-market approval of electrical products before their sale, distribution, and advertisement.

The Ontario Electrical Safety Code (OESC) has comprehensive requirements related to product approval, applying for inspection, submitting plans for review and connection authorization requirements. Including this program (*), any work (where the OESC applies) on an electrical installation will need to comply with the above requirements, which include what to install, who is eligible to install and how to install. Installers and designers are required to meet and satisfy the current OESC requirements and are encouraged to refer to the latest bulletins issued by the ESA. The bulletins include interpretations, clarifications, and sometimes easements.

A sample of these published bulletins are located on the following website link: https://esasafe.com/electrical-products/bulletins/

Notifications can be filed on the following website link: https://esasafe.com/fees-and-forms/forms/

Plan Review submissions can be filed on the following website link: https://esasafe.com/business-and-property-owners/electrical-plan-review/

For more information about ESA technical requirements, please refer to the following website link: https://esasafe.com/code-technical/

(*) OESC requirements apply to work on an electrical installation related to this program. Work on an electrical installation may include but is not limited to, the installation (e.g. new equipment, future modifications, replacement, and retrofitting) of;

- DERs (e.g. energy storage systems, renewable energy systems such as solar/wind/fuel cell assets, generators); energy management systems; - example of related bulletins are Bulletin 64-1-*, 64-7-*, 84-1-* which can be found along with other bulletins in the following link https://esasafe.com/electrical-products/bulletins/
- Section 18 – Hazardous locations and related bulletins – examples of related bulletin is Bulletin 18-1-* which can be found along with other bulletins in the following link https://esasafe.com/electrical-products/bulletins/

All the generating facilities must be inspected by ESA prior to be connected to the distribution grid. See Bulletin 2-28-*in the following link https://esasafe.com/electrical-products/bulletins/

Generation equipment that is grid interconnected shall meet all the applicable requirements of the OESC including section 84 and Bulletin 84-1-* in the following link https://esasafe.com/electrical-products/bulletins/

Appendices

Appendix A: Key Performance Indicators (KPIs)

Applicants will be asked to outline their methodology for each KPI listed below to present how the objectives of the 2025 HIF Call will be achieved, using publicly recognized/standardized methodologies where appropriate. Applicants are encouraged to propose additional KPIs aligned with demonstrating the achievement of the HIF objectives.

KPI	KPI DESCRIPTION	PROPOSED UNIT	PRIMARY RELEVANT OBJECTIVE
GHG Emissions Reduction	Quantifies the reduction in GHG emissions throughout the course of the project resulting from the decarbonization of applications by switching to low-carbon hydrogen.	tonnes of CO2 or CO2e	Decarbonization and Emissions Reduction
TRL Advancement	Quantifies the advancement of the technology readiness level.	# delta TRL	Hydrogen Technology Advancement
Grid Services	Quantifies the number of different grid services demonstrated via the IESO-prescribed testing framework.	# of services	Electricity System Flexibility
Knowledge-sharing Events	Quantifies the number of events held/publications made to support knowledge transfer and lessons learned.	# of events and publications	Collaboration and Knowledge Sharing

Appendix B: Technology Readiness Levels (TRL)

The project must be at the Technology Readiness Level 7 (TRL 7) or higher, to be considered for funding.

There are 9 technology readiness levels, with 1 being the least ready and 9 being already used in real-life conditions[2].

Level 1: Basic principles of concept are observed and reported

Scientific research begins to be translated into applied research and development. Activities might include paper studies of a technology's basic properties.

Level 2: Technology concept and/or application formulated

Invention begins. Once basic principles are observed, practical applications can be invented. Activities are limited to analytic studies.

Level 3: Analytical and experimental critical function and/or proof of concept

Active research and development are initiated. This includes analytical studies and/or laboratory studies. Activities might include components that are not yet integrated or representative.

Level 4: Component and/or validation in a laboratory environment

Basic technological components are integrated to establish that they will work together. Activities include integration of "ad hoc" hardware in the laboratory.

Level 5: Component and/or validation in a simulated environment

The basic technological components are integrated for testing in a simulated environment. Activities include laboratory integration of components.

Level 6: System/subsystem model or prototype demonstration in a simulated environment

A model or prototype that represents a near desired configuration. Activities include testing in a simulated operational environment or laboratory.

Levels 7 through 9 represent the pre-commercialization gap for innovations.

Level 7: Prototype ready for demonstration in an appropriate operational environment

Prototype at planned operational level and is ready for demonstration in an operational environment. Activities include prototype field testing.

---

[2] https://ised-isde.canada.ca/site/innovation-canada/en/technology-readiness-levels

Level 8: Actual technology completed and qualified through tests and demonstrations

Technology has been proven to work in its final form and under expected conditions. Activities include developmental testing and evaluation of whether it will meet operational requirements.

Level 9: Actual technology proven through successful deployment in an operational setting

Actual application of the technology in its final form and under real-life conditions, such as those encountered in operational tests and evaluations. Activities include using the innovation under operational conditions.

Appendix C: Eligible and Ineligible Expenses

Eligible cash contributions cover direct costs related to project activities, design, development, demonstration, installation, implementation, testing, measurement, and performance verification of the project.

In-kind contributions include non-monetary resources, such as donated goods or services, and must be documented with invoices or payroll records. The value of in-kind contributions should reflect market rates for goods and services provided.

The following table summarizes eligible and ineligible expenses.

Eligible Expenses	**Ineligible Expenses**
✓ Purchase or use of capital assets (improvements and equipment), listed and itemized, required for the delivery of the project ✓ Project-specific raw materials, products, tools and software, upgrades ✓ Costs associated with the monitoring, verification, and evaluation of the project's impacts, including data collection, processing, analysis, and management ✓ Salaries and benefits of employees directly involved in the design, selection, purchase, and installation of the project ✓ Professional, engineering, scientific, technical, management and contracting services, including training ✓ Permits and license fees ✓ Funding for marketing, communications and workshops directly related to project activities ✓ Costs associated with completing the IESO-Prescribed Testing	× Budget deficits × Activities completed or costs incurred before the funding is approved or after the project is completed × Costs over $50,000 for any single consultant or contractor that has not been selected through a competitive process × Costs associated with applying for other government grants and programs × Routine testing and maintenance × Costs associated with the purchase of land or real estate × Any overhead costs generated by the lead applicant or third parties, such as operating costs related to general maintenance and repair × Professional fees unless directly associated with the project × Hospitality, incidental or food expenses for the project team

Eligible Expenses	Ineligible Expenses
	× Hospitality or travel costs not in compliance with the Government of Ontario's Travel, Meals, and Hospitality Expenses Directive × Any costs not directly related to the achievement of the project's objectives as defined in the Contribution Agreement between the IESO and the applicant

Appendix D: Submission Documents

HIF 2025 Application Templates Documents are found on the following links, and must be completed and submitted as part of the application:

- Project Application Template Part A (document to be provided once the submission window opens)
- Project Application Template Part B (document to be provided once the submission window opens)
- Project Brief Template (document to be provided once the submission window opens)
- HIF 2025 Testing Framework - Test Plan and Asset Specifications (document to be provided once the submission window opens)

With the application submission, the following supporting documents are required:

- Copy of the applicant's certificate of incorporation
- Signed Letters of Support from all project partners, confirming contribution amounts ($) and type (cash/in-kind)
- Applicant's most recent audited Financial Statements
- Project Team's Curriculum Vitae's (CVs)
- Signed Letter of Attestation of Canadian Status (where applicable)

Successful applicants will be required to enter into the following agreement:

- Contribution Agreement Template (document to be provided once the submission window opens)

Independent Electricity

System Operator

1600-120 Adelaide Street West

Toronto, Ontario M5H 1T1

Phone: 905.403.6900

Toll-free: 1.888.448.7777

E-mail: customer.relations@ieso.ca

ieso.ca

@IESO_Tweets

linkedin.com/company/IESO

ieso
Connecting Today.
Powering Tomorrow.