



Statement of Interest: Wind turbine blade reliability and
innovation projects at Wind Technology Testing Center
SOI WTTC-2026-01SOI

Date of Issue:
February 9, 2026 at 11:59 PM

All proposals must be submitted to:
WTTC@Masscec.com

I. SUMMARY

This Statement of Interest (“SOI”) is intended to proactively expand and diversify testing opportunities at the Wind Technology Testing Center (“WTTC”) by encouraging new and innovative blade testing activities. The SOI is particularly focused on the 2027–2028 timeframe, and seeks to leverage this period to advance testing protocols to enhance resilience, as well as explore alternative use cases, emerging technologies, and new market segments.

Through this SOI, WTTC is inviting applications (“Applicants”) for funding to support projects that will broaden the center’s capabilities across four key focus areas:

1. **IECRE Certification Testing:** Attracting the full-scale IEC 61400-23 certification testing of new blade models and customers who might otherwise test blades at alternative facilities.
2. **Innovation and Reliability Enhancement:** Supporting additional full-scale utility blade testing that advances industry reliability and innovation, including the integration of new sensor technologies, new materials, or new testing methods.
3. **Dual Axis and Off-Axis Testing:** Further the implementation and reduce the technical and program risk of using advanced methodologies or comparative testing against traditional single-axis methods.
4. **Large Structure Testing:** Massachusetts-based University-led or companies with large structural testing that can be useful innovations for non-wind energy markets like aircraft, aerospace, defense, and civil structures that increases the facilities ability to conduct varying structural testing.

This initiative aligns with WTTC’s broader goal of maintaining high-quality operations and positioning the facility as a proactive leader in wind turbine reliability and innovation. MassCEC anticipates awarding 4-6 structural testing projects. Total funding available, subject to approval, is approximately \$3.8M. Contracts or purchase orders have to be executed by December 31, 2026. Project start date and duration are flexible to comply with the long-lead nature of blade design, manufacturing and testing projects.

II. ABOUT MASSCEC

The Massachusetts Clean Energy Technology Center (MassCEC) is a quasi-state economic development agency dedicated to accelerating the growth of the clean energy sector across the Commonwealth to spur job creation, deliver statewide environmental benefits and to secure long-term economic growth for the people of Massachusetts. MassCEC works to increase the adoption of clean energy while driving down costs and delivering financial, environmental, and economic development benefits to energy users and utility customers across the state.

MassCEC’s mission is to accelerate the clean energy and climate solution innovation that is critical to meeting the Commonwealth’s climate goals, advancing Massachusetts’ position as an international climate leader while growing the state’s clean energy economy. MassCEC is committed to creating a diverse, equitable, and inclusive organization where everyone is welcomed, supported, respected, and valued. We are committed to incorporating principles of diversity, equity, inclusion, and environmental justice in all aspects of our work to promote the equitable distribution of the health and economic benefits of clean energy and support a diverse and inclusive clean energy industry. MassCEC strives to lead and innovate in equitable clean energy and climate solutions.

MassCEC’s Wind Technology Testing Center is a testing facility completing full scale structural testing of wind turbine blades. The facility has been operational since 2011 and has tested over 57 blades. The WTTC is ISO 17025 accredited test laboratory and IECRE accredited Renewable Energy Testing Laboratory (RETL) for testing to IEC 61400-23 standard.

III. PROGRAM GOALS AND DESCRIPTION

IECRE CERTIFICATION TESTING

The WTTC is currently the only facility in the United States accredited to perform full-scale IEC 61400-23 certification testing of wind turbine blades. IECRE certification is a rigorous process governed by the International Electrotechnical Commission’s Renewable Energy (IECRE) standards, specifically IEC 61400-23, which sets requirements for structural testing, data integrity, and reporting for wind turbine blades. The certification process involves comprehensive fatigue and static testing, precise instrumentation, and strict adherence to quality management protocols. Successful completion of IECRE certification enables blade manufacturers and turbine OEMs to demonstrate compliance with international safety and reliability standards, facilitating market entry and customer confidence.

Through this SOI, WTTC aims to address these challenges by offering funding to offset special one-time costs, test stand time, and energy expenses, and provide comprehensive engineering support for all applicants selected. By incentivizing blade manufacturers and turbine OEMs to conduct IECRE certification testing in the U.S., WTTC seeks to promote the commercialization of new wind turbine models, strengthen domestic industry competitiveness, and position itself as a proactive leader in wind turbine reliability and innovation.

Through this SOI, Funding will be made available for:

- Offsetting one-time special costs for testing a blade(s) in the US
- Test stand time and energy costs
- Engineering support

INNOVATION AND RELIABILITY ENHANCEMENT

This program area aims to **advance the reliability and innovation of wind turbine blades** by supporting full-scale utility blade testing that goes beyond the minimum requirements of the IEC 61400-23 standard. By incentivizing applicants to conduct testing that exceeds certification benchmarks, MassCEC seeks to support the industry for long-term success. These efforts will help identify and address potential reliability issues earlier in the product lifecycle, ultimately improving blade performance and durability in real-world conditions. Projects funded under this category should demonstrate how their proposed testing protocols will contribute to industry-wide reliability improvements and support the integration of innovative solutions within the wind energy sector.

In addition to advancing reliability, this program area encourages applicants to pursue innovation across several critical domains. Projects may focus on the development and validation of novel blade materials, such as advanced composites or environmentally sustainable alternatives, to enhance performance and durability. Innovative aerodynamic designs that improve energy capture and reduce operational loads are also encouraged, as are new manufacturing processes that increase efficiency, consistency, and scalability. Furthermore, applicants are invited to explore structural design enhancements that optimize blade integrity and resilience under real-world conditions. By supporting testing that integrates these innovations, MassCEC aims to drive industry progress and position the WTTC as a leader in wind turbine technology advancement.

This program area also encourages applicants to **advance blade sensor technology** with a focus on practical implementation in commercial wind projects. Proposals should demonstrate how sensor systems can be integrated with turbine supervisory control and data acquisition (SCADA) platforms to enable robust condition-based monitoring. By supporting solutions that provide real-time data on blade health and performance, MassCEC aims to facilitate early detection of issues, optimize maintenance strategies, and extend blade service life. Projects must outline a clear pathway for deploying these technologies at scale, ensuring that innovations in sensor integration translate directly to operational improvements in the field.

Funding through this program area is intended to empower applicants to pursue ambitious testing protocols and implement cutting-edge solutions that will benefit the wind energy sector as a whole. To facilitate these efforts, funding may be made available for:

- Offsetting one-time special costs for testing a blade(s) in the US
- Covering test stand time and energy costs associated with advanced testing protocols
- WTTC staff time for engineering support for the development and validation of innovative materials, designs, and sensor technologies

These resources are designed to help applicants overcome market barriers and accelerate the adoption of new technologies that enhance blade reliability and performance.

DUAL AXIS AND OFF-AXIS TESTING

Funding under this program area may be used to support the implementation and advancement of dual axis and off-axis fatigue testing methodologies at the WTTC. These advanced testing protocols are designed to more accurately replicate the complex, multi-directional loads experienced by wind turbine blades in real-world operating conditions, addressing limitations of traditional single-axis testing. Specifically, these testing methods can fully test panels and extreme leading edge (LE)/ trailing edge (TE) sections. By enabling comprehensive testing in multiple directions, this initiative aims to reduce technical and program risk, enhance blade reliability, and accelerate the adoption of innovative blade designs and materials within the industry

Eligible activities may include the design and execution of dual axis (elliptical, figure 8, gamma) and off-axis (diagonal) fatigue tests, development of specialized test setups, and analysis of blade performance under varied load scenarios. Funding can also be used for engineering support, instrumentation, and data analysis required to validate these methodologies. In summary funding may be made available for:

- Design and execution of dual axis and off-axis testing
- Providing engineering support for the development and validation of instrumentation and data analysis
- Offsetting one-time special costs for testing a blade (s) in the US

LARGE STRUCTURE TESTING

Funding under this program area may be used to support the implementation and advancement of large structural testing at the WTTC. The large structural testing can include useful innovations for non-wind energy markets like aircraft, aerospace, defense, and civil structures that increases the facilities ability to conduct varying structural testing.

Eligible activities may include the design and execution of large structure testing, development of specialized test setups, and analysis of structure performance under varied load scenarios. Funding can also be used for engineering support, instrumentation, and data analysis required to validate these methodologies. In summary funding may be made available for:

- Design and execution of structure testing
- WTTC staff providing engineering support for the development and validation of instrumentation and data analysis
- Offsetting one-time special costs for structural testing

IV. ELIGIBILITY

Eligible applicants for this SOI must be able to provide a utility-sized, full-scale wind turbine blade, full-scale blade component, or large structure for testing at the WTTC. The following entities are eligible to apply:

- **Wind Turbine Original Equipment Manufacturers (OEMs):** Companies that design and manufacture wind turbines with the ability to supply a full-scale blade for certification or advanced testing.
- **Blade Design Firms:** Organizations specializing in the design and engineering of wind turbine blades, with the capability to deliver a utility-scale blade for testing.
- **Blade Manufacturing Firms:** Companies engaged in the production of wind turbine blades, able to provide a full-scale blade for testing at WTTC.
- **Owner-Operators of Wind Turbine Farms:** Entities that own or operate wind farms and have a field blade available for testing, either for certification, reliability enhancement, or innovation purposes.
- **New Blade Technology Companies or Condition-Based Monitoring Companies:** Firms developing novel blade technologies or advanced monitoring solutions, provided they can supply a full-scale blade for testing through partnership with an OEM.
- **Massachusetts Universities partnering with national and nonprofit labs or companies:** With the need for innovation and validation of large structures using new technologies and materials it is important for university, research facility partnerships with private companies.

Applicants must demonstrate their ability to deliver a structure that meets the requirements of the WTTC testing protocols. Partnerships between technology providers, OEMs, and Owner-Operators are encouraged to facilitate the testing of innovative blade designs, materials, or sensor technologies. Additional eligibility requirements may apply as specified by MassCEC.

V. ESTIMATED TIMELINE

Release of SOI	February 9, 2026
Questions due to MassCEC via email to WTTC@MassCEC.com	March 1, 2026
Questions with Answers Posted to MassCEC Website	March 15, 2026
Proposals Due	April 15, 2026, 11:59 PM

Notification of Selection	May 15, 2026
Anticipated Latest Project Duration	Up to two years

Project start date and duration is flexible to comply with the long-lead nature of the testing projects.

This timeline is subject to change at MassCEC’s discretion.

VI. HOW TO APPLY

Applicants must use and submit the pre-formatted application template Attachment A. Proposals should be:

- Submitted via email to WTTC@masscec.com
- Submitted in MS Word or PDF Format, using Calibri font in 11 pt. size
- Maximum of one file submitted; proposal followed by attachments

As described in Attachment A (Application Form), Applicants must provide detailed information about their organizations, experience and capabilities, their proposed scope of work, estimated budget, and supporting information for related elements such as user access plans, user costs, marketing and outreach, and other pertinent information.

Application Required Documents

- Application Form (Attachment A)
- Signature Page (Attachment B)

The application must be sent as one document, preferably as a searchable PDF file. Applicants should answer the questions as clearly and succinctly as possible.

[Optional but recommended] Under no circumstances will MassCEC accept responses past the deadline.

VII. SELECTION CRITERIA

1. Technical Merit and Innovation 30%

- Extent to which the proposed testing advances blade reliability, innovation, or certification beyond minimum standards (e.g., integration of new sensor technologies, materials, or testing methods).

- Demonstrated potential for industry-wide impact, including adoption of innovative solutions and improvements in blade performance and durability.
 - Increases the facility’s ability to test large structures
- 2. Alignment with Program Goals 20%**
- How well the proposal addresses one or more of the four key program areas:
 - IECRE Certification Testing
 - Innovation and Reliability Enhancement
 - Dual Axis and Off-Axis Testing
 - Large structural testing for R&D or validation
 - Contribution to WTTC’s goal of maintaining high-quality operations and positioning the facility as a leader in wind turbine reliability and innovation.
- 3. Feasibility and Readiness 20%**
- Demonstrated ability to deliver a utility-sized, full-scale wind turbine blade for testing.
 - Realism and clarity of the proposed scope of work, timeline, and budget.
 - Evidence of organizational experience, capabilities, and partnerships (especially for new technology or monitoring companies partnering with OEMs).
- 4. Impact on Market Competitiveness 15%**
- Likelihood that the project will stimulate blade testing activities that would not naturally occur under current market conditions, especially in 2027 and 2028.
 - Potential to attract new blade models and customers to WTTC, and to strengthen domestic industry competitiveness.
- 5. Cost Effectiveness 15%**
- Efficient use of requested funding, including justification for costs such as shipping, test stand time, energy, and engineering support.
 - Value delivered relative to the amount of funding requested.

IX. BUDGET

Projects funded under this SOI may request up to \$1,000,000 in total funding. Awarded funds can be used to cover test stand time and facility costs at the WTTC, engineering support for testing and validation activities, and shipping costs associated with transporting blades to the WTTC. Requests for equipment purchases will be evaluated on a case-by-case basis to ensure alignment with program goals and cost effectiveness. Applicants should provide a budget justification for all requested expenses, demonstrating efficient use of funds and clear value delivered relative to the amount requested. As a guide a list of allowable and unallowable costs are given below. MassCEC reserves the right to accept/deny uses at their discretion.

Allowable	Unallowable
Shipping / Logistics	Staff overhead not directly tied to testing
Test stand time	Product R&D not related to the test
WTTC Engineering support	Capital purchases outside program intent

Instrumentation	
Sensor systems	
Custom fixtures or adapters	
Data analysis	

X. CONTACT INFORMATION FOR QUESTIONS

Rahul Yarala, Executive Director, RYarala@Masscec.com

George Blagdon, Engineering Director, GBlagdon@masscec.com

XI. GENERAL REQUEST FOR PROPOSALS CONDITIONS

NOTICE OF PUBLIC DISCLOSURE

As a public entity, MassCEC is subject to Massachusetts' Public Records Law, codified at Chapter 66 of the Massachusetts General Laws. Thus, any documentary material, data, or other information received by MassCEC from an applicant is a public record subject to disclosure. Applicants shall not send MassCEC any confidential or sensitive information in response to this SOI. If confidential information is submitted as part of the application and not clearly marked as confidential, such information may be made publicly available by MassCEC without further notice to the Applicant.

DISCLAIMER & WAIVER AUTHORITY

This SOI does not commit MassCEC to award any funds, pay any costs incurred in preparing an application, or procure or contract for services or supplies. MassCEC reserves the right to accept or reject any or all applications received, waive minor irregularities in submittal requirements, modify the anticipated timeline, request modification of the application, negotiate with all qualified Applicants, cancel or modify the SOI in part or in its entirety, or change the application guidelines, when it is in MassCEC's best interests.

This SOI has been distributed electronically using MassCEC's website. It is the responsibility of Applicants to check the website for any addenda or modifications to an SOI to which they intend

to respond. MassCEC accepts no liability and will provide no accommodation to Applicants who submit an application based on an out-of-date SOI document.

CONTRACT REQUIREMENTS

Upon MassCEC's authorization to proceed with the proposal, MassCEC and the awarded applicant(s) will execute a contract, which will set forth the respective roles and responsibilities of the parties.

ATTACHMENT A: APPLICATION FORM

Please fill in the tables below.

1.1 Applicant and Partner Information	
Lead Applicant Organization	
Contact Person *including pronouns)	
Title	
Contact Email	
Contact Phone	

2.1 Project Proposal Summary	
Requested Total Funding	\$ Click or tap here to enter text.
Proposed Duration of Project (in months)	
Executive Summary	<i>In three (3) to five (5) paragraphs, provide a high-level summary of the planned testing program.</i>
Funding Use	<i>Explain what the funding will be used for.</i>
Impact Statement	<i>How will the funding have a positive impact on 1) your organization 2) blade reliability, 3) WTTC capabilities and 4) the wind industry as a whole.</i>
WTTC Deliverables	<i>What deliverables are expected from the WTTC for the project. Examples include reports, publications, data, IECRE RETR</i>
Eligibility	<i>Referencing to the prior eligibility section, explain how this project meets eligibility requirements.</i>
Additional Details	<i>Please provide any additional information to help the review team understand the goals of the project and aid in the review process.</i>

ATTACHMENT B: AUTHORIZED APPLICANT'S SIGNATURE AND ACCEPTANCE FORM

SOI WTTC-2026-01SOI (the "SOI")

The undersigned is a duly authorized representative of the Applicant named below. The undersigned has read and understands the SOI requirements and acknowledges and confirms that the Applicant and each member of its team has read and understands the SOI Requirements. The undersigned acknowledges and agrees that all of the terms and conditions of the SOI are mandatory.

The undersigned and each Applicant and each member of its team acknowledges and agrees that (i) all materials submitted as part of the application are subject to disclosure under the Massachusetts Public Records Law, as explained in the SOI; (ii) that the Massachusetts Clean Energy Technology Center ("MassCEC") has no obligation, and retains the sole discretion to fund or choose not to fund the application set forth herein; and (iii) that MassCEC's receipt of the application does not imply any promise of funding at any time.

The undersigned and each member of the Applicant's team understands that, if the Application is selected by MassCEC pursuant to this SOI, the Applicant will execute and deliver an agreement to be provided by MassCEC that shall set forth the terms and conditions, together the respective roles and responsibilities of the Applicant, and each member of its team, and MassCEC, with respect to the project described in the SOI.

I certify that the statements made in this Application, including all attachments and exhibits, are true and correct.

Applicant: _____

(Printed Name of Applicant)

By: _____

(Signature of Applicant or Authorized Representative)

Title: _____

Date: _____