marine renewables canada

Research & Technical Track at MRC 2025 Call for Abstracts

HALIFAX | NOVA SCOTIA

NOVEMBER 12-14, 2025




marinerenewablesconference.ca

CALL FOR ABSTRACTS

Research & Technical Track at MRC 2025

Call for Abstracts

Members ask, MRC delivers! Over the past couple of years, MRC's post-conference surveys have shown an interest in having more technical presentations and sessions at the annual conference. With an expanded conference this year and a larger venue, MRC will be offering concurrent sessions including technical/R&D focused presentations.

MRC is pleased to invite you to submit abstracts for the Research & Technical Track of MRC2025, where industry leaders, innovators, and experts will come together to explore the latest advancements, technologies, and challenges in the marine renewable energy sector. This is an excellent opportunity to share your cutting-edge research, solutions, and insights with an international audience passionate about the future of offshore wind, tidal, and wave energy.

Track Themes

MRC encourages submissions across a wide range of technical topics that demonstrate innovation, solutions to existing challenges, and advancements in the marine renewables industry. Presentations should focus on research covering offshore wind, tidal, wave, and river current energy or a topic related to supporting the advancement of those technologies/subsectors (e.g. green hydrogen, energy storage, etc.). Following is a list of cross-cutting themes and examples of technical/research topics that could fall under those themes. This list is not exhaustive or limiting, but intended to help guide submissions to focus on priority issues of the sector:

1. **Technology and Innovation**

- Advancements in tidal, wave, and offshore wind (including floating and deepwater solutions) technologies
- Economic viability and scalability of technologies
- Next-generation materials and novel coatings for improved durability and efficiency
- Control systems and optimization techniques
- Hybrid energy systems

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2. **Environmental and Ecosystem Impact Considerations**
   - Assessing the impact of marine renewable energy on marine ecosystems (e.g. approaches, technologies, etc.)
   - Noise, vibration, and electromagnetic field management
   - Marine spatial planning and marine renewable energy project siting
   - Mitigation strategies for wildlife protection (e.g., bird, bat, and marine mammal interactions), marine biodiversity, and habitats

3. **Energy Production, Storage, and Grid Integration**
   - Grid connectivity and integration
   - Offshore power transmission technologies and solutions
   - Energy storage and balancing solutions (e.g. batteries, hydrogen)
   - Energy transmission technologies (subsea cables, HVDC, etc.)
   - Marine renewable energy electricity system attributes (e.g. flexible, predictable, consistent, etc.)
   - Smart grids and marine renewable energy integration into existing energy infrastructure
   - Marine renewable energy's role in meeting decarbonization goals

4. **Economics, Market Dynamics, and Financing**
   - Cost reduction strategies (LCOE and CAPEX/OPEX reduction)
   - Economic and financial models for projects
   - Investment and financing strategies
   - Marine renewable energy in the context of a just energy transition and equitable economic development

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5. **Operation, Maintenance, and Reliability**
- O&M strategies and cost reduction
- Reliability of device components and technologies
- Design and optimization of devices and systems
- Remote monitoring, predictive maintenance, and condition-based maintenance
- Safety standards and risk management in offshore wind operations
- Vessel and logistics innovations
- Safety and risk management

6. **Data, Modeling, and Simulation**
- Data-driven approaches for resource assessment
- Advanced modeling and simulation techniques for device performance
- Environmental monitoring and data collection methods
- AI and machine learning for optimizing project design and operation
- Big data analytics for improving efficiency and reducing costs

7. I**nnovation in Manufacturing and Materials**
- Innovations in component manufacturing for offshore environments
- Advances in anti-corrosion materials
- Additive manufacturing (3D printing) in device components
- Recycling and sustainability of devices

The following themes will likely be covered in the main conference track, however MRC still encourages abstracts covering these themes that are based on research conducted.

8**. Infrastructure, Supply Chain and Workforce**
- Job creation and skills development
- Supply chain logistics for manufacturing and transportation
- Port infrastructure and logistics
- Advances in installation vessels and techniques
- Developing local supply chains and the impact on regional economies
- Decommissioning and lifecycle management

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9. **Indigenous and Social Considerations**
   - Socioeconomic impacts
   - Considerations for integration of marine renewable energy systems in remote, coastal and Indigenous communities
   - Community engagement and stakeholder involvement
   - Co-existence and cooperation with other ocean users and uses
   - Environmental justice and inclusivity

10. **Policy, Regulation, and Governance**
    - Government policies and regulatory frameworks for marine renewable energy
    - Incentives, subsidies, and financial mechanisms
    - Global and regional strategies for the development of marine renewable energy
    - Permitting challenges and solutions

11. **Global Marine Renewable Energy Development Trends**
    - Global trends in development
    - Lessons learned from marine renewable energy pilot and demonstration projects
    - Success stories and challenges from current operational systems
    - Collaboration and knowledge-sharing between countries and regions

12. **Climate Change Mitigation and Marine Renewable Energy**
    - Role of marine renewable energy in reducing greenhouse gas emissions
    - Synergies between marine renewable energy and carbon capture technologies
    - Marine renewable energy as a climate change adaptation strategy for coastal regions
    - Marine renewable energy and its contribution to global carbon neutrality and sustainability

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Submission Guidelines

- **Abstract Length:** Abstracts should be no longer than 300 words.
- **Research based:** Abstracts must be based on research that has been conducted or is underway – they should not propose a presentation that is not based on research as other aspects of the MRC 2025 program will cover broader topics that are less technical.
- **Submission Format:** Abstracts must be submitted through this platform **here**. You will be asked to include:
  - Title of the presentation
  - Name(s) of author(s), affiliation(s), address
  - Abstract description (up to 300 words) (Please do not upload full papers or documents as they will not be used for the review process.)
  - Focus area (offshore wind, tidal, wave, river current)
  - Theme (one of the 12 themes above or "other")
  - Biographies of all proposed presenters (included in one document for upload)
  - Keywords related to the technical/research topic (choose from the topics listed above or suggest others)
- **New Submission Deadline:** All abstracts must be submitted by **June 16, 2025; 11:59 PM Atlantic.**

Review Process

Abstracts will be reviewed by a committee of industry experts based on relevance, innovation, technical depth, and impact. Accepted abstracts will be invited for full presentations at the conference. MRC is also exploring the possibility of publication in a peer-reviewed journal – stay tuned for more details.