



## Day 1 – Sunday January 26<sup>th</sup>, 2020

Time	Session	Organization	Room	
12:00 – 14:30	Canada Luncheon – <b>Pre-Booking Required</b>	MRC	Góndola	
14:30 – 15:00	Exhibition Booths Opening	Sponsors	Tobosí	
	Conference Opening / Registration	-	Chirripó	
15:00 – 17:00	Opening Plenary and Welcome	Msc. Jamilette Guerrero	CECACIER	
		Mr. Bruce Cameron	PAMEC.Energy Association	
		Dr. Rodrigo Rojas	ICE	
		Eng. Irene Cañas	ICE	
		Mr. Carlos Manuel Rodríguez	MINAE	
	Topic: Marine Energy and the Blue Economy – A Regional Perspective of Developments and Opportunities <i>Moderator: Kenneth Lobo</i>		ICE	Chirripó
	Costa Rica	Ms. Haydée Rodríguez	MINAE	
	Canada	Elisa Obermann	MRC	
	Chile	Dernis Mediavilla	MERIC	
	Colombia	Prof. Andrés Fernando Osorio Arias	Universidad Nacional de Colombia	
Dominican Republic	Mario Miranda Madera	Ministry of Energy and Mines		
Mexico	Dr. Edgar Mendoza	CEMIE-Oceáno		
USA	Carrie Schmaus	Department of Energy		
17:00 – 18:30	<b>COFFEE BREAK FOR GENERAL PARTICIPANTS</b>	-	Tobosí	
	Closed Leadership Roundtable Event for Officials <i>Participants: Americas and Global Industry and Policy Leaders</i>	-	Góndola	
18:30 – 20:30	<b>EVENING RECEPTION</b>	-	Outdoor Pavillion	

End of Day 1



## Day 2 – Monday January 27th, 2020 Main Room – Chirripó

Time	Session	Organization	Room
8:00	Exhibition Area Opens	-	Tobosí
8:30 – 9:30	<u>Topic: Global Perspectives</u>		-
	Conference Welcome Speech	Mr. Rolando Castro	MINAE
	The Future for Renewables	Alessandra Salgado	IRENA
	The Future for Marine Energy	Prof. AbuBakr S Bahaj	EWTEC
9:30 – 10:00	<b>COFFEE BREAK</b>	-	Tobosí
10:00 – 11:30	<u>Topic: Setting the Regional Research Scene</u>		-
	Overview on State of Knowledge and Experience	Elisa Obermann	MRC
	Resources	Dr. Richard Karsten	Acadia University
	Environment	Dr. Andrea Copping	PNNL
	Conventional Technologies (Tidal)	Cameron Johnstone	Strathclyde University
	Conventional Technologies (Waves)	Dr. Jochem Weber	NREL
	OTEC and Floating Solar	Diego Acevedo	Oceans of Energy
	Floating Offshore Wind	Sue Barr	Marine Power Systems
11:30 – 13:00	<u>Topic: Resource Assessment</u> <i>Chair: Rodney Mora</i>		UCR
	Wave Characteristics on the Pacific Coast of Costa Rica for Energy Production	Georges Govaere	IMARES
	Approaching the Wave Energy Potential in a Coastline Section of the Nicoya Peninsula	Henry Alfaro Chavarría	IMARES
	Wave Power Resource Assessment in Northeast Mexico	Francisco Ocampo Torres	CICESE
	Evaluation of Wave Energy Extraction in a Sheltered Bay	Emiliano Gorr	CICESE
	Wave Power Availability in the Pacific of Mexico and Central America	Héctor García Nava	CICESE
	High Resolution Wave Hindcasts for Resource Characterization in the U.S Pacific Regions	Gabriel García Medina	PNNL
13:00 – 14:00	<b>LUNCH BREAK</b> <i>Guest Speaker: Dr. Jorge Jiménez / PAMEC 2020 Blue Flag Accreditation</i>	MarViva	



## Day 2 – Monday January 27th, 2020

### Main Room – Chirripó

Time	Session	Organization	Room	
14:00 – 16:00	<u>Topic: Wave Energy Technology</u> <i>Chair: Henry Alfaro</i>		UCR	Chirripó
	Vancouver Wave Energy Testing Station: Continuous Electricity Output Verification from Waves	Dana Morin	FERN	
	Assessment of the INWAVE WEC-Hybrid PTO Technology in the Canadian Pacific Coast	Moien Mojabi	Pacific Regional Institute for Marine Energy Discovery	
	e.Wave: Maximization of Wave Energy using an Adaptative Mechanical System	Adrián Hernández	ITCR	
	Numerical Study of the Effect of a Flap-Type WEC	Melissa Jaramillo	UNAM	
	Electrohydrodynamics for a Point Absorber WEC: Theoretical Foundation	Eduardo Santiago Ojeda	CICESE	
	Dynamic Analysis of a Novel Six Degrees of Freedom Device for Wave Energy Extraction	Diego Eduardo Galvan Pozos	CICESE	
	Review of WEC-Sim Development and Applications	Yi-Hsiang Yu	NREL	
16:00 – 16:30	<b>COFFEE BREAK</b>		-	Tobosí
16:30 – 18:30	<i>Presentations continue in Other Rooms</i>		-	-
19:00 – 00:00	<b>CONFERENCE DINNER</b>		-	Chirripó



## Day 2 – Monday January 27th, 2020

### Secondary Room - Góndola

Time	Session	Organization	Room	
10:45 – 12:15	<u>Topic: Environmental Impacts</u> <i>Chair: Ingo Werhtmann</i>		UCR	Góndola
	Environmental Monitoring of a Floating Tidal Energy Converter in the Bay of Fundy	Craig Chandler	Mersey Consulting Ltd.	
	Assessment of Environmental Impacts from In-Stream Tidal Devices	Richard Karsten	Acadia University	
	Environmental Impacts of Energy Ocean Devices: Life Cycle Analysis	María Figueroa	Mexico	
	What Do We Know About the Potential Impact of Ocean Energy in the Environment	M. Luisa Martínez	UNAM	
	Environmental Impacts Associated with the Use of Ocean Energy	Debora Lithgow	UNAM	
12:15 – 13:00	<i>Presentations continue in Other Rooms</i>		-	-
13:00 – 14:00	<b>LUNCH BREAK</b> <i>Guest Speaker: Dr. Jorge Jiménez / PAMEC 2020 Blue Flag Accreditation</i>		MarViva	
14:00 – 15:00	<u>Topic: Tidal Energy Technology</u> <i>Chair: Julio Rojas</i>		ITCR	Góndola
	Understanding Transient Load on Turbine Blades to Reduce Risks and Assist Design	Dominic Groulx	Dalhousie University	
	Development and Testing of a Tidal Turbine Blade	Craig Chandler	Mersey Consulting Ltd.	
	ANDRITZ MK1 Tidal Turbine Operating Experience	Craig Love	Andritz	
15:00 – 16:00	<u>Topic: Technology Tools</u> <i>Chair: Isaac Rojas</i>		ICE	Góndola
	How International Standardization and Certification can Accelerate Commercial Uptake	Peter Scheijgrond	DMEC	
	Marine Hydrokinetic Tools – MHKiT	Frederick Driscoll	NREL	
	Modular Ocean Data Acquisition System - MODAQ	Robert Raye	NREL	



## Day 2 – Monday January 27th, 2020

### Secondary Room - Góndola

Time	Session	Organization	Room
16:00 – 16:30	<b>COFFEE BREAK</b>	-	Tobosí
16:30 – 18:30	<u>Topic: Ocean Thermal Energy Current Technology</u> <i>Chair: Dr. Edgar Mendoza</i>		CEMIE-Oceáno
	Case Study of OTEC Developments in the Caribbean: Economics, Plant Sizing and Challenges	Diego Acevedo	Oceans of Energy
	Analysis of the Performance and Efficiency of an OTEC Turbine through a Simulation Program	Sergio Pérez Otamend	UNAM
	Criteria for the Selection of Optimal Sites for OTEC plants in the Mexican Pacific	Paola Garduño	UNAM
	Possible Oceanographic and Biological Effects due to the Operation of an OTEC plant	Alejandro García Huante	UNAM
	Design of a Prototype of a 1kWe Open Cycle Mareothermic (OTEC) Plant	David Soriano	UNAM
	Evaluation of the Oceanic Thermal Potential on the Coasts of Panama	Guillermo López	Panama
	Studies and Ocean Measurements for Cooling Costa Plata, Dominican Republic	Eduardo D. Sagredo	Dominican Republic
	Deep Ocean Water Technologies and their Contributions to Sustainable Development	Andrés Osorio	Universidad Nacional de Colombia



## Day 2 – Monday January 27th, 2020

### Secondary Room – Cahuita 1

Time	Session	Organization	Room	
14:00 – 15:15	<u>Topic: Floating Offshore Wind Technology and Resources</u> <i>Chair: Kenneth Lobo</i>		ICE	Cahuita 1
	Wind Potential and Methodological Guide for Installation of Floating Offshore Wind Farm	Marianella Bolivara	Universidad de la Costa	
	Considerations for Offshore Wind Turbine Design in the North Pacific of Costa Rica	Mariana Montenegro	Costa Rica	
	Bathymetry and Capacity Factor Study in Areas of the Gulf of Baja California, Mexico	Gallardo Brigido J.C.	UNAM	
	Multicriteria Analysis Based on SIG for Offshore Wind Power Potentials Sites in North Pacific	Wilfredo Segura	ICE	
	Determination of Offshore Wind Power Potential in Costa Rica	Kenneth Lobo	ICE	
15:15	<i>Presentations continue in Other Rooms</i>		-	-
16:00 – 16:30	<b>COFFEE BREAK</b>		-	Tobosí
16:30 – 18:00	<u>Topic: Salinity Gradient Technology</u> <i>Chair: Andrés Osorio</i>		Universidad Nacional de Colombia	Cahuita 1
	Pressure Drop in Reverse Electrodialysis: Analysis using CFD	Mateo Roldán Carvajal	Universidad Nacional de Colombia	
	Salinity Gradient Energy Potential in Latin America with emphasis in Colombia and Mexico	Oscar Alvarez-Silva	Colombia	
	Determination of the Saline Gradient in the Coastal Zone of the Mexican Caribbean	Karen Vázquez Morales	UNAM	
	Hydrodynamic Analysis of a Reverse Electrodialysis Device	Alejandro Martínez Flores	UNAM	
	Optimization and Construction of a Reverse Electrodialysis Device	Vianey García Paredes	UNAM	
18:00 – 18:30	<i>Presentations continue in Other Rooms</i>		-	-

*End of Day 2*



## Day 3 – Tuesday January 28th, 2020

Time	Session	Organization	Room
8:00 – 8:45	<u>Topic: Renewables, Grids, and Integration</u>		-
	Integrating Marine and Other Renewable Solutions into an Electricity Grid	Alessandra Salgado	IRENA
	Keynote Speakers	Marco Acuña	ICE
		Javier Orozco	ICE
		Dr. Gustavo Gómez	ITCR
		Dr. Sue Molloy	Glas Ocean
8:45 – 10:15	<u>Topic: Micro-Grid Technologies and Solutions</u>		UNA-Renovables
	<i>Chair: Dr. Rolando Madriz</i>		
	Design Process for a Microgrid Central Controller in Remote Communities	Martin Moody	BMT Canada
	Development of Materials to Reduce Costs in the Integration of Hydrogen as Renewable Energy	Abissaid Martínez	UNAM
	Island and Remote Grid Considerations for Marine Energy Development	Dhruv Bhatnagar	PNNL
	The Influence of Hybrid Renewable Energy Systems on Energy Storage	Jorge Olmedo-González	UNAM
	NOMAD: Freedom and Autonomy by Converging Marine Life and Humankind	Alejandro Jaramillo Luconi	NOMAD
Tidal Energy for Hydrogen Production through Reversible Solid Oxide Cells	Antonio Jarquín Laguna	Delft University of Technology	
10:15 – 10:45	<b>COFFEE BREAK</b>		-
10:45 – 11:30	<u>Topic: Social, Environmental, and Economic Issues</u>		-
	<u>Roundtable Discussion on Policy, Markets, and Social Factors</u>		
	<i>Chair: Fernando Mora</i>		
	Building Social Support	Zdenka Piskulich	Costa Rica X Siempre
Policy Innovation to Support Marine Renewables	Sue Barr	Marine Energy Council UK	
Financing Renewable Energy	Julio Montes de Oca	UICN	



## Day 3 – Tuesday January 28th, 2020

Time	Session	Organization	Room	
11:30 – 13:15	<u>Topic: Building Social and Policy Support for Marine Renewables</u> <i>Chair: Sandra Farwell</i>		Nova Scotia Department of Energy and Mines	Chirripó
	MERIC: Supporting the Development of MRE in Chile	Dernis Mediavilla	MERIC	
	Lessons Learned for Marine Renewable Energy Development in Chile, Peru, and Colombia	Isa Walker	Aquatera	
	Powering the Blue Economy: Marine Energy for Enabling Applications including Ocean Observations	Andrea Copping	PNNL	
	SEA Wave: Addressing the Long-Term Environmental Concerns Associated with Wave Energy	Caitlin Long	EMEC	
	The Road to Risk Retirement: Evaluating and Communicating Environmental Risks	Andrea Copping	PNNL	
	<u>Topic: UK-Mexico Research Project Dissemination Seminar</u> Tidal Opportunities in Mexico		-	
Tidal Energy Resource in Mexico, with Overview of Technology to Extract the Energy, including Lessons Learned and Funding Opportunities to Work with Latin American Countries	Cameron Johnstone	Strathclyde University		
13:15 – 14:00	<b>LUNCH BREAK</b> <i>Guest Speaker: Dr. Rosibel Viquez Abarca</i>		UNED	
14:00 – 14:30	<u>Topic: Roundtable – Do we have Momentum?</u> <i>Chair: Tattiana Hernández-Madrigal</i>		PAMEC.Energy Association	Chirripó
	Building Student Connections		CEMIE-Oceáno Students	
	Connecting Globally with ICOE and AWTEC		-	
	Closing Panel: Dialogue on Value of PAMEC	Bruce Cameron	PAMEC.Energy Association	
		Dr. Edgar Mendoza	CEMIE-Oceáno	
Dr. José Rodrigo Rojas Morales		ICE		
	Prof. Andrés Fernando Osorio	Universidad Nacional de Colombia		
14:30	Bus Departure to Site Visit and Technical Workshops		-	Lobby
15:00	Technical Visit to IMARES Lab Facilities		IMARES	UCR
	Technical Workshops		IMARES	

*End of Day 3*