



GRAND RENEWABLE ENERGY 2018 INTERNATIONAL Conference and Exhibition

Advanced Technology Paths to Global Sustainability

<http://grand-re2018.org>

Conference: June 17 (Sun) - 22 (Fri), Exhibition: June 20 (Wed) - 22 (Fri)
Venue: Pacifico Yokohama, Yokohama, Japan



How to accelerate Renewable Energy Integration

Chairperson's Message

The Paris Agreement in COP21 is the agreement applicable to all participants of parties for the first time in history and serves as a turning point with an eye toward a decarbonized society. Under the Agreement, the greenhouse gas emissions are to be reduced dramatically to almost zero by the end of this century. With this long-term goal in the Paris Agreement, it is important for us to accelerate strategic efforts and initiatives carbon emission reduction in energy demand and supply.

The practical challenge to achieve is low-carbonization of energy supply, energy conversion, and energy conservation including smart integration of renewable energy in maximum both in supply and demand sides. Financial strategy, policy initiatives and advanced

technology development must be associated with them. Intelligence and cutting edge technology are indispensable in the fields of electricity, electronics, mechanics, physics, chemicals, biology, architecture, civil, mathematics, meteorology, sociology, systems, finance, and integrated management.

We have great expectation and feel glad to have discussion about these crucial issues through more than 900 papers' presentation covering 12 areas of renewable energies. Plenary session by the invited speakers, more than 15 experts, from all over the world are also programmed. International exhibition is held in parallel.

We, Organizing Committee, welcome all those participating in Grand Renewable Energy 2018 Conference, and look forward to seeing in Yokohama.

General Chairperson Prof. Kazuhiko Ogimoto (the University of Tokyo)

General Deputy Chairperson Dr. Yoshiro Owadano (National Institute of Advanced Industrial Science and Technology)

Call for Papers and Key Milestone

- Aug. 20, 2017: Call for Papers Announcement
- Jan. 31, 2018: Abstract due date
- Apr. 30, 2018: Early Bird end

[Secretariat Office of GRE2018]
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Policy & Concept



Photovoltaics



Solar Thermal Applications



Innovative Bioclimatic Architecture



Wind Energy



Biomass Utilization & Conversion



Hydrogen & Fuel Cell



Ocean Energy



Geothermal Energy & Ground-Source HP



Energy Network



Energy Conservation & Heat Pump



Small Hydro & Non-Conventional Energy

Conference Topics

1. Policy, Integrated Concept

- Policy Instruments, e.g. FIT
- Scenario
- RE and Climate Change, toward CO2 Zero
- RE in the Context of Sustainable Development
- Mitigation Potential and Costs
- Financing and Implementation
- R&D Policy
- Energy Technology Roadmap
- International Cooperation and Collaboration

2. Photovoltaic

- Silicon Solar Cells and Modules
- Compound Semiconductor Thin Film Solar Cells and Modules
- III-V Solar Cells, Concentrator and Space Applications
- Perovskite
- Dye sensitized Solar Cells
- Organic thin film Solar Cells
- Novel materials and concepts (nanostructures, multi excitation generation, intermediate band, plasmonics, etc.)
- Multi-junction Solar Cells
- Bifacial Solar Cells and Modules
- Performance Characterization Method
- Reliability
- PV systems and Grid Integration
- Operation and Maintenance
- Life Cycle Assessment
- Forecast
- Solar resources

3. Solar Thermal Application

- Solar thermal collector
- Solar based heat pump technology
- Solar Cooling
- Solar-fired power generation
- Solar Binary Power Generation
- Thermal Energy Storage
- Solar-thermally driven chemical processes
- Solar thermal utilization for hydrogen and fuel production
- Solar desalination
- Solar cooker
- Solar thermal detoxification

4. Innovative Bioclimatic Architecture

- Vernacular Architecture / Passive Design
- Zero Energy House/ Zero Energy Building
- Zero Net Carbon
- Affordable Green Housing

- Building Stock Activation / Refinement
- Smart City / ICT
- Comfort and Indoor Climate
- Energy Management System / Commissioning
- Elements and Materials
- Building Evaluation Index/Tool

5. Wind Energy

- Offshore Wind Power
- Advanced Wind Turbine Technology
- Grid Connection and Electrical Systems
- Site Assessments and Forecasting
- Plant Design and Management
- Operation and Maintenance
- Tower and Foundation
- Measurement and Monitoring Techniques
- Acoustics and Noise Issues
- Small/Distributed Wind Power
- COE of Wind Power
- Social and Environmental Issues

6. Biomass

- Biofuels (Biomethanol BDF including BTL)
- Biomaterials
- Gasification and combustion
- Biomass Refinery
- Marine Biomass including freshwater biomass
- Pyrolysis and carbonization including torrefaction
- Anaerobic Digestion
- Carbon Neutrality
- Forestry
- Sustainability

7. Hydrogen & Fuel Cell

- Hydrogen Energy Systems
- Hydrogen Production
- Hydrogen Transportation and Storage
- Hydrogen End-Use Technology
- Technology and Fabrication
- Fuel Cell for Transportation
- Fuel Cell Power Plants
- Fuel Cell for Co-generation

8. Ocean Energy

- Wave Energy
- Tidal Current Energy
- Ocean Current Energy
- OTEC
- Off-shore Wind Energy
- Utilization with Aquaculture
- Resource Assessment and Monitoring
- Economic Assessment

- Ocean Resources for Energy
- Ocean Marine Biomass
- Deep Sea Water Application

9. Geothermal Energy & Ground-Source Heat Pump System

- Exploration
- Geothermal Field
- Reservoir Engineering
- EGS
- Power Generation
- Public Acceptance
- Geochemistry
- Environmental Aspects
- Geo-Heat
- Ground-Source Heat Pump
- Direct Use
- Geothermal Frontier

10. Energy Network

- Smart Grid
- Micro-grid
- Energy Network
- Distributed Energy Resources
- Power Storage and System
- Vehicle to Grid
- Demand Response
- Power Electronics
- Superconductor and System
- Advanced Electric Car

11. Energy Conservation & Heat Pump

- Air-conditioning/Heat Pump
- Area Energy and Environmental Management
- Combined Heat and Power Utilization
- Energy Conservation and Assessment
- Global Warming/Heat Island and Other Environmental Issues
- Net Zero Energy Building/House
- Refrigeration and Refrigerants
- Renewable Energy Utilization
- Thermal Energy Technology and Storage
- Thermodynamics and Energy Management

12. Small Hydro & Non-Conventional Energy

- Hydropower Development and Utilization
- Practical Examples and Field (Model) Tests
- Micro & Pico System
- Undeveloped Energy for Human Life
- Unused Energy Recovery

June 17 (Sun)	June 18 (Mon)	June 19 (Tue)	June 20 (Wed)	June 21 (Thu)	June 22 (Fri)	June 23 (Sat)
	Opening & Keynote Speeches	Special Session				
		Plenary Session by Invited Speakers				
		Paper Presentation in Oral (12 Areas)				Closing Ceremony
Registration		Paper Presentation in Poster (12 Areas)				Full Day Technical Tour
	International Workshop and Conference					
	Workshop, Forum, Event by Supporters					
				Mini Tour		
		Thanks Dinner	Banquet	VIP Reception		
		The 13th Renewable Energy International Exhibition by JCRE				
		PV Japan 2018 Exhibition and Forum by JPEA				

RE International Conference
<ul style="list-style-type: none"> • Fourth. June 17- 22, 2018 <Aiming following numbers> Participants 1,300+ from 50 Countries Number of Paper Presentation 900+ Visitors to Exhibition 40,000+ at Pacifico Yokohama, Japan • Third. July 27- Aug 1, 2014 Participants 1,357 from 48 Countries Number of Paper Presentation 936 Visitors to Exhibition 44,210 at Tokyo Big Sight, Tokyo, Japan • Second. June 27- July 2, 2010 Participants 1,359 from 66 Countries Number of Paper Presentation 887 Visitors to Exhibition 44,260 at Pacifico Yokohama, Japan • First. 9-13, Oct., 2006 Participants 1,063 from 55 Countries Number of Paper Presentation 663 Visitors to Exhibition 20,203 at Makuhari Messe, Japan