

# AGENDA

## OECS Geothermal Energy Roundtable

Saint Lucia, 5<sup>th</sup> December 2018

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## Regional Geothermal Resource Data Gathering, UNFC Classification and Training

Saint Lucia, 6<sup>th</sup>-7<sup>th</sup> December, 2018

### Brief:

Currently, seven OECS Member States in the Caribbean Islands are pursuing geothermal energy which is a significant undertaking. For this reason, efforts to reduce the perception of risk on geothermal projects in the sub region and to attract capital from diverse sources is of utmost importance.

Also, as the sub region continues with exploratory efforts to better understand its geothermal potential, there is need for holistic multi-stakeholder coordination and planning amongst the island states. Critical areas requiring such coordination such as regulatory and licensing practices, pricing, regional power trade – are determinants of success for geothermal projects in the sub region. As such, this has warranted the calls for more dialogue and collaboration on geothermal energy given the similar characteristics and interests of Member States.

To this end, the OECS Geothermal Energy Roundtable will seek to catalyze the move to closer collaboration on geothermal energy within a regional framework. The geothermal energy dialogue will bring together key experts and decision-maker in geothermal energy in the region to help advance geothermal development in the region. The discussions will focus on the status of the OECS geothermal projects including opportunities, challenges and underlying risks with a view to highlighting the risk mitigation and financing options. The geothermal energy roundtable will be followed up by an introduction to the United Nations Framework Classification for Resources (UNFC) and related specifications for renewable energies, and geothermal energy in particular. The introduction of the UNFC classification and training will be undertaken by the International Renewable Energy Agency (IRENA), the International Geothermal Association (IGA) and the World Bank's Energy Sector Mapping and Assessment Program (ESMAP) under the partnership umbrella of the Global Geothermal Alliance (GGA) coordinated by IRENA. The practical session on the second and third day intends to provide essential insights including exploring how UNFC relates to prior classifications of Caribbean geothermal resource estimates.

## Day 1: OECS Geothermal Energy Roundtable

**Title:** Advancing Geothermal Energy in the OECS for Economic Development and Resilience

**Date:** 5<sup>th</sup> December, 2018

**Speakers:** IRENA, OECS, World Bank, and IGA

**Participants:** 30 participants expected that include representatives of geological agencies, local authorities, project developers, local research institutions and other relevant stakeholders

### Objectives:

- To provide a platform to discuss about underlying risks with a view to highlighting the risk mitigation options and financing options and catalyse the move to closer collaboration on geothermal energy within a regional framework;
- To introduce the collaboration of IRENA, IGA, World Bank and UNECE under the framework of the GGA to apply the Geothermal Specifications at national level and;
- To present the UNFC, geothermal specifications, and application examples (i.e., case studies) and make audience more familiar with UNFC principles and classification methodology and their benefits to the future geothermal market;
- To receive feedback, comments, and suggestions on the Geothermal Specifications, especially in the Caribbean context.

Time	Item	Description
8:30 - 9:00	Opening Ceremony	Welcome remarks: <b>OECS Commission</b> Remarks: <b>IRENA (Abdulmalik Oricha Ali)</b> Remarks: <b>World Bank (Thrainn Fridriksson)</b> Remarks: <b>IGA (Marit Brommer)</b> Opening address: <b>Government of Saint Lucia</b>
9:00 – 9:30	Presentations	Geothermal Energy in the Eastern Caribbean <b>Judith Ephraim, OECS Commission</b>
9:30 – 10:00	Presentation	Financing Geothermal Energy in the Caribbean <b>CDB</b>



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IRENA  
International Renewable Energy Agency

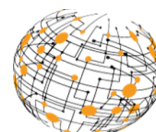


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10:00 – 10:30	Presentation	Risk Management for Geothermal Projects in the Caribbean
Coffee break		
10:45 – 11:45	Breakout Sessions	Geothermal Energy Development: Challenges and Opportunities
11:45 – 13:00	Plenary Discussion	Derisking Geothermal Energy in the Caribbean
Lunch break		
14:00 – 14:20	Presentation	Direct use of Geothermal Energy Prospects
14:20 – 14:40	Presentation	Overview of the Global Atlas for Renewable Energy (geothermal component) <b>Huiyi Chen, IRENA</b>
14:40 – 15:00	Presentation	The United Nations Framework Classification for Resources and Reserves (UNFC), application to renewable energy
Coffee break		
15:15 – 15:45	Presentation	Application of UNFC to Geothermal Energy Resources <b>Greg Usher, IGA</b>
15:45 – 16:15	Presentation	Geothermal Energy Island Interconnection: A viable option for the Eastern Caribbean
16:15 – 16:45	Presentation	Recommendations for a Regional Collaborative Framework for Geothermal Energy in the Caribbean
16:45 – 17:00	Ending remarks	Conclusion

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## Day 2 & 3: Classification of Geothermal Resource Estimates according to UNFC Geothermal Specifications

### Full-day round table workshop

**Date:** 6<sup>th</sup> - 7<sup>th</sup> December, 2018

**Expected Facilitators:** Paolo Conti (IGA), Greg Ussher (IGA), Harmen Mijnlief (IGA), Rob Hogarth (IGA), and selected persons from the Geological Agencies, Local Utility Companies, Research Institutions, and Geothermal Developers on each island

### Objectives:

- To present each 'Geothermal Project' consistent with UNFC definition of a 'Project'
- To present and explain key supporting data for each geothermal project
- To discuss the socio-economic and technical context of each geothermal project
- To present the resource estimation method and implications for the confidence in the geothermal resource estimate
- To classify each geothermal resource estimate according to UNFC Geothermal Specifications;

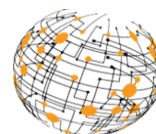
### Brief:

This is a practical session where the IGA/UNECE experts will work through the process of UNFC classification with the local participants to classify the resource estimates for several geothermal projects, selected from the full list of projects. Trained local technical persons will report and classify the remaining projects subsequent to the workshop, under remote guidance and supervision of designated UNECE/IGA members.



Day 2		
Time	Item	Description
8:30 – 9:00	Introduction	Welcome remarks. <b>OECS Commission</b> Introduction to the IRENA/ESMAP/IGA program <b>Abdulmalik Oricha Ali, IRENA/ Thrainn Fridriksson, WB</b>
9:00 – 9:30	Presentation	Overview of Geothermal prospects in the Caribbean islands, <b>OECS Commission</b>
Coffee Break		
10:00 – 13:00	Roundtable working group	Review of the Geological information for prospects 1,2, and 3 in view of completing the UNFC Classification of the prospects on geological confidence (G-axis)
Lunch		
14:00 – 15:30	Roundtable working group	Part 1 Review of the technical details – expected or installed turbine capacity, number of wells – existing vs planned, permits e.tc, for prospects 1,2, and 3 in view of completing the UNFC Classification of the prospects on technical feasibility (F-axis)
Coffee Break		
16:00 – 17:30	Roundtable working group	Part 2 Review of the technical details – expected or installed turbine capacity, number of wells – existing vs planned, permits e.tc, for prospects 1,2, and 3 in view of completing the UNFC Classification of the prospects on technical feasibility (F-axis)

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Day 3		
Time	Item	Description
<b>Lunch</b>		
9:00 – 10:30	<b>Roundtable working group</b>	Part 1 Review of the economic details – proposed off taker (s), products (direct heat, electricity or both), tariffs, financing arrangements, etc., for prospects 1,2, and 3 in view of completing the UNFC Classification of the prospects on economic feasibility (E-axis)
<b>Coffee Break</b>		
11:00 – 13:00	<b>Roundtable working group</b>	Part 2 Review of the economic details – proposed off taker (s), products (direct heat, electricity or both), tariffs, financing arrangements, etc., for prospects 1,2, and 3 in view of completing the UNFC Classification of the prospects on economic feasibility (E-axis)
<b>Lunch</b>		
14:00 – 15:30	<b>General Discussion</b>	<b>Collective review of group classifications for each geothermal prospect and assignment of new prospects for classification</b>
<b>Coffee break</b>		
16:00 – 16:30	<b>Closing remarks</b>	<b>IRENA, IGA</b>

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