

# Central and South American Workshop on Geothermal Energy

18<sup>th</sup> and 19<sup>th</sup> April 2016

IEA Geothermal  
International Technology Collaboration Program

[www.iea-gia.org](http://www.iea-gia.org)



# Instructions

- Presentations are in pdf format and are hyperlinked from this pdf
- Click the hyperlink to open the presentations
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# Day 1 - Welcome and Introduction

- Welcome
  - Efraín Villanueva Arcos
- IEA Geothermal – Introduction and Overview
  - Dr. Lothar Wissing  
Chairman IEA Geothermal
- Perspectiva oficial sobre el futuro de la Geotermia en México
  - Efraín Villanueva Arcos



# Session 1: Potential and political importance of Geothermal Direct Use

- Overview and Opportunities of Geothermal Direct Use
  - Dr. Katharina Link and Brian Carey
- Direct use for Heating and Cooling in Germany
  - Dr. Rolf Bracke
- Estudio de mercado para la aplicación de bombas de calor geotérmicas en México
  - Dr. Alfonso García Gutiérrez



# Session 2 - Munich, Germany

## Megacity 100 % Renewable District Heating and Cooling

- Deep Geothermal District Heating in Munich – from Vision to Realization
  - Dr. Christian Hecht
- Geothermal Heat of the Bavarian Molasse Basin (Germany) for district heating and power supply: project management, risk mitigation, costs and lessons learnt
  - Neil Farquharson



# Session 3: Geothermal Heat Pump Systems Opportunities and Benefits

- Heating and cooling with Ground Source Heat Pumps in Korea
  - Case histories and lessons learned
  - Dr. Yoonho Song
- Possible Solutions for more intensive use of GSHP Systems in Japan
  - Kasumi Yasukawa
- Use of direct geothermal heat in Norway, a country with apparently "little geothermal potential"
  - Jiri Muller



# Session 4 Smart applications

## Underground storage, agriculture and industry

- Minimization of primary energy consumption and CO<sub>2</sub> emissions by smart geothermal applications
  - Examples from Switzerland
  - Dr. Katharina Link and Matthias Kolb
- Retos del uso de la energía geotérmica en la agricultura: El caso de la deshidratación de alimentos
  - Dr. Julio Vargas Medina
- Smart geothermal direct use applications in agriculture and industry
  - Brian Carey



# Central and South American Workshop on Geothermal Energy

Day 2  
Tuesday 19th April 2016



# Innovation in Geothermal Technology: Introduction and Framework

- Day 2 - Welcome
  - Dr. Lothar Wissing
  - David Nieve – Brochure in Spanish in Preparation
- Introduction to innovation and emerging technologies
  - Brian Carey
- Financial framework for project related innovations
  - Xavier Perezcano



# Session 1: Innovative Drilling Technologies

- Innovative Drilling Technologies
  - Dr. Rolf Bracke
- Innovative Drilling and Production Technology for Deep Geothermal Wells
  - Jörg Lehr
- ThermoDrill – Fast Track Innovative Drilling System for Deep Geothermal Challenges
  - Dimitra Teza
- Drilling Technology Development for Supercritical Geothermal Resources in Japan
  - Dr. Shigemi Naganawa



## Session 2: New and innovative projects

- Portfolio of innovation projects of CEMIE-Geo
  - Dr. José Manuel Romo
- Aprovechamiento de pozos geotérmicos con presencia de HCl (acidez) en su fluido de producción  
Utilization of geothermal wells with HCl fluids.
  - Heber Diez León
- Deep roots of geothermal systems
  - Chris Bromley



# Session 3: Enhanced Geothermal Systems

- Estimación de los recursos de Roca Seca Caliente en México
  - Dr. Eduardo Iglesias
- El enorme potencial y los retos de los EGS multi-fractura

The enormous potential and the challenges of multi-stage EGS

  - Peter Meier
- EGS Technology
  - Dimitra Teza



# Closing Remarks

- Lothar Wissing
  - IEA Geothermal Chair

