



## **Geothermal Direct Use Technology & Marketplace**

Hilton Garden Inn Pittsburgh/Southpointe

1000 Corporate Dr, Canonsburg, PA 15317

### **Workshop Agenda – Monday August 17, 2015**

*This workshop is a forum to exchange information on low temperature geothermal applications. To that end, participants will be asked to provide recommendations and information based on personal experience, individual advice, information, or facts regarding this topic. The objective of the workshop is not to obtain any group position or consensus; rather, the DOE is seeking as many recommendations as possible from all individuals at this meeting.*

### **8:00 a.m. - Check-in for all Registrants/Continental Breakfast (Parlor A Foyer)**

#### **General Session - Parlor A**

### **9:00 a.m. - Introduction and Background**

### **9:15 a.m. - Geothermal Resources (in the Eastern U.S.) Parlor A**

**Discussion Lead- Brian Anderson, WVU**

- Where are the geothermal hot spots and how are these discoverable?
- At what temperatures can various geothermal technologies operate?
- Which innovative hybrid technologies can utilize local energy sources?
- Geologic variability in the sub-surface and issues pertaining to flow rate.

### **10:15- 10:45 a.m. – BREAK (Parlor A Foyer)**

### **10:45 a.m. - Geothermal Deep Direct Use Technology**

**Discussion Lead - Jefferson Tester, Cornell University**

- What is geothermal direct use technology?
- What is geothermal deep direct use technology?
- How has direct use been practiced?
- How does direct use differ from geothermal ground-source heating and cooling?

### **11:45 a.m. - Sustainability Initiatives in Pittsburgh**

**Presenter- Grant Ervin, Chief Resilience Officer, Office of Mayor William Peduto**



## **12:00-1:30 p.m. - Luncheon and Presentation on Geothermal Experience in Iceland (Parlor A)**

**Presenter- Thorleikur Jóhannesson, Verkis Consulting Engineers**

## **1:30 p.m. - Geothermal Marketplace (in the Eastern U.S.)**

**Discussion Lead - Jay Egg, Egg Geothermal**

- What are GSHP Payback and Market Space?
- What are the economics behind hybrid energy systems?
- How do Federal, State and Local Incentives Work to Lower Costs?
- Which states include GSHP and Direct Use in Renewable Portfolio Standards?

## **2:30-3:00 p.m. – BREAK (Parlor A Foyer)**

## **3:00-4:30 p.m. - Discussion of Geothermal Opportunities in the Region**

*High Impact:* Is this a high-impact problem (>1% Impact on local goals if successful)?

*Additionally:* Will work in this area make a large difference relative to what the private sector (and other funding entities) is already doing?

*Enduring Economic Benefit:* How will geothermal direct use result in enduring economic benefit to the U.S.?

**Optional Presentation – Regional Geothermal Data, presented by Arlene Anderson – Parlor C**

