



# **Introduction to EPRI's Gasification Users Association (GUA)**

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# Topics Covered

- Background
- Objectives
- Benefits of membership
- Project approach and summary
- Project deliverables
- 2012 planned activities

## Gasification Users Association (GUA)



- Interact with other gasification technology users or potential users and share information, experiences, and best practices to advance the state of the industry
- Gain access to information that could assist with the planning and/or consideration of adding a gasification plant to asset mix
- Participate in a forum to identify and participate in research, development, engineering, demonstration, and commercial utilization of gasification for the production of electricity and other forms of energy and chemicals

### Background, Objectives, and New Learnings

The Gasification Users Association (GUA) provides users and potential users of gasification technology a network to exchange non-confidential information on the practice and operation of gasification and its associated technologies, including air separation, gas cooling and clean-up, gas separation, and power generation.

Gasification-based plants can provide for high-efficiency, reliable, and environmentally benign generation of electricity and production of other types of energy and chemicals. EPRI has helped advance development of gasification processes through its RD&D program and continues to help the industry apply the results of the work that it has sponsored, as well as related work.

### Benefits

To ensure optimum development, the gasification and related technologies industry needs an avenue to exchange information about utility requirements, safety, training, reliability, and power generation considerations. For more than 20 years, the GUA has helped meet this need and

today continues serving as an industry group, complementing the RD&D roles of EPRI, individual organizations, and government.

### Project Approach and Summary

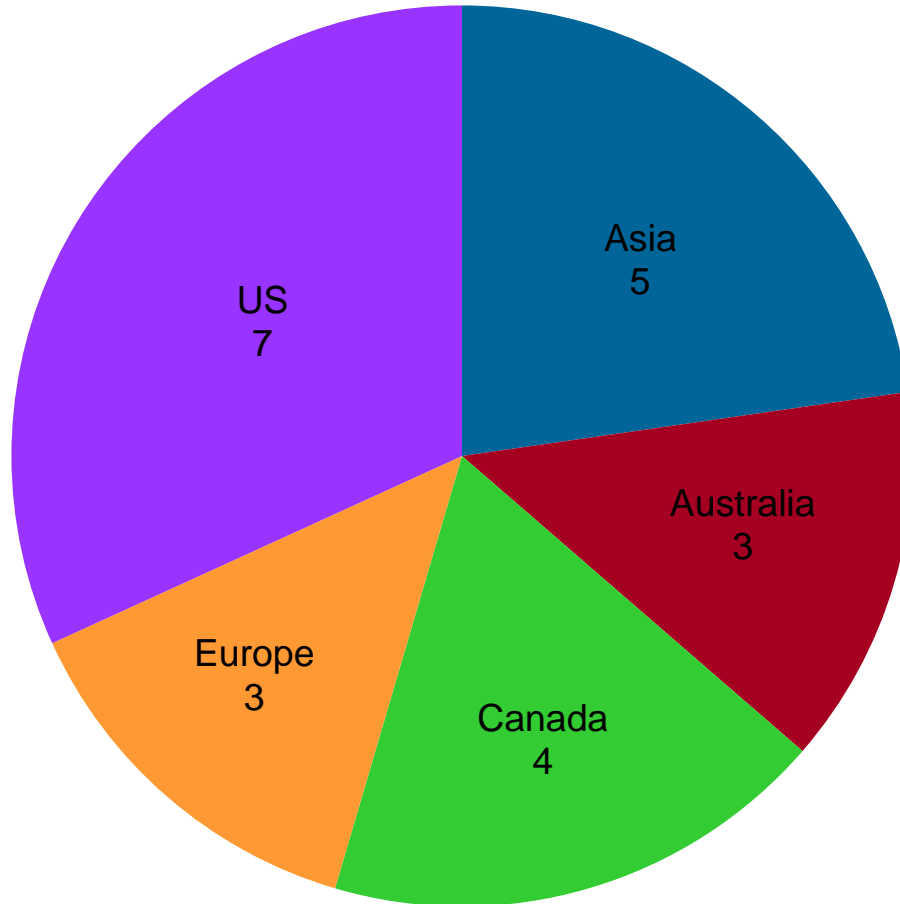
The GUA is an international organization that meets twice a year, usually in association with gasification or IGCC plant visits in the United States, Europe, or Asia. The annual meeting usually is held in conjunction with the Gasification Technologies Conference (sponsored by EPRI and the Gasification Technologies Council [GTC]). EPRI staff provides technical and management support for the GUA. EPRI arranges the meetings and agenda in cooperation with the members and provides an overview of the status of the technology, in addition to its applications and economics, at each meeting. An annual report includes comparisons of IGCC to other competing power generation technologies such as ultra-supercritical pulverized coal, fluidized-bed combustion, and natural gas combined cycles, as well as updates on gasification technology development activities and commercial projects.

# Background

- Gasification-based plants can provide for high efficiency, reliable, and environmentally benign generation of electricity and production of chemicals
- EPRI has helped advance development of gasification processes through its RD&D program
- To ensure optimum development, the gasification and related technologies industry needs an avenue to exchange information about utility requirements, safety, training, reliability, and power generation considerations
- GUA formed in 1982 to provide users of gasification technology a network to exchange non-confidential information on the practice and operation of gasification and its associated technologies

# Background

## 2011 GUA Membership



**Broad Representation of International Members**

# GUA Project Purpose and Scope

- Purpose
  - Encourage continued development of gasification for production of electricity and other forms of energy and chemicals by fostering interactions with industry, technology developers, component manufacturers and government agencies
  - Coordinate, cooperate in, and exchange information within the energy and chemical industries
- Scope of Activities
  - Encompass gasification and related technologies and projects with emphasis on those in service or nearing commercialization

# Benefits of GUA Membership

- Interact with other gasification technology users or potential users and share information, experiences, and best practices to advance the state of the industry
- Gain access to information that could assist with the planning and/or consideration of adding a gasification plant to asset mix
- Participate in a forum to identify and participate in research, development, engineering, demonstration, and commercial utilization of gasification for the production of electricity and other forms of energy and chemicals

# Example – Feedback to Improve IGCC RAM

## *Results from 2007 GUA RAM Workshop*

- On-line coal and slurry analysis for guiding gasifier operating conditions
- Accurate (+/- 14°C (25°F)), robust gasifier temperature measurement
- High reliability combustion turbines (more important than higher efficiency)
- High-pressure acoustic cleaning devices for syngas cooler
- Improved IGCC operator training methods/options
- Ability to start-up and shutdown without flaring (or with minimum flaring)
- Improved slag removal system (not lockhopper)
- High temperature wall thickness measurement device (for detecting areas with high corrosion without having to shutdown or enter equipment)

# Project Approach and Summary

- International organization that meets twice per year
  - 1<sup>st</sup> meeting associated with gasification or IGCC plant visits in US, Europe or Asia
  - 2<sup>nd</sup> meeting held in conjunction with Gasification Technologies Conference
- EPRI staff:
  - Provides technical and management support
  - Arranges meetings and agenda in cooperation with members
  - Produces project deliverables
- Members:
  - Elect Board of Directors including Chair and Vice-Chair




# Project Deliverables

- Electronic Newsletters
  - Published at end of 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> quarters that include current gasification news
- Gasification Technology Status Update
  - Annual report covers status of gasification technology, major projects, developments and economics

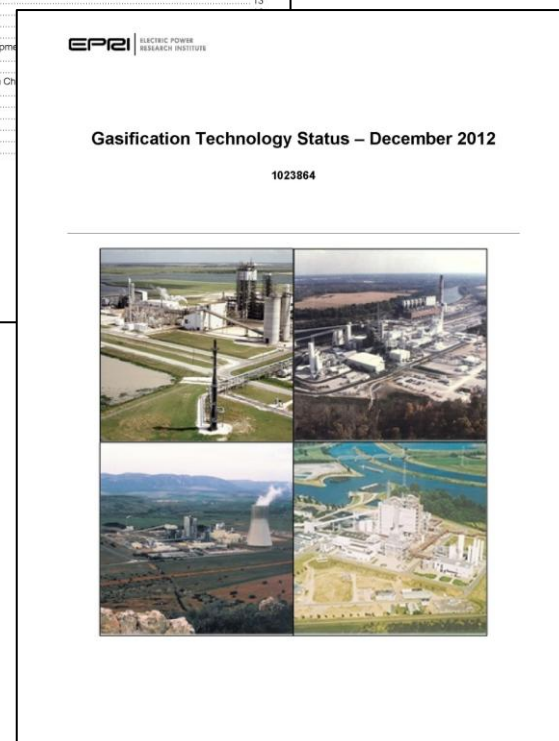
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GUA Update



Gasification Users Association (GUA) March 31, 2012

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# 2012 GUA Planned Activities

- Electronic Newsletters
  - 1025069, March 2012 *available for download at [epri.com](http://epri.com)*
  - 1025070, June 2012
  - 1025071, September 2012
- Gasification Technology Status Report
  - 1025072, December 2012
- Meetings
  - Spring: April 26 in Jeju Island, Korea
  - Fall: October 31 in Washington, D.C. and tentative tour of Edwardsport IGCC plant on November 1

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