

# 6TH CARBON DIOXIDE UTILIZATION SUMMIT

24TH- 25TH FEBRUARY 2016  
NEWARK, NEW JERSEY, USA

Exploring The Evolving Field Of CO2 Re-use

## KEYS TOPICS:

Building the CDU (CO2 Utilization) Value Chain  
Scale of CO2 Utilization  
The Use of CO2 in Gas Turbines  
CO2 Utilization Developments in EOR  
From R&D to Commercialization  
Utilizing Coal Fired Flue Gas: Overcoming Challenges  
Advances in CO2 Mineralization  
CO2 Fuels & Chemicals: Conversion & Products

## EXCLUSIVE SITE VISIT

### PRIMUS GREEN ENERGY PLANT

Tuesday 23rd February 2016

During the afternoon on Tuesday 23rd February, a limited number of attendees will receive the unique opportunity to visit to Primus Green Energy Plant in Hillsborough, NJ. Spaces for the site visit are of no extra charge and are reserved on a first come first serve basis. Please confirm your interest upon registration.

## Our Sponsors



For sponsorship enquires please contact:  
Maureen Ignacio +44 20 3141 0636 [mignacio@acieu.net](mailto:mignacio@acieu.net)



## The Conference

ACI's **6th Carbon Dioxide Utilization Summit** will explore commercial aspects of carbon dioxide applications in several industries such as **fuel, chemical, oil & gas, power and cultivation**. The conference will evaluate potential benefits and challenges of investments in carbon dioxide utilization as well as the political policy in place to ensure scale of emission targets are being achieved.

The two day conference will consist of series of informative presentations followed by an interactive Q&A session. Join us in Newark and participate in panel discussions giving you deep insights on the views shared from different prospects of carbon dioxide utilization.

### Exclusive Site Visit

#### Primus Green Energy Gas to Liquids Plant

During the afternoon of Tuesday 23rd February 2016, a limited number of conference attendees will have the opportunity to attend an exclusive site visit to "Primus Green Energy".

Primus Green Energy has developed an innovative gas-to-liquids technology that economically produces transportation fuels such as high-octane gasoline, diesel fuel or jet fuel directly from syngas derived from natural gas and other carbon-rich feedstock. There is no extra charge to attend the site visit. Please register your attendance for the site visit when booking for the conference. Hurry! Spaces for the site visit are limited and allocated on a first come, first serve basis.

#### Site Visit Itinerary

**12:30**—Depart conference hotel—Newark, New Jersey

**13:15**—Welcome address & guided tour of plant facilities

**14:30**—Depart Primus Green Energy—Hillsborough, New Jersey

**15:15**—Arrival back at conference hotel —Newark, New Jersey



## Registration is Simple:

To find out more information and to register, please contact **Rohan Baryah** using any of the following methods:

+48 (0) 616 467 022

rbaryah@acieu.net

http://www.acieu.net

## Commercial & Sponsorship Opportunities

Maureen Ignacio

+44 (0) 203 141 0636/ mignacio@acieu.net

## Who Will Be Attending?

ACI's 6th Carbon Dioxide Utilization Conference is designed to appeal to anyone interested in exploring further the commercial opportunities of CO2 Utilization, including advanced market update and latest technology developments.

### Key Areas for Discussion:

- Building the CDU Value Chain
- Scale of CO2 Utilization
- The Use of CO2 in Gas Turbines
- CO2 Utilization Developments in EOR
- From R&D to Commercialization
- Utilizing Coal Fire Flue Gas: Overcoming Challenges
- Advances in CO2 Mineralization
- CO2 Fuels & Chemicals: Conversion & Products

### Call For Papers

If you would like to be considered as a speaker at the event for a 30-45 minute presentation, please submit an abstract to:

Jasmine Okure : +44 (0) 203 141 0647

jokure@acieu.net

### Previous Attendees

| Nalco Energy Services | GreenFire Energy | Ferus Inc. | Total | Research & Energy | University of Illinois at Chicago | Phytonix Corporation | Algae Fuels | Blue Planet | US Department of Energy (DOE) | SABIC | Volkswagen Group America | Skyonic Corporation | Liquid Light | 3M | BMBF | E.ON | Sunfire GmbH | ArcelorMittal | Innovation | ACP Polska Sp | Aqualia | Audi AG | Avantium | Total | Gas Natural Fenosa Engineering | TECNALIA | SINTEF Energy Research | Iberdrola | Ecofys | FOM-institute DIFFER | ENEA Consulting | VITO | IPG Industrial Project Group Srl | International Energy Agency (IEA) | Climeworks AG | Bayer Material Science | DNV GL | Jagiellonian University | ETOGAS GmbH | Five Quarter Energy Limited / Five Quarter Energy | PTT Exploration & Production PCL / PTTEP | DIFFER | Solvay SA | TNO | Energibyen, Skive | KSLA | VTT | GreenField Speciality Alcohols Inc / GreenField | RA-FAKO S.A. | Bilfinger Bohr- Und Rohrtechnik GmbH | Linde AG | Institute For Energy Technology (IFE) | The Chemical Coal Processing Institute | Mitsubishi Hitachi Power Systems Europe GmbH / Mitsubishi Hitachi PowerSystems | Borealis Polyolefine GmbH | ON | University Of Antwerp | Joule Unlimited | Yara Int. | PTT PLC | Clariant Produkte (Deutschland) GmbH | Gas Natural Fenosa | INHA University | FCC AQUALIA, S.A. | Antwerp Port Authority | Jupiter Oxygen Corporation | OMV | Bertrandt Ingenieurbuero GmbH | Chemieanlagenbau Chemnitz GmbH | GDF Suez | CCM Research | BASF New Business GmbH | Unimore//Protesa | MARU Teknik AB | PTT Public Company Ltd | KH Engineering B.v | Naviglobe NV | & many more!

## DAY 1

Wednesday 24th February 2016

### 08:00 REGISTRATION & COFFEE

### 09:00 CHAIRMAN'S OPENING REMARKS

Bruce Dannenberg  
Founder & CEO  
Phytonix Corporation

### 09:15 CONFERENCE SESSION ONE

#### Building the CDU (CO<sub>2</sub> Utilization) Value Chain

- Development of strategies for CO<sub>2</sub> utilization value chain deployment
- Outlook on CO<sub>2</sub> supply & demand
- Advanced solutions vs scale of emissions
- Developing global CDU networks for policy makers
- Effects of carbon tax & exploring potential financial support

Barry Worthington  
Executive Director  
USEA

Bala Suresh  
Director  
IHS Chemical

Senior Representative  
XPRIZE

### 11:05 MORNING REFRESHMENTS

### 11:35 PANEL DISCUSSION

#### Scale of CO<sub>2</sub> Utilization

Senior representatives from power production, chemical process, CO<sub>2</sub>-to- fuels & EOR will discuss the different scales of technology for each application/approach.

- Comparing the various technology scales across applications
- Insights on upscaling: Will the technology be the same across different scales?
- Source: Where is the CO<sub>2</sub> in use coming from?

Graciela Chichilnisky  
CEO & Co-Founder  
Global Thermostat LLC

### 12:20 CONFERENCE PRESENTATION

#### The Use of CO<sub>2</sub> in Gas Turbines

- Advancements in thermal efficiency
- Replacing steam with supercritical carbon dioxide
- Challenges & opportunities faced designing a supercritical CO<sub>2</sub> Brayton Cycle

### 13:05 LUNCH

### 14:20 CONFERENCE SESSION TWO

#### CO<sub>2</sub> Utilization Developments in EOR (Enhanced Oil Recovery)

- Advancement in CO<sub>2</sub> applications in EOR
- Updates on EOR projects in USA & Canada
- 'Next Generation' growth

Sayavur Bakhtiyarov  
Associate Professor  
New Mexico Institute Of Mining And Technology

### 16:10 AFTERNOON REFRESHMENTS

### 16:40 ROUND TABLE DISCUSSION

#### CO<sub>2</sub> Utilization: From R&D to Commercialization

There will be 3 roundtables. Each table will be discussing the challenges faced and new opportunities along the pathway to commercialization within the particular industry.

- Table 1: Power generation
- Table 2: Fuels & chemicals
- Table 3: Oil & gas

Noah Deich  
Founder & Executive Director  
Center For Carbon Removal

Brent Lakeman  
Executive Director - Environment  
Alberta Innovates - Technology Futures

# 6<sup>th</sup> CARBON DIOXIDE UTILIZATION SUMMIT

NEWARK, NEW JERSEY, UNITED STATES

**17:55 CONFERENCE PRESENTATION**  
**Expanding the CCU Portfolio to Include Atmospheric Capture: Opportunities and Challenges**

- Overview of methods to recycle carbon dioxide from the air
- Insight into markets for future deployment
- Rationale for urgent development of new technology space

Christophe Jospe  
Chief Strategist  
**The Center For Negative Carbon Emissions**

**18:40 CLOSE OF DAY ONE FOLLOWED BY EVENING DRINKS RECEPTION SPONSORED BY:**



**Commercial Opportunities**

If you would like to showcase your technology reaching a target audience of senior level professionals within the CO2 Utilization industry please contact Maureen Ignacio  
T. +44 (0) 20 3141 0636 – mignacio@acieu.net



## DAY 2

Thursday 25th February 2016

**08:30 REGISTRATION & COFFEE**

**09:00 CHAIRMAN'S OPENING REMARKS**

Bruce Dannenberg  
Founder & CEO  
**Phytonix Corporation**

**09:05 CONFERENCE SESSION THREE**

**Advances in CO2 Mineralization**

- Exploring technologies ready for deployment
- Converting CO2 into high value building material
- Innovative routes for mineral carbonization

Richard Riman  
Distinguished Professor Of MSE  
**Rutgers, The State University Of New Jersey**

Sean Monkman  
VP Technology Development  
**Carbon Cure**

Brent R Constanz  
CEO  
**Blue Planet Ltd**

**10:55 MORNING REFRESHMENTS**

**11:25 CONFERENCE SESSION FOUR**

**CO2 Utilization in Fuels & Chemicals: Conversion Process**

- Insights from electrochemical processes for CO2 reuse
- Global advantages of artificial photosynthesis & photosynthetic processes
- Effective catalysts innovations for commercial CO2 conversion

Bruce Dannenberg  
Founder & CEO  
**Phytonix Corporation**

Laura Nereng  
Sustainability Leader  
**3M**

# 6<sup>th</sup> CARBON DIOXIDE UTILIZATION SUMMIT

NEWARK, NEW JERSEY, UNITED STATES

Sona Kazemi  
Chief Technology Officer  
**Mantra Energy Alternatives**

13:15 LUNCH

14:30 CONFERENCE SESSION FIVE  
**CO<sub>2</sub> Utilization in Fuels & Chemicals:  
Production**

- Developments in CO<sub>2</sub> for fuel applications
- CO<sub>2</sub> as feedstock for chemicals & polymers
- CO<sub>2</sub> utilization in biofuel production from algae

Sam Rushing  
President  
**Advanced Cryogenics**

Dimitry Polyansky  
Chemist  
**Brookhaven National Laboratory**

Dan Robertson  
Chief Scientific Officer  
**Joule Unlimited**

16:20 CHAIRMAN'S CLOSING REMARKS

Bruce Dannenberg  
Founder & CEO  
**Phytonix Corporation**

16:30 END OF CONFERENCE & AFTERNOON  
REFRESHMENTS

## Speaking Opportunities

If you would like to be considered as a speaker for the event with a 30-45 minute presentation, please submit an abstract for consideration to Jasmine Okure  
T. +44 (0) 20 3141 0647 – jokure@acieu.net



## Registration Is Simple

If you would like to register for this event or wish to find out more information, you can contact **Rohan Baryah** using any of the following methods:

 +48 616 467 022

 rbaryah@acieu.net

 <http://www.acieu.net>

 Postal Address:  
ACI Europe, 5/13 Great Suffolk Street, London, SE1 0NS

## Registration Is Simple

Conference (Includes Documentation Packet)  
24th & 25th February 2016

£1,495.00

Documentation Packet Only

£420.00

Please Note.

Members and customers of all supporting organizations are entitled to a discount off their conference package.

For more information please call +48 616 467 022

## Documentation Packet Available

We are selling the 6th Carbon Dioxide Utilization Conference papers at just £395 (+£25 P&P). Simply tick the box on the booking form, send it with payment and your copy will be on its way to you after the meeting. This important manual will be a source of invaluable reference for the future.

## About ACI

ACI, a UK owned company, has been running successful conferences in the USA since 1999. Headquartered in Chicago with offices all around the States, ACI opened its European head office at the end of 2005 and has expanded rapidly, launching a series of events in key industries including maritime, energy, oil & gas, cosmetics, chemicals & media.

## Terms & Conditions

### Payment

Payment must be received within five business days of returning the signed contract. After receiving payment a VAT receipt will be issued. If you do not receive a letter outlining details two weeks prior to the event, please contact the Conference Coordinator at ACI Europe Ltd.

Discounts are available for multiple/group bookings. Please call **+48 616 467 022**

### Cancellations

Substitutions are welcome up to 24 hours prior to the event. Cancellations must be received in writing no less than 3 weeks prior to the start of the conference; a full credit voucher towards a future ACI conference will be issued. Any cancellation received less than 3 weeks prior to the start of the event shall be deemed to be a breach of this contract by client, and accordingly, no credits will be given. Cancellations must be received in writing by mail or fax three weeks before the conference. Thereafter the full conference fee is payable. If for any reason ACI Europe Ltd decides to amend, cancel or postpone this conference, the conference fee will not be refunded. Furthermore, ACI Europe Ltd will not be responsible for covering airfare, hotel or other costs incurred by registrants. In the event that ACI Europe Ltd cancel or postpone the event, ACI Europe Ltd reserves the right to transfer this booking to another conference to be held in the following twelve months, or to provide a credit of an equivalent amount to another conference within the following twelve months. The construction, validity and performance of this agreement shall be governed in all respects by the laws of England to the exclusive jurisdiction of whose courts the Parties hereby agree to submit.

### Accommodation

The cost of accommodation is not included in the event fee. Preferential rates will be arranged with or near the event venue, and all confirmed delegates will be given details of how to book accommodation at this rate in due course.