

# HHP SUMMIT 2012

*“Natural Gas for High Horsepower Applications”*

Royal Sonesta Hotel, Houston, Texas - September 26-28, 2012

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*The potential of natural gas to fuel a wide range of high horsepower equipment has never been more real or more imminent. HHP Summit 2012 is a multi-day conference designed to discuss the opportunities presented by natural gas as an alternative to traditional diesel fuel in these operations. Energy supply, pricing, technology advancements, and regulatory shifts are now combining to form "the perfect storm" and make an exceptionally strong case for a switch to natural gas in a variety of high fuel use applications. Increased mobile fueling options have also recently expanded opportunities for use of natural gas in these sectors and other remote (non-pipeline) operations.*

**Conference Objectives:** *The program for HHP Summit 2012 was designed with several specific goals in mind:*

- 1) *Highlight the multiple success stories from around the world where natural gas has and is being used in high horsepower applications in lieu of diesel fuel;*
- 2) *Assess the economic, regulatory, and environmental drivers for the growth of this market;*
- 3) *Analyze the potential market size in North America; and,*
- 4) *Connect equipment, technology, and fuel suppliers to end users and public agencies (especially those with financial incentives) to further facilitate the development of these budding and very promising markets.*

## Wednesday, September 26, 2012

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### 8:30 a.m. Pre-Conference Training Session: LNG Fundamentals

*The “LNG 101” session will provide an overview on the basic properties of liquefied natural gas (LNG), its production and use as a transportation fuel, and general transportation and safety considerations. This session will feature a “live LNG demonstration” so that attendees can get an up-close and personal look at the product. For those new to the industry, you will not want to miss this exciting LNG primer. Pre-Conference Training will take place in Champions Room V.*

8:30 a.m. Session 1

10:00 a.m. Break

10:15 a.m. Session 2

11:45 a.m. Break for Lunch

*Local restaurant list available at registration.*

### 1:00 p.m. SUMMIT BEGINS

Master of Ceremonies: Erik Neandross, Chief Executive Officer, Gladstein, Neandross & Associates

**Official Conference Welcome and Opening Remarks****1:10 p.m. Keynote Address**

- John Somerhalder, Chairman, President and Chief Executive Officer, AGL Resources

*As head of AGL Resources, the nation's largest natural gas-only distributor and energy services holding company, John Somerhalder will discuss North American expansion of natural gas use in non-traditional applications. With more than three decades in the energy industry, including state and regulatory experience, Mr. Somerhalder will provide an overview of natural gas supply and demand fundamentals and industry initiatives to help develop natural gas transportation markets. He will also present an overview of AGL's near-term strategies and opportunities.*

**1:40 p.m. Plenary Session #1: "What, Where, Who, Why, and How: A Look at the Current Opportunity for a Transition to Natural Gas in High Horsepower Operations"**

*The use of natural gas as a replacement for conventional diesel fuels in vehicle applications has been gaining ground around the world for well over a decade. In the United States, on-road trucking fleets have realized significant benefits resulting from the deployment of natural gas vehicles, especially given the increasing difference in the cost of petroleum versus domestic natural gas. While these heavy-duty fleet operators have been able to realize impressive savings, the use of natural gas in place of diesel in off-road high-horsepower applications presents an even greater opportunity to recognize significant operational cost reductions and near-immediate payback periods, in addition to important environmental benefits. In this session, senior executives from global organizations will examine the economic, environmental, and energy security benefits of switching to natural gas in fuel-hungry, traditionally diesel-powered operations. The executive panelists will highlight the growing momentum within this industry and specific natural gas projects throughout North America.*

MODERATOR: Erik Neandross, Chief Executive Officer, Gladstein, Neandross & Associates

1. Eric Marsh, Executive Vice President & Senior Vice President, USA Division, Encana Corporation
2. Ron Morgan, Product Manager - Gas Engines, Caterpillar Inc.
3. Sam Thomas, President, Chief Executive Officer, and Chairman, Chart Industries
4. James Burns, General Manager, LNG for Transport Americas, Shell

**3:00 p.m. Afternoon Energy Break —Light refreshments and snacks  
Sponsored by Cummins****3:30 p.m. Plenary Session #2: "An End-User's Perspective: The Business Case for Natural Gas— A Perfect Storm of Opportunity"**

*With the combination of already high priced petroleum and refined diesel products, increasing regulation and thus costs of diesel-based operations, and the significant growth and reduced cost of domestic natural gas supplies, the "perfect storm" has been created for a wide-scale transition from diesel to natural gas. Simply put, natural gas fuel can often offer the simplest and most cost-effective overall operating strategy and regulatory compliance approach in applications where fuel consumption is copious. The more fuel used, the better the case for natural gas. Replacing diesel with natural gas can save an end user 30 to 50 percent on the cost of fuel, in addition to achieving important emission and noise reductions. Top-level executives from end-user operations will present their reasons and*

*rationale for looking more closely at and transitioning their operations to natural gas, including key business case decision making criteria.*

MODERATOR: Gene Barr, President and Chief Executive Officer, Pennsylvania Chamber of Business and Industry

1. Richard Heckmann, Chairman and Chief Executive Officer, Heckmann Corporation
2. Bob Geddes, President, Ensign Energy Services
3. Robert Frayser, Chairman, Utah Mining Association and General Manager, Lisbon Valley Mining Co.
4. Normand Pellerin, Assistant Vice President, Environment and Sustainability, Canadian National Railway

**5:00 p.m. Trade Show Grand Opening and Reception in the Discovery Center  
Sponsored by Applied NGF**



*The HHP Summit 2012 will present booths and technology displays from a wide range of industry stakeholders. The Discovery Center will provide an interactive environment for learning about the technologies, equipment, fuels, and service providers that support companies and personnel engaged in high horsepower equipment operations.*

## Thursday, September 27, 2012

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*Around the world, there are budding examples of where natural gas has been tested and is being used in off-road high horsepower applications. To date, no individual sector has seen market penetration beyond a handful of units. However, in nearly every case, fuel cost savings to the end-user can be significant, with payback periods often less than a year or two. Thursday's discussions will present the business case for a transition to natural gas in high horsepower operations via a look at current in use projects throughout the world. A detailed examination of the engines and technologies used to power these operations will be provided in today's breakout sessions, as well as an in-depth discussion on critical regulatory and policy considerations facing these various industries.*

**7:30 a.m. Breakfast in the Discovery Center  
Sponsored by ABS**



**9:00 a.m. Opening Remarks**

- Dave Dunlevy, General Manager, Caterpillar Global Petroleum

**9:10 a.m. Plenary Session #3: “The International Experience: Translating Lessons Learned into Opportunity for the North American Market”**

*International representatives on this plenary session will highlight the use of natural gas in these various applications across the globe. Speakers will highlight lessons learned in order that the North American market can learn from these strategic advancements. Panelists will describe how energy supply and regulatory influences have fostered market development; and what technologies, engines, and equipment have met with the most success thus far; and what the future holds for off-road natural gas use in these operations.*

1. Oscar Bergheim, Operations Manager, The Fjord1 Group, *An Update from the World's Largest LNG Ferry Operator*
2. Peter Han, President Chart Asia, Chart Industries, *Overview of Asia's LNG Growth and Its Impact on the North American Market*
3. Trond Jerve, Head of Business Development Clean Energy, Merchant LNG Europe & Marine, AGA AS (Linde Group), *Linde and Development of the Scandinavian Maritime Small-Scale LNG Market*

**10:30 a.m. Breakout Session #1: “First Movers: Showcasing Today's HHP Projects, Engine Technology and Refueling Infrastructure”**

*Throughout North America, new equipment, fuel supply technology, and aggressive industry members and end users are making a transition to natural gas possible in applications where diesel typically reigns. This session will spotlight some of the early adopter projects to date in the high horsepower realm, many of which showcase the collaborative efforts of multiple project partners. This breakout session will be divided by sector in order to provide in-depth coverage of in-use projects and provide current updates on opportunities, challenges, and successes in each category.*

*All breakout sessions will run concurrently and will take place on the second floor of the Conference Center.*

- **Marine (End User Case Studies)**  
MODERATOR: Bill Sember, Vice President, Global Gas Development, ABS

1. Bill Stegbauer, President, Southern Towing Company, *Moving to LNG Use on US Inland Towboats: Progress, Problems, and Predictions*
  2. Endicott Fay, Chief Naval Architect & Manager Vessel Design, Washington State Ferries, *LNG Retrofit of the Issaquah Class Ferries*
  3. Oscar Bergheim, Operations Manager, The Fjord1 Group, *A Summary of Fjord1's Crew Training Program for the Proper and Safe Handling of LNG*
  4. John Hatley, Americas Vice President Ship Power, Wärtsilä North America, Inc., *Recent LNG Marine Developments in Europe*
- **E&P Operations (End User Case Studies)**  
 MODERATOR: Brian Gilmore, Managing Director, Westlake Securities
    1. Pat Osachuk, Project Lead, Frac Team, Encana Corporation, *Lessons Learned: A Case Study in Successful Application of Natural Gas Fuel in High Horsepower Pressure Pumping Services*
    2. David Ross, Director of Business Development, EQT Corporation, *EQT's LNG Drill Rig Project - A Perspective on Getting Started and Getting Going*
    3. Pierce Dehring, Project Engineer, Baker Hughes, *Bi-Fuel Conversions on Fracturing Pumps*
    4. Brian Murphy, Engineering Manager, Ensign Energy Services, *Natural Gas – The New Fuel of Choice for Drilling Rigs*
  - **Rail (Case Studies, Engines, and Fueling)**
  - MODERATOR: Robert Fronczak, Assistant Vice President Environment & Hazardous Materials, Association of American Railroads
    1. Bruce Luff, Business Development Manager, Air Products & Chemicals, *LNG as a Railroad Transportation Fuel – Proven Application has a New Life*
    2. Normand Pellerin, Assistant Vice President, Environment and Sustainability, Canadian National Railway, *Canadian National Railway's LNG Demonstration Project*
    3. Larry Rodney, System Engineer, Aftermarket Department and Natural Gas Locomotive Program, Electro-Motive Diesel, *The Natural Gas Locomotive*
    4. David Mumford, Director, High Horsepower Partner Development, Westport Innovations, *Adapting Westport HPDI Technology to an EMD Mainline Locomotive*
    5. Martin Blanchet, Business Development Manager, Gaz Métro, *Gaz Métro Transport Solutions, Fueling Innovation in the Natural Gas Age*

**12:30 p.m. Lunch in the Legends Ballroom**  
**Sponsored by America's Natural Gas Alliance**



**1:15 p.m. Keynote Luncheon: "The New Energy Reality - A Transition to the Natural Gas Economy"**

*The shale gas revolution is upon us. This technological revolution has pushed North American natural gas production and reserve estimates to all-time-high levels, while ensuring that prices will remain low for the foreseeable future. With continued elevated diesel fuel prices and ever-present volatility in the world's petroleum markets, the price spread between domestically secure and cleaner burning natural gas and diesel fuel has maintained a historically wide margin. This has presented unprecedented opportunities for customers that require high volumes of energy to fuel their industrial and commercial operations. Natural gas is quickly becoming the "go to" option for those looking to reduce fuel costs and improve environmental performance in high fuel consuming applications such as commercial marine vessels, locomotives, mine haul, oil and gas exploration and production, and other off-pipeline industrial power and thermal generation applications. As hydraulic fracturing technology begins to be exported from North America to Europe, Asia and beyond, it is likely that the world will soon be awash in natural gas; thus expanding such opportunities on a global scale. Our luncheon keynote speaker will highlight how this fundamental shift is creating a*

*new reality in the energy markets and the equipment that powers much of our commercial and industrial sectors today. As this new energy reality becomes more clear, businesses and industries are beginning to shift their almost exclusive reliance of diesel fuel to an increased use of cleaner burning and low cost natural gas. This in turn is focusing those that supply products and services to the market to shift their offerings to meet this growing demand for natural gas powered high horsepower equipment.*

- Joel Feucht, Director of Gas Engine Strategy for Energy & Power Systems, Caterpillar

**2:00 p.m. Breakout Session #2: “First Movers: Showcasing Today’s HHP Projects, Engine Technology, and Refueling Infrastructure”**

*Now that the stage has been set with details concerning why natural gas makes sense from an economic and environmental perspective, the conversation shifts to provide an exciting look at the technologies and equipment that can make it happen. Across all sectors, various technologies are being developed and tested for potential large-scale rollout and use. In many instances these products are already returning significant results and are outlining the immense opportunity for a transition to natural gas in the very near-term future. Ample time for Q&A and discussion amongst panelists will provide first-hand insight into the real and practical costs, challenges, and benefits to each of the technologies presented.*

*All breakout sessions will run concurrently and will take place on the second floor of the Conference Center.*

- **Marine (Engine Technology)**

MODERATOR: **Bob Nimocks**, President, Zeus Development Corporation

1. John Shock, Segment Manager, Caterpillar Marine, *Caterpillar’s Natural Gas Solutions for Marine Applications*
2. Paul Blomerus, Senior Director, High Horsepower, Westport Innovations, *New Choices for LNG-Fuelled Coastal and Inland Waterway Vessels*
3. John Hatley, Americas Vice President Ship Power, Wärtsilä North America, Inc., *New Marine Era for Gas*
4. Ivan Bach, Commercial Marine Sales Manager, GE, *GE Gas Turbines for Marine Applications*

- **E&P Operations (Engine Technology)**

MODERATOR: David Hill, Vice President, Natural Gas Economy Operations, Encana Corporation

1. Bart Myers, Global Product Marketing Manager, Caterpillar Global Petroleum, *Caterpillar’s Journey to Burn Gas in Oil and Gas Applications*
2. David Kinnaird, Vice President of Manufacturing and Supply, Green Field Energy Services, *Turbine Power and Natural Gas Fuel – The Future of Hydraulic Fracturing*
3. Shane Cannon, Territory Manager, Oil and Gas, Cummins, *Cummins Dual Fuel*
4. Alex Quintero, Senior Field Engineer, GTI Altronics, *Benefits of Bi-fuel in Drilling & Fracing*
5. Lyle Jensen, Chief Executive Officer and President, American Power Group, *Aftermarket Upgrades for HHP Diesel Engines*

- **Mining & Earthmoving (Case Studies, Engines and Fueling)**

MODERATOR: Tom Jackson, Executive Editor, Equipment World

1. Ron Morgan, Product Manager - Gas Engines, Caterpillar Inc., *Dual Fuel and Gas Engine Technology for Mining & Construction Applications*
2. Robert Frayser, Chairman, Utah Mining Association and General Manager, Lisbon Valley Mining Co., *Lisbon Valley Mining Co. – 600 HP Boiler Fuel Conversion*
3. David Bolderoff, Fleet Administrator, Los Angeles County Sanitation District, *A Case Study on LNG Conversions of Multiple Pieces of Earth Moving Equipment*
4. Peter Murray, Product Manager - LNG Vehicle Fuel Systems, Chart Industries, *LNG Fueling Solutions for Mine Haul Applications*

**3:30 p.m. Plenary Session #4: “An Examination of Regulatory and Policy Influences”**

*The use of natural gas in high horsepower applications is a viable strategy and response to federal and state demands for improved air quality and a reduction of dependence on imports of more carbon-intensive conventional fuels. Heavy-duty diesel engines have long been viewed as a significant contributor to regional air quality problems which are the drivers behind increasingly stringent emission standards for these engines. This session will examine the regulatory policies impacting potential growth of the market for natural gas in high horsepower industries.*

MODERATOR: Rich Kassel, Senior Vice President, Gladstein, Neandross & Associates

1. Timothy Meyers, Office of Design and Engineering Standards, Systems Engineering Division, United States Coast Guard, *Update and Overview on LNG Vessels and Bunkering in the United States*
2. Fakhri Hamady, Division Technical Advisor, United States Environmental Protection Agency Office of Transportation and Air Quality, *EPA Policy for Clean Alternative Fuel Vehicle and Engine Conversions*

**5:00 p.m. Evening Reception and Networking in the Discovery Center**

*The HHP Summit 2012 will present booths and technology displays from a wide range of industry stakeholders. The Discovery Center will provide an interactive environment for learning about the technologies, equipment, fuels, and service providers that support companies and personnel engaged in high horsepower equipment operations.*

## Friday, September 28, 2012

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**7:30 a.m. Breakfast in the Discovery Center**

**8:00 a.m. Special Session: LNG Rail Tender Car Seminar Hosted by Shell and Westport Innovations**

*Special Session will take place in Champions Rooms VI and VII*

*The use of natural gas, especially LNG, has enormous potential for applications that consume extremely large volumes of fuel. This session will focus on the use of LNG as a locomotive fuel and the systems necessary to store, transport and use LNG for rail applications. This facilitated session will explore the challenges and opportunities associated with the development and implementation of an LNG tender car. Attendees invited to participate in this session will contribute to a discussion of the technical, regulatory and market forces at play in the integration of new technologies and fuels into the rail sector.*

*Spaces are limited. Attendance will be by pre-registration only. If you are interested in attending this workshop, please email [events@gladstein.org](mailto:events@gladstein.org) or call 888-993-0302.*

**9:00 a.m. Breakout Session #3: “First Movers: Showcasing Today’s HHP Projects, Engine Technology, and Refueling Infrastructure”**

*Successful alternative fuel planning requires the development of a robust and strategically planned infrastructure system that works seamlessly to support everyday operational needs. These technical breakout sessions will provide case studies and detailed presentations on mobile and permanent natural gas refueling equipment options (including both LNG and CNG), costs, permitting and code issues, development considerations, and other important issues. Mobile LNG refueling equipment—which has proved critical to successful natural gas fueled HHP operations—will be displayed on-site at the HHP Summit to give attendees a hands-on look at this equipment as a compliment to the technical presentations provided.*

*All breakout sessions will run concurrently and will take place on the second floor of the Conference Center.*

- **Marine (Focus on Fueling)**

MODERATOR: Cliff Gladstein, President, Gladstein, Neandross & Associates

1. Christine Peck Kretz, Business Development Manager, LNG, Air Products & Chemicals, *Paving the Way for LNG Use in Marine Applications*
2. Tony Teo, Business Development Director, DNV North America, *The Fueling Infrastructure & Bunkering*
3. Jay Gottlieb, Chief Operating Officer, Argent Marine, *Innovative Solutions for LNG Transport and Bunkering in the Marine Sector*
4. Marcus Burgmann, Director, Technology Scouting, Teekay Corporation, *Delivering LNG as a Marine Fuel in the Pacific Northwest*

- **E&P Operations (Focus on Fueling)**

MODERATOR: Ryan Erickson, Project Director, Gladstein, Neandross & Associates

1. Paul Sjogren, Director of Product Management and Marketing, Chart Industries, *Chart Industries LNG Fueling Solutions for the E&P Sector*
2. Bryan Luftglass, Energy Segment Manager, The Linde Group, *Supporting LNG for Oil and Gas Drilling and Completion*



3. Mike Fradette, Business Development Manager, Prometheus Energy, *Changing the E&P Mindset: Effectively Deploying Turnkey LNG Fuel Solutions through LNG Supply, Equipment, and Operational Service*
  4. Dave Myers, Business Development Manager, Lincoln Composites, *Another Option for Large Volume Natural Gas Transportation*
- **Fuel Substitution for Off-Pipeline Industrial Power Generation, Boilers, and Thermal Supply (Case Studies)**  
 MODERATOR: David Schultz, Vice President, Asset Development, AGL Resources
    1. David Barr, Vice President and General Manager of Global LNG, Taylor Wharton, *LNG Solves the Used Oil Problem in Asphalt Plants*
    2. Tom Quine, President, Northstar Industries, LLC, *Facilities Required for Commodity LNG/CNG Supply*
    3. Jerry McDonald, Technical Director-Natural Gas Products, Petro Energy, *LNG: New Approaches for Energy in Farms and Factories*

**10:45 a.m. Plenary Session #5: “New Opportunities: North American Natural Gas Fuel Supply”**

*Since 2008, an upsurge in the production and availability of domestic natural gas in North America from massive shale gas formations has yielded a buyers market. Leading experts predict the supply of this clean domestic fuel will remain abundant and competitively priced well into the future. At the same time, these shale plays and increased gas delivery into the market is leading to a decreased utilization rate of North American LNG peakshave and storage facilities; thus creating a tremendous opportunity for these facilities to increase their utilization and provide this emerging market with an important new supply of LNG fuel. Simultaneously, more than a dozen new LNG production plans are being proposed for development and/or are already being built in the U.S. and Canada, not including the growing number of proposals to produce and export LNG overseas. This session will examine how existing and new natural gas fuel supply and delivery systems can support high horsepower operations even more readily and securely than previously possible. This final key chapter in the overall conference program will also showcase how multiple HHP applications in a region—rail, marine, E&P, and/or mine haul—can be reliably served from these current and potential new LNG plants.*

- MODERATOR: Erik Neandross, Chief Executive Officer, Gladstein, Neandross & Associates
1. Tom Choi, National Practice Leader – Gas, Deloitte MarketPoint LLC, *An Industry Expert’s Perspective on the Future Price Spread Between Diesel and Natural Gas*
  2. Peter Tumminello, Executive Vice President, Wholesale Services, AGL Resources, *North America’s Robust Natural Gas Storage and Delivery Infrastructure*
  3. David Hill, Vice President, Natural Gas Economy Operations, Encana Corporation, *What’s Next in High Horsepower: a Look at the Benefits of Co-location*

**12:00 p.m. Closing Remarks**

**12:15 p.m. Program Concludes**