

Svenskt Gastekniskt Center AB
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FOKUSGRUPPERNA

Rapport från konferens: NGV Global 2014, Long Beach USA

Bakgrund

Mattias Svensson deltog å SGC:s vägnar i konferensen *ACT Expo/NGV Global 2014* som ägde rum i Long Beach CA USA 140505–140508. 3000-4000 personer deltog på konferensen, mestadels från Nordamerika.

Fem intressanta bidrag

Bland många intressanta föredrag noteras särskilt vid följande fem:

1. *Propane autogas advancements*, Tim J Callahan Powertrain product development section, southwest research institute¹
 - a. Ett PERC-finansierat forskningsprojekt där en direktinsprutad lätt bensinbil konverterades till gasoldrift. Jag skrev inte ner resultaten, men slogs av att resultaten var mycket bra: Bra prestanda, och trots ännu inte helt optimerat så klarades utsläppsgränserna. En faktor som ännu inte undersökts var hur gasols lägre lubricitet påverkade långtidshållfastheten och hur kompensera för det
2. *LNG for Transportation in China*, Brenda Smith, Safety & Gas Advisers
 - a. Shells uppgifter från konferensen "Small Scale LNG Transport Forum" bekräftades och höjdes: 100 000 LNG-drivna tunga fordon, varav 40 000 är bussar. 1 100 tankstationer (nov 2013). Mål 2015: 247 000 fordon och 2 500 stationer. 2025: 700 000 fordon och 7 500 stationer, 6 % av tunga fordon totalt
 - b. Drivkraften är de markant lägre utsläppen av smogdrivande ämnen. Metanutsläppen är inte lika viktiga, så boil-off-hanteringen på tankstationerna var inte prioriterad. Tekniken hos den inhemska utvecklade och tillverkade utrustningen på tankstationer och fordon var dock fullgod
 - c. Drivkraften för marknaden är helt kommersiell, och drivs av den billigare tekniken (12 800 USD påslag; LNG-priserna är högre än i USA). Återbetalningstider för lastbilar ligger just under ett år
3. , Harrison Clay, Clean Energy Renewable Fuels (Sessionen "Natural Gas Infrastructure & Fuel Supply Issues")
 - a. Intressant om en kommande mycket stor marknad för biometandrivna transport, stödd av "cap and trade"-system på federal och statlig

¹ Ett sideevent dagen före konferensens början, arrangerat av PERC, Propan Education and Research Council: "A Propane Autogas event: Lead the Way" Denna presentation finns inte tillgänglig

- nivå. RNG-kostnad: 5-8 USD/mmBtu – merkostnad kan täckas av certifikat och kunders villighet att betala mer för förnybart bränsle
- b. 2014 års produktionsprognos motsvarar nästan 4TWh (177 miljoner etanol-gallons) – beroende av att certifikat-system bibehålls
4. *Climate Implications of Natural Gas Operations*, Mark MacLeod, Climate & Air, Environmental Defense Fund (Sessionen "Environmental Considerations of NGVs")
 - a. Amerikanska myndigheter har finansierat forskning kring hur stora utsläppen är från naturgasindustrin, och hur mycket det skulle kosta att åtgärda en signifikant del av dem (163 Bcf, 40 % av branschens utsläpp på land). Eftersom metan sparas så blir nettokostnaden bara 1 cent per mmBtu (Henry Hub 4-5 USD/mmBtu). Problemet är att de små aktörerna inte har tillgång till investeringskapital för att genomföra ett sånt program².
 5. *LNG Supply & Infrastructure for Offroad Markets*, Greg Roche, Eagle LNG Partners (Session "Marine & Off-road NGVs")
 - a. Potentiell marknadsutveckling för olika marknadsektorer (Prospektering och produktion, gruvnäring, järnväg och marint)
 - b. Underströk vikten av dels nya regelverk, dels vikten av att ha en spread mellan LNG och oljepris för att täcka nödvändiga investeringar

På konferensen talades det rent allmänt mycket om hur stor marknadspotentialen för naturgas inom transport var, och det rådde stor framtidstro, så länge prisskillnaden naturgas och diesel bibehölls. Man ser det som troligt att CNG blir större än LNG som bränsle, pga prisskillnaden. Man är mycket förväntansfulla vad gäller Westports generation 2 av sin HPDI-motor för tung trafik, som utlovades bli lanserad nästa år. Ett samarbete med Delfi har markant sänkt produktionspriset för tekniken och samtidigt förbättrat prestandan, enligt uppgift från Westport³.

Konferensmaterialet

Programmet finns tillgängligt på nätet⁴. Titlarna på de föreläsningar som gjordes tillgängliga för delegaterna är listade nedan. Intressanta presentationer kan erhållas vid förfrågan från mattias.svensson@sgc.se.

² Rapporten kan hittas på: <http://www.edf.org/methanesolutions>

³ *NGV Fuel Economy*, Gord Exel, Cummins Westport Inc (Sessionen "NGVs - Keeping Pace with Fuel Efficiency Improvements")

⁴ <http://www.ngv2014.com/agenda2014.php>



TUESDAY, MAY 6

Introduction of Keynote Speaker

- [Amy Farrell](#), Vice President of Market Development, America's Natural Gas Alliance (PDF, 0.96 MB)

Keynote Speaker

- [Dennis Slagle](#), Executive Vice President Group Trucks Sales & Marketing Americas, Volvo Group (PDF, 2.25 MB)

Joint Plenary Session – "Global Growth Throughout the Clean Transportation Sector"

- [Andrew Littlefair](#), Co-Founder, President & Chief Executive Officer, Clean Energy Fuels (PDF, 3.16 MB)
- [Roy Willis](#), President & Chief Executive Officer, Propane Education & Research Council (PDF, 1.12 MB)
- [Joe Jobe](#), Chief Executive Officer, National Biodiesel Board (PDF, 1.65 MB) (LINK)
- [Bob Lutz](#), President & Chief Executive Officer, Lutz Communications; Chairman of the Board, VIA Motors (PDF, 0.81 MB)

ACT Expo Breakout Session 1.1 – "Next Generation Hydrogen Fuel Cell Vehicles"

- [Chris White](#), Communications Director, California Fuel Cell Partnership (PDF, 1.90 MB)
- [Stephen Ellis](#), Fuel Cell Vehicle Marketing Manager, American Honda Motor Company (PDF, 2.31 MB) (MOV, 137 MB)
- [Geri Yoza](#), National Business Planning Manager, Toyota Motor Sales (PDF, 2.69 MB)
- [Matthew Forrest](#), Project Engineer, Fuel Cell Vehicles Operations, Mercedes-Benz Research & Development North America (PDF, 7.40 MB)
- [Gil Castillo](#), Senior Group Manager of Alternative Vehicle & Advanced Vehicle Strategy (PDF, 1.69 MB)

ACT Expo Breakout Session 1.2 – "Propane Autogas Fueling Infrastructure"

- [Nathan Ediger](#), Director of Autogas, Ferrellgas Propane (PDF, 2.79 MB)
- [Bob Barnett](#), Facility Revenue Manager, Pilot Flying J (PDF, 2.95 MB)
- [Blair Poulsen](#), Sales Director, CleanFUEL USA (PDF, 2.85 MB)
- [Robert Little](#), Director, Autogas Sales & Marketing, JP Energy Partners (PDF, 2.21 MB)

ACT Expo Breakout Session 1.3 – "Light-Duty Electric Fleet Case Studies"

- [Joe Stergios](#), Manager of New Vehicles and Manufacturer Relations, Enterprise Holdings (PDF, 0.67 MB)
- [Rick Sikes](#), Fleet Superintendent, City of Santa Monica (PDF, 1.95 MB)
- [Greg Haddow](#), Clean Transportation Manager, San Diego Gas & Electric Company (PDF, 2.32 MB)
- [Alan Riddle](#), Director of Transportation Services, Southern California Edison (PDF, 0.92 MB)

NGV Global Breakout Session 1.4 – "Light-Duty & Medium-Duty Natural Gas Retrofits"

- [Alan McEwan](#), Director of Business Development, New Eagle Consulting (PDF, 1.45 MB)
- [Mark Aubry](#), Vice President of Sales and Marketing, Westport (PDF, 1.97 MB)

- [Barry Carr](#), Director of Business Development, Landi-Renzo USA (PDF, 3.45 MB)
- [Keith Fields](#), Business Development Manager, IMPCO Automotive (PDF, 4.45 MB)
- [Will Gutilla](#), Business Development Manager, A-1 Alternative Fuel Systems (PDF, 0.54 MB)

NGV Global Breakout Session 1.5 – "Heavy-Duty Natural Gas Trucks: A Reality Check"

- [Andy Douglas](#), National Sales Manager, Kenworth Truck Company (PDF, 1.60 MB)
- [Charles Cook](#), Marketing Manager – Vocation Products, Peterbilt Motors (PDF, 1.47 MB)

ACT Expo Breakout Session 2.1 – "Medium-Duty & Heavy-Duty Hybrid Drive Systems"

- [Ian Wright](#), Founder & Chief Executive Officer, Wrightspeed Powertrains (PDF, 3.32 MB) (MOV, 5.91)
- [Matt Jarmuz](#), Director of Sales, Odyne Systems (PDF, 2.80 MB)
- [Tim Reeser](#), President & Co-Founder, Lightning Hybrids (PDF, 1.91 MB)
- [Edward Lovelace](#), Chief Technology Officer, XL Hybrids (PDF, 2.50 MB)

ACT Expo Breakout Session 2.2 – "Hydrogen Fuel Cell Demonstration Fleet Case Studies"

- [Jennifer Kurtz](#), Hydrogen Analysis Group Manager, National Renewable Energy Laboratory (PDF, 3.56 MB)
- [Tommy Edwards](#), Advanced Technology Project Manager, SunLine Transit Agency (PDF, 1.29 MB)
- [Kersey Manlicic](#), Researcher, Advanced Power and Energy Program (APEP), University of California, Irvine (PDF, 3.86 MB)
- [Kip Selby](#), Senior Project Manager, The Kroger Company (PDF, 0.68 MB)

ACT Expo Breakout Session 2.3 – "E85 & Biodiesel Fleet Case Studies"

- [Michael Lengyel](#), Senior Management Analyst, City of Chula Vista (PDF, 0.78 MB)
- [Han Dinh](#), Director of Vehicle Engineering & Technology Innovations, United States Postal Service (PDF, 1.25 MB)
- [Andrew Hudgins](#), Project Leader, National Renewable Energy Laboratory (PDF, 1.69 MB)
- [Jim Ruby](#), Assistant Director Fleet Services, University of California, San Diego (PDF, 4.08 MB)

NGV Global Breakout Session 2.4 – "NGVs – Keeping Pace with Fuel Efficiency Improvements"

- [Gordon Exel](#), President, Cummins Westport (PDF, 0.97 MB)
- [Mike Roeth](#), Executive Director, North American Council on Freight Efficiency (PDF, 4.37 MB)
- [Paul Schwark](#), Engineering Manager, Robert Bosch (PDF, 1.80 MB)
- [Jim Arthurs](#), Executive Vice President, Heavy Duty Engine Systems, Westport (PDF, 1.51 MB)

NGV Global Breakout Session 2.5 – "Heavy-Duty Natural Gas Retrofits"

- [Kevin Campbell](#), Business Development Director, Clean Air Power (PDF, 3.62 MB)
- [Lyle Jensen](#), Chief Executive Officer & President, American Power Group (PDF, 0.98 MB)
- [Werner Funk](#), Chief Executive Officer, Omnitek Engineering (PDF, 1.33 MB)
- [Barry Carr](#), Director of Business Development, Landi Renzo USA (PDF, 4.53 MB)

WEDNESDAY, MAY 7

ACT Expo Welcome Remarks

- [Tahmid Mizan](#), Senior Technology Advisor, Corporate Strategic Planning Department, ExxonMobil Corporation (PDF, 1.22 MB)

ACT Expo Keynote Speaker

- [Matt Petersen](#), Chief Sustainability Officer, City of Los Angeles (PDF, 3.32 MB)

ACT Expo Plenary Session – "International Fleet Investments Shaping the Future of Clean Transportation"

- [Mike O'Connell](#), Senior Director for Fleet Operations, Frito-Lay North America (PDF, 2.82 MB)
- [Joe Stergios](#), Manager of New Vehicles and Manufacturer Relations, Enterprise Holdings (PDF, 1.00 MB)
- [Michael Britt](#), Director of Maintenance & Engineering International Operations, Ground Fleet, UPS (PDF, 3.67 MB)

NGV Global Plenary Session – "OEM Strategies for Heavy-Duty & Light-Duty NGVs"

- [Dick Kauling](#), Engineering Group Manager, Gaseous Fuel Systems, General Motors (PDF, 6.07 MB)
- [T.J. Reed](#), Director of Product Strategy, Daimler Trucks North America/Freightliner Trucks (PDF, 1.02 MB)
- [Reinhard Otten](#), Environmental Product Manager, Audi AG (PDF, 3.84 MB)
- [Frank Bio](#), Director of Sales Development, Specialty Vehicles & Alternate Fuels, Volvo Trucks (PDF, 1.30 MB)
- [Prashant Banerjee](#), Head, Product Evaluation & Homologation, Engineering Research Centre, Tata Motors (PDF, 2.60 MB)

NGV Global Plenary Session – "International Market Update"

- [Lennart Pilskog](#), Secretary General, NGVA Europe; Board Member, NGV Global (PDF, 2.17 MB)
- [Diego Goldin](#), Executive Director, NGV Global (PDF, 0.95 MB)
- [Fazal Ali Khan](#), CNG Development Manager, Emirates Gas; Vice President, Asia Pacific Natural Gas Vehicles Association (PDF, 1.94 MB)
- [Brenda Smith](#), Managing Director, Safety & Gas Advisers (PDF, 1.59 MB)

ACT Expo Breakout Session 3.1 – "Service & Support for OEM-Developed Walk-In Vans and Medium-Duty Commercial Trucks"

- [Kevin Holland](#), Manager, Natural Gas Sales, Freightliner Trucks (PDF, 1.21 MB)
- [Mark Burdge](#), Vice President of Sales and Business Development, VIA Motors (PDF, 4.39 MB)
- [Glenn Ellis](#), Vice President of Marketing and Dealer Operations, Hino Motors (PDF, 1.48 MB)
- [Brian Tabel](#), Director of Marketing, Isuzu Commercial Truck of America (PDF, 3.66 MB)

ACT Expo Breakout Session 3.2 – "AFV Taxi Policies & Fleet Case Studies"

- [Brent Bell](#), President & Chief Executive Officer, Whittlesea Bell Transportation (PDF, 1.44 MB)
- [Tom Drischler](#), Taxicab Administrator and Manager, Franchise & Taxicab Regulation, City of Los Angeles Department of Transportation (PDF, 2.50 MB)

ACT Expo Breakout Session 3.3 – "Light-Duty Diesel: A Growing Alternative"

- [Alex Freitag](#), Director of Diesel Systems Engineering, Robert Bosch (PDF, 3.62 MB)

- [Mike McGarry](#), Fleet Product Planning Manager and Green Fleet Support, General Motors (PDF, 4.53 MB)
- [William Craven](#), General Manager of Regulatory Affairs, Daimler AG/Mercedes-Benz (PDF, 1.94 MB)

NGV Global Breakout Session 3.4 – "Shippers Driving Investment in Natural Gas"

- [David Uncapher](#), Transportation Sourcing and Operations Leader, Owens Corning (PDF, 0.86 MB)
- [Adam Bishop](#), Senior Logistics Analyst, Domestic Transportation – Parts, Service & Technical Division, American Honda Motor Company (PDF, 1.33 MB)
- [John Sheehy](#), President, Sheehy Mail Contractors (LINK)
- [Joe Goodwin](#), Director of Transportation, Seaboard Foods (PDF, 2.25 MB)

NGV Global Breakout Session 3.5 – "Renewable Natural Gas for Low Carbon Operations"

- [Mats Ekelund](#), Partner, Senior Adviser of Projects & Finance, Strateco Development AB (PDF, 0.54 MB)
- [Doug Middleton](#), Chief Operating Officer, Pierce Transit (PDF, 1.64 MB)
- [Andrea Stephenson](#), General Manager, Atlas ReFuel (PDF, 0.86 MB)
- [Lorenzo Maggioni](#), Head of Research & Development, Italian BioGas Consortium (PDF, 2.34 MB)
- [Paul Relis](#), Senior Vice President, CR&R Environmental Services (PDF, 1.23 MB)

NGV Global Breakout Session 3.6 – "Natural Gas Safety & Standards"

- [John Dimmick](#), Director of Technology, Clean Vehicle Education Foundation (PDF, 0.55 MB)
- [Juan Carlos Fracchia](#), Vice President, Argentoil S.A. (PDF, 0.44 MB)
- [Flavio Merigo](#), Technical Director, NGV Italy (LINK)
- [Travis Homer](#), Director of Safety & Loss Prevention, Ryder System (PDF, 1.47 MB)

ACT Expo Breakout Session 4.1 – "Medium-Duty & Heavy-Duty Hybrid Fleet Case Studies"

- [Nina Kisch](#), Fleet Administration Manager, Transportation Services, Pacific Gas & Electric Company (PDF, 0.22 MB)
- [Tom Howard](#), Transportation Systems Manager, Veritable Vegetable (PDF, 7.48 MB)
- [Dan Moody](#), Senior Governmental Compliance Specialist, ComEd (PDF, 3.62 MB)

ACT Expo Breakout Session 4.2 – "Electric Charging Networks & Infrastructure"

- [Charles Botsford](#), Business Development, Efficient Energy Systems, Aerovironment (PDF, 0.83 MB)
- [Jim Stanley](#), Vice President and General Manager, Blink Network, CarCharging (PDF, 0.67 MB)

ACT Expo Breakout Session 4.3 – "Fuel Supply & Infrastructure for Liquid Biofuels"

- [Christopher Standlee](#), Executive Vice President, Global Affairs, Abengoa Bioenergy US Holding (PDF, 4.62 MB)
- [Jon Scharingson](#), Director of Sales & Marketing, Renewable Energy Group (PDF, 2.28 MB)
- [Rob Elam](#), Founder & Chief Executive Officer, Propel Fuels (PDF, 3.17 MB)
- [Chris Bliley](#), Director of Regulatory Affairs, Growth Energy (PDF, 1.07 MB)
- [Mike Lewis](#), General Manager, Pearson Fuels (PDF, 1.83 MB)

NGV Global Breakout Session 4.4 – "NGV Policy Initiatives"

- [Henry Hogo](#), Assistant Deputy Executive Officer, South Coast Air Quality Management District (PDF, 2.79 MB)

- [Jack Kitowski](#), Assistant Chief, Stationary Source Division, California Air Resources Board (PDF, 0.23 MB)
- [Hirase Yusuke](#), General Manager of Natural Gas Vehicle Department, The Japan Gas Association (PDF, 0.78 MB)
- [Eduardo Pizano](#), President, Naturgas (Colombian Natural Gas Association) (PDF, 1.62 MB)

NGV Global Breakout Session 4.5 – "Heavy-Duty On-Road Vehicles – LNG and CNG for the Long Haul"

- [Jeff Shefchik](#), President, Paper Transport (PDF, 0.77 MB)
- [Ashley White](#), Logistics Sustainability Manager, The Kroger Company (PDF, 0.70 MB) (WMV, 14.8 MB)
- [Mike DelBovo](#), President, Saddle Creek Transportation (PDF, 1.05 MB)
- [Mark Davis](#), President, Jack B. Kelley (a Kenan Advantage Group company) (PDF, 3.29 MB)

NGV Global Breakout Session 4.6 – "Natural Gas Infrastructure & Fuel Supply Issues"

- [William Zobel](#), Vice President of Market Development & Strategy, Trillium CNG (PDF, 3.40 MB)
- [Enid Joffe](#), Senior Vice President, Galileo Group (PDF, 4.44 MB)
- [Harrison Clay](#), President, Clean Energy Renewable Fuels (PDF, 4.16 MB)
- [Reinhard Otten](#), Environmental Product Manager, Audi AG (PDF, 4.25 MB)

THURSDAY, MAY 8

ACT Expo Opening Remarks

- [Joe Lyou](#), Board Member, South Coast Air Quality Management District; President & Chief Executive Officer, Coalition for Clean Air (PDF, 0.96 MB)

ACT Expo Plenary Session – "Getting to Zero"

- [David Meisel](#), Senior Director, Transportation & Aviation Services, Pacific Gas & Electric Company (PDF, 0.43 MB)

NGV Global Plenary Session – "Lessons Learned from the International NGV Market & Application to North America – Secondary Market & Infrastructure Development"

- [Rich Kolodziej](#), President, NGVAmerica (PDF, 1.89 MB)
- [Mariarosa Baroni](#), President & Chief Executive Officer, NGV Italy (PDF, 5.54 MB)
- [Mats Ekelund](#), Partner, Senior Adviser of Projects & Finance, Strateco Development AB (PDF, 2.54 MB)
- [Jorge Mathuiz](#), Commercial Director, MAT SA; Member, Brazilian Petroleum & Gas Institute NGV Committee (PDF, 1.09 MB)
- [Jeffrey Seisler](#), Chief Executive Officer, Clean Fuels Consulting (PDF, 2.78 MB)

ACT Expo Breakout Session 5.1 – "Medium-Duty Electric Drive Vehicle Technologies"

- [John Mikulin](#), Regional Lead, Electric Vehicle Deployment, West Coast Collaborative, United States Environmental Protection Agency (PDF, 1.38 MB)
- [David West](#), Chief Marketing Officer, VIA Motors (PDF, 6.05 MB) (MP4, 54.4 MB)
- [Abas Goodarzi](#), Founder & President, US Hybrid (PDF, 3.61 MB) (WMV, 260 MB)
- [Christine Smith](#), Vice President of Sales and Marketing, Zenith Motors (PDF, 1.08 MB)

- [Erik Hansen](#), Vice President of Sales & Hydrogen, Plug Power (PDF, 2.26 MB)

ACT Expo Breakout Session 5.2 – "Service & Support from Light-Duty OEMs"

- [Jon Coleman](#), Fleet Sustainability & Technology Manager, Ford Motor Company (PDF, 7.41 MB)
- [Mark Karney](#), Director of Alternative Energy Vehicles, General Motors (PDF, 4.02 MB)
- [Stephen Ellis](#), Fuel Cell Vehicle Marketing Manager, American Honda Motor Company (PDF, 1.73 MB)
- [Marc Deutsch](#), EV Business Development Manager, Western Region, Nissan North America (PDF, 1.24 MB)

ACT Expo Breakout Session 5.3 – "Light-Duty & Medium-Duty Propane Fleet Case Studies"

- [Todd Mouw](#), Vice President of Sales & Marketing, ROUSH CleanTech (PDF, 0.98 MB)
- [Scott Lavery](#), West Region Vice President of Automotive Engineering, Fleet Maintenance & Operations, UPS (PDF, 1.10 MB)
- [Teri Brady](#), Director of Student Transportation, Portland Public Schools (PDF, 0.51 MB)
- [Mike Yohe](#), General Manager, Shuttle Operations, ACE Parking (PDF, 0.85 MB)

ACT Expo Breakout Session 5.4 – "Alternative Fuels for Utility Fleets & Service Vehicle Case Studies"

- [Kurt Moreland](#), Associate Publisher, Utility Fleet Professional (PDF, 1.18 MB)
- [Tony Orta](#), Strategy & Compliance Manager, Fleet Services, Southern California Gas Company (PDF, 1.73 MB) (MP4, 103 MB)
- [Scott Briasco](#), Manager of Fleet Engineering & Electric Transportation, Los Angeles Department of Water & Power (PDF, 1.78 MB)
- [Frank Chapel](#), Director Natural Gas Transportation Fuels, Apache Corporation (PDF, 1.31 MB)
- [Jordan Smith](#), Manager of Electric Drive Systems, Southern California Edison (PDF, 1.14 MB)

NGV Global Breakout Session 5.5 – "Natural Gas for Food & Beverage Distribution"

- [Bob Kidder](#), Director of Fleet, Facility and Maintenance, Sysco Food Services (PDF, 4.89 MB)
- [Bill Osteen](#), Senior Vice President of Business Operations, Golden Eagle Distributors (PDF, 1.28 MB)
- [Billy Lawder](#), Director of Transportation Engineering, Anheuser-Busch (PDF, 1.65 MB)

NGV Global Breakout Session 5.6 – "Environmental Considerations of NGVs"

- [Patrick Couch](#), Project Director, Gladstein, Neandross & Associates (PDF, 0.46 MB)
- [Erica Bowman](#), Vice President of Research & Policy Analysis, Chief Economist, America's Natural Gas Alliance (PDF, 0.55 MB)
- [Mark MacLeod](#), Director of Special Projects, Climate & Air, Environmental Defense Fund (PDF, 1.53 MB) (WMV, 1.96 MB)
- [Scott Hartman](#), LNG Technology Lead, North America, Shell (PDF, 0.52 MB)
- [George Minter](#), Senior Director, Policy and Environment, Southern California Gas Company (PDF, 2.36 MB)

ACT Expo Breakout Session 6.1 – "Medium-Duty Electric Vehicle End-User Case Studies"

- [Jon Leonard](#), Senior Vice President, Gladstein, Neandross & Associates (PDF, 0.72 MB)
- [Michael Britt](#), Director of Maintenance & Engineering International Operations – Ground Fleet, UPS (PDF, 2.16 MB)
- [Bob Douglas](#), Vice President Field Maintenance, Northeast Region, Penske (PDF, 1.87 MB)

- [John Clements](#), Retired Director of Transportation, Kings Canyon Unified School District (PDF, 4.88 MB)

ACT Expo Breakout Session 6.2 – "Hydrogen Fueling Infrastructure & 2014 Hydrogen Student Design Contest Award Ceremony"

- [Joe Gagliano](#), Infrastructure Business Development Specialist, California Fuel Cell Partnership (PDF, 1.32 MB)
- [Shane Stephens-Romero](#), President & Co-Founder, FirstElement Fuels (PDF, 1.41 MB)
- [Marianne Mintz](#), Deployment and Analysis Team Lead, Argonne National Laboratory (PDF, 1.41 MB)
- [Michel Archambault](#), Director of Business Development & Sales, Hydrogenics Corporation (PDF, 8.29 MB)
- ["Designing a Drop-in Hydrogen Fueling Station"](#), Washington State University Student Winners (PDF, 2.20 MB)

ACT Expo Breakout Session 6.3 – "Propane Vehicle Conversions"

- [Michael Sabourin](#), Program Engineer, On-Highway Vehicle Alternative Fuel Conversions, Office of Transportation and Air Quality, United States Environmental Protection Agency (PDF, 0.41 MB)
- [Todd Mouw](#), Vice President of Sales & Marketing, ROUSH CleanTech (PDF, 3.03 MB)
- [Ralph Perpetuini](#), Chief Executive Officer, Icom North America (PDF, 2.69 MB)
- [Stuart Weidie](#), President, Alliance Autogas (PDF, 2.34 MB)
- [Brad Shantry](#), Operations Manager, Powertrain Integration (PDF, 2.76 MB)

NGV Global Breakout Session 6.4 – "NGV Utility Programs"

- [Ron Goodman](#), Director of Technology Solutions, Southern California Gas Company (PDF, 0.73 MB)
- [Doug Stout](#), Vice President of Energy Solutions & External Relations, FortisBC; Chair, CNGVA (PDF, 0.63 MB)
- [Curt Ganeles](#), Demonstration Coordinator, LNG Blue Corridors Project, erdgas mobil GmbH (PDF, 3.03 MB)
- [Ian Skelton](#), Director, Natural Gas Vehicles, AGL Resources (PDF, 0.93 MB)

NGV Global Breakout Session 6.5 – "NGV Industry Leaders"

- [Eric Woods](#), Vice President of Fleet Supply Chain, Waste Management (PDF, 0.92 MB)
- [Phil Crofts](#), Marketing Director, Dillon Transport (PDF, 2.90 MB)
- [Bill Cashmareck](#), General Manager, Natural Gas, Love's Travel Stops (PDF, 1.79 MB)
- [John Drayton](#), Manager, Vehicle Technology, Los Angeles County Metropolitan Transportation Authority (PDF, 0.74 MB)

NGV Global Breakout Session 6.6 – "Marine & Off-Road NGVs"

- [Michael McGarry](#), Manager of System Sales, Chart Energy & Chemicals (PDF, 1.33 MB)
- [Greg Roche](#), General Manager, Eagle LNG Partners (PDF, 1.69 MB)
- [Enid Joffe](#), Senior Vice President, Galileo Group (PDF, 4.11 MB)

GNA is the leading North American consulting firm specializing in market development for low emission and alternative fuel vehicle technologies, infrastructure, and fuels for both on- and off-road applications.