

10th International Hydrail Conference Agenda

Day 1: Monday, June 22, 2015

- 8:00 **Conference registration check-in**
- 8:30 **Stan Thompson:** welcome; statement of purpose
- 8:35 **Ms. Jenifer Roberts:**
Former Chair, Metropolitan Transit Commission (Charlotte)
Local Importance of Global Innovation
- 8:45 **Dr. John Hardin:** Executive Director, Board of Science,
Technology and Innovation—NC Department of Commerce.
Importance to NC Economy of nurturing innovative
Technologies such as hydrail.
- 9:10 **Dr. Alistair Miller:** Researcher Emeritus, Canadian Nuclear
Laboratories, Chalk River, Ontario, Canada: emerging synergy
among hydrail deployment, grid energy storage and hydrogen
technology development in Canada.
- 9:35 **Gibson Barbee,** Senior Engineer-Research and Testing,
Norfolk Southern Railway: NS locomotive fleet requirements,
the NS 999 battery locomotive, and other advanced traction
innovations, including hydrail.
- 10:00 **Break, 15 minutes**
- 10:15 **Dr. Andreas Hoffrichter,** University of Warwick, Coventry
UK: Economic considerations driving the interest in hydrail
Alternatives to diesel and wayside electric in the UK
- 10:40 **Herr Detlef Matthiessen,** Detlef Matthiessen, MdL
Member of State Parliament of Schleswig-Holstein Speaker for
Economy, Energy, Traffic and Innovation for the Green
parliamentary group at the State Parliament of Schleswig-
Holstein: Why and how the German Energy transition is
driving the evolution of hydrail?

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- 11:10 **Brad Read**, President of TIG/m Modern Street Railways: a description of TIG/m's new trams in Dubai and Aruba and legacy regulation obstacles to introducing hydrail streetcars in the United States.
- 12:00 **Networking lunch in meeting room – 45 minutes**
- 12:45 **Dr. Holger Busche**, scientific contributor of economic, energy, traffic and innovation information for the Green parliamentary group in the Schleswig-Holstein State Parliament, Germany: Electrification of rail traffic in Northern Germany and Western Denmark - An international hydrail network.
- 1:10 **Raphael Isaac**, doctoral student at the University of California at Davis: considerations concerning hydrail and other traction innovations as less expensive alternatives to wayside track electrification in the San Francisco Bay Area, where train ridership is predicted to double by about 2040.
- 1:35 **Herbert Wancura**, synergesis consulting, Graz Austria: the emerging potential of hydrail as a less costly traction technology for high energy applications such as high speed rail and non-passenger trains.
- 2:00 **Break, 20 minutes**
- 2:20 **Panel—"Big Data and the Rail Industry"—Rick Hudson**, Specialist—Data Science and Business Analytics Initiative in the at the College of Computing and Informatics, University of North Carolina at Charlotte; **George List**, PhD, Professor, is in the Department of Civil, Construction, and Environmental at North Carolina State University at Raleigh; **Peter Crofton**, Counsel, Smith, Gambrell & Russell LLP and Adjunct Professor of Law, Emory University Law School, Atlanta, Georgia: policy legislation and the introduction of hydrogen technologies; observability and statistical control in network planning and operations; and introduction of alternative fuels in developing nations.
- 3:20 **Peter Eggleton** TELLIGENCE Group, Saint-Lambert, Quebec, Canada: The recently announced application of Hydrogenics fuel cells for Alstom's 40 regional trainsets in Germany.

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3:45 **Edward Buie**, Coulometrics, Chattanooga, Tennessee: nickel-metal hydride batteries—advantages for use in hybrid freight locomotives and in “slugs”—battery booster tenders for diesel electric locomotives.

4:10 **Germany—USA hydrail press conference:** Herr Detlef Matthiessen MdL, Schleswig-Holstein Parliament and Herr Klaus E. Becker – Honorary Consul of Germany to Charlotte: Hydrail developments in Germany and engagement of German industry in Charlotte’s New Energy Hub role.

6:00 **Reconvening of all presenters (optional for other**
(until) **conferees) for networking mixer and dinner at Alino’s**
Pizza, 500 S. Main Street.

Free for presenters; conferees “go Dutch.”

===== **END, DAY ONE, MONDAY** =====

===== **BEGIN, DAY TWO, TUESDAY** =====

9:00 **Stan Thompson:** welcome back; recap Mooresville Hydrail Initiative

9:10 **Dr. Johan Enslin,** Director of EPIC—the Energy Production and Infrastructure Center at the University of North Carolina at Charlotte: the rise of Charlotte as a national energy technology hub and the formative role of EPIC in bringing it about; EPIC’s vision for the energy hub; the role of EPIC in rail infrastructure research and development; the new advanced railway technology engineering collaboration between UNC Charlotte and the Birmingham UK Centre for Railway Research and Education (BCRRE); and joint EPIC-BCRRE hydrail locomotive design entries in the European Railway Challenge in 2014 and 2015.

10:40 **Jason Hoyle,** Research Analyst, the Energy Center, Appalachian State University—Boone, North Carolina: some in-State, carbon-free potential energy resources for hydrogen to power hydrail; bio-fuels and other environmentally superior alternatives to power railway and transit systems.

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Break: twenty minutes

- 11:00 **Lynn Harris**, McDowell Engineering and Associates—
Consultant to the Rail Division of the North Carolina
Department of Transportation Rail Division: alternative
traction technologies, including hydrail, being analyzed by the
Rail Division to enhance the role of rail in the State's
transportation systems and meet the tighter environmental
standards of the future.
- 11:15 **David Cook**, Chief Technology Officer, Rail Propulsion
Systems, Fullerton, California: modifications being pursued in
California to convert diesel locomotives to cleaner-burning
gaseous fuels and hybridization as possible precursors to
hydrail deployment.
- 11: 35 **Stan Thompson**: announcement of the location of 11 IHC in
2016 and adjournment.