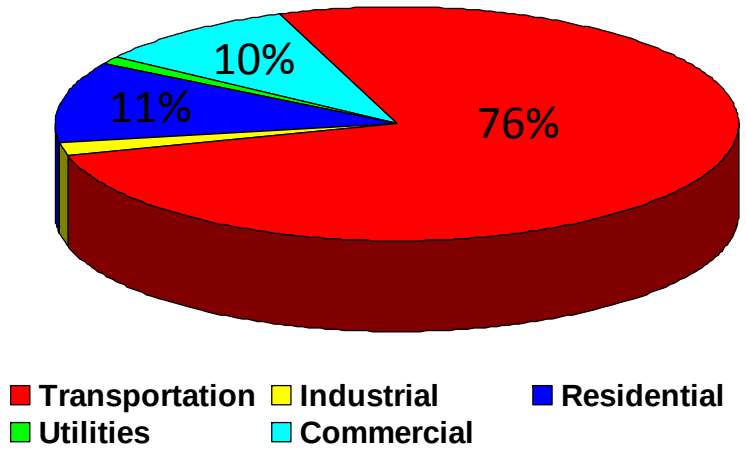
NYSERDA / NYSDOT 2013 Collaborative Transportation Research Program

Joseph Tario – NYSERDA Transportation R&D
Robert Ancar – NYSDOT Policy & Performance

nyserda
Energy. Innovation. Solutions.

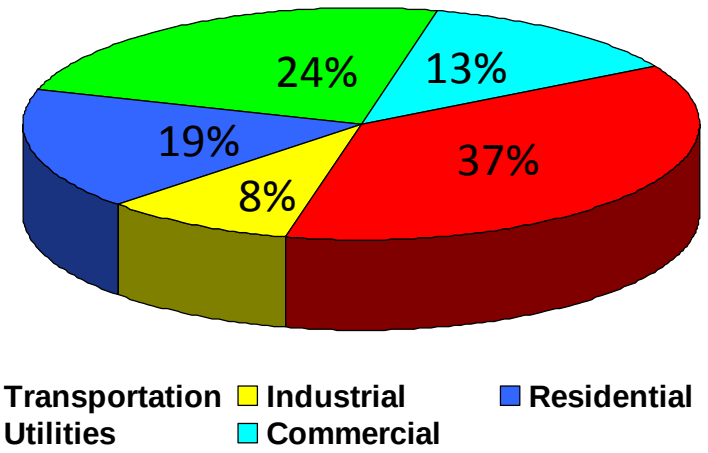
NYS Transportation Energy Statistics

NYS Petroleum Consumption (2010)



242 million barrels (4% of US total)

NYS Fuel Combustion Greenhouse Gases (2010)



194 million tons CO2 equivalent

Source: NYSERDA 2012

nyserda
Energy. Innovation. Solutions.

Fitting the Pieces Together

Collaborative R&D Program History

- 2001 C012668 $7.5M SPR (8 yrs)
  Transportation Infrastructure
  Research Consortium (TIRC)
- 2006 initiated joint research PONs
  73 projects to date $9.5M NYS funds
- 2009 C030749 $4.5M (3 yrs)
  Research Partnership Agreement I
- 2013 C031105 $24M (8 yrs)
  Research Partnership Agreement II

nyserda
Energy. Innovation. Solutions.

Program Opportunity Notice 2881

$3,000,000 NYS Funding Available

Planned Release in January 2014

Four Focus Areas Anticipated

1. Transportation Resiliency and Adaptation
2. Active Transportation and Demand Management
3. Integrated Corridor Management
4. Freight Transportation and Mobility

nyserda
Energy. Innovation. Solutions.

PON 2881 Funding Categories & Limits

- Education and Technology Transfer

  $30,000 with 25% cost share

- Policy Research and Feasibility Studies

  $150,000 ($100,000 with 25% cost share, 35% above that)

- Underutilized Strategy Demonstrations

  $200,000 with 25% cost share

- Collaborative Partnerships

  $300,000 with 25% cost share

- Underutilized Technology Demonstrations

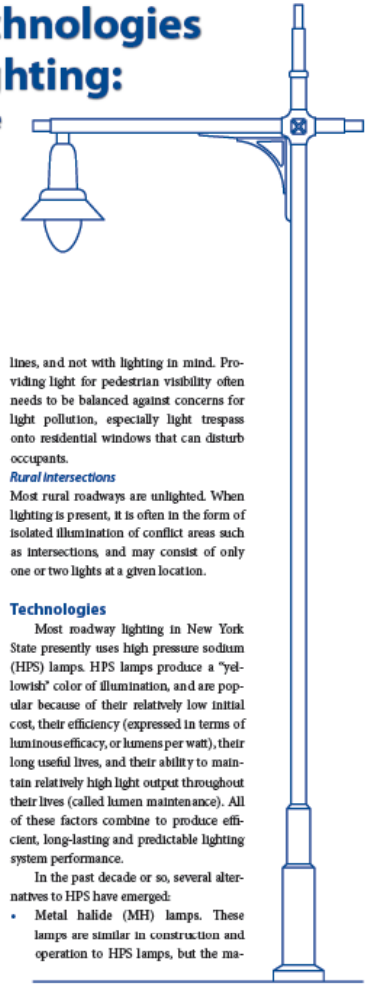
  $500,000 ($350,000 with 25% cost share, 35% above that)

nyserda
Energy. Innovation. Solutions.

Education and Technology Transfer

New Lighting Technologies and Roadway Lighting:

An Informational Brochure



Developed by the Lighting Research Center (LRC) at Rensselaer Polytechnic Institute

Project Sponsors:
New York State Energy Research and Development Authority (NYSERDA)
New York State Department of Transportation (NYSDOT)

Lighting is an important element of roadway safety. Evidence suggests that roadway lighting is usually associated with reductions in nighttime crashes. After several decades of relatively slow and gradual change, light source technologies for roadway lighting are evolving rapidly. Many new options for roadway lighting are available, and there is more information about how light interacts with the human visual system. This informational brochure provides some information about these developments and how they might be incorporated into lighting practices for several types of roadways and locations in New York State. The focus is on replacement of older roadway lighting systems near the end of their useful lives, and on maintaining or improving visibility and safety while minimizing energy use and associated costs.

Types of Roadways Discussed

Roadways in New York State range from residential streets to freeways. This brochure focuses on three types of roadways.

Parkways

These are usually highways with designed landscaping and limited access control. They often carry traffic at fairly high speeds (greater than 40 mph) but are not built to the same standards as most freeways. Parkways may have more winding turns and changes in elevation than typical freeways; lighting might assist drivers in identifying and responding to these roadway features safely. Many parkways are considered historic or scenic in character, and maintaining this character is often an important lighting design consideration.

Residential streets

In many residential areas, the focus of lighting is more on nighttime pedestrian activity than traffic safety. Many residential street lighting systems are mounted on existing utility poles, which are located for the purpose of carrying utility lines, and not with lighting in mind. Providing light for pedestrian visibility often needs to be balanced against concerns for light pollution, especially light trespass onto residential windows that can disturb occupants.

Rural Intersections

Most rural roadways are unlighted. When lighting is present, it is often in the form of isolated illumination of conflict areas such as intersections, and may consist of only one or two lights at a given location.

Technologies

Most roadway lighting in New York State presently uses high pressure sodium (HPS) lamps. HPS lamps produce a "yellowish" color of illumination, and are popular because of their relatively low initial cost, their efficiency (expressed in terms of luminous efficacy, or lumens per watt), their long useful lives, and their ability to maintain relatively high light output throughout their lives (called lumen maintenance). All of these factors combine to produce efficient, long-lasting and predictable lighting system performance.

In the past decade or so, several alternatives to HPS have emerged:

- Metal halide (MH) lamps. These lamps are similar in construction and operation to HPS lamps, but the ma-

---

Save the Date

LAST MILE FREIGHT DELIVERY

USE OF CLEANER MOBILITY VEHICLES

PRESENTED BY
UNIVERSITY TRANSPORTATION RESEARCH CENTER - REGION II

In collaboration with:

- IDMEC – Instituto Superior Técnico, Lisbon
- New York State Energy Research and Development Authority (NYSERDA)
- New York State Department of Transportation (NYSDOT)

Date:
Friday, October 4, 2013

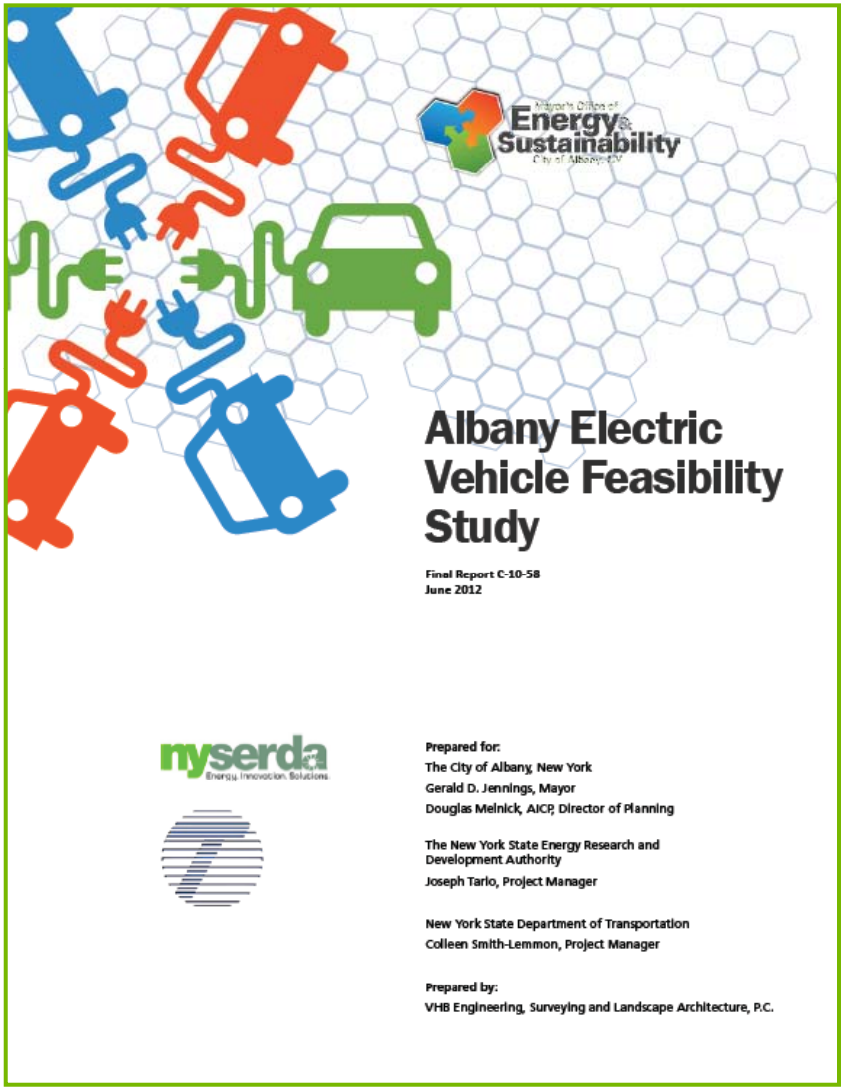
Time:
8:30am - 4:30pm

Location:
Baruch College/CUNY
William and Anita Newman Conference Center
151 East 25th Street, 7th Floor,
New York, NY 10010.

RSVP at:
www.utrc2.org/events/lastmilefreightdelivery.com

New York State Department of Transportation
nyserda Energy Innovation. Solutions.
idmec TÉCNICO LISBOA

Policy Research and Feasibility Studies



Mayor's Office of Energy & Sustainability
City of Albany, NY

Albany Electric Vehicle Feasibility Study

Final Report C-10-58
June 2012

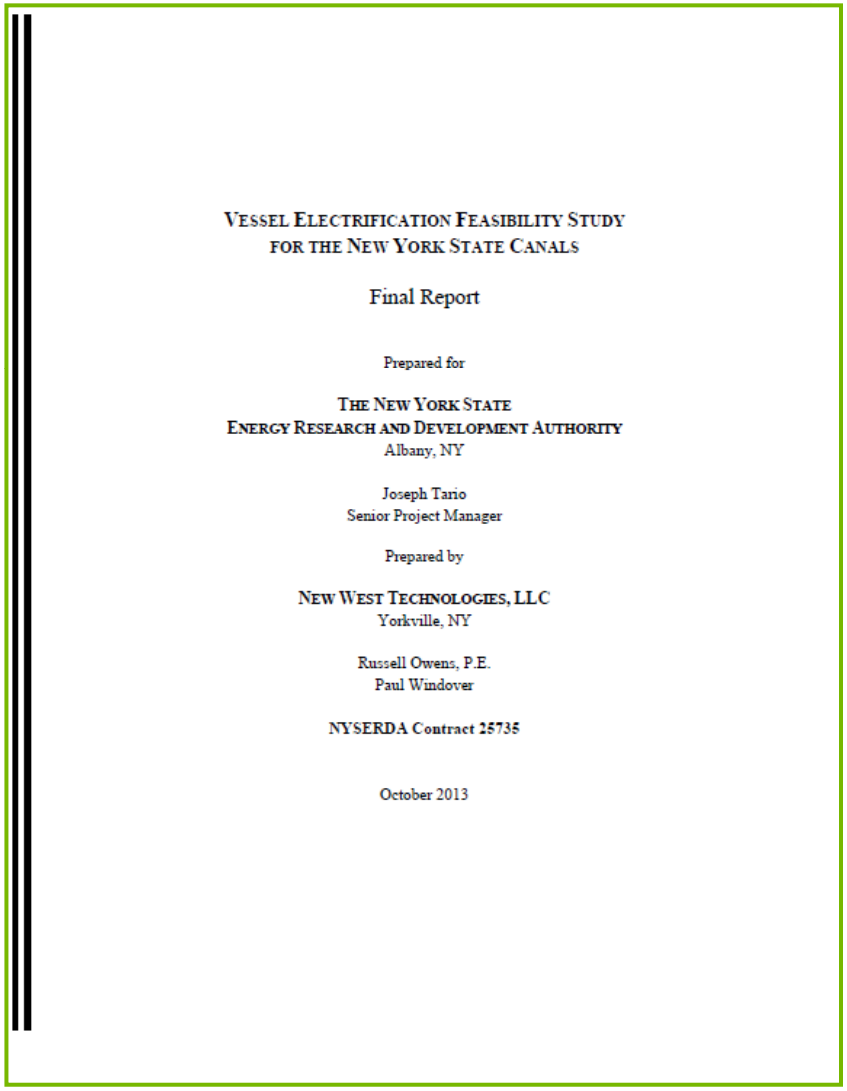
nyserda
Energy Innovation Solutions

Prepared for:
The City of Albany, New York
Gerald D. Jennings, Mayor
Douglas Melnick, AICP, Director of Planning

The New York State Energy Research and Development Authority
Joseph Tario, Project Manager

New York State Department of Transportation
Colleen Smith-Lemmon, Project Manager

Prepared by:
VHB Engineering, Surveying and Landscape Architecture, P.C.



VESSEL ELECTRIFICATION FEASIBILITY STUDY
FOR THE NEW YORK STATE CANALS

Final Report

Prepared for

THE NEW YORK STATE
ENERGY RESEARCH AND DEVELOPMENT AUTHORITY
Albany, NY

Joseph Tario
Senior Project Manager

Prepared by

NEW WEST TECHNOLOGIES, LLC
Yorkville, NY

Russell Owens, P.E.
Paul Windover

NYSERDA Contract 25735

October 2013

Underutilized Strategy Demonstrations

Collaborative Partnerships

Buffalo Niagara Medical Campus

- surveys & assessments
- car/bicycle sharing
- vanpool pilot study
- complete streets summit
- education & outreach
- employee champions
- ride matching services
- tiered transit incentives
- parking management
- guaranteed ride home
- smartcard pilot program

for more info … www.gobnmc.org

nyserda
Energy. Innovation. Solutions.

Underutilized Technology Demonstrations

Thank You!

Joseph D. Tario, P.E.
NYS Energy Research and Development Authority
Transportation and Power Systems Research
17 Columbia Circle, Albany, NY 12203
(518) 862-1090 ext 3215
jdt@nyserda.ny.gov

Robert Ancar
New York State Department of Transportation
Office of Policy and Performance
50 Wolf Road, 6th Floor
Albany, New York 12232
(518) 457-1756
Robert.Ancar@dot.ny.gov

for more info … www.nyserda.ny.gov

nyserda
Energy. Innovation. Solutions.