Moving Energy

Gulf Ports Harbor the Changes
Multimodal Freight Opportunities
Delivering Natural Gas to New England
Rural Roads and Heavy Hauling
Crude Oil by Rail: Economics and Safety
The National Academies of Sciences • Engineering • Medicine

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The Transportation Research Board is one of seven programs of the National Academies of Sciences, Engineering, and Medicine. The mission of the Transportation Research Board is to provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. The Board's varied activities annually engage about 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation. www.TRB.org

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INTRODUCTION

Changes in Energy Markets: Effects on the U.S. Transportation System
Jonathan Rubin

The U.S. transportation energy system is undergoing rapid changes, from historic increases in fuel efficiency to renewed domestic production of oil and natural gas to new routes for moving energy around the nation and the world. Articles in this issue address these changes with a clear understanding that transportation services are essential to meeting the nation's economic and social goals.

U.S. Gulf Ports Harbor the Changing Energy Supply
Michael Bomba

The Gulf of Mexico region has served for decades as the U.S. headquarters for petroleum production and exploration—but also for commerce in natural gas, coal, and renewable energy resources. The author traces trends in energy sector commodities and policies and their effects on the ports and private terminals along the Gulf.

Moving the Changing U.S. Energy Mix by Multimodal Freight: Opportunities, Prospects, and Issues
Mark J. Carr

The structural shift in U.S. energy production and consumption is changing the locations of energy trade lanes and the commodities and volumes transported. A 2015 TRB Annual Meeting session examined the effects on the multimodal freight system; the author presents insights from session speakers on the historic opportunities, regulatory influences, safety concerns, infrastructure needs, and more.

Natural Gas Transport in New England: Supply, Storage, Infrastructure, and Security
Kevin R. Easley

Boosting infrastructure capacity to deliver affordable natural gas supplies reliably to the New England region year-round is—and will continue to be—an enormous challenge, the author reports, describing the geographic constraints, pipeline and offshore facilities, storage, distribution, and related issues for producers, shippers, policy makers, consumers, and other stakeholders.

Pennsylvania Roads and Marcellus Fracking Operations: A Peaceful Coexistence in Lycoming County
Mark R. Murawski

Lycoming County, located at the epicenter of the Marcellus shale play, has partnered with the state of Pennsylvania to take bold steps with the gas industry to ensure that roads and bridges stay safe and sound under heavy hauling, and that all parties receive the economic benefits of natural gas development. The author documents the measures and the lessons learned.

Transporting Crude Oil by Rail in North America: Economics, Logistics, Safety, Lessons Learned, and Outlook
Malcolm Cairns

A comprehensive review of the surge in the transport of nonconventional shale oil and oil sands produced and delivered within North America—including a comparison of pipelines and rail, economic factors, safety matters, lessons from the Lac-Mégantic derailment and explosion, and the outlook for production, innovations, and market influences.
features articles on innovative and timely research and development activities in all modes of transportation. Brief news items of interest to the transportation community are also included, along with profiles of transportation professionals, meeting announcements, summaries of new publications, and news of Transportation Research Board activities.

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COMING NEXT ISSUE

The next issue of TR News explores the interrelationships of public health and transportation, as metropolitan planning organizations are beginning to incorporate health-related issues into plans and programs, state departments of transportation are adopting health policies, and the research community is responding. Articles cover health impact assessments and analyses, incorporating health into transportation planning and decision making, modeling the risk of infectious disease spread through the transportation system, transportation lessons learned from the Ebola epidemic, measuring the health impacts of walking and bicycling, innovative practices and research to assess active transportation and health, health-related findings from TRB-managed research projects—and more.

Bicycles are becoming a popular mode of transportation in cities, offering individual and community health benefits, but also raising issues of traffic planning and operations and safety. Above, bicyclists at the end of the day travel along a dedicated lane on Constitution Avenue, NW, in Washington, D.C.