

**Summary of Presentations and Comments
At the
*Quadrennial Energy Review***

**Stakeholder Meeting #9: Chicago, IL
Rail, Barge, Truck Transportation Issues
August 8, 2014**

Opening Remarks



The Honorable Rahm Emanuel, Mayor of Chicago, Illinois

Main points

1. Chicago is the transportation hub of America and our intermodal transport capacity is an advantage, but it also means the city has an important role when it comes to national policy. On any given day, about 500 freight trains travel through Chicago, many carrying oil, natural gas, and other types of fuels and materials. The City of Chicago has a direct stake in the Quadrennial Energy Review (QER) because the policy recommendations will impact community first responders and how we develop policies here in Chicago.
2. A new energy and transportation context is emerging in the country right now. We are in the early stages of that process. It requires, as Secretary Foxx recommended in a recently released report, a refreshed look at transportation policy. I am an advocate for transportation policy changes that ensure equality, and the financial health and public safety of our communities. An incident similar to the Quebec rail disaster is not allowable.

3. Given that cargo and commuter rails intersect in the City of Chicago, I firmly believe that there should be a fee that establishes a funding pool both to train first responders in impacted communities, and upgrade infrastructure to ensure a modern rail system that lowers the threat of rail traffic carrying hazardous materials. This issue is pressing for all Mayors and it is an important aspect of the QER.
4. Today, the City of Chicago announced a cease and desist order for storage facilities operating on the Southeast side that are not in compliance with the protections we have in place for every child and community in the City. This new order is part of a strategy to make sure regulations and oversight, as it relates to public health and public safety, are consistent with where the industry and the economy are going, and that our communities are not vulnerable to changes in the economy.

**The Honorable Jo-Ellen Darcy, Assistant Secretary of Army (Civil Works), U.S.
Department of Defense**

Main points

1. Rivers are an important part of any conversation about transportation infrastructure. The Army Corps of Engineers is responsible for the development, protection, and restoration of federal water resources, including commercial navigation and flood risk management and environmental restoration.
2. As part of a 2012 Executive Order, the Army Corps of Engineers is working to improve the performance of federal permitting and review of infrastructure projects. We participated in interagency efforts to develop an implementation plan for President Obama's memo regarding modernization of infrastructure permitting. The plan was released in May of this year. One component of the plan is to work with the U.S. Department of Transportation and the Coast Guard to synchronize permitting requirements under the National Environmental Policy Act (NEPA) to improve the efficiency and cost effectiveness of projects.
3. The Corps of Engineers is responsible for operating and maintaining about 12,000 miles of inland and coastal waterways. About 57 percent of tonnage moved by water is coal and petroleum products. Transporting the fuel on the inland maritime system is less expensive than land or air based transportation, and such commodities often travel hundreds of miles and transverse over 20 different lock sites on the inland waterway system.
4. In 2010, the Corps of Engineers completed an operational assessment addressing 160,000 components of the waterway transportation system, of which two-thirds were deemed critical to move commercial navigation traffic and to maintain dam operations. Continued investment in maintaining these components is critical for all transportation systems. This need is demonstrated by the President's Ports Task Force which looks at the future of our port system. The Ports Task Force will make recommendations this year.
5. The Corps of Engineers is the largest provider of outdoor water-based recreation and the largest operator of hydroelectric power plants in the U.S., producing nearly one-third of the country's hydropower output. Our continued collaboration with the U.S.

Department of Energy (DOE) and other agencies is important to meet energy needs in years to come. I am interested in what these QER meetings will produce, as it will be an important resource for policymakers.

Dr. John Holdren, Director, Office of Science and Technology Policy, the White House

Main points

1. President Obama's energy vision is tied to national goals including economic growth, job creation, environmental protection, and addressing climate and national security challenges. Achieving these goals requires a comprehensive energy strategy, which is what the QER is designed to help accomplish. The QER's first year focus is on the nation's infrastructure for transporting, transmitting, storing and delivering energy. Subsequent years will focus on a set of different issues.
2. Our transportation infrastructure is increasingly being subjected to rapid changes, new stresses, and demands from a variety of forces. Those forces include changes in the physical flow of energy commodities in the U.S., population growth, regional migration trends that cause shifts in the shipment of goods, and new demands placed on the transportation system by growing concerns over climate change, including mitigation and adaptation policies.
3. The complex nature of our energy and transportation systems is further complicated by the diverse array of decision makers and stakeholders with independent and sometimes conflicting goals. Consideration of the most urgent questions in all the major modes of transportation will be particularly important. I look forward to the opportunity of studying what experts have to say on this topic and learning from it.

The Honorable Anthony Foxx, Secretary, U.S. Department of Transportation

Main points

1. The dramatic spike in domestic energy production is a huge opportunity for the U.S. However, with the opportunity comes greater responsibility to implement safety measures that are consistent with existing standards as we ramp up energy production in new places.
2. The U.S. Department of Transportation (DOT) is promoting a national freight plan, the first of its kind, to ramp up investment in the transport of commodities, eliminate bottlenecks, and ensure safety. This is being done through the "Grow America Act" which will create a national freight strategy and increase funding to \$10 billion over four years to improve the efficiency and safety of freight transportation across the country through rails, roads, ports, and waterways.
3. The Chicago region is seeing increased movements of crude and gas traveling through a variety of transportation modes. The DOT has taken steps over the last year to improve ways in which these materials move safely around the country. The domestic maritime industry is building barges at record rates to move energy products. The Administration, in support of the Jones Act, continues to work with the industry to ensure assets are in place to safely transport crude and other energy products by barge.

4. In the past five to six years, we have also seen a significant increase in the transport of crude by rail, with much of this occurring from increased production in the North Dakota Bakken region with an increase in rail cargo by an alarming 400 percent since 2008. The DOT recently issued a proposed rulemaking to improve safe transportation of large quantities of flammable materials by rail, particularly crude oil and ethanol. The proposal is now open for a 60-day public comment period. This is an urgent issue and we encourage all stakeholders to comment.

The Honorable Ernest Moniz, Secretary, U.S. Department of Energy

Main Points

1. The revolution in gas and oil production in the country is remarkable. The U.S. is the world's largest producer of oil and gas. Shale gas is now half of our natural gas production, and shale oil is growing by over a million barrels per day. Like the Marcellus in the Pennsylvania region, the North Dakota Bakken region is changing the flow of fuel, but our infrastructure has not caught up, which is why we are having this discussion in Chicago, a major transportation hub between Pennsylvania and North Dakota.
2. We have seen the challenge of infrastructure constraints during extreme weather events and the challenges of transporting fuel. This was evident in New England last winter. Natural gas and propane shortages caused severe spikes in the price of fuel. The energy and infrastructure challenges we face are regional and there is not a one-size-fits-all solution. The QER meetings we are holding around the country present an opportunity to seek input on a path forward from experts and the public.
3. As part of the QER, we are also working on a set of regional fuel resiliency studies to address how we can best prepare for impacts that may come from extreme weather. Although we have an outstanding energy data organization, the Energy Information Administration, there is still a lot of work to do in gathering data. Efforts will be made to make sure we get the best data and the best opportunities to communicate the data to those who need it (e.g. governors and mayors) in terms of preparing for various unplanned events.

Questions and Answer to VIP Panel

Name: Tucker Perkins

Affiliation: Propane industry representative

As a matter of public safety and to help consumers prepare, our efforts have been to work with the consumers to see that they have stockpile of inventories, and to replenish inventories throughout the country. Do you agree that is the right strategy for us? Or do you see other strategies?

Sec. Moniz

- The crisis last winter taught a lot of people about the importance of propane in our economy. Preparing for winter is critical. Today in the Midwest, we have a larger inventory than last year, but we are still below the five-year average. Therefore, we need to prepare.

The education approach with consumers and building up stock at the distribution chain is critical. We want to work with you and your colleagues this winter. The Energy Information Administration will provide web-based tools to track inventories and communicate early alerts for challenges to governors.

Mr. Tucker Perkins

Affiliation: None

- Based on what is happening in the propane industry, do you see parallels in other parts of the energy infrastructure?

Sec. Moniz

- Yes, it is a common issue and a focus of the QER. The New England natural gas situation last winter is an example. It was not a question of having enough supply in the country, but the ability to transport it to places with high demand.

Name: Ben Brockshmidt

Affiliation: Illinois Chamber of Commerce

- What is the role of states and local governments working with the federal government? How do you see this relationship developing over time?

Sec. Foxx:

- Part of what we are trying to do with these meetings is open the conversation in this area to folks at every level to help understand the constraints. One example is the highway system. It relies on federal funding, but states make most of the decisions about where the money is spent, such as in the transportation of energy products between states. Much of the transportation infrastructure is privately owned, including freight rails and pipelines. I am not sure the markets are incentivizing capacity building, and the shortage can lead to bottlenecks. We need to determine the right level of federal and state level government and private industry interactions to build capacity and help move goods around the country.

Mayor Emanuel

- The energy revolution has both a worldwide impact and a local context. It is a huge opportunity at all levels, not just energy production and distribution. We will see a manufacturing renaissance as a result of increased energy supply and low prices. The private sector is doing certain things, but without efforts on the public side. We need to set up a national fee so that everyone gains from investments in infrastructure.

Sec. Moniz

- One of the major issues the Administration is considering is the impact of methane emissions from production, as well as the impact of transportation and distribution pipelines in urban environments. This issue has the vested interest of many different stakeholders including governors, mayors, the Administration, environmental and labor

groups, etc. All are interested in the issue for different reasons; but this is a chance to invest in and rebuild our infrastructure.

Panel I: Truck - The Importance of Highway Infrastructure to the Energy Sector and an Overview of Our Energy Transportation Infrastructure System



NOTE: All speaker presentations are posted on the QER webpage at: www.energy.gov/ger.

Dr. Ernie Perry, Program Administrator and Facilitator for the Mid-America Freight Coalition, the National Center for Freight and Infrastructure Research and Education (CFIRE), the University of Wisconsin-Madison

Main Points

1. For over ten years, I have worked with coalition states in the Mid-America Transportation Region on freight planning and freight collaboration. Our role and efforts have accelerated with the freight initiatives in the Moving Ahead for Progress in the 21st Century Act (MAP-21 –surface transportation funding for FY 2013 and 2014). Capacity in the region and the initiatives the states are pursuing ensure that infrastructure is available and in good condition for our business and industry and economic growth. The coalition is made up of ten states in the freight centric region, and represents 23% of the nation’s truck tonnage and 63% of the nation’s rail tonnage. The waterways ship close to 44% of domestic tonnage and receive 30% of domestic tonnage.
1. We identified the economic importance of freight movement to the region. In Indiana, Conexus Indiana states that logistics jobs pay 15% higher wages. In addition, economic analysis from state transportation investment programs found that for every dollar invested, they are getting three to four dollars over a 20-year period. That means 60% of that benefit is accruing in the freight industry.

2. The status of the region's freight infrastructure is underfunded, aging and congested. We are investing about 2% of gross domestic product (GDP); Europe's investment is about 5%, and close to 12% investment in China.
3. Freight levels are expected to increase with population growth, and we will not be able to build out. States are working to find financial partnerships to address needs. Freight transport is becoming more inter-modal. These states are working on establishing a national network of corridors of waterways and rail lines to improve capacity. There is a need for increased funding to support intermodal solutions and planning strategies.

Henri Boulet, Executive Director, LA-1 Coalition

Main Points

1. Elevated LA-1 runs from Arkansas to the boarder of the Gulf of Mexico and is the only highway between Port Fourchon, the Louisiana Offshore Oil Port also known as LOOP, and other inland locations. Port Fourchon is a launching point for 95 percent of the energy in the deep-water Gulf and the LOOP receives 1.2 million barrels of imported oil per day. Together, they are responsible for 18 percent of the nation's crude. LA-1 is also the evacuation route for thousands of residents and thousands of workers on energy platforms in the Gulf of Mexico and the outer continental shelf.
2. The importance of LA-1 was documented nationally in a U.S. Department of Homeland Security (DHS) analysis on the potential loss of this highway from a natural disaster. This DHS study estimates that a 90-day closure of a small segment of LA-1 could result in upwards of an \$8billion loss in GDP.
3. I urge the Administration to bring together the Secretaries of Energy, Transportation, and Homeland Security to address at-risk federal infrastructure such as LA-1 and develop funding to address highway needs. The State of Louisiana does not have an adequate funding mechanism for LA-1 highway, a critical lifeline to the flow of energy to our nation.

Wayne Eckerle, Ph.D., Vice President, Corporate Research and Technology, Cummins, Inc.

Main Points

1. Approximately 35% of trucks on the highway have Cummins engines, and 80 percent of those trucks have Cummins equipment in one form or another. The vehicles going down highways today have near zero NOx (a generic term for the mono-nitrogen oxides--nitric oxide and nitrogen dioxide) and particulate emissions. Continued improvement of highway infrastructure will be critically important and can potentially be very complementary to the advancements in engine technology we are making to meet future trucking requirements.
2. For years, Cummins has worked on fuel economy, collaborating with the U.S. Department of Energy (DOE), other agencies and industry to advance engine powertrain technology. Recent examples include our partnership in the DOE SuperTruck Initiative and the Advanced Technology Light Automotive Systems (ATLAS) program, where we helped develop and demonstrate fuel economy and freight efficiency improvements

exceeding 75% for Class 8 trucks and fuel economy improvements exceeding 40% for half-ton pickup trucks over the gasoline engine baseline.

3. Cummins delivers market-leading technology not only for emission reduction but also for fuel consumption reductions. We are literally saving our end users tens of thousands of dollars every year on the amount of diesel and natural gas that they are burning for moving freight. As we try to accelerate these fuel reductions into the public, setting clear, concise goals as a nation will really accelerate how fast we can do that. Both partnerships and regulations are key.

Chris Smith, Senior Program Manager for Freight, the American Association of State Highway and Transportation Officials (AASHTO)

Main Points

1. The American Association of State Highway and Transportation Officials (AASHTO) represent all 52 state Departments of Transportation. States own and operate over 8 million miles of public roadways, including over 800,000 miles of federally-aided highways. These highways are essential to U.S. economic competitiveness.
2. Projected growth in consumer demand for energy and goods, coupled with declining balances in adequate federal investment, presents significant challenges for states to increase necessary highway capacity and keep existing highways operating at acceptable levels of service.
3. On the planning side, the MAP 21 Act encourages engagement of private industries to work with the state freight advisory community. The MAP-21 Act instructs the DOT to identify a national freight network. However, no additional federal funding has been appropriated for projects in this network.
4. States look to these strategic planning and investment strategies to relieve the fiscal and capacity burdens of an already over-burdened highway system. Many states are looking at their own tax policies, including raising the gas tax, to deal with economic constraints and grow revenue. Many states are also looking to invest in the coastal and inland waterway systems, to move large volumes of energy commodities.

Casey Dinges, Senior Managing Director of Public Affairs, American Society of Civil Engineers (ASCE)

Main Points

1. In March of 2013, the American Society of Civil Engineers (ASCE) released the latest version of its report card for America's Infrastructure. This report card is a comprehensive assessment of the nation's major infrastructure across 16 categories.
2. America's infrastructure received an overall D+. Two categories (levies and inland waterways) received failing marks. In sectors where investments were made, grades rose. Under-performing infrastructure is a drag on the nation's economy and will require investments.
3. The recent report card estimates that across all 16 categories of infrastructure, the total investment needed by 2020 is approximately \$3.6 trillion dollars. After projected spending, we are left with a shortfall of \$1.6 trillion dollars by 2020—just over \$200

billion dollars a year. For surface transportation alone, we face an investment shortfall of almost \$900 billion for our roads, bridges, and transit systems by 2020.

4. D+ is a grade we cannot accept. Infrastructure is the foundation that connects the nation's businesses, communities and people, driving our economy and improving our quality of life. In the short term, we need a national commitment to bring the existing infrastructure into a state of good repair; and in the long term, we must modernize and build in a targeted and strategic manner.

Panel Questions and Answers

Q: What are some of the most important interdependencies or interconnections that need to be considered when addressing a systems approach to multi-modal infrastructure?

Ernie Perry

- Instead of segregated modal systems for commodities, we need to do a better job of aligning economic activities with the best benefit for society by moving these on the systems for which they are most appropriate. We also need to open the door for the waterways to keep up with our trucking, rail initiatives, and pipelines capacity, and expand awareness and advocacy for all modes of transportation.

Henri Boulet

- Looking at the explosion in shale development in the nation, the most efficient way currently of moving products is via rail. Our nation needs to invest in new pipeline capacity to move shale formation with new technologies that will drive energy economy. The long-term safe way to handle this is major investment in pipelines.

Wayne Eckerle

- In the automotive industry, advancements in electrification and renewable energy resources as fuel for vehicles could be important. Consideration of the role renewables will play to avoid the need to transport commodities is also needed. We are not organized in how we move things. Synchronizing systems and flow to reduce the need for transportation will improve efficiency.

Chris Smith

- Our transportation systems are not adequate and we need a systematic funding approach to improve and connect our networks.

Casey Dinges

- We need to look at all sectors as whole systems. We also need a national vision on infrastructure. We have not had one since the Eisenhower Administration. Some might say that the environmental movement in the 1970's to clean rivers and safe drinking water standards was a vision. The President's initiative in high-speed rail is an important step in that direction, but it has not received the traction it needs.

Q: What advice would you give to the QER team?

Ernie Perry

- Additional coordination among state Transportation Departments is needed. We need to encourage the states to work across borders and incorporate more of the economic activity into how they plan.

Henri Boulet

- Agencies involved in energy should work on long-term funding proposals that can pass Congress. Consider industry shares, community shares, and make it a criterion by which those that have an interest in long-term economic sustainability can be involved, make a pledge, and help win federal funding.

Wayne Eckerle

- It is a systems engineering problem, so make sure your goals are clear and continue to working across agencies. Alignment across agencies helps industry.

Chris Smith

- Beware of unintended consequences. When you are talking about public infrastructure and planning long-term, you are talking about a dynamic economy, there is some reconciliation that has to be done there.

Casey Dinges

- Three ideas: 1) increase leadership so that the public is engaged; 2) promote sustainability and resilience; and 3) develop funding plans to maintain and enhance America's infrastructure.

Panel II: Rail- How a Critical Component of Our Nation's Energy Infrastructure is Adapting to 21st Century Energy Transportation Challenges



NOTE: All speaker presentations are posted on the QER webpage at: www.energy.gov/qer.

Sean Craig, Manager, Fuel Supply, Dairy Power Cooperative

Main Points

1. Dairyland Power Cooperative (Dairyland) is a generation and transmission rural electric cooperative that serves 25 distribution cooperatives and 17 municipalities located in Wisconsin, Minnesota, Iowa and Illinois. Dairyland has a diverse energy portfolio. Electricity in the Dairyland system is primarily generated from coal.
2. Coal inventories fell to dangerously low levels at many sites during last winter's polar vortex due to the lack of rail delivery. Reliable delivery service is necessary to ensure coal is available in sufficient quantities to produce power to meet demand.
3. To overcome shortages in 2015, rail providers will need to increase the amount of normal pace of deliveries for the remainder of the shipping season, which is through October. Dairyland will continue to work with the railroad to help resolve these issues.
4. Many utilities and electric cooperatives face similar challenges. Sub-par service by railroads can pose a significant risk to the reliability of the electric grid, as well as increase the likelihood of much higher energy rates for consumers.
5. Policy changes are needed to increase accountability for railroads.

John Gray, Senior Vice President, Association of America Railroads

Main Points

1. Coal is the largest single commodity delivered by rail, and represents one-third of the electricity generation capacity in the United States. Other energy commodities delivered by rail include petroleum and ethanol crude.
2. Coal is generated in places where it is not consumed. Wyoming is the largest coal production area in the U.S. Kentucky and West Virginia are the other two big producers. In 2008, coal by rail peaked and has been a declining commodity since due to the substitution of natural gas-fired generation.
3. Crude oil, on the other hand is a growing commodity. It saw 900,000 barrels transported per day in 2013, and the rate of run in 2014 is over a million. However, it is still not huge for the rail industry. There are about 5000 trains in the U.S. rail network and only 12 are crude oil trains. These trains tend to be concentrated in specific regions creating possible disruptions. Our members are investing \$400 million in this area to relieve capacity.
4. Ethanol, unlike coal or oil, moves in multiple carload lots, and goes to large production and destination points. It represents about 300,000 carloads a year.
5. The industry has been investing in infrastructure, not equipment. Many of the cars that are used are not owned by rail companies, they are owned by utilities or energy production companies. Total investments in infrastructure are about \$25 billion per year, and that is expected to be sustained moving forward.
6. Unlike other areas, our expansive infrastructure requires a high portion of revenue to be invested back into that infrastructure. For a network industry, this represents about 40% of the total portion of money going into infrastructure. These investments come from private sources. There is no public source for investment in our industry.

Dave Wanner, Manager – Fuel Services, Wisconsin Public Service Corporation

Main Points

1. The Wisconsin Public Service Corporation serves about 445,000 electric customers and about 323,000 natural gas customers. In 2013, most of the electricity generated came from power plants that burn coal from the Powder River Basin in Wyoming. The coal is transported by rail and there is no other viable source of transportation.
2. Our Weston Plant in central Wisconsin is the largest source of coal-fired generation. Rail service deliveries in 2013 were generally reliable but began to degrade and inventory decreased. By March, coal conservation measures were taken to avoid completely running out of coal. These alternative measures increased the cost electricity to customers.
3. In order to maintain coal's role as a reliable and economical source of electric generation, we must increase reliable infrastructure, increase rail system transparency, and enhance rail competition.

Rebeckah Scheinfeld, Commissioner, Chicago Department of Transportation

Main Points

1. Chicago is a global hub for transportation distribution and logistics. It is home to the most extensive freight rail infrastructure of any metropolitan area in the country. The City of Chicago sees 46% of all containerized freight in the U.S., and 25% of all rail traffic originates, ends, or travels through Chicago.
2. Demand for freight and passenger rail service is expected to grow significantly from 2018 to 2040. Each day, 500 freight trains, 750 metric commuter rail trains, and 50 Amtrak passenger trains travel through Chicago. Of those, about 5 to 10 carry crude oil through the City.
3. Although rail remains one of the safest modes of transport, policies and investments are lagging and need to catch up to the growth in demand. Just in the past decade, crude oil shipments by rail have increased by 400%. Recent rail derailments in communities around the country have called attention to the safety gap and underscore a need to protect communities.
4. More than 55% of Chicago's land area is located within one mile of the freight tracks. This year, Mayor Emanuel made a strong call for reforms to improve safety and the U.S. Conference of Mayors adopted a policy resolution calling for the same measures.
5. We need a comprehensive approach that relies on partnerships across the public and private sector. We also need to build safe and efficient infrastructure, understand hazardous materials, prepare emergency responders in the event of an accident, and require shippers to carry insurance. Last week the DOT release proposed rules to address some of these needs.
6. Congress can pass legislation to provide the resources to invest in strengthening our freight infrastructure. Right now there is no federal investment aimed at building capacity and improving safety of our national freight rail system.

John Birge, Ph.D., Jerry W. and Carol Lee Levin Professor of Operations Management, the University of Chicago Booth School of Business

Main Points

1. The railroad industry expanded rapidly in the late 19th Century. Price complexity and market power suspicion led to the Interstate Commerce Act of 1887 which was focused on the railroad industry and is the real basis for all of our laws that govern trade among the states. Further regulation came with the enactment of the Staggers Act of 1980. Since that time prices have mainly declined and load share has increased.
2. The railroad industry is highly capital intensive. Non-linear costs and regulation governing the use of coal for electric power make it difficult to understand how the distribution of coal by rail impacts utilities. Coal represents a large fraction of tonnage (~40%) and railroads provide approximately 70% of electric power usage. Crude oil is a small but increasing component.
3. When considering the policies that are governing the delivery of that crude oil, we have to think about both the safety of that delivery and the alternative modes of transportation, as well as potential opportunities to improve safety.

4. In terms of what rail can do for energy, one option is to use rail to transport electricity in batteries. Production of electricity by wind, particularly in the Midwest is a viable option. Rail can provide a mode to move the electricity being produced in one area to another area without having to build expensive transmission. Another option in urban areas is to recapture heat from trains that come into the station and reuse it as power. This is being done in China where they are actually powering entire blocks based on the energy produced by commuter rail.

Panel Question and Answers

Q: What do you see as key barriers to collaboration, stakeholder partnerships, and how can the federal government help?

Sean Craig

- As far as collaboration, what it comes down to is goals. I think the QER is a step in the right direction. Greater collaboration will be possible once goals across stakeholders are aligned.

John Gray

- The key will be managing differences between industry and customers on a continuous basis. Regulatory agencies may serve as mediators at times. However, success will not come from forced regulations.

Dave Wanner

- The Surface Transportation Board regulates railroads; but we have found it to be ineffective for our issues. Improving the effectiveness of getting issues resolved would be helpful.

Rebeckah Scheinfeld

- Federal leadership in passing a long-term transportation reauthorization bill along with regulatory reforms that facilitate collaboration between the public and private sector to prioritize resources and focus on the most productive projects or policy and operational changes is needed.

John Birge

- Beyond the general need to communicate, it is important to understand what others are doing in the sector, the challenges they face, and the complexity of the environments other collaborators are in. The ongoing dialogue that DOE is undertaking is a step in the right direction.

Q: What are the major infrastructure priorities for rail?

John Birge

- I think the priorities are: replacing the capacity taken from coal, maintaining existing infrastructure, upgrading the remaining infrastructure and creating connections to best serve new developments, particularly in the areas of crude oil and ethanol.

Rebeckah Scheinfeld

- In Chicago, a continued priority will be to advance grade separation opportunities to increase reliability, safety, and positively impact cost structures for freight and passenger rail.

Dave Wanner

- Specifically, it is really hard to say. We have no idea what other parts of the rail system are moving on specific parts of the rail system and the capacity to move crude oil and sand for hydraulic fracking on any given day.

John Gray

- There are two items. One item is the need to investment in the next market and the direction of change, all of which are predictable with great accuracy, but not absolute. Another item is collaboration on infrastructure. The Chicago Region Environmental and Transportation Efficiency Program (CREATE) is often talked about as a collaborative project, and it is one of the few areas where the public has consistently shown up with money to do what they felt was necessary, which is hard to do for public agencies. If the public is going to be involved, it also has to take responsibility, and part of that responsibility is to show up with the resources necessary to fund what the public wants.

Sean Craig

- As a utility, we are required by regulation to have contingency plans for an emergency crisis. I would like the QER to review the use of emergency orders for commodities that are critical to the economy, and require carriers to submit long-term plans to address rail shipment growth to ensure reliable rail service, and submit emergency contingent plans in case of severe weather or any crisis.

Q: What are your final words of advice for the QER team?

Sean Craig

- The QER review is important to the National Rural Electric Cooperative Association, Dairyland Power and Civics United for Railroad Environmental Solutions (CURE) for evaluating the latest transportation challenges we experience with coal delivery reliability out of the Powder River Basin. We are encouraged that this review will be a step forward to

ensure all consumers in the United States can receive reliable electricity at reasonable prices.

John Gray

- Look at things that are working and encourage them, stay out of the way of the things that are working and do not get involved and screw it up.

Dave Wanner

- Do not forget about coal as a reliable fuel. Coal has some distinct advantages, such as onsite inventory. Rail service has been reliable in the past; it can work. Do not overlook any form of energy.

Rebeckah Scheinfeld

- Continued investments are needed in our transportation infrastructure to help move energy and other support for the economy quickly, efficiently and safely. There have been significant changes in the distribution of the type of energy that is needed around the country. We need a vision for the future and we need to make sure those policies and regulations catch up to current demands on the transportation system.

John Birge

- Take a systems perspective as we look forward to energy policy and the future of energy for our country. Look at both the immediate and long-term impacts of any policy recommendation. Like rails, the economy is networked every day. We have to think about how any action will have an impact or lasting effect on the economy.

Panel III: Barge - Waterborne Transportation of Energy in the Inland Waterway, Across the Great Lakes, and Along Our Nation's Coasts



NOTE: All speaker presentations are posted on the QER webpage at: www.energy.gov/qer.

Marty Hettel, Senior Manager of Waterway Regulatory Programs, American Electric Power River Operations

Main Points

1. American Electric Power transports 75 million tons of coal annually on the inland waterway system to power plants to generate electricity in 11 states.
2. According to a study by the Texas Transportation Institute for the National Waterways Foundation, the inland waterway system moves energy goods in the safest, most fuel efficient, and cost-effective manner of delivering bulk commodities within the United States. Despite the reliability, these efficiencies are being challenged by an aging infrastructure.
3. As of 2014, 60% of the Corps of Engineers' inventory of locks and dams are over 50 years old. This will increase to 70% by 2020 and 85% by 2030. More routine maintenance will be needed to keep these locks and dam facilities operational and avoid higher costs to consumers and negative effects on exports.
4. The recent Water Resources Reform and Development Act of 2014 which was signed into law by the President on June 10, 2014 is a good start to recapitalizing and improving the aging infrastructure.
5. During the cold weather in January 2014, American Electric Power utilized every bit available capacity to feed the grid. This capacity included 89% of all the coal-fired power plants that will retire next year. As these older power plants get shut down, it will be important that we avoid disruptions of deliveries of fuel and environmental consumables to the base load power plants in operation to keep the grid supplied with power.

Matt Woodruff, Director, Government Relations, Kirby Corporation

Main Points

1. Kirby Corporation is the largest operator of both inland and coastal tank barges in the United States. Marine transportation, both inland and coastal, has long played a vital role in the nation's energy supply chain.
2. Both public and private infrastructure is important. The Water Resources Reform and Development Act, that was just passed by Congress, provides a framework to improve our system and ensure our waterways infrastructure will be safe, reliable, and efficient in the future.
3. Our industry is investing billions of dollars, not just in terminals but especially in new vessels to meet the energy transportation needs of the nation.
4. The renaissance that we are seeing today in shipbuilding is important in terms of jobs. Kirby Corporation is currently building two 185,000 barrel tug barge units on the West Coast. The shipyard building the barges has created 300 new jobs for the project, and the shipyard building the tugs has taken on 150 new workers.
5. The domestic maritime industry plays an important role to maintain our country's energy independence. The industry is strong, and will continue to meet the needs of the nation. We are prepared to work with the DOE in any way we can to identify and ensure that we are doing that job.

Kevin Schoeben, Deputy Director of the Office of Planning & Programming, Illinois Department of Transportation

Main Points

1. The Illinois Department of Transportation (Illinois DOT) is engaged in waterway planning and navigation. Though the Illinois DOT only has ownership in highways, it remains engaged in thoughtful promotion and advocacy of freight transportation systems, to understand what is happening in the region in terms of freight mobility in the private sector.
2. The Illinois DOT role is somewhat defined by MAP-21 Act requirements in three main areas: 1) state planning to meet national freight goals; 2) regional collaboration on freight policy; and 3) condition and performance measurements of freight systems to help guide investment.
3. Illinois DOT's freight strategy is to support all freight, incorporate commodity flows into the state freight plan, identify chokepoints and bottlenecks in modal networks, and collaborate with industry to promote modal connection choices.
4. There are 220 intermodal freight facilities in Illinois; most of which are connections between truck and rail. Over half of the intermodal facilities are located in seven counties in the metropolitan Chicago region.

Michael Forde, Chairman of the Board, Illinois International Port District

Main Points

1. Chicago is part of the Great Lakes navigation system located in the center of the country's industrial and manufacturing heart. The Great Lakes economy has a combined GDP of \$4.9 trillion. This would rank the region fourth in the world in GDP, behind only the U.S., China and Japan.
2. Due to the recent growth in U.S. energy production, the Port of Chicago expects future increases in the level of energy shipments. As a result, investments need to catch up to ensure continued economic growth. The iron, steel, cement manufacturing, agriculture, and energy sectors all depend on shipping through the Great Lakes system. Shipping for these sectors means jobs for the region.
3. Dredging and port investments are important to the Chicago local economy, and the Great Lakes regional economy. The Corps of Engineers reported that almost 30% of commercial vessels arriving in U.S. ports are constrained by inadequate channel depths because of inadequate funds to maintain our maritime infrastructure. The Corps of Engineers estimates it needs more than \$200 million to restore Great Lakes ports and waterways; but the Great Lakes have only received \$20 to \$30 million in recent years to address these issues.
4. Congress began addressing dredging issues by passing the Water Resources Reform and Development Act this year. Under this reauthorization legislation, more harbor maintenance trust fund revenue will go toward harbor maintenance and will continue to increase until 2025 when we hope 100% of the harbor maintenance trust fund will be used for critical harbor infrastructure projects.

5. As this new funding becomes available, we look forward to working with the Corps of Engineers on new projects to bring Chicago's port infrastructure in the 21st Century. These investments are needed for Chicago and the country to stay competitive. If our ports are not prepared to handle our energy and other transportation demands, we will fall behind.

Carl Bentzel, Vice President, DCI Group

Main Points

1. Traditionally, most of the energy in the U.S. came from the Gulf of Mexico and Alaska. However, now we are seeing production in North Dakota, Ohio, potentially New York at some point, and California. For a system originally designed to move product from the Gulf Coast, this adds stress but presents an opportunity for growth.
2. More recently, a study produced by the Maritime Administration said that the domestic maritime industry supports nearly 500,000 family wage jobs and generates close to \$100 billion in economic output. Increased production will impact the transportation structure and present additional economic opportunities.
3. The QER may consider some policies that can influence and address transportation challenges. One example is permitting. Permitting issues in the United States are changing. For instance, permits for coal terminals on the West Coast are calling for life cycle emissions evaluations as part of the permit process. These changes will impact transportation.
4. One thing I would stress is that all of these challenges and changes have potential growth. How we as a nation choose to address these will affect whether we can capitalize on the energy resources we have and potentially use them domestically and internationally. Energy is the biggest gap in our trade balance, but the potential to export energy is a reality, and that is a big change.

Panel Questions and Answers

Q: From the maritime point of view, what is your advice for the QER team? What could you offer them in terms of words of wisdom, recommendations, and advice?

Marty Hettel

- A national freight policy is needed. Capacity in the inland waterway system exists and needs to be utilized to overcome congestion on rails and roads. The agencies with jurisdiction over energy and transportation systems need to work together. Collaboration among the DOT, DOE, and the Army Corps of Engineers is critical.

Matt Woodruff

- We need to step back and look at the inland waterway system in the context of the nation's transportation system and determine where to invest funds to get the benefits that we need. There are many beneficiaries, and one beneficiary of a strong inland waterway

system is the highway system that does not have to accommodate the cargoes that move best by water.

Carl Bentzel

- Our growing U.S. energy production is an opportunity. I hope that as you move forward, you make recommendations and identify impediments to safely produce, transport, and use these resources. If we do not do it right, someone else will.

Kevin Shoeben

- Secretary Foxx mentioned an effort to work with other agencies to streamline permitting. I suggest improving coordination around planning as well. DOE should consider multi-modal studies from other agencies. Pull government entities together to put in place a national plan or a North American plan.

Michael Forde

- To realize the potential of waterway systems, we need to increase investment in dredging. This will not only increase capacity but reduce stress on rail and road systems.

Q: Is there room for creative financing? How do you stimulate investment? Where will the money come from?

Marty Hettel

- The public does not realize what waterways do for them. To move a ton of freight at \$11 a ton is less expensive than transportation by truck or rails. We need about \$8 billion to make our system reliable and resilient. I wish I knew where funding will come from. We are willing to step up and help, we just need to build facilities on time and on budget.

Matt Woodruff

- For coastal ports the money is already there. We are collecting a harbor maintenance tax and putting it into a trust fund for projects. The Water Resources Reform and Development Act includes a plan to increase the spending on coastal port maintenance. We need to recognize the national importance and have the national will to invest in the system.

Carl Bentzel

- In terms public financing, people need to pressure Congress raise the gas tax. Industry has been willing to pay additional user fees for highway programs and maritime programs if those funds were used for infrastructure.
- On the private side, improvements are needed in the permitting process. Uncertainty in the process and the length of time to get a permit has discouraged industry from committing investments in infrastructures projects.

Kevin Shoeben

- A systems approach is needed. The Water Resources Reform and Development Act includes public-private partnerships; but we have to acknowledge that particularly on the inland waterways, it is a difficult challenge. Perhaps there are opportunities for public-private partnerships on port development. The key is creative financing. We need a systematic approach to pay back the loans and make public-private partnerships work.

Michael Forde

- I agree with Kevin. The need for a systematic view on the funding structure is important.

Public Comments

Public Commenter Name: Jeff Petrash, National Propane Gas Association

State: District of Columbia

Commenter's Main Points:

- The propane industry had a very difficult winter as a result of the grain harvest, the polar vortex, and the re-plumbing of infrastructure involving both natural gas pipelines and natural gas liquid pipelines. We are seeing a number of natural gas liquid pipelines going out of service. Most importantly, in the Upper Midwest, the Cochin pipeline will no longer will be bringing propane into Minnesota, Illinois and Wisconsin. As a result, our business will have to look at rail and motor carrier modes to transport propane to these Upper Midwest states. Both alternatives are important for the upcoming winter. I would like to pose some challenges:
 - This past year, rail delays caused considerable reliability concerns and raised questions about the capacity rail system compared to oil pipelines.
 - Similarly, although hours-of-service rules for trucks were waived in many states this year, the federal government cannot waive weight limits. There have been instances where trucks wait in line for 12 hours to fill with propane from terminals, and then leave with less than a full load because of weight limits.

Meeting Conclusion

Dr. William Hederman, Deputy Director for Systems Integration in the DOE Office of Energy Policy and Systems Analysis, and Senior Advisor to the Secretary, expressed appreciation to everyone who took the time to present their views and participate in the process. He noted that all information is available on the QER website at www.energy.gov/ger and that comments can be submitted to QERComments@hq.doe.gov.

He thanked the panelists and attendees, informed the audience of upcoming meetings and adjourned the meeting.