EWG-42 Agenda Item 4
Report on Transportation and Energy Ministerial Conference

Introduction

The United States hosted the first-ever joint Transportation and Energy Ministerial Conference in San Francisco on September 13, 2011. Ministers and other high-level officials from almost all the APEC economies participated, along with senior executives from the private sector, experts from non-governmental organizations, municipal planners, and leading professors from academia. Participants exchanged views in four public-private roundtables, covering a wide range of energy and transportation issues. An Action Agenda was issued to guide follow-up work by the Energy Working Group, the Transportation Working Group, and interested APEC economies.

Roundtable 1: Vision for Strengthening Transportation's Role in a Clean-Energy Future

This session focused on how energy efficiency, fuel switching, and urban planning policies and tools can be used to move the APEC region towards reduced reliance on oil imports and a low-energy, low-carbon, sustainable transport future. Among the many interesting points made in the course of the public-private dialogue on transportation's future clean energy role:

- The transportation sector is one of the largest contributors to energy use and oil use.
- A variety of incentives and regulations can be used to reduce use of fossil fuels, notably corporate average fuel economy standards and minimum fuel economy standards for vehicles. A doubling of fuel efficiency and halving of carbon emissions and oil use from new vehicles entering the marketplace can be foreseen in several APEC economies.
- Research and development and deployment of electric vehicles can help to promote the introduction of a more energy-efficient and less oil-dependent vehicle fleet.
- Collaboration between public and private sectors can accelerate the development and introduction of more efficient vehicles and alternative-fueled vehicles.
- Improvements in public transportation in both urban and rural areas can facilitate mobility for poorer segments of the population while reducing us of oil in transport. In densely populated urban areas, economies may practically envision the use of public transportation for over two-thirds of commuter trips to and from work.
- Increasing the price of private transportation by making it more expensive to drive and park, particularly in congested urban areas, can help to encourage public transportation and significantly reduce travel times while reducing oil use and carbon emissions.

Several key points on strengthening transportation's clean energy role are included in the Ministers' Action Agenda:

- Cleaner and more energy efficient transportation can help to reduce energy use, oil imports and carbon emissions in our transport networks, in our rapidly growing urban areas, in the movement of goods and people both within and among our economies, and in air travel across the region.

- The Energy Working Group was instructed to intensify analysis of the potential for further energy intensity improvement, beyond the regional goal of 25 percent between 2005 and 2030 that was agreed by Leaders in 2007, with a view to recommending an enhanced goal to APEC Leaders in November.
- The Energy Working Group and Transportation Working Group were directed to assess the measures APEC economies could take in the transportation sector to be more energy efficient, and to identify additional areas of collaboration.
- The Energy Working Group was directed to develop a voluntary reporting mechanism on reduction and phase-out of inefficient fossil fuel subsidies to be presented to APEC Leaders in November, consistent with approaches in the G20.

Roundtable 2: Energy-Efficient Transport Systems for Livable Low-Carbon Communities

This session focused on livable low-carbon communities in various APEC economies, along with common components of such communities such as Transit-Oriented Development (TOD), Bus Rapid Transit (BRT), and bike paths and walkways and their potential to reduce energy use and carbon emissions. Among the interesting points made by participating ministers, energy and transport company executives, and municipal planning authorities:

- Where people live close to public transport, which is a core principle of transit-oriented development, greenhouse gas emissions and energy use per capita are lower. Denser cities have lower greenhouse gas emissions and energy use than sprawling ones.
- Once patterns of transportation are established, they take a long time to change, so it is critical to establish efficient patterns of transportation early in a city's development.
- A variety of strategies can be used to promote the use of bus transport, including design of bus systems according to BRT principles with dedicated lanes and off-board payment, subsidies for buses in low-density areas, investment in improved bus terminals, creation of a single card for use in all forms of public transportation, and financial incentives for electric buses or more efficient buses to replace less efficient buses fueled by oil.
- Sorting out the tasks to be handled by transportation, energy and interior ministries is essential to the effective implementation of strategies to promote public transport.
- Public education on the benefits of public transport in reduced energy costs, travel times, and environmental emissions is essential to marshal support for the investments required.
- Railways are a highly efficient and low-carbon mode of transport between APEC cities.
- Public transport is an energy saver and time saver because it displaced automobile trips, allows the more efficient allocation of available land, and relieves urban congestion.

Ministers' Action Agenda includes the following points on energy-efficient urban transport:

- The Transportation Working Group and EWG were directed to develop performance measures for gauging the impact of livability-driven interventions to reduce transport times, energy use and carbon emissions, and to have initial measures available for review by Energy Ministers in 2012 and Transportation Ministers in 2013.

- The decision by a number of member economies to support and participate in the Energy-Smart Communities Initiative (ESCI) was welcomed, and the successful progress of the APEC Low-Carbon Model Town (LCMT) Project was underlined.
- The EWG and Transportation Working Group were directed to develop activities and best practices for reducing energy consumption and carbon emissions from urban transport, building upon the LCMT Project, promoting the ESCI, and obtaining expert advice through the Cooperative Energy Efficiency Design for Sustainability (CEEDS) project.
- The Transportation Working Group was directed to study the expanded use of TOD, BRT, bicycle lanes and walkways which can be incorporated into an assessment of the potential for reduced intensity of energy use in the transportation sector, building upon the projects already underway on the energy, transport and environmental benefits of TOD and BRT.

Roundtable 3: Powering Low-Carbon Transport – Electricity, Biofuels and Natural Gas

This session focused on opportunities for the development and promotion of environmentally sustainable biofuels, natural gas and electric drive vehicles to reduce reliance on petroleum fuel for transport. Key barriers to the expansion of these options and strategies for overcoming such barriers were suggested. Several themes surfaced during the discussion:

- Wider adoption of electric vehicles requires expansion of charging infrastructure, reduction in vehicle costs, improved range, and support for investment. A variety of infrastructure options exist such as battery rental, battery swap and rapid charging.
- Greater use of natural gas is a promising way to reduce vehicle carbon emissions in view of expanded estimates of unconventional gas supplies, including both direct use in heavy-duty vehicles and indirect use as a generating source to electric vehicles.
- Advanced biofuel options include butanol made through thermochemical processes and jet fuel from algae which can be produced year-round, as well as cellulosic ethanol. Consistent fuel quality standards will allow industry to optimize vehicle fuel efficiency.
- Development of more efficient freight and passenger jets and development of alternative jet fuels like biodiesel are promising ways to reduce carbon emissions and reliance on oil imports as jet fuel typically accounts for two-fifths of airlines' operating costs. Aviation industry aims for carbon-neutral growth by 2020 and halving of carbon emitted by 2050.
- Alternative fuels can reduce oil use and carbon emissions while boosting jobs and profits.

The Ministers' Action Agenda addresses alternative transport fuels as follows:

- The Energy Working Group and Transportation Working Group were directed to identify and study appropriate strategies, approaches and best practices for promoting efficient and alternative-fueled vehicles, including electric drive vehicles, based on life cycle assessments. Electromobility roadmaps and electric drive vehicle demonstrations under the Energy Smart Communities Initiative are noted in this regard.

- Ministers welcomed efforts to streamline procedures and regulations related to the importation of small numbers of non-salable advanced and alternative fueled demonstration motor vehicles, and called on officials to identify common elements of procedures and regulations in this regard by the November Leaders' Summit.
- Ministers encouraged development of harmonized approaches to addressing the safety of electric vehicles in order to maintain consumer confidence in them.
- Pursuant to findings of the Biofuels Task Force that second-generation biofuels from farm and forest residues could potentially displace two-fifths of gasoline use and one-fifth of crude oil imports in the APEC region while generating substantial employment , the EWG and individual APEC economies are encouraged to consider and assess in greater detail the resource and employment potential that could practically be developed.
- The EWG and Transportation Working Group were directed to cooperate on best practices for the modernization of air traffic management and the development of aviation biofuels, in coordination with the International Civil Aviation Organization (ICAO).

Roundtable 4: Greening the Supply Chain – Energy-Efficient Freight Transportation

This session focused on best practices for energy-efficient freight transport and business initiatives to reduce energy costs and carbon footprints through improved their freight logistics, use of hybrid-electric trucks, and shifting from trucks to less energy-intensive transport modes like ship, barge and rail. Several interesting points were made in the course of the dialogue:

- Growing trade and urbanization make rail an excellent option for moving freight going forward. Freight rail can carry twice as much for the same cost as it did 30 years ago. It also has about one-third less emissions than trucking per unit of weight and distance. Synchronization of rail facilities with ports and harbors will help to promote the option.
- Use of more efficient freight jets can reduce aircraft emissions by 20 percent by 2020. Electric fleet vehicles and reduced idling at airports can also help to reduce emissions.
- Regulation of medium- and heavy-duty cars and trucks can substantially reduce carbon emissions from trucking while also providing significant cost savings to freight shippers. Design of trucks that can transport more freight with each trip will also produce savings.
- Operational improvements at seaports, through application of low-cost software, can reduce congestion and emissions through better vehicle tracking and logistics.
- Similarly, intelligent transportation systems for light-duty freight vehicle fleets can reduce congestion, oil use and pollution emissions while also improving safety.
- The private sector strongly supports harmonized standards and interoperability to improve the efficiency of vehicle fleets and freight transportation in general.

Energy-efficient freight transport is addressed in the Ministers' Action Agenda as follows:

- The Energy Working Group and Transportation Working Group were directed to consider strategies and best practices for energy efficiency improvement in freight

transportation, in consultation with industry. The project on energy efficient freight transport under the Energy Smart Communities Initiative is noted in this context.

- The Transportation Working Group was directed to develop best practices for promoting intermodal freight strategies that reduce the energy intensity and environmental impacts of freight transport by encouraging freight shippers to shift where practical from energy-intensive transport modes like trucks to energy-efficient modes like rail, barge and ship. These should be based on the strategies that have been implemented to date, such as infrastructure expansion and planning to facilitate intermodal freight connectivity.
- A strategy for adoption Global Navigational Satellite Systems (GNSS) technologies that reduce energy us in the takeoff and landing of freight and passenger aircraft is to be implemented.
- The Energy Working Group and Transportation Working Group were directed to work with the APEC Business Advisory Council (ABAC) to establish a network of freight transporters to develop best practices for reducing their energy use and to document their cost-saving, energy-saving and carbon-reducing strategies, in cooperation with ESCI.