



**Asia-Pacific
Economic Cooperation**

2013/EWG46/005

Agenda Item: 5a

Carbon Footprint Project

Purpose: Information

Submitted by: Russia



**46th Energy Working Group Meeting
Da Nang, Viet Nam
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Environmental Performance and Energy Efficiency of Supply Chains:

Carbon Footprint Project

Progress Update

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46th meeting of Energy Working Group, Da
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46th meeting of Energy Working Group, Da Nang, Viet Nam

OUTLINE

- Background of the project
- Progress to-date
- Highlights of the Carbon Footprint Workshop
- Current developments
- Next steps
- Questions

CARBON FOOTPRINT PROJECT

- Developed following adoption of joint Action Agenda by the Transportation and Energy Ministerial Conference in 2011 in San Francisco and represents concrete demonstration of collaboration between EWG & TPTWG to advance goals of each group.
- Endorsed in 2012 by both Transportation Working Group (TPTWG-36, St. Petersburg) and Energy Working Group (EWG-44, Washington, DC).
- Aims to strengthen transportation's role in clean energy future and to advance several of the APEC priorities through collaboration between APEC Transportation Working Group and Energy Working Group.
- Formal APEC tender process conducted in early 2013; Global Spatial Technology Solutions Inc. was awarded the contract and leads the work.

SUMMARY OF PROJECT

- The project aims to directly link emissions and energy use to transportation activities and develop a methodology to allocate emissions and energy use per cargo, per port. The methodology will be validated with data from a sample of ocean going-vessels on a specific 'pilot' route in the Asia-Pacific region.
- The outcomes of the project will help improve shippers' ability to measure vessels' energy and emission intensity and find opportunities to improve both, thus reducing fuel costs and ultimately, contributing to improved energy efficiency in the APEC region, and the APEC aspirational goal of 45% reduction in energy intensity.
- Given importance of maritime transportation for the APEC region, the project starts with ocean vessels, but approach could be adapted to include other transportation modes.

PROGRESS TO-DATE

- Project launched at the 38th Transportation Working Group meeting, Bali, July 2013.
- Governance Committee, comprising government officials from the United States, Korea, Australia and China, established to review technical input. EWG is also represented on the Committee.
- Carbon Footprint Workshop held during TPTWG-38 in July 2013.
- 1st Interim Report submitted August 2013.
- Pilot route Ningbo, China-Prince Rupert, Canada to test methodology established October 2013.
- Draft methodology developed November 2013.

HIGHLIGHTS OF WORKSHOP

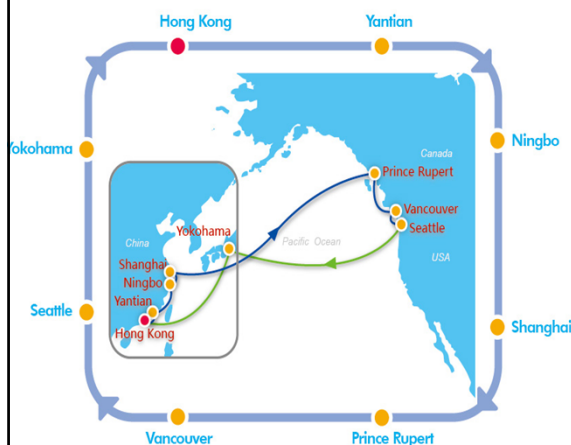
- The purpose of the Workshop was to engage APEC policy makers and transportation industry stakeholders in the development of the methodology from an early stage.
- The Workshop, opened by the TPTWG Lead Shepherd, was attended by 14 APEC economies, Maritime Expert Group members of the TPTWG, APEC Secretariat executives, Energy Working Group (Expert Group on Energy Efficiency and Conservation) and representatives of APEC Port Services Network.
- Chair of EWG EGEEC provided an update on the structure, objectives and recent projects of the APEC Energy Working Group (EWG), highlighting significance of TPTWG/EWG joint efforts for advancing of APEC aspirational goal of 45% reduction in energy intensity by 2035.

KEY FINDINGS AT WORKSHOP

- Comprehensive review and analysis of the project by panel of international experts, including:
 - International Chamber of Shipping
 - Australian Shipowners Association
 - Asian Shipowners' Forum
 - Maersk Line
 - Business for Social Responsibility (Clean Cargo Working Group)
- The presentations addressed various aspects of emissions monitoring, data collection, industry views and concerns, as well as dynamics of energy efficiency work at the IMO.
- Through presentations and in-depth discussions, participants reviewed existing methodologies to measure energy efficiency and carbon footprint of ocean going vessels and discussed challenges and timelines of work on allocating emissions per port, per cargo.

KEY OUTCOMES OF THE WORKSHOP

- Confirmed support from APEC policy makers, industry stakeholders, carriers and ship operators to develop a theoretical methodology to allocate emissions by cargo and by port.
- China and Canada expressed their interest in establishing a commercial pilot route in the Asia-Pacific region to validate methodology.
- The Workshop concluded with positive remarks by the APEC Program Director, encouraging further collaborative work between the TPTWG and EWG.



Port Rotation

Port	Eta	Time	Etd	Time
Hong Kong	Thu	0	Fri	1
Yantian	Fri	1	Sat	2
Ningbo	Mon	4	Mon	4
Shanghai	Tue	5	Wed	6
Prince Rupert	Sat	16	Mon	18
Vancouver	Tue	19	Wed	20
Seattle	Thu	21	Fri	22
Yokohama	Sat	37	Sat	37
Hong Kong	Thu	42		

Transit Time (Day)

From/To	Prince Rupert	Vancouver	Seattle
Hong Kong	15	18	20
Yantian	14	17	19
Ningbo	12	15	17
Shanghai	10	13	15

CURRENT DEVELOPMENTS

- Draft methodology to allocate emissions:

- Applicable to any marine route in the Asia-Pacific region with multiple ports on a single trip
- Coherent and harmonized approach
- Compatible with IMO approach (Energy Efficiency Design Index, Energy Efficiency Operating Index, Ship Energy Efficiency Management Plan)

- Current methodology used by industry's Clean Cargo Working Group reviewed and evaluated

- The draft methodology is modelled on Game Theory to offer solid allocation procedures.

- Computational efficiency and ease of application taken into account; prototype user interface for the online tool developed.

Allocate CO2 emissions

Fuel Type Fuel Mass tonnes

Number of ports :

Distance from Origin to port 1 : nautical miles

Distance from Origin to port 2 : nautical miles

Distance from Origin to port 3 : nautical miles

amount of cargo to port 1 : TEU

amount of cargo to port 2 : TEU

amount of cargo to port 3 : TEU

Allocated emission to port 1 per cargo : Tonne/TEU

Allocated emission to port 2 per cargo : Tonne/TEU

Allocated emission to port 3 per cargo : Tonne/TEU

NEXT STEPS

December 2013-March 2014

- Testing and validation of proposed methodology

February 2014

- Interim monitoring Report 2 to APEC Secretariat

Spring 2014

- Testing and validation of methodology

Summer 2014

- Workshop at one of the participating ports
- Interim monitoring Report 3 to APEC Secretariat

December 2014

- Final report

**For further information on this
project, please contact:**

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