

International Business Congress Project

LNG in Road Transport

Preliminary Results

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The Aim of the Project

The aim of the Project is to develop recommendations for IBC, which would facilitate increase in utilization of LNG as fuel for road traffic in Central and Eastern Europe (roughly the area between Germany and Russia).

The following associated positive effects are expected

Human footprint to environment



Transport expenditures for national economies



Development of regional economies



Sales of natural gas



National competitiveness



Significant part of the Project relates to the vision of LNG for road traffic infrastructure in the year **2030**.

The expected positive effects are mentioned in the Project Road Map signed by E.ON New Build & Technology, Gazprom Gas-Engine Fuel LLC, Gazprom transgaz Yekaterinburg





Project Topics & Organisation

Steering Committee

Mr Aksyutin

Mr Fip

Ms Blagova

Project management



Uniper

Mr Weßling



Gazprom Gas-
Engine Fuel

Mr Likhachev



Gazprom
Transgaz
Yekaterinburg

Mr Gaidt

Project office



Expert Workshops

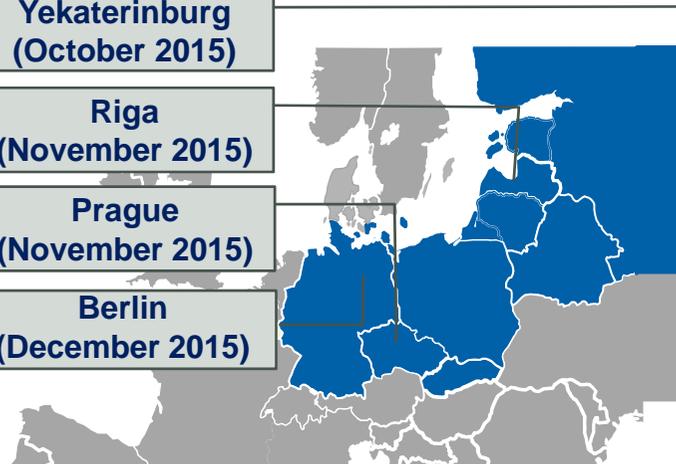
- 4 Expert Workshops organized in 2015 to promote LNG for trucks and to collect data need to prepare recommendations.
- During the workshops LNG market development was discussed with regional market experts and players:
 - **Over 100 Experts** representing key market participants (LNG producers, distributors, consumers, logistics and technology companies, consulting companies, government organizations, industry associations);
 - **Some of the companies represented in the workshops:** MAN, KAMAZ, Iveco, Volvo, Daimler, HAVI Global Logistics, Chart Ferrox, McKinsey & Co, Zukunft Erdgas e.V., etc.
- During the seminars we collected Expert opinion on key project topics (regulation, commercialisation, funding). Attendees additionally expressed their professional positions in special survey forms distributed before the workshops.
- The Project benefited from the experts sharing professional experience in the field of developing national LNG markets.

Yekaterinburg
(October 2015)

Riga
(November 2015)

Prague
(November 2015)

Berlin
(December 2015)



Key issues

Standards
and
Legislation

Commercia-
lisation

Politics
and Funding





Content of the Project Report

The aim of the Project is to develop a set of recommendations for IBC to facilitate LNG for transport adoption in Europe.

The Working Group prepares the Final Project Report for the governing bodies and members of IBC containing these recommendations.

The Report will cover a comprehensive set of topic including:

General overview of the European LNG market

General overview of existing technologies

Current availability of LNG trucks and buses

Target country profiles / LNG adoption in the target countries

Vision of LNG infrastructure in 2030 for the target countries

Obstacles to infrastructure development

Commercialization issues

Politics and Financing

Recommendations and next steps



Current LNG Infrastructure in Project Area

LNG plants		LNG import terminals		LNG stations	
Russia	7	Lithuania	1	Poland	3
Poland	3	Poland	1	Russia	2
Germany	3			Finland	1
Finland	1			Estonia	1
Total capacity approx 250,000 ton p.a. (0,36 bcm)		Total capacity approx 6,200,000 ton p.a. (9 bcm)			
<p>LNG production in Poland, Germany, Finland is aimed mainly to execute regional off-grid supply of natural gas.</p> <p>Russian LNG plants are directed to LNG export to Eastern European countries as well as local off-grid and some cases of LNG for vehicles / rail.</p>		<p>LNG is supplied to these terminals for subsequent regasification and onward transportation to local gas pipeline system.</p> <p>The Lithuanian terminal is an FSRU (floating storage and regasification unit).</p>		<p>LNG market development in Europe remains robust.</p> <p>Legal measures to provide incentives are being developed.</p>	



HD Trucks LNG Forecast 2030

In order to determine the most suitable forecast of needed indicators a number of analytical sources have been investigated

Oxford Institute for Energy Studies

European Commission

OECD

World Bank

AT&Kearney

Deloitte

OPEC

For the purpose of infrastructure allocation modelling the following has been accepted:

HD trucks population growth

2% p.a. till 2030 in EU target countries

0.6% p.a. till 2030 in Russia and Belarus

Share of LNG trucks in target countries reaches 2% by 2030

Main forecast results:

LNG HD trucks population in target countries by 2030
~ 22,000

HDVs LNG forecasted consumption p.a. by 2030
~ 1 bcm (~ 700,000 ton)



LNG Infrastructure Allocation Principles

The Working Group prepared a draft model for LNG infrastructure allocation in the target countries for the year 2030 using these key principles:

Priority to TEN-T /
Pan-European Routes

Not more than 400 km between
LNG Filling Stations
(Directive 2014/94/EU)

Required infrastructure for each country
depends on demand forecast
for the Year 2030

Two types of LNG FS considered:
10,000 ton p.a.
3,000 ton p.a.



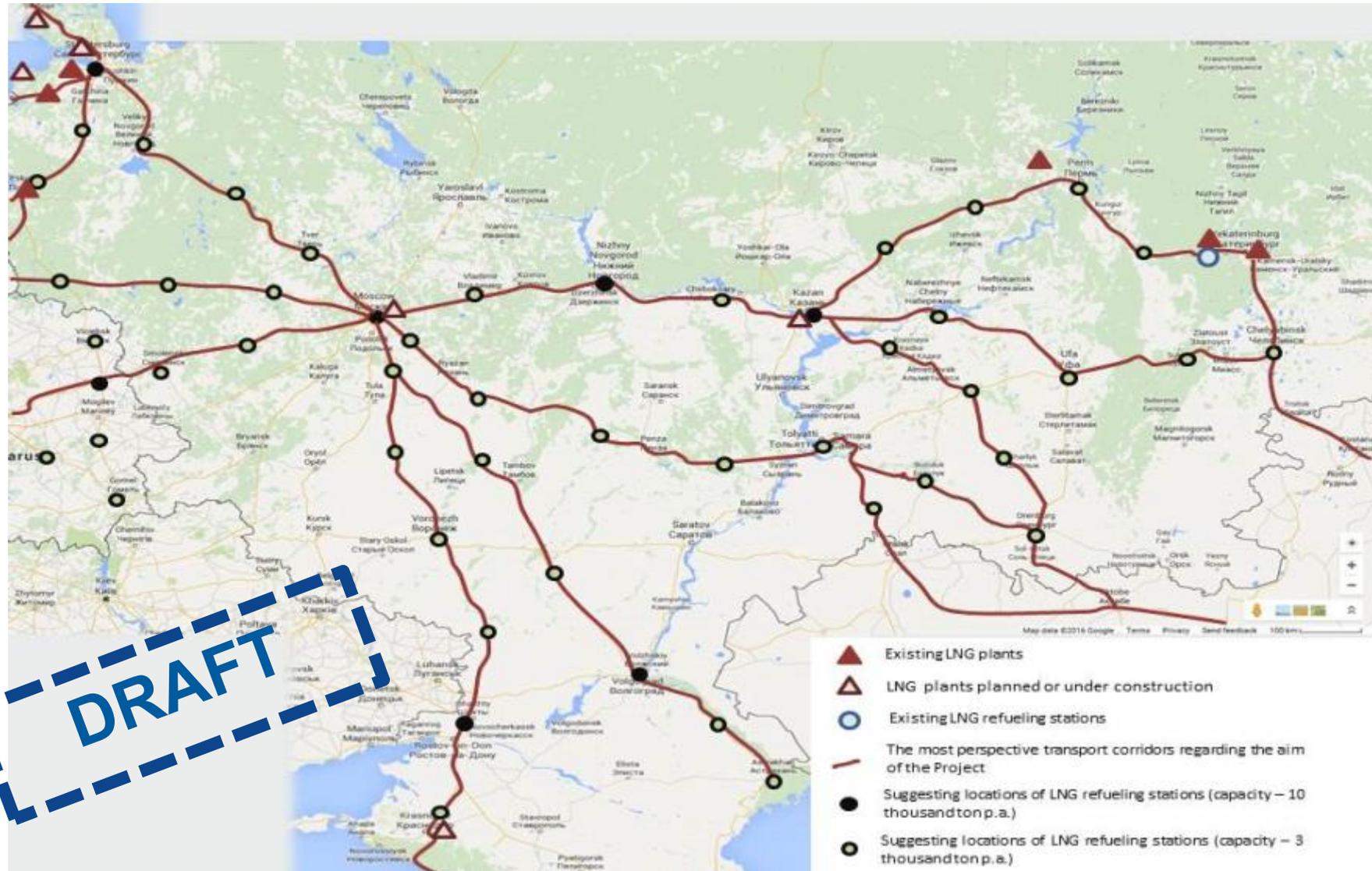
LNG Infrastructure by 2030 (Europe)

DRAFT





LNG Infrastructure by 2030 (Russia)



DRAFT



Next Steps

LNG for HD Vehicles demand 2030
model finalization and approval

Drafting recommendations for IBC to
implement LNG for HD Vehicles in
Europe

Report presentation to the Project
Steering Committee

Infrastructure allocation scheme
finalization

Final Report preparation for IBC
management and members



First Conclusions and Recommendations

LNG for HD Vehicles is a highly prospective market for Europe and beyond by the year 2030

In order for LNG for HD Vehicles to reach its full potential, one needs to consider the possibility of developing truly international transit corridors

In order to reach this end, it might be worthwhile to consider implementing LNG along the international transit corridor “Western Europe – China” through Russia and Belarus

Investigating this opportunity through a separate Project might give IBC the international dimension it deserves

Thank you for attention!

**Stanislav Urzhumtsev
Gazprom Gas-Engine Fuel, LLC**