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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

Working Party on Transport Statistics  
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**TRANSPORT OF GAS THROUGH PIPELINES**

**Submitted by the Government of the Russian Federation**

Note: Pursuant to the intention of the Working Party to continue to exchange opinions regarding statistics on the transport of gas through pipelines, the Government of the Russian Federation has prepared the discussion document reproduced below.

## STATISTICS ON TRUNK PIPELINE TRANSPORT

**This document gives the principal concepts and definitions relating to trunk pipeline transport; describes how statistics on trunk pipeline transport are gathered and the information obtained is published; outlines the indicators used in describing the core operations of trunk pipelines; and cites statistics on trunk pipeline transport published in the compilation “Transport in the Russian Federation. 2003”.**

**1. Trunk pipeline transport is one of the most important components of the transport system in the Russian Federation. It accounts for more than half the freight carried by all modes of transport, contributing approximately 15 per cent to the gross value-added of the transport sector.**

**Statistics on pipeline transport operations and their position relative to other modes of transport may be found in the tables below.**

**2. Pipeline transport statistics focus on the operations of trunk pipelines conveying gas, oil and petroleum products.**

**Gas pipelines** are those designed for the long-distance movement of large volumes of gas from the point of extraction or production to gas distribution stations.

**Oil pipelines** are those designed to carry oil from areas of extraction (from main pumping stations in the oilfield) to refineries, storage facilities, rail, river and seaport loading facilities, or to spur pipelines for delivering oil to specific organizations.

**Petroleum product pipelines** are those designed to transport petroleum products from the point of production (the main or transit pumping or compressor station) to the point of consumption (transshipment point, facilities for loading into tank wagons, tanker trucks, tanker vessels or directly to consumers in the community).

Pipelines that carry gas and petroleum products directly to end-users (industry, filling stations, residential accommodation, etc.) form part of the distribution network. They do not figure in transport statistics.

Pipelines for moving other materials such as crushed ore or coal slurry are not classed as trunk pipelines either. Together with conveyors, monorails, overhead cable conveyors, pneumatic containers and other similar installations, they are one variety of so-called continuous cargo handling, mainly serving industry. Statistics on pipelines of this type are gathered as part of transport statistics once every five years, but are not aggregated with data on trunk pipelines.

**3. Seven specialized types of federal statistical observation have been approved for the statistical study of core trunk pipeline operations. Information is supplied by legal entities conducting transport operations via trunk pipelines. In two cases the information is gathered and processed by State statistical agencies; in the remainder, the information is gathered and processed by the appropriate organizations (Gazprom, Transneft and Transnefteprodukt), then submitted to the State Statistical Committee of the Russian Federation. Information about the**

volume pumped (dispatched) and throughput of gas, oil and petroleum products is prepared monthly, data on transport-related revenues and costs, quarterly, and information about the extent of the trunk pipeline network, annually.

In addition, every six months trunk pipeline operators report any accidental environmental pollution to the State statistical agencies.

Information on the output of trunk pipelines in value terms, the size of the workforce, investments and the financial performance of operations in the sector is gathered by the State statistical agencies using the special types of federal statistical observation.

4. Every month in its report on the socio-economic situation of the Russian Federation, the State Statistical Committee publishes data on trunk pipeline turnover (throughput). More detailed information is available in the statistical compilation "Transport in the Russian Federation", individual tables from which are annexed hereto.

5. The principal indicators used to characterize core trunk pipeline operations are listed below.

*Extent of the gas pipeline network* is defined as the total linear extent of all pipeline sections measured as a single main extending from the inlet collector of the main pumping station to the inlet collector of the gas distribution station at destination and the linear extent of the pipes branching off from a trunk shut-off valve to the inlet collector of the gas distribution station at a point of consumption. It is measured in kilometres and is defined by the technical specifications of the trunk pipelines. The extent of the oil pipeline and petroleum product pipeline networks is defined in the same way.

The *pumped volume* of gas, oil and oil products through trunk pipelines is measured by *initial dispatch* of these products, expressed in tonnes. It is the primary intake of gas or oil into the trunk pipeline of the reporting organization, whether extracted by that organization or imported into the Russian Federation, and the intake of gas following refinement of condensate. In the case of petroleum product pipelines, this corresponds to the intake of petroleum products from oil refineries or other suppliers.

The intake of a product (gas, oil or petroleum product) into a trunk pipeline belonging to the reporting organization from neighbouring enterprises or pipeline-owners is deemed to be transit traffic for that organization's purposes and is not included in the reported figures.

The throughput (*freight turnover*) of gas, oil and petroleum products is defined as the product of all volumes of the product in question (in tonnes) that have passed through the pipelines belonging to a particular organization and the extent of those pipelines (or sections thereof), in kilometres. Transit volumes of gas, oil and petroleum products are factored into this calculation.

**EXTENT OF THE TRUNK PIPELINE NETWORK**

	1990	1995	2000	2001	2002
Trunk pipelines (total)(at year end; '000 km)	210	210	213	213	216
Of which:					
Gas pipelines	144	148	152	152	153
Oil pipelines	51	47	46	46	48
Petroleum product pipelines	15	15	15	15	15
Density of trunk pipelines, km/1,000 km <sup>2</sup>	12.3	12.3	12.5	12.5	12.6
Density of traffic carried by trunk pipelines, million tonne-kilometres per km of pipeline	12.3	9.0	9.0	9.2	9.7

**TRANSPORT OF FREIGHT BY TRUNK PIPELINE****(million tonnes)**

	1990	1995	2000	2001	2002
<b>Total freight</b>	<b>1 101.4</b>	<b>782.6</b>	<b>828.9</b>	<b>853.4</b>	<b>899.3</b>
Of which:					
Gas	543.3	473.8	511.2	508.8	513.8
Oil	497.9	287.9	294.6	319.7	359.8
Petroleum products	60.2	20.9	23.1	24.9	25.7

### FREIGHT TURNOVER, TRUNK PIPELINES

(billion tonne-kilometres)

	1990	1995	2000	2001	2002
<b>Total freight</b>	<b>2 575</b>	<b>1 899</b>	<b>1 916</b>	<b>1 962</b>	<b>2 100</b>
Of which:					
Gas	1 335	1 231	1 171	1 164	1 203
Oil	1 198	650	718	769	867
Petroleum products	42	19	27	28	30

### FREIGHT TRAFFIC, BY MODE OF TRANSPORT

(million tonnes)

	1990	1995	2000	2001	2002
<b>Transport (all modes)</b>	<b>6 859</b>	<b>3 458</b>	<b>2 560</b>	<b>2 610</b>	<b>2 613</b>
Of which:					
Rail	2 140	1 028	1 047	1 058	1 084
Road	2 941	1 441	550	561	503
<b>Trunk pipeline</b>	<b>1 101</b>	<b>783</b>	<b>829</b>	<b>853</b>	<b>899</b>
<b>as percentage of total</b>	<b>16.1</b>	<b>22.6</b>	<b>32.4</b>	<b>32.7</b>	<b>34.4</b>
Sea	112	65	27	24	26
Inland waterway	562	140	106	113	100
Air	2.5	0.6	0.8	0.9	0.9

**FREIGHT TURNOVER, BY MODE OF TRANSPORT**

(billion tonne-kilometres)

	1990	1995	2000	2001	2002
<b>Transport (all modes)</b>	<b>5 891</b>	<b>3 533</b>	<b>3 480</b>	<b>3 592</b>	<b>3 802</b>
Of which:					
Rail	2 523	1 214	1 373	1 434	1 510
Road	68	31	23	23	23
<b>Trunk pipeline</b>	<b>2 575</b>	<b>1 899</b>	<b>1 916</b>	<b>1 962</b>	<b>2 100</b>
<b>as percentage of total</b>	<b>43.7</b>	<b>53.8</b>	<b>55.1</b>	<b>54.6</b>	<b>55.2</b>
Sea	508	297	100	94	93
Inland waterway	214	90	65	76	73
Air	2.6	1.6	2.5	2.6	2.7

**AVERAGE DISTANCE OF CARRIAGE OF 1 TONNE OF FREIGHT,  
BY MODE OF TRANSPORT**

(kilometres)

	1990	1995	2000	2001	2002
Rail	1 189	1 067	1 195	1 231	1 266
Road (international traffic)	705	358	175	144	143
<b>Trunk pipeline</b>	<b>2 338</b>	<b>2 427</b>	<b>2 312</b>	<b>2 299</b>	<b>2 335</b>
Sea	4 543	4 559	3 766	3 872	3 589
Inland waterway	381	640	619	674	731
Air	...	3 532	4 602	4 276	4 243

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